UNIVERSITY OF LATVIA

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DOCTORAL THESIS

The Doctoral Thesis has been drafted in English

Managing Facilitation of Employability of Vocational Education Graduates in Latvia

Profesionālās izglītības absolventu nodarbināmības veicināšanas vadīšana Latvijā

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ANNOTATION

The research in this thesis investigates the phenomenon of facilitating sustainable employability of vocational education and training (VET) graduates. The topic of the research is essentially relevant because of the low employability of VET graduates, especially later in their careers, as well as the importance of employability to young people, adults and policy makers. The goal of the research is to investigate and to find appropriate opportunities for Latvia to manage facilitation of employability of VET graduates. The research objectives are: researching factors that facilitate employability of VET graduates; elaborating a model that represent the relationship between and inter-play of the employability factors in ways that might facilitate employability of VET graduates; investigating which personal attributes should be developed in VET and which improvements are needed in the VET management processes in Latvia to facilitate employability of graduates.

The model for managing facilitation of graduate employability developed within the framework of the research provides an overall framework for understanding employability of graduates and the process of facilitating employability within a vocational education and training institution (VETI). The results of the empirical research show which personal attributes are the most important for VET graduates in Latvia for their employability, considering the labour market demands and the past performance of VETIs; as well as detailed overview of the strengths and weaknesses in the existing VET management processes regarding facilitation of employability of graduates. Based on the theoretical framework and the empirical research results, the researcher has elaborated practical recommendations to VET policy makers and managers of VETIs on the necessary action on the national and institutional level to improve employability of VET graduates. This work contributes to complete research on employability of education. It can also serve as a methodical support in activity of the education researchers and practitioners. Thus, this research contributes to both, the theory and practice.

The dissertation was developed in the Faculty of Pedagogy, Psychology and Arts of the University of Latvia. It includes 221 pages, including 4 chapters, 19 tables, 27 figures and 16 appendices. Overall, 275 literature and information sources have been used in the research.

Keywords: *employability, employability factors, graduates, importance – performance analysis, management, management processes, vocational education.*

ANOTĀCIJA

Šīs disertācijas pētījumā autore analizē profesionālās izglītības (PI) absolventu ilgtspējīgas nodarbināmības veicināšanas fenomenu. Pētījuma tēma ir būtiska zemās PI absolventu nodarbināmības dēļ, īpaši karjeras vēlākā posmā, kā arī tādēļ, ka nodarbināmība ir svarīga gan jauniešiem, gan pieaugušajiem, gan politikas veidotājiem, gan darba devējiem. Pētījuma mērķis ir izpētīt un atrast Latvijai atbilstošas iespējas vadīt PI absolventu nodarbināmības uzlabošanos. Pētījuma apakšmērķi ir: izpētīt faktorus, kas veicina PI absolventu nodarbinātību; izstrādāt nodarbināmības modeli, kas atspoguļo nodarbinātības faktoru savstarpējo mijiedarbību tādā veidā, lai veicinātu PI absolventu nodarbināmību; izpētīt, kādas individuālās nodarbināmības iezīmes jāattīsta PI un kādi uzlabojumi ir nepieciešami PI vadības procesos Latvijā, lai sekmētu absolventu nodarbināmību.

Pētījuma ietvaros izstrādātais absolventu nodarbināmības veicināšanas vadības modelis nodrošina vispārēju ietvaru absolventu nodarbināmības izpratnes veicināšanai un nodarbināmības uzlabošanās iespēju veicināšanas procesam PI iestādē. Empīriskā pētījuma rezultāti parāda, kuras individuālās iezīmes ir vissvarīgākās PI absolventu nodarbināmības nodrošināšanai Latvijā, ņemot vērā darba tirgus pieprasījumu un PI iestāžu līdzšinējo sniegumu. Tāpat arī pētījumā analizēti PI vadības procesi, lai nodrošinātu absolventu nodarbināmību. Ņemot vērā teorētiskā un empīriskā pētījuma rezultātus, autore ir izstrādājusi praktiskus ieteikumus PI politikas veidotājiem un PI iestāžu vadītājiem par nepieciešamiem pasākumiem valsts un iestāžu līmenī, lai uzlabotu PI absolventu nodarbināmību. Šis darbs sniedz ieguldījumu izglītības nodarbināmības pētniecības attīstībā. Tas var arī tikt izmantots kā metodisks atbalsts izglītības pētnieku un praktiķu darbā. Tādējādi šis pētījums sniedz ieguldījumu gan teorijas attīstībā, gan praktiskās darbības atbalstam.

Disertācija ir izstrādāta Latvijas Universitātes Pedagoģijas, psiholoģijas un mākslas fakultātē. Darba apjoms ir 221 lpp., tajā skaitā 4 nodaļas, 19 tabulas, 28 attēli un 16 pielikumi. Darba izstrādes gaitā ir izmantoti 275 literatūras un informācijas avoti.

Atslēgvārdi: *absolventi, nodarbināmība, nodarbināmības faktori, profesionālā izglītība, svarīguma – veiktspējas analīze, vadība, vadības procesi.*

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LIST OF ABBREVIATIONS

Cedefop – European Centre for the Development of Vocational Training

CSP – Central Statistical Bureau (Centrālā statistikas pārvalde)

EACEA - Education, Audiovisual and Culture Executive Agency of the European Commission

EQARF – European quality assurance reference framework for vocational education and training

EQAVET – The European quality assurance in vocational education and training

ERDF – European Regional Development Fund

ESF – European Social Fund

EU – European Union

I – importance

ICT – information and communication technology

ILO – International Labour Organization

IPA – Importance – Performance analysis

ISCED – International standard classification of education

KMO – A Kaiser-Meyer-Olkin test

LQS – Latvian qualification system

NACE – Statistical classification of economic activities in the European Community

OECD – Organisation for Economic Cooperation and Development

P – performance

PIAAC – The Programme for the International Assessment of Adult Competencies

PINTSA – Council on Vocational Education and Employment (Profesionālās izglītības un nodarbinātības trīspusējās sadarbības apakšpadome)

VET – vocational education and training

VETI(s) – vocational education and training institution(s)

WBL – work-based learning

INTRODUCTION

Considering the increasingly changing labour market, the education system is facing the challenge of how to support students to prepare for turbulent careers. According to the World Economic Forum, 42 % of core skills will change between 2018 and 2022 (World Economic Forum, 2018). This means that students have to learn for becoming professionals in occupations that probably still do not exist. For education systems this means a need to review curriculum and teaching and learning methods to ensure that students become eager lifelong learners and develop ability to constantly adapt to changing labour market and societal conditions.

If evaluating past performance of different types of education in terms of labour market outcomes, VET performs better than general education for most of the countries in ensuring better transit from education to labour market, higher employment rates and lower unemployment rates (European Commission, 2015; Flisi & Goglio, 2015). However, when it comes to employability in the long-term, data indicates to the inefficiencies of VET. According to the data of the Public Employment Service of Latvia (2016, 2017, 2018, 2019), the biggest share of the unemployed people is those with VET qualifications. For example, at the end of September 2016, 36.6 % of the unemployed population were people with VET qualifications, the majority of them (73.3 %) – at least 40 years old (Employment Agency of Latvia, 2016). Evidence shows that it is not a problem only in Latvia, in fact Hanushek, Schwerdt, Woessmann, and Zhang (2017) compared employment rates across different ages for people with general education and VET for 11 countries, and found strong and robust support for a trade-off between better school-to-work transition for VET graduates and better labour market outcomes later in life for general education graduates. The skills generated by VET may facilitate the transition into the labour market but may become obsolete at a faster rate. Individuals with general education initially face worse employment outcomes but experience improved employability probability as they become older relative to individuals with VET. The pattern is most pronounced in the countries with apprenticeships such as Denmark, Germany, and Switzerland (Hanushek et al., 2017). Worse labour market outcomes for VET in the long term in comparison to general education could be explained by shorter time devoted to the development of general/ key competencies (Krueger & Kumar, 2003; Hanushek, Schwerdt, Woessmann, & Zhang, 2017; Green, 1998). In addition, the selection may also contribute that those with lower learning achievements tend to choose VET (Malamud & Pop-Eleches, 2010).

Higher education graduates demonstrate better labour market outcomes than any other, lower education in terms of employment, unemployment, income, job satisfaction and even life satisfaction (for example: European Commission/EACEA/Eurydice, 2015; European

Commission, 2015; Eurostat, 2015; NVA, 2016). Also, unemployment statistics by Eurostat indicate that the financial crisis affected employees differently depending on their level of education. A fall in employment rate was observed among persons with low and medium levels of education, while employment among highly educated persons continued to increase against prevailing trend (Hijman, 2009). Higher education graduates are also leaders in terms of participation in lifelong learning in comparison to lower education levels (Central Statistical Bureau [CSP], 2013; European Commission, 2015) which inevitably helps higher education graduates to maintain their employability throughout their working careers. It should be noted, that average adult participation in lifelong learning in Latvia is very low: 7.3 % of adults of age 25-64, while in EU on average – 10.8 %, and, for example, in Finland – 26.4 % (European Commission, 2017).

The last decade marks significant improvements in VET system in Latvia. A lot has been done to reform VET system and to improve its infrastructure, develop links to the labour market, provide support to students. Different activities have been implemented with the aim to facilitate compliance of VET to the labour market needs, for example, establishing Sectorial Expert Councils, Conventions of VETIs with participation of external partners in the governance of VETIs, developing sectorial qualifications frameworks and updating occupational standards, as well as introducing WBL as a new form of implementing VET programmes. These improvements are gradually starting to deliver results in terms of VET attractiveness and relevance to the labour market needs. Further improvements, however, are still needed. 20 % (or 5.4 of 27.2 thousand) of VET students did not complete their studies in 2019 (Ministry of Education and Science, 2019a). 12 % of students think that his or her work-placement did not provide useful knowledge and skills for work in the occupation (Klāsons & Spuriņš, 2015, 40). 27 % - that it did not help to find a good job (Klāsons & Spuriņš, 2015, 41). 37 % of trainees did not want to stay and work in the same company where they had work placement. Every one fifth of them – because they were not interested in their occupation (Klāsons & Spuriņš, 2015, 42). Among those who graduated from VETI, 24 % continued their work or studies in other field (Ministry of Education and Science, 2018). This data indicates inefficiencies in career education system, in implementing VET and ensuring its quality and relevance to labour market needs. Wrong career choices, education which is not required in the labour market, and inefficient transfer from VET to the labour market may lead to loosing knowledge and skills obtained in VET programmes and financial losses for the state and for individuals. Moreover, the long-term competitiveness of VET graduates in the labour market, is not in the focus of VETIs. Although VET reform and EU funding support has triggered some

activity of VETIs in ensuring adult learning opportunities, this area of activity is only developing. And unemployment of adult VET graduates is a concern of the public employment service which provides re-training opportunities for the unemployed. Until now, the education system has addressed lifelong learning in the context of adult education and retraining, rather than as a component of initial VET ensuring preparation for life-long and life-wide learning.

Inefficiency of VET in terms of both employability of graduates in the short-term, and in the long-term, worse labour market outcomes in comparison to higher education, as well as necessity to adapt to ever-increasing labour market changes creates the question for education policy makers, managers and stakeholders, what improvements are needed and how to manage VET system to ensure better employability of its graduates.

Ensuring sustainable employability of VET graduates in the long-term perspective has not yet been researched in Latvia. Related topics such as transfering from VET to the labour market, relevance of VET to the labour market needs, implementation WBL and lifelong learning have been addressed in policy planning documents, as well as EU-funded projects[1]. Aspects linked to employability of education in Latvia have been analysed in several researches: I. Buligina researched the approaches of public administration in the development of competitive labour force in VET and training (Buligina, 2015); G. Kinta researched importance of learning outcomes in management of VET (Kinta, 2014), A. Zaļaiskalne evaluated curriculum reform (Zaļaiskalne, 2014), O. Dementjeva analysed competitiveness of graduates from vocational secondary school in higher education (Dementjeva, 2012), N. van Gijeka researched cooperation competencies of VET students (van Gijeka, 2013), U. Libkovska – aspects of career education (Libkovska, 2011), S. Kārkliņa – support to non-formal language learning in non-formal education (Kārkliņa, 2013), T. Sēja – the development of VET in the regions of Latvia (Sēja, 2008), M. Niklass – the entrance of youth with low education, i.e., without secondary general or vocational qualification, into the labour market in Latvia (M. Niklass, 2013). It should be noted that none of these researches address employability of VET graduates directly and broadly.

[1] For example, projects in which the author has participated as an expert: Erasmus+ project "VET to Work Transition – How to Meet Labour Market Needs and Engage Businesses in Latvia's VET system?" (No.5500462-LLP-1-2013-1-LV-KA1-KA1ECETA), coordinated by the National Centre for Education; Erasmus+ project „National Authorities for Apprenticeships: Implementing Work Based Learning in Latvia, Lithuania and Estonia" (WBL-Balt), No.557236-EPP-1-LV-EPKA3-APPREN, coordinated by the Ministry of Education and Science; Erasmus+ project "VET for employment", No. 2014-1-LV01-KA202-000522, coordinated by the Employers' Confederation of Latvia, as well as an ESF project "Vocational Education Learner participation in the Work-Based Learning and Work Placements in Companies", coordinated by the Employers' Confederation of Latvia.

In this research, the author has considered that employability of graduates does not depend only on education. There are many external factors, for example, employment opportunities in particular country and in particular sector, graduate's background, personal traits, goals and beliefs, recruitment behaviour of employers affect employability of graduates. At the same time educational institutions have an important role in developing individual employability of graduates, in terms of developing their human capital, attitudes, social capital, ensuring necessary support in exploring personal interests and setting goals for personal and career development, in effective integration into the labour market and even for upskilling at a later stage in career. Therefore, it is possible to proactively manage facilitation of graduate employability by appropriate education policy methods and management methods of educational institutions.

Researching factors which are important in the Latvian context to facilitate employability of VET graduates, as well as of the most effective aspects in VET policy making and management will ensure useful ground for policy makers and education managers to take steps towards ensuring better employability of graduates. It will also provide a solid basis for further research on other aspects of employability of education. The detailed context of the research is presented in the Chapter 1.

Research problem. Considering the importance of ensuring employability or graduates and existing inefficiencies in VET in achieving this goal, it is important, based on academic research, to look for appropriate opportunities for Latvia to manage facilitation of employability of VET graduates. The issues being examined in this research are relevant to various institutional, sectoral, national and international stakeholder groups, both in education and business. The problem of ensuring employability is also global, although this research concentrates on VET in Latvia.

The aim of the research is to investigate and to find appropriate opportunities for Latvia to manage facilitation of employability of VET graduates.

The research object is managing facilitation of employability of VET graduates.

Research Objectives

Researching factors facilitating employability of VET graduates; elaborating a model representing the relationship between and inter-play of the employability factors in ways that might facilitate employability of VET graduates; investigating, which personal attributes should be developed in VET and which improvements are needed in the VET management processes in Latvia to facilitate employability of graduates.

The main research question and sub-question in this dissertation are:

Main research question: How can the facilitation of employability of VET graduates be managed in Latvia?

Sub-question #1: Which factors facilitate employability of VET graduates? The research examines in detail both personal attributes as outcome-oriented factors and VET management processes as process-oriented factors. Outcome-oriented factors answers the question "What to facilitate?" and process-oriented factors – "How to facilitate?"

Sub-question #2: What model would represent the relationship between and inter-play of the employability factors in ways that might facilitate employability of VET graduates?

Sub-question #3: Which personal attributes should be developed in the VET system in Latvia to facilitate employability of VET graduates?

Sub-question #4: Which VET management processes in Latvia are implemented successfully and which require improvements to facilitate employability of VET graduates?

For reaching the aim of the work, the following tasks were set and implemented:

1. To investigate theoretical approaches about the notion of employability.

2. To analyse theoretical literature about the personal attributes and VET management processes which might facilitate employability of VET graduates.

3. To research theoretical literature about management of education institutions in the context of achieving goals and improvement in VET to facilitate employability of graduates and system's theory in the context of viewing facilitation of employability in systematic way and constructing a model for managing facilitation of employability.

4. To implement the preconception phase of the research by researching international VET systems and carrying out employer survey and to summarise outcomes.

5. To construct a model which represents factors important for employability of VET graduates and their interplay.

6. To conduct a questionnaire survey among employers about the most important personal attributes in the labour market and the performance of VET system in Latvia in developing them.

7. To conduct interviews with managers of VETIs about personal attributes important for employability in Latvia, the ways how VETIs facilitate development of these personal attributes, as well as successful and unsuccessful aspects in the current implementation of VET management processes to facilitate employability of graduates.

8. To develop recommendations on how the facilitation of employability of VET graduates could be managed in Latvia.

Based on the determined framework, the author puts forward the following **thesis to be defended**:

1. VET focuses more on the development of occupational and academic skills, but less on development of emotional and self-management competencies. Emotional and self-management competencies are essential for individual employability.

2. Although employability of graduates is important goal for VETIs in Latvia and VETIs implement activities to support graduate employability development, they reach only a portion of students, reducing the chances for students to develop employability.

3. Personal attributes that determine employability can be successfully developed in VET, if the facilitation of graduate employability is managed appropriately.

Considering the amplitude and complexity of the topic, the author set the following **limits to the research**:

1) The type and level of education: the empirical research is primarily concerned with initial secondary VET in Latvia. This limitation, however, does not apply to the theoretical analysis to ensure that the research benefits also from the advanced international academic research on employability of higher education and to transfer best possible practice from higher education to VET.

2) Educational institutions: the research considers only those educational institutions which offer publicly funded initial secondary VET programmes. The research does not deal with VETIs of culture and arts which are subordinate to the Ministry of Culture of the Republic of Latvia. In 2018, there were 38 such educational institutions in Latvia.

3) Employability factors: the research considers in detail only those employability factors which can be influenced by VETIs. In the theoretical part of the research, the author has briefly described all factors influencing employability of graduates, including factors that are external to education system, in order to better describe the concept of employability.

4) Personal attributes: as this research is not occupation or sector-specific, it is limited only to those personal attributes, including competencies, experience and attitudes, that are general enough to be equally applicable to all VET occupations.

The research design and framework, the research methods

Key theories that comprise the theoretical framework for the research are employability theory, system's theory and management theory. The research strategy is constructive research as the research focuses on constructive problem solving. Both qualitative and quantitative research methods and data were used and triangulated.

The data used in the research. The author used the existing databases of statistical data (CSP, Eurostat, Lursoft, National Centre for Education of Latvia, OECD), as well as collected quantitative and qualitative data herself by three international study visits, two employer surveys and in-depth interviews.

The data collection and processing methods:

1. Analysis of research publications, research studies, policy papers and documents, legal acts, reports, statistical analysis.

2. Empirical research provided data from: instrumental and critical case studies of VET systems in Germany, Austria and Finland; employer survey (n=98); employer survey (n=750) and semi-structured face-to-face in-depth interviews (n=12) with the managers of VETIs. Data collection instruments were developed for this research.

The **quantitative data processing methods included**: descriptive statistics (indicators of central tendency or location (arithmetic mean, mode, median); indicators of variability (range, standard deviation, standard error of mean); frequency analysis; sampling adequacy tests (Bartlett's test, KMO test) and multivariate statistical analysis (factor analysis and correlation analysis); statistical hypotheses testing with paired samples t-test, Kruskal-Wallis test (one way ANOVA) and Wilcoxon–Mann-Whitney test. Importance – Performance Analysis (IPA) was used in data analysis to substantiate interpretation of the results.

The **qualitative research data processing methods** included: consensual qualitative research procedure.

Overview of the structure of the Dissertation

Chapter One. The importance of employability of graduates. In this chapter, the author presents the context of the research: the importance of employability in the European and Latvian contexts, the existing research and data about the labour market demand for VET qualifications and the employability of VET graduates.

Chapter Two. Factors facilitating employability of graduates. In this chapter, the author investigates the theoretical approaches about the notion of employability, outlines the link between VET and employability, showing how one affects the other. Overview of different types of factors influencing employability and their models is provided. Personal attributes which determine employability are analysed in detail.

Chapter Three. Managing facilitation of employability of graduates. Firstly, the role of education management in facilitating employability is discussed. Secondly, different education management processes are discussed, based on theoretical literature review and preconception phase of the research. The situation in Latvia in relation to these processes is

described as well. Thirdly, the system's approach to managing facilitation of employability of graduates is discussed with the goal to elaborate the model depicting this process as a system.

Chapter Four. Managing facilitation of employability of graduates in Latvia. In this chapter, the author presents the empirical research programme and the results of the research. The discussion of verification of the quality of the research is included as well.

Discussion of the results. In this chapter, the main results of the research are discussed.

Conclusions and recommendations. In this chapter, the main conclusions from the research are presented and discussed. Based on the theoretical analysis and empirical research results, the practical recommendations to VET policy makers and practitioners on the necessary action to facilitate graduate employability are included.

The novelty of the research:

1. The research examines employability of graduates, its factors and the process of its facilitation in a holistic way, considering outcome-oriented, process-oriented and external factors, as well as their interaction, that has not been done before.

2. Based on empirical analysis, a model of three complex factors that determine employability has been elaborated (professional skills; attitude and abilities; work experience and education achievements).

3. The main information on managing facilitation of graduate employability in VET is summarised into the graphical model which envisages that facilitating employability is regarded as a system. The practical value of the model lies in its possible application for explaining employability and for guiding management of its facilitation.

4. The methodology applied in interpreting the empirical results of the research (Importance – Performance analysis) is interdisciplinary and has been adapted from marketing research. It allows, based on empirical analysis and considering both, the labour market demands and the performance of VETIs, to determine the priority action in VET in Latvia to facilitate graduate employability.

The theoretical value of the research:

1. This work contributes to complete research on employability of VET. The research analyses extensive, often chaotic and contradictory theoretical literature on employability, different interpretations of its concept and factors facilitating employability, and proposes a logical arrangement for the interpretation and application of the concept of employability in research. The factors facilitating employability are a logically structured and described in detail.

2. The model of managing facilitation of graduate employability elaborated within this research provides an overall framework for understanding the phenomenon of employability and the process of managing its facilitation in VET.

3. The research methodology can serve as a methodical support for education researchers and practitioners willing to analyse education outcomes and determine priorities for their education systems or institutions.

4. The research also provides solid basis for further research, for example, on employability of other types of education.

The practical value of the research:

1. The model of managing facilitation of graduate employability can be used for guiding action and for policy making. It also provides easily acquirable information for the main stakeholders in VET. The model is universal and could be adapted for other contexts and countries.

2. Also, the theoretical framework of the research can be used to provide a more holistic view of the employability and employability factors in VET. It can serve as a useful awareness-raising source to the researchers and practitioners interested in employability.

3. The results of the employer survey and IPA analysis provide nationally representative data on the necessary priorities in the curriculum of VET to ensure employability of graduates. It can serve as a basis for the discussion about the future of VET and for action of education policy makers and managers.

4. The results of the interviews with the VET managers provide detailed analysis of the current situation in the management processes of VETIs and necessary improvements to ensure employability of graduates.

5. Recommendations for policy makers and managers provide a practical action plan for improving employability in vocational education.

The list of publications in peer-reviewed editions in connection with the research topic:

1. Līce, A., Sloka, B. (2019). *Attitudes, skills or experience? Factors that are the most important for employers in Latvia in the recruitment process.* Manuscript submitted for publication. 13 pp.

2. Līce, A., Sloka, B. (2019). *Promoting emotional intelligence in vocational education as a method to achieve employability of graduates.* Manuscript submitted for publication. 9 pp.

3. Līce, A. (2019). Managing vocational education to facilitate employability of graduates. In L. Daniela (Ed.), *Human, Technologies and Quality of Education. Proceedings of Scientific*

Papers of 77th Scientific Conference of University of Latvia. Riga: Latvian University Academic Publishers, pp. 33-42.

4. Līce, A., Sloka, B. (2019). Which skills, competencies and attitudes are employers looking for in recruitment process in Latvia? In *Proceedings of the International Scientific Conference „Contemporary Issues in Business, Management and Economics Engineering", Vilnius, Lithuania, 2019*, pp. 7-17.

5. Līce, A., Sloka, B. (2019). Performance of vocational education in Latvia in developing employability of graduates. In *SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference. Volume 5, Rezekne, Rezekne Academy of Technologies, 2019*, pp. 222–232.

6. Līce, A. (2018). The Importance-Performance Analysis (IPA) of employer evaluations of employability competencies in vocational education. *Problems of Management in the 21st Century* 13*(1)*, pp. 7-17.

7. Līce, A., Volkova. T., Zvaigzne, A. (2018). Two sides of the same coin. How to involve employers in higher education and its quality management system. *Journal of European Higher Education Area 2018(2)*, pp. 1-18.

8. Līce, A. (2018). Learning by Working: Examining Examples of Good Practice in Organising Work placements in Vocational Education. *Learning Strategies and Constructionism in Modern Education Settings* by IGI Global publishing house, pp. 250-267.

9. Līce, A., Volkova. T., Zvaigzne, A. (2017). Meeting employers' expectations on employability competencies of higher education graduates. Paper presented at the *12th European Quality Assurance Forum*. Available from https://eua.eu/resources/publications/489:meeting-employers%E2%80%99-expectations-on-employability-competencies-of-higher-education-graduates.html [accessed 08.06.2019].

10. Līce, A. (2017). Involvement of employers in educating employees as a solution to the problem of skilled workforce shortage in Latvia. In I. Kangro, A. Fernāte, S. Kārkliņa, & S. Kraže (Eds.), *Challenges for high quality of adult education: Inter-national scientific conference proceedings*, pp. 111–123. Riga: Ministry of Education and Science.

11. Buligina, I., Sloka, B., Kantāne, I., Līce, A. (2016). Role of Social Partners for Work-Based Learning: Results of Surveys. *Economics and Business, 2016/29-1*, pp. 82–89. https://doi.org/10.1515/eb-2016-0025.

The research results have been presented in international scientific conferences:

1. Līce, A. Presentation "Performance of Vocational education in Latvia in developing employability of graduates". 13th international scientific conference "Society. Integration. Education" of Rezekne Academy of Technologies, May 24, 2019, Rezekne, Latvia.

2. Līce, A. Presentation "Managing Vocational Education to Facilitate Employability". Forum "Challenges and Solutions of the Latvian State and Public in the International Context" of the State Research Programme "INTERFRAME-LV", May 16, 2019, Riga, Latvia.

3. Līce, A. Presentation "Which skills, competencies and attitudes are employers looking for in recruitment process in Latvia?". International Scientific Conference of Vilnius Gedeminas Technical University „Contemporary Issues in Business, Management and Economics Engineering", May 9, 2019, Vilnius, Lithuania.

4. Līce, A. Presentation "Managing vocational education to facilitate employability of graduates in Latvia: perspective of vocational education managers". 76th International scientific conference of the University of Latvia, February 12, 2019, Riga, Latvia.

5. Līce, A., Volkova, T., Zvaigzne, A. Presentation "Meeting employers' expectations on employability competencies of higher education graduates". 12th European Quality Assurance Forum, November 23-25, 2017, Riga, Latvia.

6. Līce, A. Presentation "Role of social partners for WBL: results of surveys". International scientific conference "Challenges for high quality of adult education", May 30, 2016, Riga, Latvia.

7. Līce, A. Presentation "Managing facilitation of employability of VET graduates". Doctoral school by Johannes Kepler University Linz and European Educational Research Association (EERA) "Methods and Methodology in Educational Research.", July 11-15, 2016, Linz, Austria.

8. Buligina, I., Sloka, B., Kantāne, I., Līce, A. Presentation "Role of social partners for WBL: results of surveys". 56th international scientific conference of the Riga Technical University, October 15, 2016, Riga, Latvia.

9. Līce, A. Presentation "University – business cooperation for employability of graduates". International scientific conference of the ISMA University, November 25, 2015, Riga, Latvia.

10. Līce, A. Presentation "Higher Education – Business Cooperation as a factor for employability development". International scientific-practical conference "Higher education as

a solution to the economic crisis" of the Russian New University, September 25, 2015, Moscow, Russia.

11. Buligina, I., Sloka, B., Kantāne, I., Līce, A. Presentation "Work-based Learning: Employers Preparedness for Involvement". International scientific conference "Baltic Sea Region in the Context of EU Integration", July 11-13, 2015, Riga, Latvia.

12. Līce, A. Presentation "The concept of employability in education management: its interpretations and approaches to facilitation of employability". 73rd International scientific conference of the University of Latvia, February 3, 2015, Riga, Latvia.

The research results have also been presented and discussed in more than 20 other events (practical and dissemination conferences, workshops in Latvia and abroad), for example, organised by Latvian College Association (in 2019), municipalities in Latvia (in 2018); European Commission (in 2016 and in 2015); Parliament of Latvia (in 2016); Ministry of Education and Science (in 2016); Employers' Confederation of Latvia (in 2019, 2017, 2016 and 2015); Academic Information Centre (in 2016, 2015 and 2014); Higher Education Quality Agency (in 2015); State Education Development Agency (in 2015); Association of Mechanical Engineering and Metalworking Industries of Latvia (in 2015); National Centre for Education of the Republic of Latvia (in 2015); Employers' Confederation of Latvia in co-operation with Vocational Education Association and EUROPEA International (in 2015); BusinessEurope, EUAPME and CEEP (in 2015); Free Trade Union Confederation of Latvia (in 2015); Cedefop (in 2014), as well as disseminated to different organisations, including OECD.

The list of terms used in this research is included in the Appendix 1 to ensure clear and consistent use of language.

CHAPTER 1. IMPORTANCE OF EMPLOYABILITY OF GRADUATES

In this chapter, the author presents the context of the research: the importance of employability in the European and Latvian contexts, the existing research and data about the labour market demand for VET qualifications and the employability of VET graduates.

1.1. Importance of Employability of Graduates in European and Latvian Context

Employability of young graduates has gained considerable attention internationally and its growing importance is reflected not only in scientific publications but also in public and private policies. This interest in employability is aroused by economic realities, youth unemployment, massification of education, as well as by changing career models: it is argued that a lifetime career with one employer is no longer relevant for a majority of the working population and has been replaced by a more dynamic model based on "careers" (de Grip, Van Loo, & Sanders, 2004). Employability as a political priority became very relevant in the context of the global financial crisis of 2007-2008 which severely hit the young population and the effects of which are still felt even today. According to Eurostat, from the second quarter of 2008, the youth unemployment rate has taken an upward trend peaking at 23.9 % in the first quarter of 2013 making more than five million of young people unemployed.

Enhancing individual employability benefits not only individuals, but also the firms they work for, the labour market and business development. Employability is also particularly important due to the demographic situation in Europe: the workforce is both shrinking and ageing. The young population declines while the old population increases, this may create potential labour shortages and make the labour market much more dependent on older workers (Cedefop, 2014a).

The dominant discourses on graduates' employability have tended to centre on the economic role of graduates and the capacity of education to equip them for the labour market. Accordingly, there has been considerable government faith in the role of education in meeting new economic imperatives (Tomlinson, 2012) and education was set as one of the key priorities to reach economic and social targets of the EU. Investment in education and training systems, anticipation of skills needs, matching and guidance services are mentioned as fundamentals to raise productivity, competitiveness, economic growth and ultimately employment (European Commission, 2010a; European Commission, 2011).

Employability is a key element in the EU 2020 strategy for growth which aims at making labour markets function better, improving quality of jobs and working conditions, and equipping people with the right skills for labour market. The strategy is underpinned by the EU

flagship initiative “An agenda for new skills and jobs” aiming at modernising labour markets by facilitating labour mobility and the development of skills throughout the lifecycle with a view to increase labour participation and better match labour supply and demand, as well as by education and labour market policies at national and sub-national levels (European Commission, 2010b). In 2012, within the EU framework for Education and Training 2020, EU member states adopted a benchmark on employability of young graduates aiming at reaching employment rate of 82 % among recent graduates (20 – 34 years old) (Council, 2012) — a level the EU last reached in 2008. After a decrease to 75.4 % in 2013 it has gradually increased to 81.6 in 2018 (Eurostat, 2019). On 10 June 2016 EU adopted new and comprehensive Skills Agenda for Europe aiming to “ultimately boost employability” by improving the quality and relevance of skills formation, making skills and qualifications more visible and comparable and improving skills information for better career choices (European Commission, 2016). More recently, the EU has announced creation of the European Education Area, which includes a proposal to revise the EU key competences framework and a communication on a digital education action plan. EU and national EU goals are well followed-up within the EU semester process, country-specific recommendations by the Commission and regularly reported by the member states. Latvia in 2016, 2017 and 2018 received recommendations regarding VET – to speed up curricula reform in VET, strengthen the involvement of social partners and to increase the offer of WBL (European Commission, 2018).

Employability of graduates is especially relevant in VET policies. VET has an important role to play by training younger and older individuals to acquire appropriate skills and work-related competences, increasing worker motivation and satisfaction as well as increasing productivity to achieve economic growth (Cedefop, 2014a). Employability and promoting social cohesion are the dual objectives of VET according to the Bruges Communiqué on enhanced European Cooperation in VET for the period of 2011-2020. VET should offer attractive and challenging career opportunities to young people, as well as adults, men and women, people with high potential, and to those at risk of exclusion (Bruges Communiqué, 2010).

In 2015, ministers responsible for VET from EU countries, EU candidate countries and European Economic Area, as well as social partners met in Riga to decide on a new set of deliverables in the field of VET for the period of 2015 – 2020, based on the review of deliverables defined in the Bruges communiqué of 2010. In Riga Conclusions (2015), the importance of investment in VET to raise employability of people, help to reduce skills’ mismatches and to allow for smoother transition into the labour market on the one hand, and to

promote personal development of individuals, was stressed. Out of the five mid-term goals for VET set in the document, four are related to a better link between VET and labour market and graduate employability: promoting WBL and developing quality assurance mechanisms with a view to develop high quality and labour market relevant VET, and to ensure flexibility and permeability in VET, guidance and validation of non-formal and informal learning, as well as to strengthen the key competences with a view to facilitate long-term employability and adaptability to evolving skill needs.

In Latvia, employability of graduates is a politically important issue irrespective of education type and level. Competitiveness of graduates in the labour market forms part of the vision towards 2020 in the National Development plan (2012). The relevance of VET to the labour market needs is an important priority in the reforms of the VET system which have envisaged enhanced employer involvement and restructuring of VET programmes to ensure they are up-to date and demanded in the labour market (e.g., Ministry of Education and Science, 2009, 2014a; Cabinet of Ministers, 2010, Cabinet of Ministers, 2015, Saeima, 2012). The process of reforming VET started in 2009 when a policy paper for raising attractiveness of VET and facilitating involvement of social partners (Ministry of Education and Science) was adopted by the Cabinet of Ministers. An ESF project (2010-2015) was used to implement proposed changes in VET, for example, to develop sectoral qualifications, to implement sectoral experts' councils, to develop module-based education programmes, update occupational standards and qualification exams, approbate recognition system of qualifications acquired outside formal education. A number of projects to continue VET reform were also implemented during the next EU funds planning period (2014 – 2022). The proposed measures are useful for better integration of VET graduates into the labour market, as well as raising prestige of VET. As demonstrated by the data about employment of recent VET graduates (see the following section), a lot still has to be done to promote better transfer from VET to the labour market. Ensuring long-term employability of graduates throughout changing labour markets, however, is not directly addressed within the reforms. Political agenda of education reforms offer one main remedy to the problem of maintaining employability in the long-term – enhanced participation in lifelong learning (Ministry of Education and Science, 2013). While lifelong learning without any doubt is a very important component in the process of facilitating graduate employability, this research aims at expanding the list of possible solutions, especially when it comes to the role of initial VET. Moreover, this research focusses not just on the national policy making level, but also management level of VETIs, by analysing VET management processes and offering practical solutions to real problems at grass-roots level.

1.2. Labour Market Demand for VET Qualifications in Latvia

The labour market demand for highly qualified specialists in Latvia will continue to grow driven primarily driven by the demand for labour in manufacturing and services, in particular, business services, especially to ensure the replacement of current workers (Ministry of Economics, 2015, 2016). Similar trends can also be observed in the EU (Cedefop, 2010; Cedefop, 2012a). At the same time, a significant proportion of the economically active population in Latvia has obtained only either general secondary education (23.3 %) or primary education (9.1 %) (Ministry of Economics, 2016, 35). Compared with other EU countries, Latvia has the sixth highest proportion of 30-34-year-olds, who have attained only general secondary education as their highest level of education (European Commission, 2015, 65).

According to the forecasts of the Ministry of Economics (2018, 78-79), there will be the following skills mismatches by 2025:

- a severe shortage of workforce with secondary VET qualifications (in all fields of education, but especially pronounced in engineering and manufacturing);

- a surplus of workers without qualification and skills. More than 2/5 of young people obtain only general secondary or primary education, but the labour market demand for this education will only decrease in the future;

Similar tendencies in the labour market are also confirmed by other researches (e.g., NK Konsultāciju birojs, 2014; SIA Dorus, 2013; Project and Quality Management Ltd., 2013) and employer surveys (e.g., Līce, 2016). Projected skills forecasts and rapid ageing of workforce with vocational qualifications serves the basis for political attention paid to VET system in recent years.

1.3. Employability of VET Graduates in Latvia

Even though VET qualifications are highly demanded in the labour market, transition from VET to the labour market is not as smooth as it should be. According to the surveys of the Ministry of Education and Science, since 2016, less than 60 % of recent graduates from VET programmes (financed by public funding: state budget or ESF) work or continue their education in the field of their education (Table 1.2). The nNumber of students continuing their education at a higher level is included in this number as well; both, as both, employment in the relevant field and further studies should be considered a successful outcome.

Also, the number of unemployed young people (of age 15 – 24) with vocational qualification is twice as high as the number of young people with higher education (Employment Agency of Latvia, 2016). This indicates that currently employability of recent VET graduates is not sufficient in Latvia.

Table 1.2
Employment Status of Recent Graduates from VET Programmes

Status	Graduated in 2014/2015 study year[1]	Graduated in 2015/2016 study year[2]	Graduated in 2016/2017 study year[3]	Graduated in 2017/2018 study year[4]
Work in the field of their education	47.9 %	57.6 % (work or study)	59.0 % (work or study)	59.07 % (work or study)
Continue education in the field of their education	17.5 %			
Work or continue their education in the other field	17.8 %	24.1 %	23.0 %	24.32 %
Work abroad	6.0 %	6.3 %	7.0 %	6.95 %
Do not continue education and do not work	10.7 %	12.0 %	11.0 %	9.78 %

1 Survey covers 38 educational institutions, 7004 graduates
2 Survey covers 38 educational institutions, 6096 graduates
3 Survey covers 30 educational institutions
4 Survey covers 30 educational institutions
Source: Created by author, data Ministry of Education and Science, 2015, 2016, 2017, 2018

The low employment level of recent graduates does not necessarily indicate their low employability, reasons for this might also be deeply rooted in the Latvian labour market, for example, unattractive work positions for young people and low salary level in certain industries and regions, especially if compared with career opportunities abroad. Other explanations for inability of recent graduates to find appropriate work positions might be recruitment practices of employers, weak tradition of co-operation between VETIs and employers and low degree of importance attributed by employers to the educational diploma obtained. For example, it is much more common in Latvia that employers recruit employees with the help of recommendations by relatives, friends and acquaintances rather than through cooperation with educational institutions by offering work placements (Līce, 2016; Project and Quality Management Ltd., 2014). Offering work placements or WBL to students is an important recruitment practice only to a portion of companies which are strongly engaged in cooperation with VETIs, but not on a system's level. A national survey of employers in Latvia (Klāsons & Spuriņš, 2015) showed that work placement plays only a moderately important role in recruitment of new employees – 22 % of employers indicated that they take into account whether the candidate has had work placement experience. At the same time, real work experience plays a significantly more important role (77 %), from which one could conclude that employers do not consider work placements as an alternative to work experience. Obtained education is not as important as work experience (50 %) and almost as important as references

(49 %) (Klāsons & Spuriņš, 2015). Informal, untransparent recruitment practices, as well as comparatively low profile of experience gained during work-placements in the eyes of employers might make it more difficult for recent graduates to find first job in their occupation.

Concerning the long-term competitiveness of graduates with vocational qualifications in the labour market, the statistics of unemployed people indicate a worrying trend: more than 1/3 of unemployed people have vocational qualification in Latvia (Employment Agency of Latvia, 2016, 2018). As the majority of them (more than 73 %) are at least 40 years old, more than half – at least 50 years old (Employment Agency of Latvia, 2016, 2018), it is a clear indicator that vocational qualifications are becoming outdated and their competitiveness in the labour market diminish with time, especially if compared to the higher education qualifications (European Commission/EACEA/Eurydice, 2015; European Commission, 2015; Employment Agency of Latvia, 2016; Eurostat, 2015; Quintini, 2014). Even though these are past data about the qualifications obtained during the period of Latvia being part of the Soviet Union, it is important to pay attention to the current VET system and to raise a question of whether or not it will ensure better competitiveness of its graduates in the long term. This question is of particular relevance due to increasingly changing labour market needs.

Data indicate that not just employment rate but also other labour market outcomes are worse for VET graduates in comparison to higher education graduates: lower salary level, and even lower job satisfaction level (European Commission, 2016a; Eurostat, 2015; Quintini, 2014). Moreover, adults with a secondary level education do not participate in adult learning as actively as those with higher education which is critically important for employability in the context of a rapidly changing labour market. This is a consistent trend across different countries, including Latvia, where 54 % of people with higher education degree participated either in formal or non-formal education in 2011 while only 25 % - with secondary level education (general or vocational) (Central Statistical Bureau, 2013).

Conclusions

This chapter has provided the context for the research. Employability of VET is essentially relevant to young people, adults, employers and policy makers in Latvia and internationally. Even though VET qualifications are highly demanded in the labour market in Latvia, the data about labour market outcomes of VET graduates indicate towards significant shortcomings in employability of VET graduates, especially later in their career. It is highly problematic as the general perception that obtaining vocational qualification ensuring a job is one of the factors which attracts young people to VET (Cedefop, 2014a). Indeed, vocational secondary education in Latvia has suffered from a negative image for many years (European

Commission, 2011a; Ministry of Education and Science, 2009), therefore, this research aims at investigating and looking for appropriate opportunities for Latvia to manage the facilitation of employability of VET graduates both in the short term and in the long term. Further on, the author's analysis of the theoretical approaches in relation to the notion of employability and factors facilitating employability are presented.

CHAPTER 2. FACTORS FACILITATING EMPLOYABILITY OF GRADUATES

In this chapter, the author investigates the theoretical approaches about the notion of employability, outlines the link between VET and employability, showing how one affects the other. An overview of different types of factors influencing employability and their models is provided. Personal attributes which determine employability are analysed in detail.

2.1. Contentious Notion of Employability and its Development

Despite the large number of studies, graduate employability appears to be suffering from the lack of theoretical control and politicization (Sumanasiri, Yajid, & Khatibi, 2015). It has been shown that different stakeholders like faculty, employers and students understand the concept of employability differently (Sumanasiri et al., 2015; Wickramasinghe & Perera, 2010). Thus, employability is a contentious concept with a plethora of different interpretations. Smith (2014) explains it by the lack of theoretical "control" over the construct, in which members of the research community agree to limit the definition, the politicisation of the construct – with many vested interests, from government, industry and the education sector, all vying for their favourite sub-concept, as well as by the generality of the notion itself.

Historically, the notion of employability has evolved along with the changing career and employment models (Clarke, 2008). The concept of "employability" came into use at the beginning of 20th century when, according to Mansfield (2001), it was introduced by Beveridge in 1909. The concept was further developed in the US where initially it described the availability of able-bodies employees to distinguish between people eligible for relief (unemployable) - e.g. the elderly - and people looking for work (employable) (de Grip, Van Loo, & Sanders, 2004).

In the 1950s and 1960s employability was understood in terms of individual potential to become employed, and it described the distance which separated different individuals, first of all, with special needs, and later others, from regular employment (de Grip et al., 2004). During industrialization, with an increase of manufacturing and financial sectors, organisation-type careers appeared with long-term employment contracts (Clarke, 2008).

In the 1970s concerns increased about the growing imbalance between the slowly growing labour market demand for skilled specialists and the rapidly expanding number of higher education graduates, actualizing the potential problem of the need for retraining. In the 1980s, the trust into labour market forecasts decreased and therefore warnings of approaching

disaster due to too rapid of an increase in higher education availability lost its topicality (Teichler, 1999).

In the end of the 20th century the career and employability models were restructured due to the pressure of increasing competition, and the organisations which had so far offered hierarchical career development opportunities throughout life, began to offer short-term employment contracts (Clarke, 2008). Interest in the employability of graduates in 1990s was associated with a high level of unemployment for graduates, the demand for better competitiveness of developed countries and the interest in the economic return on investment in higher education (Prokou, 2008). The transition of graduates from education to labour market became topical. Rapid technological developments pointed to the fact that graduates could no longer count on the work in the same profession and could expect a small number of job-changes throughout life; meaning they should become more flexible and better prepared for lifelong learning. Finally, it formed the view that professional competence was no longer based only specific academic and professional knowledge. Students had to learn and apply knowledge, develop their social and communication skills, values and attitudes necessary for successful work (Teichler, 2007).

Around 1990, the concept of employability was further broadened by the incorporation of other contextual factors (Green et al., 2013), which depending on historical, political and philosophical context were important, for example, the labour market situation, knowledge of the labour market, and company policies. Outin (1990), for instance, saw employability as a construct of four elements that influence one's chances to become and/or remain active on the labour market, namely: individual qualities, occupation-specific skills, labour market situation, and government and employer training policies. Employability thus became a shared responsibility of government, employers/companies and the individual employee (de Grip et al., 2004) which has created the need for the management of employability promotion.

During the last decade, employability gained wide popularity on an international level. Its growing importance is reflected not only in scientific publications, but also in policy planning documents (de Grip et al., 2004). If initially employability was mainly seen as an issue related only to school drop-outs and the unemployed, and to facilitate a more inclusive labour market for vulnerable groups, then recently the topic has attracted new interest to ensure employment in changing structure of organisations, career and labour market conditions (Cartwright & Holmes, 2006; Forrier, Verbruggen, & De Cuyper, 2015; Korsakiene & Smaliukiene, 2014). Organisations continue to become smaller, less bureaucratic, more services get outsourced, which generally reduces the long-term stability and increases importance of

flexibility and employability (Clarke, 2008). It is notable that facilitating competitiveness of individuals in the labour market has become not just a condition of attractiveness for educational institutions, but in many cases also as the way employers attract talents, by inviting specialists to join the company to "achieve their full potential" and by creating company values accordingly (Tan Siew & Crowell, 2015).

In a way different countries or international networks view employability, a lot depends on a political, and a historical context, including the view on the role of education. Where the view that education should ensure development of thinking rather than educate specialists is prevailing, more general cognitive, social and communicative skills are stressed in education systems. However, the necessity to acquire specialised knowledge and its application is more important, where it is expected to "prepare" graduates for specific professional sectors. Countries with a more "general" approach, like Anglo-Saxon countries, teaching "specialists" is considered too narrow (Teichler, 1999). For example, the US has a strong belief in self-regulation, on the contrary EU countries more frequently use different macro planning, including education, which is important to achieve balance between social, economic and cultural policies (Teichler, 2007). East European countries during the Soviet Union, however, had a strong commitment and actual power to control economic production, and the education and production goals were integrated by expanding skill-oriented trade schools and technical secondary schools (known as Technicums) (Benavot, 1983, p. 69). The "Manpower planning" model is applied in a number of EU countries including Greece, however rapid technological changes made it clear that it was impossible to predict the kind of jobs that would exist after some time, even after only five years (Prokou, 2008).

In contemporary research and education policy making, employability can be viewed as the employment of graduates within particular time after graduation, as a host of person-centred constructs (e.g., skills and competencies), or as a constant, life-long learning process in which personal adaptation to changing labour market and societal conditions take place.

Employability within the Context of Job Transitions

According to Nicholson (1984), the interpretation of employability as employment is based on the idea that the fact of gaining employment indicate individual's chances in the labour market. Job transitions foresee any changes in the status of employment or any significant changes in the content of work. Changes in the employment status can take place within an organisation (internal job transitions) or between different organisations (external job transitions). The indicators used to describe employability in this context are changes in the employment status (Forrier et al., 2015), for example, employment of graduates within a

specific time after graduation. This type of interpretation of the notion of employability was widely accepted before the 1970-ties when employability was understood as participation in the labour market, accompanied by flexibility and adaptability of the society. The goal of the governments was to achieve full employment and to reduce collective burden (Van Der Heijde & Van Der Heijden, 2006). Indicators of this type are also very easy to measure and use in international and longitudinal comparisons. For example, the EU has adopted the benchmark on employability, which is defined as the share of young people employed among 20-34 years old, who graduated one, two or three years before, and are not currently in education or training (Council of the European Union, 2012). It is computed using the annual Labour Force Survey data.

Interpreting employability as employment is rooted in logical positivism – a philosophical position asserting that foundations in the form of logical proofs and empirical bases can be built. Brown (2002) has summarised the assumptions of logical positivism as follows:

- People can be studied separately from their environments; people can be subdivided into categories for study.
- Human behavior can be objectively observed and measured; behavior operates in a lawful, linear fashion; cause and effect can be inferred.
- The tradition of the scientific method is the accepted paradigm for identifying facts about human behavior (Brown, 2002, pp. 12-13).
- The contexts (environments) in which people operate are considered neutral or relatively unimportant; thus, the focus of inquiry should be the observable actions of human beings.

As it pertains to employability, the error is in the assertion that the environement is neutral (Brown, 2002). Therefore, research utilizing this simplistic interpretation of employability is widely criticized by the scientific community arguing that this view does not consider external factors which affect employability and that it is not possible to conclude the impact of education. As Harvey (2001) has formulated, it implies a “magic bullet” model of the impact of education on the employment as there is a presupposed causal link between the employability opportunities and the individual employability of the graduate (Harvey, 2001). According to Teichler (1999), the links between study and employment cannot be solely explained as an interaction between a “homo economicus” student and a “rational actor” employer, and potential diversity of employers and recruitment practices should be respected. Recruitment is not always rational and can be influenced by the prestige of educational institutions, study form, graduate location and mobility options, work experience, age, ethnicity, gender and

socioeconomic background (Harvey, 2001). Employment also depends on other factors, for example, personal attributes, the social capital of the graduate or his/her family, obtained outside of education or conditions in the labour market. The problematic aspects of studies ignoring external factors such as labour market conditions are highlighted also by a number of other authors (e.g. Clarke, 2008; Sumanasiri et al., 2015).

Harvey (2001) also pointed out to other deficiencies of interpreting employability as immediate employment after graduation: ignoring the quality of employment, for example, the job satisfaction, the relevance to education level and the area or the remuneration level's compliance to expectation or average rates, as well as the graduate's ability to maintain and regain employment in the long term and satisfaction about career development.

Employability as a Host of Person-Centred Constructs

According to Clarke (2008), interpretation of employability as a combination of personal attributes is based on the assumption that the strengths of the person increase the person's opportunities in the labour market, making graduates more likely to gain employment, although not guarantee it, as well as to help to effectively cope with changes in the labour market. The "employability skills model" has been the focus of many subsequent studies due to its simplicity and practicality. The research employing this approach analyses the demand by employers for specific knowledge, skills and competences and the extent to which graduates have them in the moment of transfer to the labour market. Conclusions are made about performance of educational institutions in reaching the goal of ensuring graduates possess these knowledge, skills and competences as demanded by the employers. For example, the European Commission (2011) stresses that the knowledge economy needs people with the right mix of skills, meaning, "the transversal competences, e-skills for the digital era, creativity and flexibility and a solid understanding of their chosen field (such as in Science, Technology, Engineering and Maths)."

Overreliance on skills has been criticized as a main weakness of of this model, arguing that employability skills are not adequate for meaningful, sustainable employment (Yorke & Knight, 2004; Sumanasiri et al., 2015). Wider critiques of skills policy (Wolf, 2007) have tended to challenge naive conceptualisations of "skills", bringing into question both their actual relationship to employee practices and the extent to which they are likely to be genuinely "demand-led" (Tomlinson, 2012).

Yorke and Knight (2004) argue that employability should be taken to be a more complex construct than those of "core" or "key" skills. It connects with a range of discourses and has many facets which range from understanding of one or more subject disciplines to "soft skills"

(such as working effectively with others). It also encompasses both academic intelligence and "practical intelligence" (Yorke & Knight, 2004). Thus, Yorke and Knight offer employability definition which still focusses on person-centred constructs but at the same time reflects the complexity of the concept: *"(Employability is) a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy"* (Yorke & Knight, 2004, 3). By mentioning understandings and personal traits in addition to skills, as well as working life success in a broad perspective, this definition encompasses both the short and the long-term perspective.

Pool and Sewell (2007) have elaborated the CareerEDGE employability model that successfully combines person-centered constructs and attitudes and perspectives of an individual. The model explains the way in which five factors, namely, career development learning, experience, degree subject knowledge, understanding and skills, generic skills, and emotional intelligence can lead towards employability through a complex interaction with social concepts such as self-esteem, self-efficacy, and self-confidence, involving reflection and evaluation (see Annex 3, Figure A3.6). The CareerEDGE model has also been operationalised by Pool, Qualter and Sewell (2014) by exploring the factor structure of the model's employability development profile and proposing a list of 26 personal attributes. This made the CareerEDGE model useful for further research on employability, and it is also used in the empirical part of this research.

Employability as a Lifelong-Learning

According to Harvey (2005), employability "is about developing attributes, techniques, or experience for life. It is about learning, and the emphasis is less on "employ" and more on "ability." In essence, the emphasis is on developing critical reflective abilities, with a view to empowering and enhancing the learner. Employment is a by-product of this enabling process." He also criticises (2001) prevailing tendency to create employability measures based on outcomes which results in employability as being construed as an institutional achievement rather than the propensity of the individual student to get employment. This interpretation of employability stresses the ever-changing nature of individual employability. Employability should be seen rather as a process than a result itself. From this perspective, lifelong learning becomes a lifestyle, an integral part of personal journey through education and employment experience, not just an occasional event in one's life after graduation. Accordingly, in the process of education management, the importance of lifelong learning should not occur just after student graduation while planning offer of adult learning courses but should be considered

also in initial education. Already in initial education, certain abilities, attitudes and motivation can be developed to adapt and to pursue knowledge for either personal or professional reasons throughout life.

The importance of long-term perspective and changing labour market conditions are also stressed by ILO which defines employability as transferable competencies and qualifications that enhance an individual's capacity to make use of the education and training opportunities available in order to secure and retain decent work, to progress within the enterprise and between jobs, and to cope with changing technology and labour market conditions (ILO, 2004). The long-term approach to employability is also important in the Bologna process: the communiqués signed by the ministers responsible for education stress the need to ensure long-term competitiveness of graduates in the changing labour markets, characterised by technological developments, the emergence of new job profiles, and increasing opportunities for employment and self-employmen by ensuring competencies suitable for entry into the labour market which also enable them to develop the new competences and by professional development throughout careers (Bucharest Communiqué of 2012; Yerevan Communiqué of 2012).

The long-term perspective can be respected by including the ability to adapt and other relevant abilities, competencies and attitudes as important employability elements. For example, Fugate, Knicki and Ashforth (2004) argue that employability represents a form of work specific (pro)active adaptability that consists of three dimensions—career identity, personal adaptability, and a social and a human capital. According to Forrier (2015), adaptability is the dynamic component with a strong focus on individual progress. It refers to the combination of willingness and ability "to change behaviours, feelings and thoughts in responses to environmental demands". Ability refers to more generic competences, namely the idea that workers can adapt to all kinds of changes, from relatively modest (e.g., changes in the content of work) to more profound changes (e.g., organizational restructuring or downsizing) (Forrier, 2015).

An additional important element to be considered is individual satisfaction that stems from the fact that the individual can be successful but not necessarily satisfied in their employment. Pool and Sewell (2007) define employability as *"having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful"* (Pool & Sewell, 2007). As Hillage and Pollard (1998) suggest, "*in simple terms, employability is about being capable of getting*

and keeping fulfilling work." This simple definition is also fully appropriate for this dissertation.

Interpreting employability as lifelong learning or as a combination of personal attributes, provided that they include elements of sustainable employability, is rooted in constructivism – a philosophical position asserting that people actively construct their own reality; they are not simply passive recipients of it (Brown (2002, p. 13). According to Brown (2002, p. 14), constructivism is based on the assumptions that all aspects of the universe are interconnected; people cannot be separated from their environments and that their behaviour can only be understood in the context in which it occurs; individuals define themselves and their environments as they understand them and participate in these events (Brown, 2002, p. 14). These notions include the importance of individuals becoming more self-directed in making of the place of work in their lifes and managing their careers (McMahon & Patton, 2002). Principles of constructivism reflects a similar world view as system theory (McMahon & Patton, 2002) and encourage to approach employability holistically, encompassing the elements of the social system. The overview of the different interpretations and usages of the concept of employability discussed in this chapter is provided in the Table 2.1.

Table 2.1
Overview of the Interpretations of the Concept of Employability

Employability as employment	Employability as a host of person-centred constructs (combination of personal employability attributes)	Employability as a lifelong learning, a process geared towards achieving personal potential and satisfaction
Based on logical positivism		Based on constructionism
Employment within certain time after graduation (Council of the European Union, 2012). The quality of employment in term of satisfaction, relevance to the field and level of education can be used as additional indicators (Harvey, 2001). Criticism: Employment does not depend only on education obtained but also on other factors (Harvey, 2001; Teichler, 1999).	Wide range of combinations of knowledge, skills, competencies, attributes valued in the labour market (Fugate, Kinicki, & Ashforth, 2004; Yorke & Knight, 2004). Criticism: Based on (wrong) assumption that employability is an institutional achievement rather than the propensity of the individual student to get employment (Harvey, 2001). There is no clear, united classification or methodology (Tomlinson, 2012). Employment is not guaranteed anyway. Labour market conditions change over time (Clarke, 2008; ILO, 2004). The long-term perspective can be respected by including personal employability attributes in the model which facilitates sustainable employability and active role of individual in the process geared towards achieving personal potential, e.g., ability to adapt and motivation (Forrier, 2015; Fugate, Knicki, & Ashforth, 2004; Pool, Qualter & Sewell, 2014).	An enabling process which includes lifelong learning. Continues to develop as the individual continues to learn throughout his/her career (Harvey, 2005). Employability reacts to the changing needs of the society and the labour market (Forrier, 2015; ILO, 2004). It is about being capable of getting and keeping fulfilling work (Pool & Sewell, 2007; Hillge & Pollard, 1998) and individual satisfaction (Pool & Sewell, 2007). Criticism: Difficult to measure.

Source: Author's analysis

The Table 2.1. demonstrates that the field of employability theory development is characterised by a variable and complex theoretical base. As seen in the table, the interpretation of employability as a combination of personal employability attributes can be based on either logical positivism or constructionism philosophy. A prerequisite for a second approach is that personal attributes which ensure sustainable employment in the long-term are included in the employability model. In the context of this research, both perspectives are important for educational policy makers and managers, the short-term goal of initial job acquisition, and the long-term goal of achieving the ability to maintain and change jobs, ensuring career development and achieving personal potential. Therefore, this research is based on the of concept of employability defined as the capability of getting and keeping fulfilling work (Hillage & Pollard, 1998) and on the CareerEDGE employability model (Pool, Qualter, & Sewell, 2014; Pool & Sewell, 2007) which combines personal attributes enabling individuals to do both: get into employment and to progress during their career, achieving personal potential. This approach encourages the education managers to think in circular rather than linear terms, and to consider the importance of the personal issues and context in developing employability.

2.2. Facilitating Employability in VET

The human capital theory suggests that an individual's human capital, that is, her or his qualifications, knowledge, skills and experience are likely to increase earnings and/or productivity. Education and competence development are the most important investments in human capital (Wittekind et al., 2010). Education quality – measured by what people know, are able to do etc. – has powerful effects on individual earnings, on the distribution of income, and on economic growth. The accumulated evidence from analyses of economic outcomes is that the quality of education – measured on an outcome basis of cognitive skills – has powerful effects (Hanushek, Woessmann, & Zhang, 2011). The distribution of skills in society appears to be closely related to the distribution of income, and also that economic growth is strongly affected by the skills of workers. Although other factors also have strong effects, for example, well-functioning economic institutions such as established property rights, open labour and product markets, and participation in international markets, nonetheless, existing evidence suggests that quality of education independently affects economic outcomes even after allowing for these other factors (Hanushek et al., 2011).

A strong relationship between skills and employment of adults has been proven by the OECD's Survey of Adult Skills (PIAAC) (Quintini, 2014, Quintini & Martin, 2006): for example, only 57 % of those with 1st skills level or lower were employed, at the same time

among those who achieved 4th or 5th level (the most proficient individuals) – 79 % were employed. Skills level is also related to remuneration level: individuals in PIAAC study countries with 4th or 5th level skills earned on average 60 % more than those with 1st level skills (Quintini, 2014).

Eichhorst, Rodrigues-Planas, Schmidl, and Zimmermann (2015) offer the typology of VET, depending on effectiveness of different type of VET in ensuring employability of graduates:

1. Vocational and technical schools providing education not necessarily supplemented by WBL. They normally ensure both secondary general and vocational according to occupations. Skills acquired in such schools are normally general and applicable in wide range of employers (for example, in Spain);
2. Formal apprenticeships in companies, complemented by theoretical studies in education institution (for example, in UK, US, Australia);
3. Dual VET systems in which theoretical studies are combined with WBL at companies (for example, in Austria (around 40 % of all graduates), Denmark, Germany and Switzerland (around 80 % of all school graduates)).

They argue that the first type of VET, which corresponds to the system which is prevalent in Latvia, is usually ensured mostly for social goals – to include students with lower achievements in learning process by the help of practically oriented education. In such systems, young people have to choose among two learning paths: academic and vocational, the first of which is more prestigious but the second one may limit opportunities to study at a higher education. Dual VET, in contrast to apprenticeships in companies, ensures a high degree of VET formalization, ensuring education in accredited occupations, involvement of social partners in formulating demand and monitoring the quality of VET system, both in the school and in the companies. Results indicate that VET is a valued alternative to general education and that the use of apprenticeships combined with institutional learning tends to be more effective than school-based VET (Eichhorst et al., 2015).

A better transition to the labour market from VET programmes in comparison to those who hold an upper secondary or post-secondary non-tertiary qualification from the general pathway and do not continue into higher education is confirmed by employment statistics, for example, as depicted in Figure 2.1.

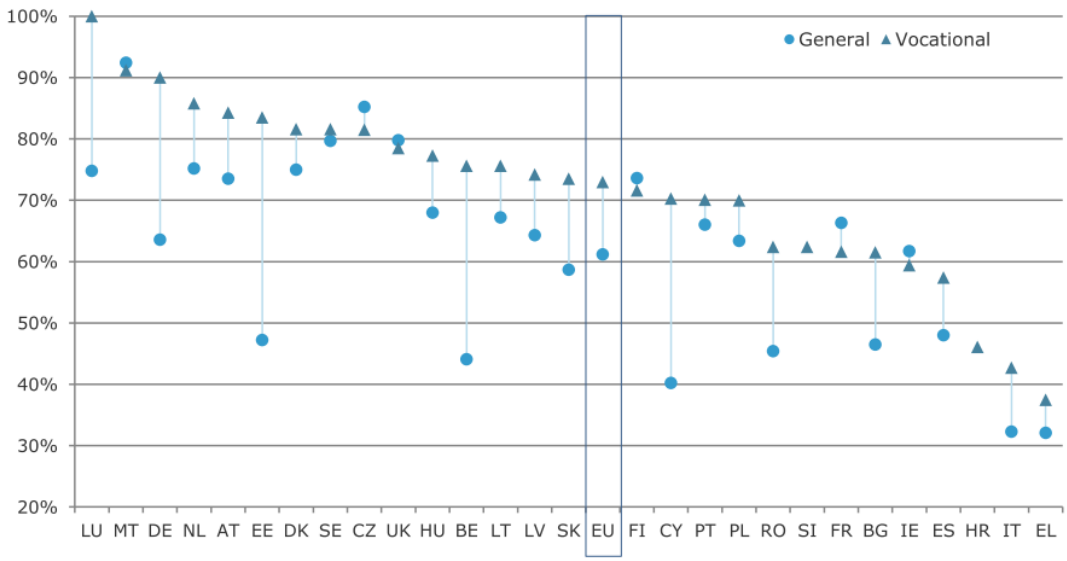

Figure 2.1. Employment rate of recent upper secondary and post-secondary non- tertiary graduates (persons aged 20 to 34)
Source: Eurostat. Reprinted from Education and Training Monitor 2016 (p. 68), by European Commission. Copyright 2016 by European Union. Reprinted with permission

Although VET has better labour market outcomes than general education, Eichhorst et.al. (2015) argues that VET should not be seen as panacea to fight youth unemployment and should be seen just as complementary to structural reform policies. VET is appropriate to prepare young people for certain types of jobs and is less appropriate for specific high-tech sectors and to access highest level managerial level jobs in both public and private sectors, where general academic training is more relevant (Eichhorst et al., 2015).

A recent line of research has focused on the life-cycle impact of VET, motivated by the returns to VET potentially varying at labour market entry compared to returns after spending several years in the labour market (Eichhorst et.al., 2015). While some studies support conjecture that general education provides a more solid base for such adjustments (e.g., Hanushek, Woessmann, & Zhang, 2011), others suggest that VET is better than pure on-the-job (unskilled) training (Jérôme, Dustmann, Meghir, & Robin, 2006). The long-term counterfactuals of low-skilled individuals with general or VET considering the risk of early unemployment have not yet been well investigated and future evaluations are needed to study the long-run consequences (Eichhorst et al., 2015).

According to Perez, Garrouste and Kozovska (2010), educational systems can influence creation of human capital, measured through learning outcomes in terms of formal qualifications, facilitate job search process by providing guidance and counselling and making qualification systems more understandable to employers (Perez et al., 2010). Thus, education can ensure support for individual employability in the following three phases (Perez et al., 2010), from the perspective of an individual:

1) Preparation for employment (irrespective of the level attained, all young people should have an opportunity to prepare well for their future entry and progression in the labour market).
2) Transition from education to employment (refers to the end of the "preparation for employment" phase. It should, for example, include career guidance and counselling; all qualifications should be transparent and understandable to potential employers).
3) Stay in employment and progress in career (refers to adult participation in training and education interspersed throughout their working lives). Education and training systems should be open to and, indeed, reach out to adult learners.

It is important to note that the transition through the different stages of employment is not a linear process. Going back to education and preparing for employment can occur at different stages of one's life.

2.3. Classification of Factors Facilitating Employability

For this research, it is important to distinguish between the factors which can, and which cannot be influenced by educational institutions. External factors, although they cannot be directly influenced by education institutions, cannot be ignored as they can significantly affect the employability and are important for understanding the complex nature of employability. Two issues relevant for the policy making and education management in considering factors which can be influenced by education institutions: *which* learning outcomes educational institutions should provide, and *how* educational institutions can best provide them. These two questions represent the outcome-oriented factors and the process-oriented factors respectively. Outcome-oriented factors describe a set of personal attributes, personal achievements which could be skills, experience, understandings, attitudes, that are important for employability. Process-oriented factors, however, refer to the education management processes and measures educational institutions can take to facilitate employability. The classification of employability factors used in this research is presented in Figure 2.2.

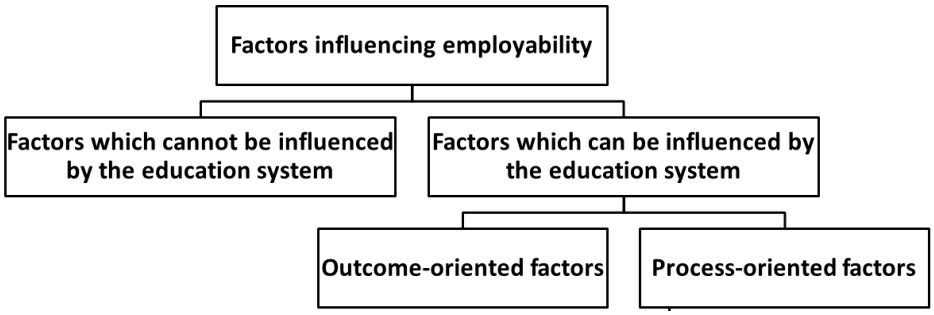

Figure 2.2. Classification of employability factors
Source: Author's analysis.

The Table 2.2 presents the examples of factors, classified according to these groups. Although in few cases the factors might be relevant to several groups, the author made the decision about division according to the extent and directness of their impact.

2.4. Employability Models

Employability researchers offer different combinations of factors, combined into employability models. The most well-known of these are described in Appendix 3. The factors included in these models usually represent *outcomes* rather than *processes.* The overview of the different employability models and the most frequently mentioned outcome-oriented factors included therein, is provided in the Table 2.2.

Table 2.2
Overview of Employability Outcome-oriented Factors in Theoretical Employability Models

Authors, Year (Employability model)	Education, Disciplinary Knowledge and Skills	Work and/ or Life Experience, Use of Skills	Opportunity/ Workplace Awareness	Career Development Learning, Career Management skills, Career Identity	Presentation, Display of Skills	Generic Skills/Competencies	Adaptability	Teamwork	Communication	Problem-solving	Leadership	Social and Human Capital	Decision Making	Self-competencies, Efficacy and Beliefs, Metacognition, Reflection	Attitude, Motivation, Willingness, Aspiration	Personal Traits, Emotional Intelligence
Hillage & Pollard, 1998				x	x											
Bennett, Dunne, & Carre, 1999	x	x	x			x										
Law & Watts, 2003 (DOTS)			x		x								x	x		
Fugate, Kinicki, & Ashforth, 2004				x			x					x				
Yorke & Knight, 2004 (USEM)	x		x			x								x		
Bridgstock, 2009	x	x		x	x	x								x		x
Copps & Plimmer, 2013 (JET)	x	x						x	x	x	x	x		x	x	x
Pool & Sewell, 2007 (CareerEDGE)	x	x		x		x								x		x
Pool, Qualter, & Sewell, 2014 (operationalised CareerEDGE model)	x	x		x	x	x	x	x	x	x			x	x	x	x

Source: Author's analysis

Considering all employability models described in the Table 2.2 and Appendix 3, the author decided to use the CareerEdge employability model (Pool & Sewell, 2007; Pool, Qualter, & Sewell, 2014) as the basis for empirical research about outcome-oriented employability factors in Latvia. As it is descripted in Chapter 2, the CareerEDGE employability model encompasses both, short and long-term approaches to employability interpretation by combining skills, competencies, experience, attitudes and personality traits which are important for sustainable employability. Moreover, this model had been empirically tested and operationalised into the list of 26 personal attributes and it is widely accepted among researchers.

2.5. Personal Attributes Determining Employability

This section describes personal attributes determining employability or outcome-oriented factors, which are considered in the CareerEDGE model (Pool & Sewell, 2007; Pool et al., 2014) and which might be important for the Latvian labour market, considering results of the preconception phase of the research. Figure 2.3 summarises the personal attributes described in this section.

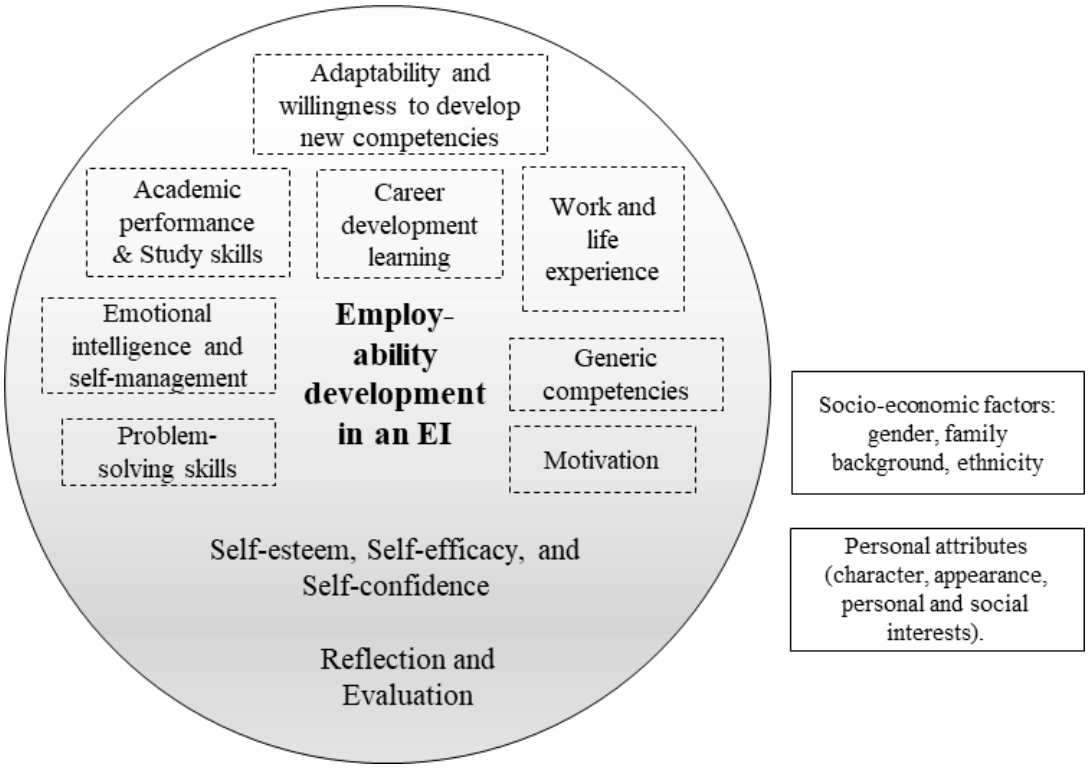

Figure 2.3. Personal attributes (outcome-oriented factors) determining employability
Source: Author's analysis

In this figure, the personal attributes that are framed with a broken line, can be influenced by education, and those with a continuous line – are external factors that cannot be influenced in education. The development of personal attributes takes place through a complex interaction with self-esteem, self-efficacy, and self-confidence, involving reflection and evaluation.

The situation in Latvia regarding implementation of these factors is described in Section 3.2 in relation to implementing VET management processes. It should be noted that considering the dynamic nature of the labour market, the personal attributes and their importance might change over time.

Academic Performance and Study Skills. In a post-industrial society in which the service sector takes on a prominent role, knowledge becomes a valued form of capital. The tasks of the knowledge workers are complex, non-repetitive and non-routine, and therefore cannot be replaced by rule-based information and communication technology (ICT). This also implies that knowledge workers become more specialized and need to work with other specialists. A typical characteristic of knowledge work is a high level of unstructured decision making (Humburg, van der Velden, & Verhagen, 2013). Humburg, van der Velden and Verhagen argue that in order to successfully make unstructured decisions, a knowledge worker needs to:

1) be equipped with a body of knowledge related to the problem at hand,

2) be able to apply expert thinking, and

3) have broad academic skills (Humburg et al., 2013).

High academic performance is also related to the personality of a student. According to Ruge and McCormack (2017), students with proactive personalities and personal initiative achieve higher academic performance. Proactivity can be a valuable employability asset, which alongside academic grades, is important to some employers as well as students and universities.

Academic performance and study skills in the context of VET system in Latvia means both successful acquisition of both secondary general education and vocational qualification, which includes occupational theory.

Problem-solving skills. Oxford English dictionary defines *problem-solving* as "the process of finding solutions to difficult or complex issues." (Simpson, Weiner, & Oxford University Press, 1989). According to the Council of the EU (2018), problem-solving skills, along with critical thinking, ability to cooperate, creativity, computational thinking, and self-

regulation are more essential than ever before in our quickly changing society as they are the tools to make what has been learned work in real time, in order to generate new ideas, new theories, new products, and new knowledge (Council, 2018).

Problem-solving normally requires the use of a range of tools and information resources. The core characteristic of problem solving is that it is impossible for a person to achieve the goal through routine actions. In problem solving, one has to reflect on the situation in order to identify the proper arrangement of decisions and actions that may lead to a solution. It often involves interaction with other individuals, and thus communicating in spoken or written form (e.g. comprehending instructions, asking questions or explaining) may be one of the actions necessary to solve the problem. Tools and technologies can normally facilitate the resolution of the problems (OECD, 2012).

OECD PIAAC has assessed the problem-solving skills of adults in technology rich environments. PIAAC data comprise the most comprehensive source of information on European adults' skills to date as it covers 11 countries: Ireland, Finland, Norway, Netherland, Austria, Germany, Belgium, Poland, Czech Republic, Slovak Republic and Denmark. Analysis of PIAAC results, done by Hämäläinen, Cincinnato, Malin and De Wever (2014) provide interesting and valuable conclusions about the problem-solving skills in technology rich environments of adults with VET backgrounds:

- Among adults with VET education background, there is a tendency to have a lack of or low problem-solving skills in all 11 countries. In all 11 countries, adults with VET perform lower on average than adults with other educational backgrounds. Specifically, only a small minority of VET adults score on the highest level and 63 % or more of the adults with VET are below the moderate performance level.
- In all of the countries, more than 11 % of the VET adults are at-risk performers in problem-solving. The average difference between work-based and school-based VET is very small. There is no indication of an association between VET adults' problem-solving skills in TREs and education approaches (more work-based or more school-based) applied in Europe.
- When comparing VET adults to adults with at least an upper secondary education, the latter strongly outperform the vocationally trained adults in all 11 countries.
- VET adults are more likely, when compared to graduates from upper secondary school (or more), to be "at risk" or "weak" performers in problem-solving than "moderate

or strong performers", independently from the country of origin (Hämäläinen, Cincinnato, Malin and De Wever, 2014).

Problem-solving skills are closely related to other employability competencies. According to Council of the EU (2018), a problem-solving attitude supports the learning process and the individual's ability to handle obstacles and change. It includes the desire to apply prior learning and life experiences and the curiosity to look for opportunities to learn and develop in a variety of life contexts (Council, 2018). Low problem-solving skills of European adults with VET background might seriously affect their employability. There is no reason to assume that the situation in Latvia would be better than in countries analysed in PIAAC, on the contrary, low employability results point to similar problems.

Career Development Learning. According to Bridgstock (2009, 36), career management skills involve creating realistic and personally meaningful career goals, identifying and engaging in strategic work decisions and learning opportunities, recognising work/life balance and appreciating the broader relationships between work, the economy and society. Bridgstock (2009, 36) divides career management skills into two categories of competences: (1) self-management and (2) career building.

Self-management skills are essential in employability as they play a large part in determining which, to what extent, in what manner, when and where generic and discipline-specific skills are learned, displayed (e.g. in applying for a job) and used. Career building skills are the skills related to finding and using information about careers, labour markets and the world of work and then locating, securing and maintaining work, as well as exploiting career opportunities to gain advancement or other desired outcomes (Bridgstock, 2009). Therefore, these skills are involved in obtaining and maintaining work.

Bridgstock (2009, p. 38) has provided the following overview of what career-building skills include:

1. Familiarity with the industry – the opportunities and threats that exist and which factors are critical to success. This involves knowledge of "the rules of the game", including industry structure, beliefs, norms, values and culture, as well as labour market information, such as unemployment rates and median salaries.

2. Ability to effectively identify and choose the best opportunities for advancement in terms of geography, projects and role.

3. Knowing how long to stay in the role, when to exploit a new employment or training opportunity and the ability to move quickly once an opportunity arises.

4. Knowing how to effectively apply for and obtain work; representing one's skills and abilities in a way that is attractive to employers or clients.

According to Wittekind et al. (2010), information about the labour market and employment opportunities, or in other words, opportunity awareness, shows some overlap with job search effort which is a predictor of re-employment success. Information about the labour market can be obtained in different ways: through education, real life or work experience. Although education institutions are not able to reach into students' extra-curricular activities, they can help students recognise the significance of those activities (Yorke & Knight, 2004).

Boundary-less careers and increasing social and job-related insecurity requires not only acquiring specific career skills, but also defining that part of the world of work that fits in with his or her own identity, or in other words, acquiring a so-called "career identity." A career identity is a structure of meanings in which the individual links his own motivation, interests and competencies with acceptable career roles (Meijers, 1998). As Meijers specify, "the career identity is not the sum of those experiences but the assimilation of the experiences into meaningful or useful structures" (Meijers, 1998, 200). Career identity provides a strong cognitive and affective foundations for employability. By addressing "who I am or want to be" in the work domain, career identities delineate possibilities for the self at work. Career identities provide a compass for the individual, thereby offering a motivational component to employability (Fugate et al, 2014).

VET can be successful in ensuring career development learning by providing career guidance. The OECD offers the following definition of the career guidance: "Career guidance refers to services and activities intended to assist people, of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. Career guidance helps people to reflect on their ambitions, interests, qualifications and abilities. It helps them to understand the labour market and education systems, and to relate this to what they know about themselves." (OECD, 2004, p. 19). The activities of career guidance may take place on an individual or group basis and may be face-to-face or at a distance (including help lines and web-based services).

VET can also facilitate development of a career identity in students by providing work-related learning experiences, for example, visits to enterprises or WBL. According to Lave and Wenger (1999), any type of WBL can provide significant contribution in developing career identity. Their work shows that the dual VET system is successful in supporting

development of career identity. Lave and Wenger (1999) supported the idea that learning is a situated social activity, and the learners acquire skills primarily by peripherally participating in existing occupational practices in a legitimised way. This notion is similar to the essence of apprenticeship system in which learners participate in a community of professional workers. Learning a trade/profession is a kind of beginning membership of a particular occupational group, and it appears that the recognition of the status of apprentice (i.e. the legitimisation of their peripheral participation) by the adult professionals is more important than acquiring education only (Meijers, 1998, 201). WBL provides meaning to the learning process because an apprentice can familiarise himself/herself with the occupational practice. More benefits of WBL are described in the next subsection "Work and life experience".

Work and Life Experience. Obtaining work experience already during initial education through, for example, WBL, is widely considered as the best way to develop many employability skills and personal attributes (Sumanasiri et al., 2015). It provides opportunity to gain practical skills, to strengthen knowledge gained in the educational institution and develop understanding about their practical application, as well as to gain confidence. Increased confidence facilitates workplace activities centring around communication and solving problems, and is also related to an individual's personal development and self-esteem (Little & Colleagues, 2006). The first work experience also contributes to developing expectations about the labour market and confirm emerging perceptions of their own career goals and what they need to do to enhance it.

Young people who participate in the WBL are also usually more motivated to learn because they have clearer understanding of the learning goals and the ways to apply the theory of occupation in real life and what is needed to become an adequate professional. In addition, research (Bridgstock, 2009, p. 38) has found that creating social capital by creating strategic personal and professional relationships with those who might provide opportunities and important resources have a direct effect on perceived and actual employability.

According to Fugate et al. (2004), social capital is the goodwill inherent in social networks. In the context of work, network size and network influence are two important network characteristics which determine the potential of providing individuals to career opportunities. People with well-developed social capital often utilize informal job search networks (e.g., "friend of a friend") in addition to more formal networks (e.g., work placements) (Fugate et al., 2004, p. 24) which works for the advantage of their employability.

As described by Lave and Wenger (1991), work experience gained through apprenticeships can contribute to building career identity through participation in peripheral learning. However, it is important that workplace learning takes place in a sufficient amount of time. WBL that is short in duration, i.e. anything less than several months, is not compatible with Lave and Wenger's theory of workplace learning, as there would be insufficient time for the learners to immerse themselves and participate fully in the relevant community or communities of practice (Tay, 2015). Short period of work placement would serve only to provide students with a taste or sampler of working life. Perhaps these students can pick up some useful technical skills during the programme, but the level of competency of its use is likely to remain amateurish as there is insufficient time provided for the honing of such skills to mastery. Therefore, WBL or work experience programmes that are short in duration are not very effective in bridging the gap between VET and work (Tay, 2015).

Work placements and WBL are not the only way that students can obtain meaningful work and life experience during initial education. To package their employability in the form of a dynamic narrative that captures their wider achievements, and which conveys the appropriate personal and social credentials desired by employers, many graduates are increasingly turning to voluntary or community work and international travel to enhance their employability narratives and potentially convert them into labour market advantage. Much of this is driven by a concern to "stand apart" from the wider graduate crowd and to add value to their existing graduate credentials (Tomlinson, 2012). Voluntary work is known as a good way to develop team-working and leadership skills, as well as social capital.

For employers, educating students in the workplace entails costs associated with, for example, invested time, materials, workplace and safety equipment. But at the same time, the potential benefits of gaining qualified, loyal workers who are fully informed about the specificity of the employer, are quite significant. Employers who prefer to recruit from placement students admit that they do so because they have had a chance to weigh them up in the workplace and know much more about their suitability for a particular job than any degree transcript or assessment centre could tell them (Yorke & Knight, 2004, 17). However, the extension of WBL is not without problems: employer and academic schedule may not dovetail, and small- and medium-sized enterprises may be inhibited by the costs and time-commitment involved (Yorke & Knight, 2003, p. 14). Therefore, when designing WBL schemes and incentives for employers to get engaged, policy makers should take into

account the necessary balance between employer costs and benefits to ensure that employers are interested in providing WBL of good quality.

Generic Competencies. For VET learners to adapt to new life situations and career shifts, manage change, take initiative, innovate, and engage in lifelong learning, purely occupation-specific skills are not enough, they also require generic skills. Distinction between specific and generic skills (such as co-operation, analytical skills) has been used extensively in social sciences, and at the same time is also often subject to ambiguity and confusion (Allen & van der Velden, 2012, p. 14). Generic skills may also be referred to as "transferable skills," "core skills," "basic skills," "key skills/ competencies" or "underpinning skills." The distinctive feature of generic skills is that they are not directly relevant to a certain job but can be used flexibly in different situations, for further learning and in the labour market (European Commission, 2011b, p. 23). However, some key competences overlap with those directly linked to a specific sector/occupation. Human capital theorists have drawn a distinction between firm-specific and general human capital. The idea behind this is that general human capital can be productively used in any firm or organization, suggesting that the costs of obtaining such knowledge and skills should be borne by the worker involved, whereas the relative uselessness of firm-specific human capital outside the firm in question implies that at least part of the costs should be borne by the firm (ibid.).

There is a widespread opinion that generic competencies are one of the most important type of skills for employability. According to Eurobarometer (TNS Political & Social, 2014), most EU citizens consider basic skills as the most important skills that VET provides. Knight and Yorke (2002) discussed the value employers place on generic competencies and summarised their views as "give us bright and engaged graduate, and we will build specific expertise for this organisation on top of that" (Knight & Yorke, 2002, p. 2). This is widespread opinion also among Latvian employers, and competencies required by employers in Latvia indicate towards it (Līce, 2017; Project and Quality Management Ltd., 2014).

European framework of key competences for lifelong learning (Council, 2018) defines key competences as those needed by all for personal fulfilment and development, active citizenship, social inclusion and employment:

1) literacy competence;
2) multilingual competence;

3) mathematical competence and competence in science, technology and engineering;
4) digital competence;
5) personal, social and learning to learn competence;
6) citizenship competence;
7) entrepreneurship competence;
8) cultural awareness and expression competence.

According to the EU Council (2018), "key competences are those which all individuals need for personal fulfilment and development, employability, social inclusion, sustainable lifestyle, successful life in peaceful societies, health-conscious life management and active citizenship" (European Parliament & Council, 2006; Council, 2018).

All eight key competences are considered equally important, many of them are interdependent and interact. The European framework of key competencies for lifelong learning recommends that key competences are acquired and developed in a life-long learning perspective in formal, non-formal and informal settings by both young people and adults (European Parliament & Council, 2018). Bruges Communiqué of 2010 promoted key competences in VET in 2011 – 2014 as they "enable (learners) to follow further education and training (within VET or in higher education) and to support career choices, participation in and transitions within the labour market" (Bruges communiqué of 2010). The Riga conclusions of 2015 continue seeking more effective opportunities to acquire or develop these competences through initial and continuing VET. A need to strengthen transversal skills and key competences is also reiterated, for example, in the joint report on a strategic framework for European cooperation in education and training 2020.

Country approaches to promoting key competences vary. They are often linked to education in general. Most common approaches across EU member states are the following (Cedefop & European Training Foundation, 2017, p. 2):

- introducing key competences in curricula (87 % of all cases in member states);
- promoting them through national/regional strategies and plans (66 %);
- training VET teachers/trainers (62 %).

The competence-based level descriptors of national qualifications frameworks, as well as occupational standards and curricula have often been influenced by the key competence framework in the EU. More than half of EU member states, including Latvia, have included key competencies in their national qualifications' framework level descriptors (Cedefop, 2015, p. 51). For example, in Estonia, the VET standard stipulates that the content of VET

is based on the European Framework of Key Competences for Lifelong Learning along with occupational standards.

The common view is that VET addresses key competences less systematically than general education (European Commission, 2009). Cedefop's opinion survey (Cedefop, European Training Foundation, 2017) points to interesting differences between general education and VET. Although VET graduates feel they have developed better entrepreneurship competences, ability to work with others and to be creative than general education graduates, VET seems to have provided fewer opportunities to learn foreign languages, gain cultural awareness and social and civic competences and develop mathematical skills.

According to Hanushek et al. (2017), initial labour-market advantage of vocational relative to general education decreases with age. This could be explained by the decrease of time and attention devoted to development of general skills in VET. VET, particularly when it is firm-based, undoubtedly include more firm- and industry-specific training for individuals. With rapid technological change, these specific skills depreciate more rapidly.

The type of education obtained, rather than the number of years of education per se even could have a crucial bearing on the rate of economic growth: this is how Krueger and Kumar (2003) explain the growth gap in Europe, which focuses on skill-specific education, has suffered since the eighties relative to the US, which focuses more on conceptual education (Krueger & Kumar, 2003). The United States has largely eliminated VET as a separate track in secondary schools on the argument that specific skills become obsolete too quickly and that it is necessary to give people the ability to adapt to new technologies (Hanushek et al., 2017). Similar trends can be observed also in other countries: the proportion of young people completing a full general secondary education in increasing throughout developed world. The increase has been strongly encouraged by governments, many of whom have aimed to have the overwhelming majority of a cohort graduate with an upper secondary (age 18), as well as by the families which desire for extended opportunities and growing aspirations for higher education (Wolf, 2011). For example, the German *Hochschulen*, which traditionally lead directly to apprenticeship at age 16 or 17, have lost enrolment share very rapidly (Wolf, 2011).

As a solution for VET to ensure appropriate development of generic competencies, Green (1998) argues for some mandatory core of general education integrated in VET. Moreover, he stresses that integration of core skills into vocational curriculum is not

sufficient, and that there should be, for all post-16 courses, a mandatory minimum core curriculum of general education. This should include, at the least, English/Communications, Mathematics/Numeracy and some form of civic or citizen education. It is not necessary, however, for all students to study these subjects in the same form. Core areas could be customised to the requirements of different pathways of the system (Green, 1998, pp. 40-41).

It should also be noted that focusing only on generic and specific skills and missing other important employability factors such as career development learning reflects a narrow understanding of the employability and rather focuses on short-term employment outcomes (Bridgstock, 2009). Therefore, it is important to view employability as a complex, overarching concept, which comprises far more different factors than just generic and specific skills.

Self-esteem, Self-efficacy, and Self-confidence; Reflection and Evaluation. The three closely-linked "Ss" of self-esteem, self-efficacy and self-confidence provide a crucial link between knowledge, understanding, skills, experience and personal attributes and employability (Fugate et al., 2004, p. 285). The leading proponent of the social learning theory Bandura (1995, p. 3) suggests several sources for efficacy beliefs. According to Fugate (2004, p. 286), the ones particularly relevant to employability are:

- mastery experiences – occur when people are given an opportunity to try a task themselves. It involves acquiring the cognitive, behavioural, and self-regulatory tools for creating and executing appropriate courses of action to manage ever-changing life circumstances;

- vicarious experiences provided by social models - seeing people similar to themselves succeed by perseverant effort raises observers' beliefs that they, too, possess the capabilities to master comparable activities;

- social persuasion - people who are persuaded that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it than if they harbour self-doubts and dwell on personal deficiencies when problems arise. To the extent that persuasive boosts in perceived self-efficacy lead people to try hard enough to succeed, self-affirming beliefs promote development of skills and a sense of personal efficacy.

By providing opportunities for mastery experiences, vicarious experiences and social persuasion, then encouraging reflection on and evaluation of these experiences, self-efficacy can be increased. The graduates who believe they can do whatever is necessary, are far more

likely to gain a position and be successful in whatever occupation they choose than the graduates who do not have that self-belief (Pool & Sewell, 2007).

Self-efficacy refers to an individual's belief about his or her capabilities to perform a specific task and convincing the counterpart of one's skills in a job interview or other contexts (Wittekind et al., 2010). Self-confidence is how this is projected to the outside world (Fugate et al., 2004, p. 286). According to Goleman (1998, p. 80), self-confidence is a strong sense of one's self-worth and capabilities, and people with this competence present themselves with self-assurance and have "presence." The self-esteem, however, could be compared to self-respect and a feeling of worthiness. People with self-esteem are realistic in their evaluations of themselves, which is very important for reflecting on areas for improvement and, therefore, for the process of lifelong learning (Goleman, 1998). Some authors (e.g., del Carmen Aguilar Rivera et al., 2012; Forrier et al., 2015; Gamboa et al., 2007; Wittekind, Raeder, & Grote, 2010) connect employability with self-awareness and self-perception. Arguments are based on the idea that the individual employability perception is the primary factor which determines how an individual feels and reacts to external conditions, which in turn affects the individual's flexibility in the labour market and his or her welfare (del Carmen Aguilar Rivera et al., 2012). Individuals first appraise potential employment opportunities and then act upon the opportunities they perceive (Forrier et al., 2015). Gamboa et.al. (2007) defines perceived employability as "the individual's perception of the opportunities he/she has to find a job of his/her choice, or to improve the one he/she has, given that these opportunities will depend on his/her characteristics and behaviours, as well as on the contextual factors around him/her" (del Carmen Aguilar Rivera et al., 2012). The core elements of perceived employability were tested empirically in Switzerland by Wittekind, Raeder and Grote (2010), they are education, support for career and skill development, current level of job-related skills, and willingness to change jobs. Researchers Forrier, Verbruggen and de Cuyper (2015) have even described how perceived employability is related to job changes by "dynamic chain", namely, job transitions influence movement capital, movement capital affects perceived employability, and perceived employability triggers job transitions. According to Wittekind, Raeder and Grote (2010), perceived employability is related to better health, well-being, engagement, and life-satisfaction, as individuals who trust their employability will perceive changing labour market situation as less threatening and experience less strain.

Self-competencies are also closely linked to emotional intelligence which is also important factor for sustainable employability.

Emotional Intelligence and Self-Management. In 1990, Mayer and Salovey developed their first theory of emotional intelligence (Mayer & Salovey, 1990), which subsequently became popularized by Goleman. Mayer and Salovey elaborated a model of emotional intelligence, which consisted of four different dimensions including perception of emotion, emotional facilitation, understanding emotions, and management of emotions (Mayer & Salovey, 1997). They also proposed that emotional intelligence was a cognitive ability which is separate but also associated to, general intelligence.

Goleman proposed (1998) that emotional intelligence was integral for life success. Emotional intelligence is not fixed genetically but develops throughout life alongside becoming more mature. He agreed that emotional intelligence skills are synergetic with cognitive ones; and top performers have both. Emotional intelligence is especially important in complex jobs because a deficiency of these abilities can hinder the use of whatever technical expertise or intellect a person may have. Goleman divided competencies as purely cognitive, such as analytic reasoning or technical expertise ("mind") and emotional competencies, which combine thoughts and feelings ("heart") (Goleman, 1998, 27). An emotional competence is a learned capability based on emotional intelligence that results in outstanding performance at work. Emotional intelligence determines one's potential for learning the practical skills that are based on its five elements: self-awareness, motivation, self-regulation, empathy, and adeptness in relationships (Goleman, 1998, 28). The Emotional Competence Framework, developed by Goleman (1998), which shows the relationship between the five dimensions of emotional intelligence and the twenty-five emotional competencies, is included in Appendix 4.

Considering the CareerEDGE employability model (Pool & Sewell, 2007), it is interesting to see that emotional intelligence encompasses several employability factors which are considered separately in the model, for example, generic competencies or self-competencies. Thus, emotional intelligence should be considered as a broad framework of skills, competencies and attitudes on its own.

Although *motivation* and *adaptability* are already included in the emotional intelligence framework (Goleman, 1998), the author has described them in detail (below) considering their importance in the Latvian labour market in line with the results of the preconception phase of the research.

Motivation. Oxford English dictionary defines *motivation* as "a reason or reasons for acting or behaving in a particular way" (Simpson, Weiner, & Oxford University Press, 1989). Someone who is motivated to get results notices ways to do better, to be entrepreneurial, to innovate, or to find a competitive advantage (Goleman, 1998). Motivation is a starting point for employability: whether or not an individual obtains a job and develops new competences depends on a positive attitude towards changes in employment, job content, tasks, and willingness to participate in training (de Grip et al., 2004; Fugate et al., 2004; Hillage & Pollard, 1998). It is especially crucial considering the changing nature of employability. According to Harvey (1999), employability is the propensity of graduates to exhibit attributes that employers anticipate will be needed for the effective future operation of their business organisation. According to de Grip, Van Loo and Sanders (2004) employability is about employees who are willing and able to be as proactive as possible considering organizational and institutional constraints – to remain attractive for the labour market.

Individuals which are motivated seem generally more satisfied with their work and perform significantly better than others (Judge & Bono, 2001). Research by Tomlinson (2007) has shown that some students on the point of transiting to employment are significantly more orientated towards the labour market than others. This research highlighted that some had developed stronger identities and forms of identification with the labour market and specific future pathways. Careerist students were clearly imaging themselves around their future labour market goals and embarking upon strategies in order to maximise their future employment outcomes and enhance their perceived employability. For such students, future careers were potentially a significant source of personal meaning, providing a platform from which they could find fulfilment, self-expression and a credible adult identity. For other students, careers were not something they were prepared to make strong levels of personal and emotional investment towards. The different orientations students are developing appear to be derived from emerging identities and self-perceptions as future employees, as well as from wider biographical dimensions of the student (Tomlinson, 2012). Other studies have also found out that students with high intrinsic motivation and career self-efficacy are likely to attain strong educational results (Evans & Burck, 1992).

Motivation is linked with other competencies, for example, learning to learn and entrepreneurship. To achieve objectives, individual needs to be creative, innovative, able to

take risks, to plan and manage projects. Motivation includes determination to meet objectives, whether they are personal goals, or aims held in common with others, including at work. In this context, it seems self-evident, why employers in Latvia consider work motivation and attitude to work to be the most important attributes of potential employees, even more important than good education and work experience (Project and Quality Management Ltd., 2014). For example, the profile of a "good employee" according to the focus group of employers from Riga (Project and Quality Management Ltd., 2014, 24) included the following:

1) internal motivation to work in the chosen occupation;
2) readiness to invest into the company more than he/she is paid for;
3) responsibility for his/her work.

Adaptability and Willingness to Develop New Competencies. Boundaries between jobs, organisations and life roles are becoming blurred and people commonly experience careers comprised of many positions with multiple organisations and even industries. In these conditions, ability to adapt to changing conditions and to learn new things have become one of the core competencies in the labour market. The author agrees with Harvey (2005) that employers are looking for recruits who are going to be effective in a changing world. They want intelligent, flexible, adaptable employees who are quick to learn and can work on a range of tasks simultaneously. They need people who can deal with change and thrive on it. Graduates are much more likely than non-graduates to meet these criteria. Employers do not need people who are resistant to new approaches or slow to respond to cues (Harvey, 2005, 16). According to employer surveys, this view is also prevalent in Latvia. The following employee competences are important for employers in Latvia (Project and Quality Management Ltd., 2014, 133):

- skills to adapt to new working environment (changing working conditions) – confirmed by 86 % of employers;
- skills to acquire new knowledge and skills independently – 80 %;
- readiness to learn – 72 %.

Among the employers which were in the network of the Latvian national employers' organisation, "ability to learn new things" was mentioned as the second most important competence for "good employees" after "ability to apply knowledge" with 93 % of respondents evaluating it as "very important" or "important" (Līce, 2016, 28). The same survey also revealed that further education of employees is important for employers (98 %),

as well their commitment in providing competence development opportunities for employees which could be explained by their size, long-term planning, including that of human resources policy, as well as social activity and social corporate responsibility (Līce, 2017).

If individuals can capitalise upon their education and training and adopt relatively flexible and proactive approaches to their working lives, then they will experience favourable labour market returns and conditions (Tomlinson, 2012). According to the European framework of key competences for lifelong learning (European Parliament & Council, 2006), *learning to learn* is "the ability to pursue and persist in learning, to organise one's own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. It requires gaining, processing and assimilating new knowledge and skills as well as seeking and making use of guidance. Individuals have to know and understand their preferred learning strategies, the strengths and weaknesses of their skills and qualifications, and to be able to search for education and training opportunities and guidance and/or support available. This competence also requires positive attitude, motivation, confidence, as well as problem-solving attitude to pursue and succeed at learning throughout life (European Parliament & Council, 2006). Therefore, learning to learn competence is very much interlinked with other employability competencies.

Employees who are willing to adapt to different kinds of changes will also consider a broader spectrum of opportunities, for example, jobs that require the acquisition of additional skills (Wittekind et al., 2010). However, these efforts are not always necessarily awarded, and can better be interpreted as an insurance policy: graduates need to have them in case things get worse, but there is no wage premium attached to it, nor are they necessarily related with better career perspectives (Humburg et al., 2013).

The reasons for increasing the importance of the ability to adapt lie in increasingly rapid pace of changing conditions of society and labour market. In the context of future skill needs, the changes have been studied by many researchers and international organisations (for example, Cedefop, 2012; de Grip et al., 2004; Humburg et al., 2013; World Economic Forum, 2015; Teichler, 1999). Understanding the trends of changes helps understanding also future skill needs associated with them. According to Teichler (1999), the four directions of change relevant for the relationships between education and the world of work are:

1. Regular employment → flexible employment.
2. Elite and scarcity paradigm → mass and abundance paradigm.
3. Pre-career education society → life-long learning society.
4. National training and labour market → global and international scene.

Humburg et al. (2013) identified six trends and corresponding skills that affect graduates' employability and determine their changing role in economic conditions (see Table 2.3). Each of the skill domains encompass multiple aspects which is supposed to help to cope with the changing societal and labour market demands.

Table 2.3
Trends, Skill Domains and Aspects of Skills

Trends	Skills	Aspect of skills
Knowledge society	Professional expertise	- Specific body of knowledge - Ability to apply expert thinking - General academic skills (e.g., analytical thinking, reflectiveness)
Increasing uncertainty	Flexibility	- Ability to deal with changes and uncertainty - Ability to learn new things - Employability skills (e.g. the willingness to invest in further education and training, and the ability to plan and take responsibility for one's own career)
ICT revolution	Innovation and knowledge management	- Innovative/creative skills (creativity, curiosity) - Network and strategic ICT skills - Implementation skills
High performance workplaces	Mobilisation of human resources	- Interpersonal skills (communication skills, teamwork skills) - (Self-)management skills (working within budget and time restrictions, leadership) - Strategic-organisational skills
Globalisation	International orientation	- Foreign language skills - Intercultural skills
Change of the economic structure	Entrepreneurs hip	- Ability to identify commercial risks and opportunities - Cost awareness - Ability to turn an idea into a successful product

Source: Humburg, van der Velden, & Verhagen, 2013, p. 11

Although the world is changing rapidly in a lot of ways, Allen and van der Velden (2012) argue that the dominant change is in ICT. Technological progress also underlies the development of industry 4.0, which should not be ignored by educational systems. Changing technology has far-reaching implications for how we act and interact at work, in education, in civic life and at home. New opportunities for collaboration, flexibility and experimentation in learning and at work have been created by increasing usage of mobile devices. The challenge facing schools is not to teach children medium-related ICT skills,

which are in most cases superior to those of their teachers, but to ensure that ICT is used in a constructive rather than a disruptive manner (Allen & van der Velden, 2012).

These working environments require workers to continually manage change – in themselves and their contexts (Fugate et al., 2004). Clearly, the construction of personal employability does not stop at graduation. Historically, employee adaptation was characterized as reactive, that is, as a response to environmental change. More recently, employees have been characterized as more proactive, as *initiating* change. For example, numerous person-centred constructs – proactive behaviours, personal initiative, proactive personality, taking charge, proactive socialization, and so on – conceive employees as active agents who initiate improvement in their work situations (Fugate et al., 2004). The so-called protean career as defined by Hall (1996) is characterised by a pattern of varied experiences in education, training, work in several organisations and changes in occupational field. In a protein career, individual workers themselves, not organisations, manage their careers. (de Grip et al., 2004).

Therefore, a person's ability and willingness to proactively participate in lifelong learning and to adapt is essential in career success. This means both, considering and facilitating development of future skills in initial education, as well as ensuring and promoting lifelong learning. Continued lifelong learning is one way of staying fit in a job market context with shifting and ever-increasing employer demands (Tomlinson, 2012). Developmental psychology also shows that competence development does not end at adolescence but continues through the adult years. In particular, the ability to think and act reflectively grows with maturity (OECD, 2005). It dispels myths about the limited ability of adults to learn. The peculiarities of adult learning to be considered when organising adult learning are described in the Section 3.2.

2.6. External Factors Affecting Employability

There are many factors that affect employability but are not directly related to the education system. The author calls them *external* factors in this research. The examples of the external factors are the following: economic and labour market trends; availability of skilled workers and skills mismatches; flexicurity and labour market regulations; employer recruitment strategies; socio-economic factors of graduates.

A very important external factor is the labour market, which differs across various professions, sectors of the economy and geographical locations. Accordingly, there may also be different employment opportunities for graduates, the need for flexibility and further

training or workers. To that end, an account has to be taken of both supply and demand determinants of workers' employability as well as sector-specific facilitating conditions (de Grip et al., 2004; Forrier et al., 2009). Forrier et al. (2009) refers to the following "gate keepers" to job opportunities: the available jobs, organisations and occupations and the ease of entering them or the organizational demography and opportunity structure.

Considering the economic and labour market trends in the process of planning and implementing education programmes can improve match between supply and demand, especially at the entrance to the labour market, or, in other words, at the transit from education to initial employment. It should be noted, however, that the match between supply and demand could be distorted also by other phenomena in the labour market, for instance labour market segmentation, labour cost and wages, values and norms, as well as institutional incentives and barriers (Forrier et al., 2009). Considering that certain jobs offer more opportunities than others, wage setting can influence individual's decision to work or not to work for certain employers or even in occupation obtained, and certain individuals could experience better or worse opportunities in the labour market based on existing values and norms, or institutional measures.

Latvian labour market can be characterized by the following challenges (Līce, 2017) which affect the situation of graduates in the labour market:

- demographic problems and the consequences of the scarcity of human resources;
- emigration of the economically active and failure to provide competitive salaries;
- large regional disparities;
- structural unemployment problems and the failure of the education system to adapt to the labour market demand, as well as a lack of relevant knowledge, skills, competencies and attributes which restricts the ability of employers to attract the necessary labour force;
- in spite of the difficulties to attract the relevant skilled labour force there is a relatively large passivity of employers to get involved in training their future and current employees through providing work placements or WBL and offering competence development opportunities for employees.

The labour market demand for VET qualifications is described in Section 1.2. Graduates with education in the fields with a significant surplus of graduates might face larger competition for the vacancies and in certain cases might need retraining. A limited number of vacancies also might imply the risk of finding a lower-level job than the qualification obtained. According to Cedefop (Cedefop, 2015a), graduates from certain

fields of study including humanities, languages and arts and other social sciences are found to be more likely to be overqualified. In Latvia, around 15 % of adults are overqualified for their job, 10 % - underqualified. Around 6 percentage points of overqualified adults in Latvia have high level qualifications, 9 percentage points - medium level (see Appendix 5) which indicate towards inefficiencies in matching education offers and labour market needs.

For policy makers and education institutions, skills mismatch implies a challenge to diminish discrepancies between the offer of education system and the demand of the labour market. Of course, in a situation of free market and dynamic labour markets perfect matching is not possible, however, some observed trends are important enough to be considered in policy planning and management. For example, it is especially important to ensure that those with only primary or general secondary education additionally acquire a vocational qualification or higher education degree, as well as to promote adult participation in education. There should be also important conclusions made by education management (for example, how to ensure best possible quality of learning outcomes and efficient transfer to the labour market) and for labour market actors (for example, how to raise prestige of certain occupations and sectors).

Flexicurity and labour market regulations can also significantly influence employment opportunities of different groups of people. For example, the large youth unemployment rate in Spain during the global financial crisis of 2008 was largely explained by the strong labour protection for existing workers and large proportion of fixed-term contracts for young workers with no guarantees of job protection. Flexicurity of the labour market reconciles the employers' need for a flexible workforce with the workers' need for security. As it is explained by the European Commission (2007), “Flexibility, on the one hand, is about successful moves (transitions) during one’s life course: from school to work, from one job to another, between unemployment or inactivity and work, and from work to retirement. (…) It is about progress of workers into better jobs, ‘upward mobility’ and optimal development of talent. (…) (It) is more than just the security to maintain one’s job: it is about equipping people with the skills that enable them to progress in their working lives and helping them find new employment. It is also about adequate unemployment benefits to facilitate transitions” (European Commission, 2007, 10). There is a low proportion of part-time employees in Latvia, which is explained by the propensity of employees to be employed full-time and to maximize the remuneration. Unlike in high income countries, workers do not try to balance potential revenues with social responsibilities, which does not facilitate job

satisfaction (Employment Agency of Latvia, 2013, 47). Adult participation in life-long learning is low in Latvia – only 5.7 % in 2015 in comparison to EU average of 10.7 % according to Eurostat. Long-term unemployment is a long-lasting challenge in Latvia. Average long-term unemployment period lasts for over 2.6 years (Employment Agency of Latvia, 2017, 2018). Youth unemployment was significantly affected by the financial crisis in Latvia. It raised up to 26 % in 2006 and has been steadily decreasing since then (Employment Agency of Latvia, 2017). Among young people, 13 % were long-term unemployed, 6 % - people after parental leave, 6 % - people with disabilities. The average unemployment period was comparatively short – around 4 months. Most unemployed young people reported the following last occupations (in decreasing order): auxiliary worker, sales consultant, retail shop seller, customer service specialist, cook, waiter, cleaner, and project manager.

Although employers want employees who are intelligent, flexible, adaptable, able to quickly learn and are going to be effective in changing world, there is evidence that employers do not always use the best criteria and follow the best recruitment strategies. Various studies suggest that recruitment and progression in employment continue to be dogged by bias and inequitable treatment (Harvey and Blackwell, 1999; Harvey, 2005). In Latvia, 77 % of employers are searching for employees with low-level qualification with the help of their relatives, friends or acquaintances, and 65 % - for employees with high-level qualification (Project and Quality Management Ltd., 2014, 131). Even the majority of companies (63.3 %), which are in the network of the Employers' Confederation of Latvia and are on average three times more active in offering work placements and WBL to educate their future employees than on average on the national level, admit that they use personal contacts to recruit new employees regularly or often (Līce, 2017).

Socio-economic factors such as gender, family background and ethnicity are yet other factors which can significantly influence employment situation. Research by Power and Whitty (2006) and Furlong and Cartmel (2005) show strong evidence of socio-economic influences on graduate returns. Those who are most disadvantaged faced the greatest difficulties in the labour market. Also, their expectations were relatively low. Women and those from the most disadvantaged backgrounds had particularly low expectations (Furlong & Cartmel, 2005). Middle-class graduates are more able to add value to their credentials and more adept at exploiting their pre-existing levels of cultural capital, social contacts and connections (Tomlinson, 2012). Power and Whitty's research (2006) shows that graduates

who experienced more elite earlier forms of education, and then attendance at prestigious universities, tend to occupy high-earning and high- reward occupations. There are two key factors here: one is the pre-existing level of social and cultural capital that these graduates possess, which opens up greater opportunities, the second relates to the biases employers harbour around different graduates from different universities in terms of these universities' relative so-called reputational capital (Power & Whitty, 2006; Tomlinson, 2012).

Although these factors can significantly affect graduate employability, the author does not analyse them further in the research as education system's ability to influence them is very limited or none and therefore is not in the focus of the research. However, they should be considered in interpreting employability results.

Conclusions

In this chapter, the author has investigated the theoretical approaches about the notion of employability and its link with VET which has contributed to the detailed description of the factors determining employability. A strong relationship between skills and employment of adults has been proven. Graduate employability in the long-term can be ensured by a combination of factors which can be embedded in the education system at the following levels: preparation for employment, transition from education to employment and stay in employment and progress in career. Author concludes that it is important to research both types of employability factors, personal attributes determining employability (outcome-oriented factors) and education management processes at different stages and levels of VET (process-oriented factors). The latter are discussed in the following chapter.

CHAPTER 3. MANAGING FACILITATION OF EMPLOYABILITY OF GRADUATES

In this chapter, the author analyses management of educational institutions in the context of achieving goals and improvement in VET to facilitate employability of graduates. Firstly, the role of education management in facilitating employability is discussed. Secondly, different education management processes are discussed, based on theoretical literature review and the preconception phase of the research. These processes can take place both at the institutional and at the national level. The processes on the national level are considered as far as they affect the work of the VETI in terms of facilitating employability. The situation in Latvia in relation to these processes is described as well, where relevant research exists. Thirdly, the system's approach to managing facilitation of employability of graduates is discussed with the goal to elaborate the model depicting this process as a system.

3.1. The Role of Education Management in Facilitating Employability

3.1.1. The Role of Education Management Theory

According to Oldroyd (1993), management is a combination of how individuals behave and the structures and procedures within which they perform. Education management theory serves to provide a rationale for decision making for education managers and policy makers. Wieringen and Bonam (1993) have named several reasons, why education management has attracted attention in recent years: budget cuts for education spending and the role of education managers in taking financing-related decisions, the ongoing debate on the relationship between state and society, the degree of autonomy of education institutions and the distribution of competencies between the national government and an individual school, as well as the quality of education (Wieringen & Bonam, 1993).

Initially, the emphasis in management and administration was based on the machine metaphor with rigid organizational structures and top-down administrative practices. In the course of time the emphasis has shifted to more flexible structures and administrative practices which foster participation, cooperation, and empowerment (Hansen, Johannsson, & Islands, 1993, p. 47): principles, which are important also in education management. Decentralisation reforms have been introduced since the 1980's in different parts of the developed and developing world. In education, decentralisation reforms vary according to whom the authority for decision making is devolved and the activities over which authority is being provided (e.g., budget allocation, hiring and firing of teachers and other staff,

curriculum development, infrastructure development, monitoring and evaluating teacher performance and student outcomes) (Hermosilla, 2014).

Education management can be viewed in its narrow or broad meaning. Traditional education management in its narrow sense is used as management of specific educational institution. In its broader sense, education management refers to any process in the field of education on different levels and aspects, for example school's class management, institution's management or management of cooperation between several institutions, region's education management, and management of the education ministry.

The three main arguments to support the view that managers have much to learn from an appreciation of education management theory according to Glasser and Strauss (1967) are the following:

1. Reliance on facts as the sole guide to action is unsatisfactory because all evidence requires interpretation. Theory provides "mental models" to help in understanding the nature and effects of practice.

2. Dependence on personal experience in interpreting facts is too narrow because it discards the knowledge of others. Arguments and insights of theorists enable practitioners to deploy a wide range of experience and understanding in resolving the problems of today.

3. Experience may be particularly unhelpful when operating in a different context. A broader awareness of theory and practice may be valuable as the manager attempts to interpret behaviour in the fresh situation.

According to Hoyle (1986), the relevance of the theory should be judged by the extent to which it informs the managers and supports resolution of daily problems in education institutions. He distinguishes between theory-for-understanding and theory-for-practice. While both are valuable, the latter is more significant for education managers. The connection between theory and practice, however, can be blurred by uncertainties which are rooted in the fundamental problems of education management theory. Contingency theorists argue that there is no single "correct" way to manage an educational organization, and the structures and leadership should be adapted to meet particular circumstances (Bolam, 1993), including organizational culture of particular school and macro-culture it operates in (Mahieu, 1993).

3.1.2. Setting Goals and Translating Them into Daily Practice

Bush (2006) and Blūma, Celma-Zīda and Ivanova (2017) argue that education management has to be centrally concerned with the purpose or goals of education. These

goals provide crucial sense of direction to underpin the management of educational institutions. Unless the link between management and goals is clear and close, there is a risk of managerialism – a stress on procedures at the expense of educational purpose and values. Fullan (1999) stressed, that educational institutions should elaborate the goals and common vision in co-operation and dynamic interaction between the managers and participants of the institution to ensure that change is effective. Furthermore, a broader strategy of staff and management development should be adopted. As Bolam wrote in1993: "The starting point for a development perspective is that the effective school performance depends primarily on the quality of its teachers and managers (leaders) (...) and that a coherent and systematic strategy for staff and management development is a pre-requisite for ensuring that these professional staff are of high quality. The strategy should be based on the schools' overall goals and policy, which may be embodied in a school development plan, and it should be directed towards the achievements of those goals" (Bolam, 1993, 20). Bolam has also underlined that "management development is a long-term process, not a series of disconnected activities, and that it consists of more than external courses" (Bolam, 1993). This leads to the conclusion that the goals of educational institution should be translated into daily practice through the strategy, plan of work and other management mechanisms. Education management process can entail process management, change management, professional development management, education project management, education programme management, and learning management. Training of teachers alone is not sufficient to bring change. There should be a comprehensive and systematic strategy for personnel development at educational institution.

In leading the organisation towards continuous change and improvement, it is important that the vision of future and the goal of educational institutions are not owned just by the education managers. As it is stressed by Fullan (1999), to achieve success in change management, the goal should be shared among members of the organisation. Managers develop their own vision, but by listening to other people they only deepen it. According to Bush (1986), education leadership can be understood as a process of influence based on clear values and beliefs and leading to a vision for the educational institution. The vision is articulated by leaders who seek to gain the commitment of staff and stakeholders. The creation of the common goal requires time and dynamic interaction between the members or organisation. Organisations which want to create a common goal, encourage their members to develop their own goals which helps them to see their role in achieving broader

educational goals. According to Fulan (1999), complex changes require a lot of people working on solutions with understanding and supporting common, purposeful work. It is not possible to force people to change, or think differently, or develop new skills. But changes require abilities, skills, engagement, motivation and confidence, awareness and unambiguous immediate assessment. Therefore, it is important to achieve, that the inquiry and continuous learning is the guideline of the organization, keeping in mind that people are best at learning when working together with others. To help the learners to learn how to cope with change, administrators and teachers themselves must also become change makers. Fullan (1999) also notes, that the existence of a common goal can be considered as advantage, but the clarity of the goal can also be a deficiency when the view is stiff, insensitive and incorrect, as well as if the process of creating a common goal does not create the common sense of purpose. Productive change is continuous search for understanding, knowing that there is no definitive answer. This observation is especially relevant in the context of facilitating employability of graduates, considering the changing demands of the labour market and external partners, as well as importance of adaptability.

It is also important to consider that school aims are strongly influenced by external environments. Many countries have a national curriculum which leaves small scope for schools to decide their own educational aims. Institutions may be left with the task of interpreting external imperatives rather than determining aims based on their own assessment of student needs. Thus, any review of trends and management and research must consider the key contextual factors in specific national systems, for example, of its goals and structures, of the roles and status of education managers and teachers, of the available financial resources, and, most important, of the socio/political/economic situation at a particular time (Bolam, 1993). According to Glatter (2003, p. 232), in contemporary globalized environments, additionally to tri-level model of educational systems – institutional, local authority, national (or state) ministry, additional levels, encompassing national political leadership (including national treasuries) and international bodies with executive powers such as the EU, should be recognized. The “macro” and “micro” levels are increasingly intertwined, and the provision experienced by students is the result of complex mix of policy, leadership and management at all levels. Thus, any review of the management of educational institutions should consider the external factors and the environment in which they operate.

3.1.3. Developing Educational Institutions

The problems educational institutions and their managers face are deep-seated and multi-faceted. The goal of facilitating employability of graduates is also complex, considering changing labour market requirements and the different priorities set by the various stakeholders. Fullan (1999) argues, that it is not possible to implement changes in education in a linear way, by searching simple cause-effect chains. Rather, changes in education should be viewed as continuous search for comprehension and interconnected dynamically complex processes. Considering the abovementioned, Garvin (1993) and Glatter and Kydd (2003) argue in favour of developing a "self-learning" system or "developing" model of governance at education institutions. This concept is similar to "learning organisations" which was introduced by Senge (1990). According to Senge (1990, 3) learning organizations are " (…) organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together." Developing organisations engage in continuous process of self-review and development in the pursuit of "total quality" in all aspects of their work (Oldroyd, 1993). Adapting a developing model for organisations is also important in the context of implementing changes and ensuring constant improvement. According to Fullan (1999), developing organisations consider change as a normal part of their work and accept them not as another imposed novelty but as a lifestyle. Developing and adaptive organisations also do not ignore the external environment but try to live together interactively. They admit that there are much more ideas outside the organisation than inside. They also perceive the forces of change as inevitable and necessary for learning and growth (Fullan, 1999). It is particularly important for vocational education institutions, taking into account the complex system of internal and external participants, different interests, and changing requirements, which is reflected in the tendency to stress the role of internal quality assurance system of educational institutions in education policy making (for example, European Parliament & Council, 2009; Standards and Guidelines for Quality Assurance in the European Higher Education Area of 2015).

Fullan (1999) stressed that the role of teachers is very important in creating a developing educational institution. According to him, there cannot be a developing educational institution without teachers who are able to learn. Many of new education goals, for example, the goal orientation of students, research habits and skills, cooperation skills,

and ability to cope with change, are the same properties which are needed for carriers of change. It is important that teachers should be able to learn themselves, without expecting that someone else will provide learning opportunities for them. Teachers cannot afford to wait until the system will improve itself. Teachers should be educated continuously, and the development of educational institutions must go hand in hand. To ensure efficient organisational change, it is also important that participants of organisations have their own vision and goals. When teachers create their own vision and see how their commitment to achieve change in the classroom is linked to the broader education goals, they find practical and moral meaning of their profession (Fullan, 1999, pp. 54-139). As mentioned previously, this brings attention to the need of having the strategy for teacher and management development, which is broader than just occasional external courses, but includes mechanisms for co-operation, self-reflection, support and personal development plans.

Developing organisations also requires an effective process for learning at the policy level (Glatter & Kydd, 2003). This requires flexibility and readiness to adapt to new circumstances, as well as readiness to solve problems by leaders at all levels: institutional, regional and national. Frequently, effective problem-solving is possible only in case of effective dialogue and co-operation between different levels and involved partners, for example, leaders of educational institutions should be able to formulate and communicate problems clearly and education administrators and policy makers on the national level should ensure that regulations and national-level support address the real problems at the grass roots level.

In its simplest essence, the management of a developing educational institution reminds a PDCA (plan–do–check–adjust) cycle which emphasizes the importance of iterating towards an improved system. In education, learning about system's performance should take place on all levels, including institutional and, as mentioned above, also policy level. At the institutional level, the goal of developing system could be reached through effective internal quality assurance system. At the policy level, it requires wise, forward-looking, analysis and evidence-based policy making.

3.1.4. The Role of Education Managers

According to Oldroyd (1993), managers in all sectors share four broad areas of responsibilities:

1. Policy making: clarifying mission, goals, structures and procedures, and offering guidelines for planning.

2. Planning: creating programmes and allocating resources to achieve these goals.
3. Implementing: motivating and supervising people in the tasks required by the programmes.
4. Evaluating: monitoring and reviewing the worthwhileness, effectiveness and efficiency of policies, plans and implementation.

The role of managers in educational institutions can be more problematic than the role of managers in profit-making enterprises due to diffuse goals in educational institutions which are subject to constant ideological debate, as well as duet to different involved parties and conflicting interests. The education managers have the role of managing education processes horizontally and vertically: within an educational institution and with policy makers and external partners. In VET, education managers have to consider not just state education policy and regulation, but also changing labour market demands and employers as important stakeholders in provision of education, which makes their task even more difficult.

The pressure to constantly adapt to changing conditions and self-develop has opened greater opportunities for leaders to adopt proactive approach to management and adaptive strategy. Adaptive strategy provides a road map of the terrain that lies before an organisation. It is supported by a set of navigation tools, realizing that there will be many different options for reaching the destination. Instead of the old approach of "making a plan and sticking to it," which led to centralized strategic planning around fixed time horizons, adaptive strategy "set a direction and test to it," treating the whole organisation as a team that is experimenting its way to success (O'Donovan & Flower, 2013). Fullan and Hargreaves (1991) offer the following guidelines for education managers who want to lead their education institution towards change:

1. Understand the culture of your institution before changing it! Active awareness and understanding are vital to be an effective leader within the culture of the institution.
2. Value your teachers: promote their professional growth.
3. Extend what you value: promote the professional development of all your teachers, rather than the advancement of a chosen, innovative few.
4. Express what you value: communicate and demonstrate what you value, expressing yourself through leadership.
5. Promote collaboration.

6. Make menus, not mandates. Do not force through one particular approach. Develop awareness of, commitment to, and experience in the general collaborative principle.
7. Use bureaucratic means to facilitate, not to constrain.
8. Connect with the wider environment.

The goal of facilitating employability requires focus on a long-term period, as long-term impact of education cannot be achieved without planning in the long-term. It requires self-learning organisations with all members sharing a common goal, and an adaptive, proactive approach to education management. Therefore, in leading education organisation towards change and becoming a developing organisation, the role of the education manager is to facilitate the process of finding a common goal, developing tools to achieve these goals, encouraging members of institution to develop their own goals and to continuously develop their skills, as well as to encourage co-operation between the members within the institution and with external partners. The example of University of Luton, described in Section 3.2, demonstrates similar principles: involvement of the university staff in joint activity of determining the common goal, as well as personal goals for their study programmes, through university-wide debate and audit of study courses. As a result, teachers were motivated to find new, innovative ways of teaching, and to significantly improve cooperation. The education managers have a key role in enabling these kind of activities – in this case, the adaptation of curriculum as a management method to enhance employability of graduates. It is also important, that education managers facilitate development of an educational institution as a constant and cyclical process. Iterating the cycle of planning – implementing – checking and improving will ensure the basis for internal quality assurance system and constant organisational development.

Figure 3.1 depicts the main elements of the management of employability facilitation in education discussed therein.

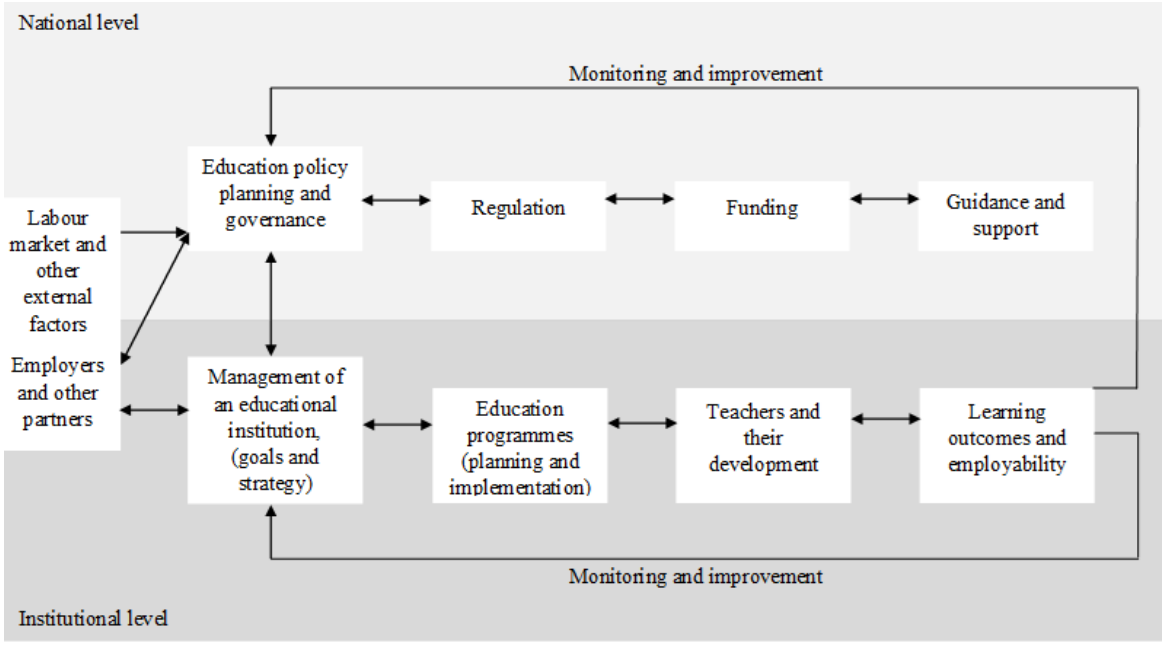

Figure 3.1. Management of the facilitation of employability in education
Source: Author's construction

On the national level, the main elements affecting the educational institutions are education policy planning and governance, regulation, funding and guidance and support which all are interlinked. On the institutional level, education managers are responsible for the management of an educational institution, including setting goals, developing strategy and a plan of work, planning and implementing education programmes, ensuring teaching staff and their development which all leads to achieving learning outcomes and employability. The results of the education process should be evaluated and conclusions fed into improvement of the overall process both, on the institutional and national level.

Considering the importance of democratic and self-learning principles in education, interaction between the national and institutional levels should be both ways: top-down and bottom-up. Likewise, cooperation with external partners, especially employers should be implemented both ways to ensure their effective participation in the education process. External factors, such as the labour market, affects education policy making.

3.2. Education Management Processes to Facilitate Employability

3.2.1. Planning and Governance Process of VET

Planning VET which would facilitate student employability includes the process of education policy planning, development of regulation, as well as governance which considers the labour market needs and the importance of developing student employability.

It also includes researching labour market needs and taking them into account in the planning process, as well as effective co-operation with labour market partners.

Ensuring lean administration and clear and transparent processes

Within the governance and management process, the goal of facilitating employability of graduates should be included for VET. Current policy planning documents (Cabinet of Ministers, 2010; 2015; Ministry of Education and Science, 2009, 2014b; Saeima, 2012) stress the need to facilitate compliance of VET to the labour market needs, ensuring employment of graduates after completion and developing co-operation with employers, but not the employability of graduates in the long-term.

The social partners - employer and employee representatives – should be included in the process of governance and planning of VET. Involvement of relevant stakeholders, including social partners and VET providers in planning and preparing implementation plans for VET is promoted by the European Quality Assurance Reference Framework (EQARF) (European Parliament, Council, 2009, p. 6). According to Cedefop research (2011), involvement of social partners in planning and management of VET, as well as engaging employers in providing WBL increase the relevance and attractiveness of VET in the eyes of young adults who prefer a more practical path or the possibility of learning while working (Cedefop, 2011; 2014). Multi-stakeholder governance model of VET is one of the success factors of dual VET system in Austria and Germany (Bliem, Petanovitsch, Schmid, 2014) and is recommended also for Latvia (Buligina, Sloka, Kantāne, & Līce, 2016).

In the process of ensuring stakeholder involvement, it should be taken into account that successful governance of VET and involvement of social partners require clear division of roles and clear and useful regulation, motivating stakeholders to participate in decision-making (Bliem, Petanovitsch, & Schmid, 2014). Planning processes should reflect a strategic vision shared by the relevant stakeholders involved in VET (European Parliament, Council, 2009, p. 6).

In Latvia, the social partners are very well involved in the process of planning VET, for example, in the Sub-Council on Vocational Education and Employment (PINTSA) under the National Tripartite Council which is responsible for adopting occupational standards, and which is consulted on the VET admission plans and any other strategic issues in the field of VET policy planning (Ministry of Education and Science, 2016a). On the sectorial level, the social partners are involved in the 12 Sectorial Expert councils which elaborate the sectorial qualification frameworks and are involved in the development of occupational

standards, planning admission, planning infrastructure development of VETIs, accreditation of VETIs and programmes, supporting VETIs and employers in organising WBL (Cabinet of Ministers, 2016a; 2016c).

Skills anticipation and using them in VET provision

VET attractiveness to a very large extent depends on attractive employment opportunities after completing VET programme (Cedefop, 2014a). Therefore, it is important to ensure that the planning offer of VET programmes is based on the labour market requirements and the number of qualified workers needed.

In Latvia, the provision of VET is planned according to various criteria, including employer advice and forecasts of labour market needs alongside student preferences (OECD, 2009, p. 30). The Ministry of Education and Science seeks an advice of the Sectorial Expert Councils when preparing student admission plan for VETIs. After consultations, the plan is adopted by the PINTSA. The initial proposal, however, is developed by the VETIs, based on the student demand, or, rarely, on the demand by employers interested in partnership with VETI. The list of programmes offered by different VETIs offers wide range of study options for students. Finally, the admission results are usually determined not by labour market restrictions, but by students' demand. Often, the education programmes which are required on the labour market, such as in the timber industry, food production, agriculture, are not attractive to young people and do not fill all available places of study. Thus, this system cannot sufficiently balance the demand and supply of the labour market. In comparison to dual VET system where students are limited to those courses and programmes where employers are willing to offer workplace training (ibid.), the Latvian system is more flexible towards demand by potential students. Considering that VET in Latvia is not designed only for the needs of narrow businesses, which allows graduates to be more flexible in the labour market, this planning model seems appropriate. Nevertheless, more efforts should be made to forecast the needs of the labour market and to plan admission accordingly. Career support should include informing students about different education options. Employers should be engaged in informing about different sectors, occupations and work opportunities more actively, as well as in promoting VET as attractive education and career path.

VET attractiveness depends also on compliance of the programmes to the labour market needs. The social partners are involved in determining the requirements for the VET programmes - the Sectorial Expert Councils are responsible for elaborating and updating the

sectorial qualification frameworks and the occupational standards, and sometimes also in elaboration of the VET programmes.

Permeability of qualifications and diversity of pathways should be also taken into account in planning VET provision as students and their parents do not want to choose programmes with dead-ends and without perspective of further studies (Cedefop, 2014a). In Latvia, VET students obtain both, professional qualification and general secondary education diploma, which formally allows them to continue studies at the higher education institutions. However, weaker results in acquiring general education subjects and in centralised exams might limit their opportunities to continue further studies on the higher level. In Finland, graduates from VET programmes can continue their studies in special technical higher education institutions. Some VETIs already have agreements with higher education institutions, but the requirements VET graduates face at the higher education institutions are the same as for everyone. Additional support, for example, by free preparatory courses, should be offered to VET students, and opportunities to study should be more promoted among potential students and their parents.

Ensuring employer engagement in provision of VET

To ensure employer engagement in VET, companies need to see a return on their investment (Advisory Committee on Vocational Education and Training [ACVT], 2016; Bliem, Petanovitsch, Schmid, 2014). VETIs should be interested and open to cooperate. Appropriate and timely communication is very important. The costs and benefits for companies must be balanced (UEAPME, BUSINESSEUROPE, & CEEP, 2016). To attract employers who have little involvement in providing work placements, such as SMEs, financial subsidies to cover part of the costs could be considered. The schemes of financial subsidies, however, should be carefully designed to facilitate the quality of work placements and to avoid financing employers seeking cheap labour.

To increase employer responsibility for VET system, delegating state functions to employer organisations should also be considered. In dual VET systems, employer organisations play important role in running VET system. For example, in Austria, employer organisations are responsible for checking the training companies, for running the qualification examinations for students, and for ensuring career guidance/ counselling.

Centralised systemic support for companies which would include organisational and consultative support to companies would be useful to promote availability of high-quality work placements and WBL. For example, there are apprenticeship offices in Austria

responsible for supporting companies in implementing apprenticeships. In Latvia, employer organisations support their members within their limited capacity. As the largest support to the companies in recent years, an ESF project should be mentioned, which offers a financial support to companies for organising work placements or WBL as of 2017. The project is coordinated by the Employers' Confederation of Latvia[2]. Nevertheless, this is not a systemic support measure, but a project which is limited in time, and more

3.2.2. Implementing VET

Implementing relevant, high quality VET programmes, which ensure both, acquisition of occupation-related knowledge, skills and competencies and employability competencies are important for competitiveness of graduates in the labour market in the short and in the long term. In the context of this dissertation, it is important to analyse how both relevant occupation-related and employability competencies, could be embedded into the curriculum of VET. Implementing systemic tools to ensure transparency of and recognition of learning outcomes are also important to ensure links with the labour market, for example, description of learning outcomes, aligning qualifications to the national qualifications' framework and European qualifications framework. Additionally, professional development of educators and educating mentors in companies is important to ensuring high quality, relevant VET facilitating employability.

Ensuring relevant, up-to-date VET programmes

The EU ministers responsible for VET have already committed in 2010 to regularly adapt VET content, infrastructure and methods in order to keep pace with shifts to new production technologies and work organisation (Bruges communiqué of 2010). In 2015, with a view to developing high quality and labour market relevant vocational skills and qualifications, they agreed to promote WBL in all its forms and to further develop quality assurance mechanisms in VET in line with the EQAVER recommendation (Riga conclusions of 2015). According to Cedefop (2009, p. 12), VET relevance to the labour market needs can be increased by ensuring close cooperation between the worlds of work and education. The following activities are essential for that: occupational standards, which are an instrument to ease communication between both worlds; the transparency and comparability of qualifications for worker and student mobility (facilitated by, for example, the European

[2] More information available at http://www.lddk.lv/projekts/sam-8-5-1-palielinat-kvalificetu-profesionalas-izglitibas-iestazu-audzeknu-skaitu-pec-to-dalibas-darba-vide-balstitas-macibas-vai-macibu-prakse-uznemuma-istenosanas-noteikumi/

qualification framework and European credit system for vocational education and training); lifelong learning and modularisation of qualifications.

In Austria, responsiveness to changing requirements of the labour market is considered to be one of the success factors of the VET system (Bliem, Petanovitsch, Schmid, 2014). Only then it would be possible to ensure that VET will impart all the required professional skills that are required by the economy and are therefore in demand in the job market. Therefore, the individual items in the occupational standards are not static; they should be formulated in such a way that they can be quickly and simply customized to suit new developments. To ensure this, an analysis of labour market requirements needs to be made. Both, formal mechanisms for flexibly adapting occupational standards and education programs, as well as motivation to change accordingly should exist. The development of formal mechanisms should include introduction of outcome-based standards and institutionalising the participation of social partners in standard-setting which are preconditions for increasing the relevance and credibility of qualifications (Cedefop, 2009).

In Latvia, EQAVET indicators have been recently implemented in the national regulation on accrediting VETIs and programmes (Cabinet of Ministers, 2016b). Latvia is also in the process of moving towards a modularised or unitised VET system. Modular VET programmes were developed within an ESF-funded project “Development of sectoral qualifications system and increasing the efficiency and quality of vocational education” which was implemented by Latvia’s State Education Development Agency (2010 - 2016); and this work is continuing within the ESF project "Improvement of Sector Qualification System for Vocational Education Development and Quality Assurance", implemented by the National Centre for Education of the Republic of Latvia (2017 - 2021).

Embedding employability competencies into curriculum

A key approach in VET systems that emphasises the acquisition of employability skills is competency-based education. In the context of the changing labour market, the potential of competency-based education can be realised only when education programmes move away from “knowledge and skills for performing at the workplace” towards “knowledge and skills for performing beyond the workplace” (Boahin & Hofman, 2013). According to Watson (1991), competency-based VET requires that knowledge, skills and attitudes to be taught in a vocational programme are those required by workers to perform successfully in the related job or occupation. It usually involves a series of learning experiences that include background information, practice and performance of the required skills in an actual or

simulated work setting and incorporates some form of individual or self-paced learning. The basic characteristic of competency-based VET is:

- competencies are identified and stated;
- competencies are specified to students prior to teaching and learning;
- criterion-referenced measures are used to measure the achievement of competencies;
- a system exists for documenting the competencies achieved by each student (Watson, 1991, p. 134).

Yorke & Knight (2006) offers a spectrum of ways in which employability competencies can be developed through curricula. Differentiation of these ways are not clean-cut, and they can smudge into each other:

- employability through the whole curriculum;
- employability in the core curriculum;
- work-based or work-related learning incorporated as one or more components within the curriculum;
- employability-related module(s) within the curriculum;
- work-based or work-related learning in parallel with the curriculum.

Each educational institution should choose the most appropriate, as there is no "one size fits all" approach. While the first might have the greatest potential for enhancing employability because it makes it easiest to bring most programme elements into constructive alignment, in many cases less ambitious approaches will be the most practical (Yorke & Knight, 2006, p. 14). In the process of planning, Yorke & Knight (2006) recommend doing the curriculum audit by analysing, where employability-related learning is incorporated into curricula – and where there might be gaps. In case of modular education programmes, it might be difficult to take a whole programme-view of what is on offer due to curricular flexibility for students, and thus it might be more sensible to concentrate on the "core" of a study path-way.

The example of University of Luton described in detail by Fallows & Steven (2000) demonstrates that the process of embedding employability into curriculum brings many benefits to the educational institution. The similar approach could be successfully adapted also for VETI. The University of Luton started by having a university-wide debate on which skills should be highlighted, how they should be assessed, how the university might ensure that each student is fully exposed to each skill area. The debate led to development of detailed tabulation of the skills expectations (learning outcomes) for each level of education

programme. The university also defined the university's expectations with respect to matters such as each student's responsibility for their own learning. The actual implementation took place in four steps:

1. Information gathering (skills audit).
2. Validation (to recognise formally and record the skills content for each module).
3. Revising modules, including information provided to students.
4. Highlighting skills development (bringing skills development to the students' attention during lectures and seminars and with reference to assignment work).

Since almost all members of teaching staff participated in this process, it was significant awareness-raising exercise. Among the most important, long-term impact for the university, Fallows & Steven (2000) mention the adoption of innovative teaching methods. This exercise has led many lecturers to rethink their teaching to include methods which positively utilise methods which recognise the students' skills. Other benefits include raised academic achievement and improved student motivation, as well as students' awareness of their personal responsibilities as learners – and not merely as "sinks" for facts and opinion by the lecturer. This example demonstrates that educational institution, once it has acknowledged the importance of employability competencies and decided to work towards this goal, can take clear steps to embed employability competencies in curricula. All results might not be immediately seen, especially regarding performance of graduates in the labour market, however benefits related to co-operation of teachers in improving teaching methods is the result that is worth the effort.

This example also suggests the importance of student-centred learning methods in developing employability competencies which has been acknowledged also by Barrie (2005) and Biggs (2003) who argue that the pedagogical approach needs to engage students positively in their learning and should discourage a relatively passive approach that is likely to lead to surface, rather than deep learning. In this context it is interesting to note that Schofield already in 1989 has sketched a range of changes that will be required in the VET system in response to the restructuring of industry in Australia to more innovative and productive, and requiring workers who are better thinkers (Hager, 1992):

- *Teaching and learning methods* will need to be less didactic and based more on enquiry and problem-solving.

- *Skills* will need to be developed in the context of a problem and in group work rather than in isolation.

- *Students/workers* will need to become mode independent learners.

- *Teachers and trainers* will need to move away from a set text, manuals and prepacked exercises to production and problem-solving.

Employability competencies can be effectively developed also through WBL, work placements internships (described in detail below) and communities of practice (Crebert, Bates, Bell, Partrick, and Cragnolini, 2004), as well as labour market experience periods in case of school-based learning. Research of examples of good practice of organising work placements in Latvia by Līce (2018) has shown that many of employers which offer high quality work placements, are interested also in other co-operation activities with educational institutions, for example, to participate in elaboration of education programmes, evaluation of students, examination, career days, and governance of educational institution. Some of the companies were also eager to offer lectures to students at educational institution and to participate in teacher training, or to offer excursion in the company, or provide materials, infrastructure, and information for students. Few also invested their effort to support skills-competitions by specially preparing students (Līce, 2018). All of these areas of co-operation between educational institutions and employers complements education with valuable learning experience.

According to Yorke and Knight (2006), extra-curricular activities are also effective in developing employability skills. Although educational institutions are not able to reach directly into students' extra-curricular activities, they can, for example, through career development, help students to recognise the significance of those activities and represent the best effect achievements that can be supported with evidence from extra-curricular activities (Yorke & Knight, 2006, p. 7).

In Latvia, key competencies in VET are promoted both, through general and vocational study subjects. VET students acquire general subjects according to the state general education standard. General study subjects constitute the smaller part of curriculum in VET compared to general education programmes. Nevertheless, VET students have to pass the same centralised exams in general study subjects in addition to qualification exam as students in general education programmes to complete VET programme. Considering that general education students have higher scores in state centralised exams, it may be concluded that often students with lower marks choose to study in VET programmes, or that students in VET often lack motivation to acquire general study subjects and are more interested in professional skills. In research by Kinta (2014) teachers and employers confirmed in

interviews that students in VET have insufficient general skills to fulfil the requirements of the state education standard. Therefore, it is not possible to include complicated problems in the learning process to achieve higher learning outcomes. As usually learners are not able to acquire general education subjects (usually they take place during first study years), discipline problems occur, including non-attendance, and many students drop-out even before they have an opportunity to get deeper understanding about their chosen occupation (Kinta, 2014, p. 125).

Comparison of the results in centralised exams for VET students and for general education students in some key subjects is presented in the Table 3.1. The results demonstrate that VET students received considerably lower exam scores than general education students.

Table 3.1
Average Marks in Centralised Exams in Schools of Different Types in 2016/2017 and 2017/2018 Study Years, %. Maximum = 100 %

Centralised exam	Study year	Secondary education school	State gymnasium	VETI*
Latvian (obligatory exam, 12th form)	2016/2017	51.6	58.5	42.1
	2017/2018	53.7	71.8	42.1
English (optional, exam must be taken in one foreign language)	2016/2017	63.1	77.1	46.1
	2017/2018	64.4	78.7	49.4
Mathematics (obligatory exam)	2016/2017	40.7	44.4	19.6
	2017/2018	38.8	55.3	20.3
Physics (optional)	2016/2017	54.6	55.4	28.6
	2017/2018	42.5	56.7	23.0
Chemistry (optional)	2016/2017	60.7	65.6	49.1
	2017/2018	61.1	72.0	31.1

* Results of schools of arts are included

Source: Author's construction based on data of National Centre for Education of Latvia, 2017, 2018

Since 2010, the promotion of key competences in VET curricula in Latvia has progressed: modules comprising key competences have been designed to soon be integrated in study subjects, and a shift to modular programmes is being piloted in VET, which may foster better integration of key competences in vocational subjects in the future (Daija, Kinta, & Ramina, 2016). In addition, the National vocational education standard (Cabinet of Ministers, 2000) introduced the technical and humanitarian directions of general study subjects in 2016. Their implementation will depend on the necessary professional competencies defined by the relevant occupational standard. In the technical direction, 45 %

of content is devoted to math, natural sciences and technologies (Daija, Kinta, & Ramina, 2016).

The competence "learning to learn" is included in the VET curriculum in Latvia. Regulations (Cabinet of Ministers, 2008) set National qualifications' framework level descriptors that include learning skills and motivation to continue education (at European qualifications' framework level 4). National VET standard (Cabinet of Ministers, 2000) set the development of learning skills and motivation to continue education as learning outcomes of the national curricula. Regulations (Cabinet of Ministers, 2010) include occupational standards, which specify the development of professional skills. The occupational standards set knowledge, skills and competences necessary for work in respective occupation (Daija, Kinta, & Ramiņa, 2016, p. 11).

At the same time, adult participation in life-long learning is low in Latvia – only 5.7 % in 2015 in comparison to the EU average of 10.7 % according to Eurostat. 17.8 % of Latvians who did not participate in adult education, but wanted to participate, could not due to lack of employer support, 35 % - could not do it due to their work schedule (CSP, 2013). Reasons for this might be a combination of lack of worker motivation and employer support, which both comes from short-term thinking and planning one's career or business development. Therefore, in the Latvian context, the shift from passive attitude towards lifelong learning to active, initiative-based attitude and action is particularly important for people of all ages.

Professional development of educators

Professional development of educators – VET teachers and mentors in companies – is important to ensure continuous improvement of VET, relevance to the labour market, and effective and student-centred teaching and learning process. EQARF suggest determining the investment in training of teachers and trainers as the quality indicator for VET. The purpose of investing in educators is to promote ownership of teachers and trainers in the process of quality development in VET, to improve the responsiveness of VET to changing demands of the labour market and to improve learners' achievements (European Parliament & Council, 2009). In Latvia, the National Centre for Education provides regular seminars for teachers working in VET to develop their professional competences (Daija et al., 2016). Occasionally (within EU funded projects), there are also work placements in companies available for teachers.

The training of work placement mentors in companies is not obligatory in Latvia, except for WBL, where at least a pedagogical qualification of 72 hours is required (Cabinet

of Ministers, 2016a). The employers complain that this requirement is too strict and cannot be met. A compromise should be considered, providing appropriate and useful education opportunities for companies offering both work placements and WBL.

The process of implementing learning outcomes-based approach

Using learning outcomes-based approaches in education, linking qualifications to the national qualifications' framework and European qualifications' framework is important to facilitate transparency and recognition of qualifications. The research by Cedefop (2012) confirms that successful implementation of learning outcomes-based approaches in education greatly depends on professional development of teachers, which includes using appropriate teaching methods, not just formal rewriting of an education programme. Kinta (2014) suggests that teaching methods should facilitate situations in which learners actively participate in the learning process, take initiative, act independently and make decisions. Learning of general and professional skills should be more interlinked to help learners to understand the importance of general education subjects and to participate in the learning process more actively. Employers should be more actively involved in formulating learning outcomes in VET, which would facilitate their awareness about education processes, as well as co-responsibility for achieved learning results. Moreover, in the process of organising education reform to implement learning outcomes-based approaches, all interested stakeholders should participate, including the learners. The process should start by educational activities about the notion of learning outcomes, their application in education and in student achievement assessment (Kinta, 2014).

In Latvia, the examination of acquired professional skills takes place in qualification examinations. In Latvia, learning outcomes are expressed in three dimensions – knowledge, skills and competence – in line with the European qualifications' framework. Students are assessed against these outcomes via a qualification exam. The Latvian qualifications framework follows the structure of the European qualifications' framework. According to Kinta (2014) research, implementation of learning outcomes-based approach in VET in Latvia has only fully taken place on the level of education policy planning. Lack of understanding about learning outcomes and their application in the process of education by teachers and students indicate that learning outcomes-based approach is not fully implemented in VET yet, and it is hindered by inadequate teacher education and professional qualification.

3.2.3. Providing Adult Learning Opportunities

For adults to participate in adult learning, adult learning opportunities should be available. Given the peculiarities of adult learning, adult learning should be tailor made for adults to learn. This also means special skills for teachers at VET instructions who are accustomed to working with young people. Recognition of prior learning is essential for the involvement of adults in skill development activities. Given the mission of VETIs and the need of their graduates for lifelong learning, VETIs should consider reaching out to their graduates more actively to involve them in further education.

Ensuring access to adult learning

The need for educational institutions to provide adult learning opportunities nowadays is self-evident.

In Latvia, adult learning opportunities are provided by private providers, non-formal education providers, municipal lifelong learning centers, employers and educational institutions found by state or municipalities, including VETIs. Nevertheless, adult participation in lifelong learning activities is low – on average only 6.3 percentage points during the last 10 years (see Figure 3.2). Average adult participation in the EU-28 in 2016 was 10.8 % according to Eurostat.

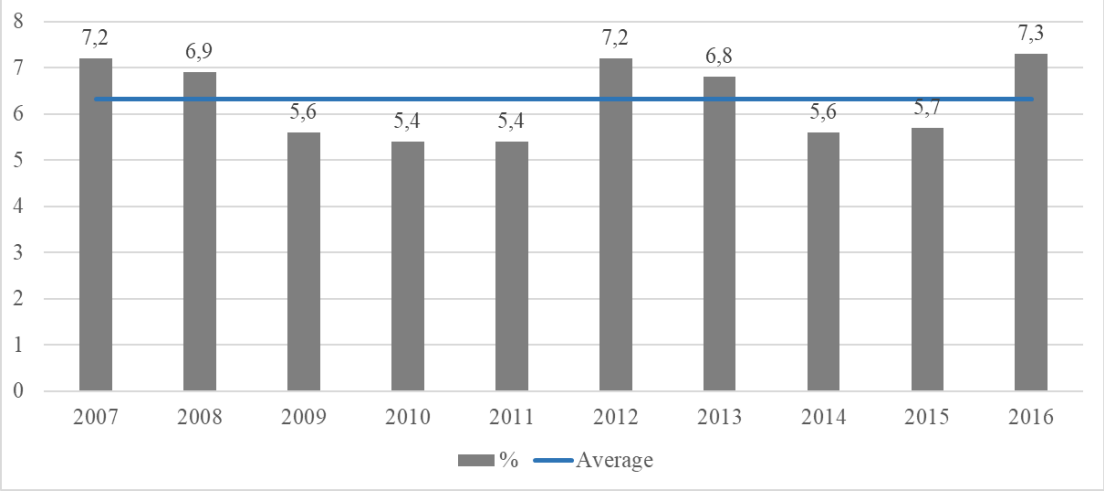

Figure 3.2. Adult (25 – 64 years old) participation in lifelong learning in Latvia, %
Source: Author's construction based on Eurostat data, 2016

The most frequently mentioned factors preventing adults from participation in adult learning in Latvia according to the Central Statistical Bureau (2013) were: too expensive, couldn't afford (22.7 %), could not combine with work schedule (14.9 %), did not have time

due to family reasons (12.1 %), lack of appropriate education offer (11.9 %), unreachable distance (9.6 %), lack of employer support, or couldn't fulfil eligibility criteria (e.g., language, prior education level) (6.4 %). Therefore, financial support, supportive attitude by employers and appropriate education offers are essential to promote adult learning. The Education Development Guidelines for 2020 has set the aim to increase adult participation in lifelong learning to 15 % in 2020 and to increase the activity of recognition of prior learning – by 20 % in comparison to 2013 (480 persons) (Ministry of Education and Science, 2013). The Ministry of Education and Science is responsible for support activities for employed people, the Ministry of Welfare – for support activities for unemployed people, the Ministry of Economics – for employee trainings in companies. As of 2017, the State Education Development Agency implements an ESF funded project[3] to support participation of employed adults in lifelong learning in Latvia, which is funded with 25.4 million EUR and which will be implemented by the end of 2022. The project funds adult learning co-ordinators in municipalities and co-finances learning courses and recognition of prior learning to employed people, primarily with low skills. Educational institutions providing vocational education programmes are invited to participate in the project. Taking into account recent investments into infrastructure of VETIs – Competence centres, the Ministry of Education and Science pays special attention to ensuring that these VETIs are active in providing adult learning activities (Cabinet of Ministers, 2016).

To better coordinate all the activities supporting different groups of adult learners and to better adjust the learning offer to the labour market needs, a new governance model of adult learning had been implemented in Latvia by establishing an Adult Education Council in 2016. It includes representatives from different ministries, national employer organisations and the municipality union (Cabinet of Ministers, 2016).

Considering recent activities and financial support for adult learning in Latvia, it is expected that activity of VETIs in providing adult learning and recognition of prior learning will increase. Participation of employed adults in adult learning should increase accordingly.

Embedding andragogy principles

To ensure that adult learning provided by VETIs is appropriate and relevant to adults, the diverse needs of adults should be taken into account when planning adult learning provisions. The following adult needs can be identified: individuals' psychological, and

[3] More information: http://www.viaa.gov.lv/lat/pieauguso_izglitiba/par_projektu/

cognitive needs, community needs and group needs (Gonczi, 1992). For example, the training schedule should be suitable for adults, especially when it comes to employed individuals. When designing education courses, the basic adult learning and andragogy principles should be considered. Knowles (1970) has proposed the following principles for adult learning:

- Involving learners in a process of *self-diagnosis* of needs for learning which involves: (1) constructing a model of the competencies or characteristics required to achieve a given ideal model of performance to help the learner to establish a vision of "a good specialist"; (2) providing diagnostic experience in which the learners can assess their present level of competencies; (3) helping the learners to measure the gaps between their present competencies and those required by the model to help the learners to identify specific directions of desirable growth. Learning is effective when it is goal-oriented (Gonczi, 1992).

- Involving learners in the process of planning their own learning, with the teacher serving as a procedural guide and content resource.

- Treating the education process as the mutual responsibility of learners and teacher.

- Doing evaluation of learning with a help of self-evaluation, in which the teacher devotes energy to helping adults get evidence for themselves about the progress they are making towards their education goals.

- Using experience of the learners in the process of learning by emphasizing experiential techniques of learning and practical application.

- Considering the developmental tasks of adults when designing the sequence of the curriculum.

- Organising adult learning around problem areas, not subjects.

Building capacity of teachers to provide adult learning effectively

Providing adult learning requires specific skills from teachers. Adult educators need as much to be experts in understanding the motivations and personalities of individual learners, as to be specialists in their subject or content areas. Ability to communicate effectively with adult learners is critical to be able to help people to learn (Kaye, 1992, p. 83). Therefore, the management of VETIs planning to work with adult clients or expanding offerings for adults should think about how to support and prepare teachers for this job.

Ensuring recognition of prior learning

According to the Council recommendation of 2012 on the validation of non-formal and informal learning, individuals should have the opportunity to demonstrate what they have learned outside formal education and training and to make use of that learning for their careers and further learning (Council of the EU, 2012). This is particularly important in the context of lifelong learning, to ensure that adults can continue education at the educational institution and build on their accumulated experience. Validation of non-formal and informal learning requires qualification standards to be formulated as learning outcomes to be open to more learning experiences (Cedefop, 2009).

In Latvia, the process of recognising prior learning is regulated by the Regulation of the Cabinet of Ministers No.146 as of February 22, 2011. However, recognition of prior learning is not a widespread practice in Latvia. Covering costs of qualification exam within an ESF-funded project intends to promote accessibility of recognition of prior learning in Latvia more widely. Providing informative and organisational support should be considered as well to ensure that more adults use this opportunity.

Building cooperation with graduates, employees and employers

In the situation of changing labour market needs and constant technological progress, as well as the decreasing number of students in Latvia and the need to effectively use the modernised infrastructure in VETIs, the role of VETIs is also changing. Given the mission of VETIs and the need of their graduates to participate in lifelong learning, VETIs should consider reaching out to their graduates more actively to involve them in further education. They should work with adults and employers more actively to contribute to the social and economic development and to realise their own potential better. Building relationships with graduates by gathering their feedback and involving them in the education process, not only facilitates the improvement of education process, but also attracts graduates as adult learners. Thus, VETI can increase their contribution towards the employability of graduates and economic development of the region. Relationship building with employers is important for the same reason – to engage workers in adult education, as well as to attract employers to the process of providing VET for the benefit of learners.

3.2.4. Providing Transfer from Education to the Labour Market

Transfer from education to the labour market includes gaining relevant work experience through work placements or other type of WBL and career counselling/ guidance, as well as other activities to become employed.

The process of ensuring relevant work experience

Learning at work takes place through one's participation in work activities. By being engaged in goal-directed work activities, trainees have access to the support that enables them to construct and learn work-related knowledge as well as reinforce that learning (Billett, 2000). The trainees have an opportunity to learn through listening, observing, reflecting, practising and refining skills, trial and error, supervision or coaching, mentoring, problem-solving, learning from mistakes, getting information and asking questions, being proactive and receiving feedback (Eraut, 2004, p. 267), as well as interacting with others (Murakami, Murray, Sims, & Chedzey, 2009). According to Papert (1980) and the constructionism theory, developed by him, learning is the most effective when learners are engaged in making things and creating something meaningful, interacts with the context and with the world, which boosts self-directed learning and ultimately facilitates the construction of new knowledge (Papert, 1980). Work placements can also be effective in building career identity, if the trainee has an opportunity to be integrated fully in the work of the company and to interact with experienced workers which helps to participate in the "peripheral learning" (Lave & Wenger, 1991). To be effective, work placements have to take sufficient amount of time (Tay, 2015).

Work placements can provide good opportunities for students to obtain meaningful learning and work experience, if organised according to the certain good practice (Līce, 2018). Although methodological approaches to organising work placements differ from company to company, the common elements of quality work placements comprise the following elements: selection of trainees, discussing the goals and programme of work placement, assigning the responsible supervisor for each trainee, preparation for work placement including getting acquainted with the safety requirements and the company, implementation of work placement, ensuring meaningful participation in the work of the company, as well as the evaluation. The most important factor to ensure quality learning and work experience for students during work placements is the interest and motivation of the companies which stem from their need for qualified workers, strategic goals and sustainable working practices (Līce, 2018). Therefore, it is of utmost importance that education

programmes are demanded in the labour market, and the planning of education offer takes place considering labour market trends and employer demands.

To maximise the potential benefits from work placements, educational institutions should play an active role in preparing students and employers for work placements, monitoring and evaluating them. The funding system of VET and the management of educational institutions should facilitate quality of work placements, for example, supporting teachers by providing sufficient time and funding for their involvement in organising, monitoring and evaluating work placements (Līce, 2018).

Companies which organise quality work placements also usually engage in other co-operation activities with educational institutions, for example, in elaboration of education programmes, as they are interested in influencing the content of education and in supporting the work of the VETI (Līce, 2018). Therefore, VETIs should provide for their employer partners an opportunity to participate not just in providing work placements, but also in formulating learning outcomes and implementing learning process, as well as in other co-operation activities, for example, providing career guidance support to the learners.

Work placements are highly valued in Latvia: 40 % of respondents in Eurobarometer (TNS Political & Social, 2014) indicated practical work experience with a company or organisation as the most important aspect of education which was the highest rate among EU 28. At the same time quality work placements are not always available. The quality of work placements also varies and can lead to both excellent and dubious experience (Līce, 2018). Having a work placement also does not guarantee employment with the same employer in Latvia. Employers, especially large companies which are offering work placements to several students at the same time, usually select only the best trainees to offer them work at the company. While most young people (both at higher education and secondary education level) would like to work at the same company where they had work placement (63 %), the actual proportion of those continuing to work with the same employer is only 25 % (Klāsons & Spuriņš, 2015). The choice to discontinue cooperation does not depend only on employers, as also 37 % of students do not want to continue to work at the place of their work placement, mainly due to limited personal development opportunities, lack of interest about specific occupation and the field of work, dislike of the job or too small remuneration (Klāsons & Spuriņš, 2015).

Only 19.3 % of employers cooperate with educational institutions by offering work placements as the means of finding highly qualified employees in Latvia (Project and Quality

Management Ltd., 2014, 131). This tendency is also confirmed by another representative employer survey: in 2014, 42 % of employers confirmed that they have had trainees during last 5 years (Klāsons & Spuriņš, 2015). In 2017 this number has decreased – only 35 % of employers have had trainees during last 5 years (Excolo Latvia Ltd, 2017). In 2014, only 33 % of employers were interested in offering work placement to students in the near future (Klāsons & Spuriņš, 2015), which corresponds to the decline in the number of work placements in the following years. There are, however, positive signs that employer interest to offer work placements will increase in the future – in 2017, 39 % of employers were interested, among those employers without work placement experience – their interest increased from 13 % to 20 % (Excolo Latvia Ltd., 2017). The largest interest to attract trainees is shown by companies in the same sectors where provision of work placements so far has been more widespread: companies in the construction and services sectors, working in Kurzeme and Latgale regions, medium and, especially, large enterprises, as well as companies which are exporting and with international capital. Work placements are significantly less frequently provided in the trade sector, in Riga, and in small companies (Excolo Latvia Ltd., 2017).

The most frequently mentioned reasons not to have trainees by the employers in Latvia were the following: lack of time to educate the trainee, lack of vacancies, did not consider, and too large of expenses etc (Klāsons & Spuriņš, 2015). Another reason might be the credibility of work placements as a way to educate potential employees. In the process of recruiting new employees only 22 % of companies consider whether a prospective employee has been a trainee before applying for a job. At the same time, previous work experience is a much more important factor (for 77 % of companies), which points to the fact that the Latvian employers do not consider work placements an alternative to work experience (Klāsons & Spuriņš, 2015, p. 64). The situation among companies which participate in the network of the national employers' organisation (mainly medium and large companies) is different: work placements are 3 times more popular among those companies than on average on the national level (Līce, 2017). As admitted by some of them during collection of the examples of good practice, the main benefit from the work placements is finding good, qualified employees (Employers' Confederation of Latvia, 2017):

> *"Work placements are the opportunity to attract the best graduates of education institutions who already have some experience at the company"* – Latvenergo Ltd.

"The main benefit is the new employees who are already familiar with the company, have proved themselves in practice and have shown interest in becoming part of the company's team." – Exigen Services Latvia Ltd.

"An essential part of students after the end of the work placement is able to fully and independently perform their duties according to their level of education and begin their first work. The company has been providing work placements for many years and several employees of the company have started their careers as trainees." – Komerccentrs DATI grupa Ltd.

Therefore, improvements are needed both in terms of availability of work placements and WBL and their quality in Latvia.

The process of organising career support

Career counselling and guidance, including provision of labour market information (Cedefop, 2016a), is very important in facilitating successful transfer from education to the labour market, initially, by supporting to choose appropriate occupation, but also by supporting purposeful study process and integration in the labour market.

In the EU, career management skills tend to be part of the guidance support in active labour markets and youth guarantee measures. Alternative or bridge programmes for the unemployed young people embrace them as one of the key features, including in Latvia. Increasingly, they are also included in initial education programmes, more specifically in the years before learners need to choose the next education programme (Cedefop, 2015, p. 61).

In Latvia, the need for comprehensive, accessible career counselling and guidance system was stressed for a long time. The Vocational Education law (1999) determined that the Ministry of Education and Science is responsible for "organising implementation of professional orientation and career education in education" (article 8). So far, the public authorities have been frequently criticised by the stakeholders for limited availability of career development support for students, as well as for the lack of systemic approach to career development support. Recently, there were efforts made to resolve this problem.

The activities of career development support system in Latvia were implemented as of 2006. Then, a career development support was included in the state policy planning documents and EU funded projects on career development support were implemented. However, these activities were rather fragmented and did not contribute to the development of the consistent system. For example, graduates from master's degree programme "Career consultant", elaborated within the EU funded project, had limited work opportunities due to low number of relevant vacancies. As of 2013, only 34 career consultants work for the State Employment Agency (Jaunzeme, 2013, p. 15). Students were also not well informed about

available career development support, if there even was any. In Eurobarometer (TNS Political & Social, 2014), 29 % of Latvian respondents did not know about available career development support, but 14 % - disagreed with the statement that the career guidance services are available throughout education. Lack of career support in Latvia has also affected VET studies. Research by Kinta (2014) showed that VET students, when starting their studies, have weak understanding about their occupation, and the understanding develops only during the last study years. Only those students studying traditional occupations with clear tasks had better understanding, for example, carpenters, car mechanics, and cooks. Interviews with teachers showed that it is very difficult for students to evaluate their initial knowledge and skills and their compliance with the future occupation (Kinta, 2014, p. 122). Low understanding about the studies and occupations may create the risk of not finishing studies.

Career development support was not available to all students even though the regulation required to provide it. According to the regulation, VETIs are obliged to ensure career education activities individual career consultations to gain and to maintain the status of the Competence centre which ensures additional funding (Cabinet of Ministers, 2013). VETIs which are not Competence centres also have the responsibility to ensure career support. It is needed because sometimes students would like to change the chosen occupation and it is possible to do it during studies, as well as because students have to develop adaptation skills, learning skills, entrepreneurship skills and understanding on the related occupations and the labour market, so that students are able to make informed decisions about work and also possible further studies (Jaunzeme, 2013, p. 21). However, availability of career support varied a lot depending on the VETI and their ability to fund these activities within their limited budgets. Significant activity of VETIs in this field started only when the EU funded project "Career support in secondary general and VETIs" was started by the State Education Development Agency. This project follows the priorities set out in the Education and Development guidelines for 2014 – 2020 which envisage the goal to develop a comprehensive career education system which includes ensuring availability of career consultants in all regions of Latvia, organising career education events for young people, e.g., occupation and work observation events, career days, demonstration of examples of good practice in co-operation with the employers, and offering grants to VET students (Ministry of Education and Science, 2013, p. 69). It is implemented from 2016 – 2020 and funded with 21.6 million euros which is the largest financial contribution for career support

in Latvia so far. However, it is not clear how the system will be financed after the end of the ESF project. Therefore, there is no tradition of a comprehensive and accessible career development support system in Latvia, which has negatively affected VET so far. Substantial career support activities are implemented only in recent years, with the major financial support coming from the EU funds. These activities should be used to facilitate development of a sustainable career development support system, preferably run by educational institutions themselves and/ or public authorities within the existing education budget.

3.2.5. Ensuring Quality of VET

Quality of education is a complex concept that can be perceived in different ways. Several authors regard quality of education as "fitness for purpose" (e.g., Harvey & Green, 1993). This assumes that the interpretation of the quality concept depends on the education's stakeholders, for example, to governments, quality might be understood in terms of graduation rates, for employers – in terms of competencies acquired (Sarrico, Rosa, Teixeira, & Cardaso, 2010). In the context of this research, quality assurance and feedback systems are viewed from the perspective of how well they provide incentives for improving employability of graduates. The process of ensuring quality of VET includes the official quality monitoring mechanisms, collecting, analysing and using information from learners, teachers and employers, as well as continuous improvement of provided education.

Monitoring quality of VET

According to EQARF, the monitoring and evaluation process should be agreed by the stakeholders and clearly described, relevant to the needs of the sector, include self-evaluation, internal and external review, as appropriate, and based on performance indicators (European Parliament, Council, 2009). The governance process of VET should include regular monitoring and evaluation of outcomes, which should be carried out on a regular basis and supported by measurement. The monitoring process of VET should also include collecting and analysing data on graduate employability and learner feedback (see next Sub-chapter). The purpose and result of regular monitoring should be continuous improvement.

In Latvia, the process of accreditation of VETIs and programmes evaluates how the monitoring and evaluation processes work in VETIs. The regulation requires educational institutions to update and publish their self-evaluation report once a year (Cabinet of Ministers, 2016b), which ensures regular self-evaluation activity.

Ensuring feedback loop

VETIs in Latvia must collect information about graduate employment: this information has to be included in the self-evaluation report for the accreditation process and is provided to the Ministry of Education and Science. Information about graduate employment is used for informative purposes only. Statistics gathered so far are included in Chapter 1.4. In Finland, VETIs receive financial incentives for employed graduates, and therefore VETIs are motivated to develop linkages with the labour market and to offer education programmes which are required in the labour market. VETIs themselves do a market research to determine labour market needs. Latvia should also consider motivating VETIs to focus on the needs of the labour market, for example, through a funding mechanism rewarding performance of VETIs. Bot, graduate employment in Latvia and further studies in higher education should be considered as the success criteria in performance-based funding mechanism. Working in a related field or occupation should also matter as job-related qualifications are regarded as key variable of employability models (de Grip et al., 2004; Fugate et al., 2004; Hillage & Pollard, 1998). The EQARF recommends that not just information on student employment status is gathered, but also their feedback on learning experience and on the learning and teaching environment. Together with teachers' feedback this should be used to inform further actions. The information gathered should be discussed with the stakeholders and publicly available and used as a part of strategic learning process of the organisation (European Parliament & Council, 2009, p. 7). According to regulation (Cabinet of Ministers, 2016b), the accreditation expert committee has the right to survey and to meet the learners, teachers or other representatives of an educational institution. It is not determined, however, if VETI should collect regular feedback for the purpose of self-improvement, as recommended by EQARF. Collecting more comprehensive feedback by graduates and employers, for example, the information on occupation obtained after graduation, satisfaction rate of individuals and employers with acquired skills/ competencies (European Parliament, Council, 2009, p. 9), would be useful for VETIs. After spending some time in the labour market, graduates can share valuable feedback on what was useful and what should be improved in the study process so that the acquired education would be more useful in the labour market. Employers, however, are the stakeholders which encounter learning outcomes in the process of their application, and therefore their feedback can be very useful for VETIs on employability of their education.

Ensuring continuous improvement

The national quality assurance framework should promote continuous improvement and self-regulation of VETIs. This implies that VETIs have resources which are appropriately internally aligned with a view to achieving the targets set in the implementation plans. Also, VETIs should be able to undertake regular training of their staff and develop cooperation with relevant stakeholders to support capacity building and quality improvement, as well as to enhance performance (European Parliament, Council, 2009, p. 6).

The description of vocational education management processes listed in this section provides a comprehensive overview of opportunities and good practice in VET management to promote the employability of graduates at each stage of VET.

3.3. System's Approach to Managing Facilitation of Employability of Graduates

In this section, the author discusses the role of system's theory in managing facilitation of employability of graduates. A systems theory is a theoretical perspective that analyses a phenomenon seen as a whole and not as simply the sum of elementary parts. The focus is on interactions and relationships between parts in order to understand an entity's organization, functioning and outcomes (Mele, Pels, & Polese, 2010). As it was articulated by the 18th century German philosopher Hegel, the whole is more than the sum of its parts, and the whole determines the nature of the parts, and the parts are dynamically interrelated and cannot be understood in isolation from the whole (Westphal, 2003, p. 111). Systems theory has been proposed as a potential overarching framework for dealing with many issues in human behaviour. Developmental Systems Theory and Motivational Systems Theory have illustrated the applicability of systems theory principles to human behaviour (Patton & McMahon, 2006).

The following characteristics of a system by Ackoff (1971, pp. 661-669) shows why the managing facilitation of graduate employability should also be considered a system:

- The *systems approach* to problems focuses on systems taken *as a whole*. Such an approach is concerned with total-systems performance because some parts of a system can only be treated adequately from a holistic point of view. The facilitation of employability should also be considered holistically, considering personal attributes determining employability, education processes and external factors facilitating employability, as well as their interaction and mutual influences. Even of some of the factors perform well as possible

relative to its own objectives, it doesn't mean that the total system will perform as well relative to its own objectives.

- A *system* is a set of interrelated elements. Each of a system's elements is connected to every other element, directly or indirectly. Likewise, employability is determined by individual attributes which are closely interrelated. For example, motivated students achieve better results in education and obtain better experience. Individual attributes can be facilitated by education processes and by external factors.

- The *state of a system* at a moment of time is the set of relevant properties which that system has at that time. Any system has an unlimited number of properties, but only some of these are relevant to particular research. Likewise, this research summarises only the main employability factors which are relevant to facilitating graduate employability in a VETI in the short and in the long term.

- An *open system* is a system that has an environment. The *environment of a system* is a set of elements which are not part of a system but can produce a change in a system. The environment in the system of managing facilitation of graduate employability consists of the external factors that affect employability but cannot be influenced in education, for example, the labour market or the family background of a student.

- Systems may or may not change over time. A *dynamic system* is one whose state changes over time. As the elements of the system of managing facilitation of graduate employability are dynamic, for example, the labour market, the education processes, personality and abilities of an individual, this system is also dynamic.

- A *goal-seeking system* is one that can respond differently to one or more different external or internal events or states until it produces a particular state (outcome). Production of this state is its goal. Such system has a choice of behaviour. It is able to accomplish the same thing in different ways and under different conditions. It has a memory and it can increase its efficiency over time. Likewise, managing facilitation of graduate employability implies consideration of individual situation for each educational institution and its environment. Although the goal of graduate employability may be the same for each VETI, the chosen priorities and methods may be different for each institution. The role of education manager in defining, implementing and improving education processes is very important.

- A system is *adaptive* if, when there is a change in its environment and/or internal state which reduced its efficiency in pursuing its goal, it reacts or responds by changing its own state. Considering the cyclical process of education and the importance of self-learning

in achieving improvement, the system of managing facilitation of graduate employability should be adaptive. To *learn* means to increase one's efficiency in the pursuit of a goal. Only systems that are goal-seeking can learn.

A further strength of applying the systems theory perspective on facilitation of employability is the link it forges between theory and practice (Patton & McMahhon, 1999). The use of systems theory framework for understanding employability development has implications for practice of education managers as it encourages interventions at levels of the system and encourages them to be more proactive at this broader level. A system's theory perspective may also be helpful for individuals to view their employment circumstances in terms of the social and economic climate of the nation and encouraging them to be more self-directed in managing their careers.

Therefore, the systems theory framework provides a map for understanding the origins of employability development. The systems approach describes the system levels and essential factors in the process of acquiring employability, as well as their interaction. Using system's approach to describing employability factors at different levels is useful due to the complexity, multiplicity of levels and interdependency of factors.

Conclusions

In this chapter, the author has analysed the management of educational institutions, the education management processes and the system's approach to managing facilitation of graduate employability. The focus of this research is on the managing facilitation of graduate employability within an educational institution. An educational institution is the main agent in facilitating student employability within an education system. Managing the education processes within an education institution takes place horizontally and vertically: within institution and with external partners and policy makers. In the context of this research, education management is important with regards to achieving the stated goal by VETI, and especially the role of the managers. The management processes analysed in this research are: planning and governance process of VET; implementing VET; providing adult learning opportunities; providing transfer from education to the labour market; and monitoring quality, ensuring feedback loop and continuous improvement.

The systems theory provides an overall framework for explaining employability of graduates and the process of managing its facilitation. The systems theory framework shows that the individual employability develops over time in relation to the interaction in his or her life and in educational institution of a complex network of influences.

Author concludes that employability itself could be regarded as a system that is constantly formed by the interaction of influences. Viewing employability development as a system helps education managers to manage the process of facilitating employability of graduates by viewing employability holistically and considering important factors for facilitating employability. It is helpful also for individuals to understand employability and to become more self-directed in managing their careers and employability development. The system's theory perspective has contributed to the development of a model on how to manage facilitation of graduate employability, described in the following chapter.

CHAPTER 4. EMPIRICAL RESEARCH ABOUT MANAGING FACILITATION OF EMPLOYABILITY OF GRADUATES IN LATVIA

In this chapter, the author presents the empirical research programme, including empirical research methodology and a detailed description of procedures of research data collection and analysis for three research phases: preconception, quantitative data and qualitative data collection and analysis. The results of the research are presented according to the research questions. Procedures to ensure quality of the research and discussion of verification of the quality of the research is included as well.

4.1. Empirical Research Programme

4.1.1. Empirical Research Methodology

Background assumptions of the author

The author's logic of reasoning is deductive: the research questions were developed based on theoretical considerations. Research findings, based on empirical scrutiny, fed into revision of theoretical considerations, specific for Latvian context. It has an inductive element of preconception phase, as the author infers the implications of her findings for the theory that prompted the whole research (Bryman, 2008, p. 24).

The epistemological basis of this research is critical realism – a specific form of realism whose manifesto is to recognise the reality of the natural order and the events and discourses of the social world and holds on that it is only possible to understand and change the social world, if we identify the structures at work that generate those events and discourses (Bryman, 2008, p. 29). In critical realism, it is accepted that generative mechanisms are not directly observable, since they can be admitted into theoretical accounts claiming their effects are observable. Although the author focuses on the mechanisms to promote employability, the main reason for their inclusion in the research and in the model is their impact on employability. The author also appreciates the context which serves to shed light on the conditions that promote or impede the operation of the causal mechanism, which is crucial in critical realism. Finally, what makes critical realism *critical,* is that the adequate interpretation of the world and identification of generative mechanisms offers the prospect of introducing rational changes that can transform the status quo (Bryman, 2008; Corson, 2006), which is the goal of this research.

The ontological position of the research is constructionism. Constructionism invites the researchers to consider the ways in which the social reality is an ongoing accomplishment

of social actors rather than something external to them and that totally constrains them. It also implies that social phenomena and categories are produced through social interaction and are in a constant change (Bryman, 2008, pp. 33-34). The author considers the role of both individuals and organisations in promoting employability and has integrated the process of constant change into the research.

In this research, a practical knowledge interest is present in all phases. The practical interest of the research is to instruct the decision-making. The research process, including research methodology, and constructed model provide a new knowledge base for various stakeholders and decision makers in VET sector. The research also aims to stimulate discussion of the phenomenon.

Research strategy

The author uses the constructive research strategy for the research. The objective of the research is constructive problem-solving. Research is focused on real-world problems necessary to be solved in practice. According to Kasanen, Lukka, and Siitonen (1993), the constructive research approach as a type of applied study aims to produce new knowledge for application. The results of constructive research should express how one should act in a current situation to achieve a desired state. It includes an assumption about the causality of things: the action will case some anticipated effects to fix a problematic situation. Kasanen et al. (1993) propose four elements that should always be included in constructive research, which are displayed in Figure 4.1. Constructive research can be assessed according to the following criteria: an innovative solution to a real-life problem, the potential for the solution to be used more generally and the demonstrated usability and theoretical connections of the construction (Kasanen et al., 1993).

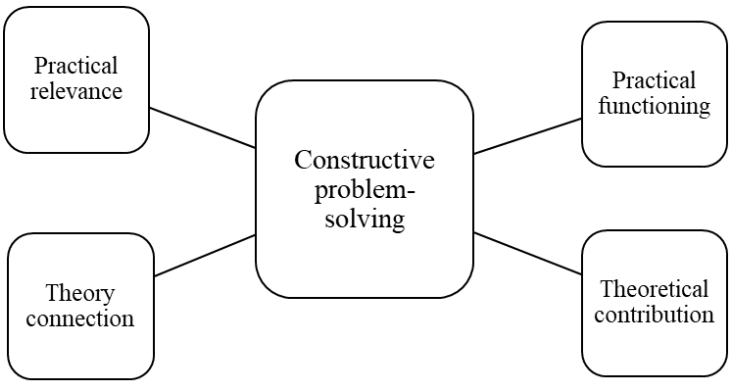

Figure 4.1. Elements of Constructive Research
Source: Adapted from "The constructive approach in management accounting research" by Kasanen, Luuka, & Siitonen, 1993, Journal of Management Accounting Research, 5, 241–64

The author used both qualitative and quantitative research methods and data to examine the phenomenon, including by triangulation. According to Dainty (2008), the pluralistic methodological approach is characteristic to constructive research as varying perspectives offered by several methods add their own unique value to the research, making it stronger than it otherwise would be.

4.1.2. Implementation of the Research

Research process and quality of the research

The research process involved three phases, which supplied information and knowledge to the research process. The author treated the research process a a spiral process, aiming to get deep into the research subject and to understand research data objectively. In the research process, the various phases overlapped with each other and contributed to each other. The process of the research is depicted in Figure 4.2. The schedule of the research is presented in the Table 4.1.

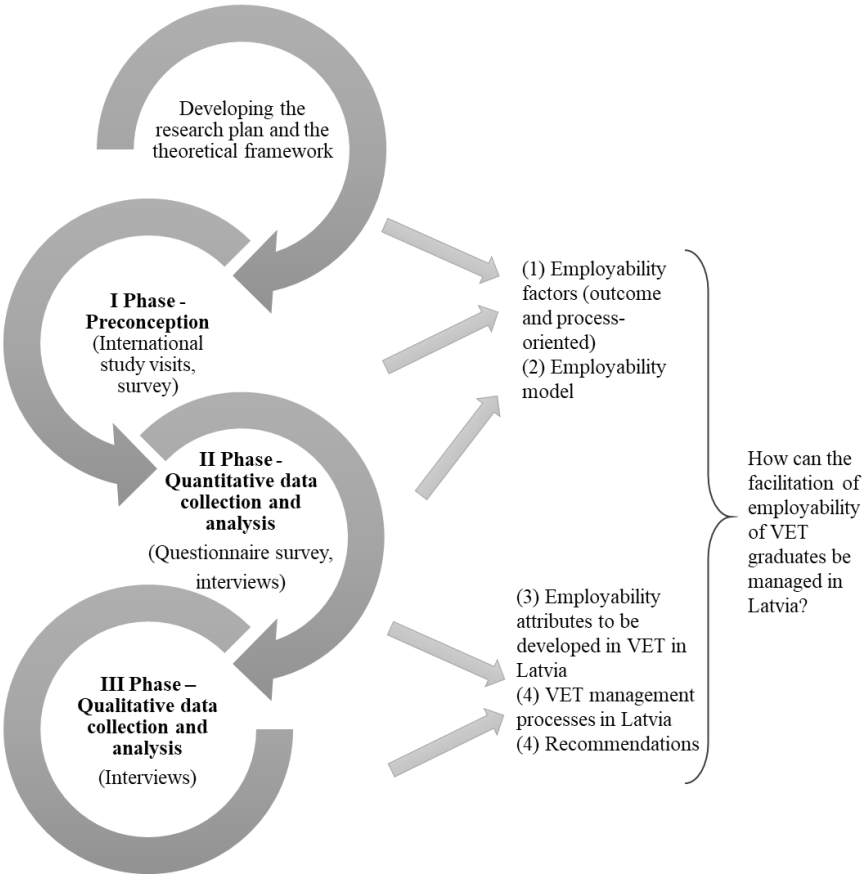

Figure 4.2. Research Process: Research Phases and Research Results
Source: Author's construction

Both qualitative and quantitative methods were used in the research. The research methods were refined during the research process. The mixed methods, combining

qualitative and quantitative methods increase the integrity of findings and credibility of research (Bryman, 2012, p. 634). Mixed methods also seem more appropriate for studying the social world than using quantitative research methods alone.

The preconception phase of the research included the international study visits in three countries and a small-scale employer survey which contributed to both, the development of a theoretical model of employability factors and preparing further empirical research (development of instruments for the questionnaire survey and interviews).

The quantitative and qualitative data collection during research phases II and III was done in Latvia. The quantitative research data was collected using a representative questionnaire survey among Latvian employers. The qualitative research data were collected through interviews with the managers of VETIs. The analysis and interpretation of research data was conducted using methods appropriate to each type of data.

Table 4.1
Schedule of the Research

Research Phase	Point in Time
Developing the research plan and the theoretical framework	2nd half of 2014 – 2nd half of 2017
I research phase – Preconception International study visits and employer survey. Results of data analysis: elements and factors of employability.	1st half of 2015 – 2nd half of 2016
Results of the preconception phase and analysis of the theoretical literature: constructing the model of managing facilitation of graduate employability. Finalising the model, considering the overall research results.	2nd half of 2017 2nd half of 2018
II research phase – quantitative data collection and analysis Data collection through questionnaire survey among Latvian employers and interviews with the managers of VETIs. Results of data analysis: personal attributes to be developed in VET in Latvia	1st half of 2017 – 1st half of 2018
III research phase – qualitative data collection and analysis Data collection through interviews with the managers of VETIs. Results of data analysis: personal attributes to be developed in VET in Latvia, methods and successful and unsuccessful aspects in implementation of employability factors in Latvia.	1st half of 2018
Compiling the research and developing recommendations for employability facilitation in Latvia.	1st half of 2018 – 2nd half of 2018

Source: Author's construction

In this research, the examination of the quality follows the quality areas of Mårtensson, Fors, Wallin, Zander and Nillson (2016) and the criteria of reliability and validity described by Bryman (2012) and Cropley (2002). Quality areas and relevant queries are introduced in Table 4.2.

Table 4.2
Research Quality Areas and Related Concepts

	Definition	Related concepts
Credible	Research that is Coherent, Consistent, Rigorous and Transparent	Rigorous, Internally valid, Reliable, Contextual, Consistent, Coherent, Transparent
Contributory	Research that is Original, Relevant and Generalizable	Original, Original idea, Original procedure, Original result, Relevant, Relevant research idea, Applicable result, Current idea, Generalizable
Communicable	Research that is Consumable, Accessible and Searchable	Consumable, Structured, Understandable, Readable, Accessible, Searchable
Conforming	Research that is Regulatory Aligned, Ethical and Sustainable	Aligned with regulations, Ethical, Morally justifiable, Open, Equal opportunities, Sustainable

Source: Mårtensson, Fors, Wallin, Zander and Nillson, 2016

In relation to results of the research, the constructive research should be evaluated based on both the practical and theoretical contributions to fulfil the requirements of a dual audience (Kasanen et al., 1993). A distinction should be made between the validity of constructive research and the validity of the construct which in the case of this research is the model of managing facilitation of graduate employability. Construct validity is commonly connected to the functionality of the construct, that is, its ability to solve the problem for which it was designed (Lukka, 2000). The assessment of the quality of the research is discussed in Section 4.3.

Procedures of research data collection and analysis

The first phase of data collection and analysis was done during the preconception phase of the research. The research questions for the preconception phase were: "What are the elements and factors facilitating employability of VET students?" and "Which employee competencies might be important for employers in Latvia?". The goal of the preconception phase was to obtain a deeper understanding about the employability factors in VET and the potential preferences of employers in Latvia to facilitate the further research process: the elaboration of a theoretical model of employability factors and preparing research instruments for further empirical research.

The basis for the preconception of the phenomena in Latvia was the author's professional experience obtained while working for the Employers' Confederation of Latvia, dealing with VET and employability policy making and implementation processes. Within this process, the author carried out preliminary discussions with various interest groups, participated in numerous VET-related events and working-groups, analysed and contributed

to development of policy planning documents and implementing projects in the field of VET. The preconception phase of the research included participation in the international study visits and an employer survey. The results of the preconception phase contributed to the design of the research process.

The author decided to study VET system in Germany, Austria and Finland due to good results of these VET systems in comparison to Latvia. For example, VET in these countries enjoy higher public image and demand from young people and employers than in Latvia (see Table 4.3). In countries with dual a VET system, such as Germany and Austria, the proportion of young people involved in apprenticeship training is the largest in all of Europe. These countries demonstrated high youth employment rate results even throughout financial crisis (Bliem et al., 2014, p. 36). Finland, however, is among the countries with the highest agreement that VET offers high-quality learning and also has a very positive image of VET.

Table 4.3
VET in Germany, Austria, Finland and Latvia

	Germany	Austria	Finland	Latvia
General perception of VET image (%) (European Commission, 2011, p. 22)	84	88	90	60
General perception of VET quality (%) (European Commission, 2011, p. 33)	84	89	88	63
General perception of VET demand in the labour market (European Commission, 2011, p. 54)	67	84	89	60
Share of upper secondary students in VET (%) (Eurostat, 2015) (EU-28 average – 47.3 %)	46.8	69.5	71.3	39.8
Proportion of enterprises providing initial vocational training (%) (Eurostat, 2010)	62	47	21	5
Youth unemployment rate (%) (Eurostat, 2016) (EU-28 average – 18.7 %)	7.0	11.2	20.1	17.3

Source: Author's construction based on data of European Commission, 2011; Eurostat, 2015

Methodology for collecting data at the study visits was the instrumental and critical case study. The instrumental case study aims at gaining insight into a phenomenon rather than to study a particular person or a group. The cases studied were selected because they were particularly useful for refining theory (Cropley, 2002, p. 74). The critical case study is chosen on the grounds that it will allow a better understanding of the circumstances in which the hypothesis will and will not be held (Bryman, 2012, p. 70). In a case study, the researcher is usually concerned to elucidate the unique features of the case (Bryman, 2012, p. 69).

The collection of data was carried out during study visits. All visits had a comprehensive programme of meeting different stakeholders involved in VET and visiting different venues of implementing VET. Each visit included a preparation phase of

researching written materials provided by the organisers before the study visit. The study visits to Germany[4], Berlin (22 – 26 February 2015), and Austria, Vienna (15 – 19 February 2015), were financed within an Erasmus+ project "VET for employment" and organised by the Employers' Confederation of Latvia. The author was one of the main organisers of the study visits. The author selected these countries at the moment of preparing the project application. The study visit to Finland, Pori (23 – 24 August 2016), was organised by a VET school "Länsirannikon koulutus Oy WinNova", within an Erasmus+ project "New Models in Work-Based Learning". The author prepared the reports for each of the study visits, based on the notes made during the visits. The reports for the study visits in Germany and Austria (Līce, 2015, 2015a) were circulated among other participants of the visits (7-10 experts in the field of VET: VET policy makers, social partners and VETIs) and commented upon. The report for the study in Finland (Līce, 2016a) was based on the author's notes and evaluation of experts (representatives of 8 organisations, including public policy makers and employers).

The cases of these VET systems were not systematically analysed. Rather, the information from them enriched the viewpoints of the potential factors important for high-quality VET with good public image and employability outcomes. Based on the case studies, the author compiled a preconception of elements and factors of employability. The results of the preconception phase contributed to the design of the research and development of a theoretical model of employability factors.

A survey of employers engaged in the network of the Employers' Confederation of Latvia was conducted in August 2016. The questionnaire was designed to assess the importance of different competencies for employability, as well as the relevance of different qualifications to employers in Latvia. 162 questionnaires were sent electronically to the members of the Employers' Confederation of Latvia. Responses of 98 employers were gathered reaching 60 % response rate. The companies of respondents represented all NACE fields of economic activity. The highest number of respondents were working in the sectors of manufacturing (16 %), information and communication services (15 %) and

[4] The researcher has also participated in other study visits which contributed to the overall understanding of the German VET system:
- Study visit in Germany, Cologne, in April 2011, organised by Cedefop;
- Study visit in Germany, Stuttgart, 24 – 28 March 2014, organised by the National Agency Education for Europe at BIBB (NA at BIBB) and German Office for International Cooperation in Vocational Education and Training (GOVET);
- Study visit in Germany, Bonn, 11 – 12 May 2016, organised by the Federal Institute for Vocational Education and Training (BIBB), within an Erasmus+ project "New Models in Work-Based Learning".

accommodation and food services (14 %). 33 % of the respondents represented large, 27 % - medium-sized enterprises. The answers were mainly prepared by the employees responsible for human resource development. The data were processed with the help of software programmes R (mainly) and SPSS.

The research question for the **second phase of data collection** and analysis was, which personal attributes should be developed in VET system in Latvia to facilitate employability of VET graduates? The purpose of the second phase of data collection was to reveal the opinion of employers and VET managers on the national level. The data from employers were collected, using a questionnaire survey designed for employers (see Appendix 7). The questionnaire yielded quantitative data that provided an insight into the "big picture" on importance of personal attributes (outcome-oriented employability factors) in the labour market in Latvia and performance of Latvian vocational secondary education system in developing these competencies. The quantitative data from VET managers were collected during interviews.

The employer survey measures the importance of personal attributes for employability in Latvia and the performance of vocational secondary education system in developing these attributes. The questionnaire for employer survey was developed in Latvian, ensuring that it is easily understandable and answerable by the respondents – the managers of companies. Considering that the companies might have limited knowledge of VET, the questions on their experience with VET outcomes (on having employees with VET qualifications or trainees) were included in the questionnaire to check the validity of data. The companies which responded positively were considered experts.

To assess the importance of different personal attributes in the labour market and the performance of vocational education, the questions on employer perception of the importance of certain personal attributes for employment in their companies (Q4) and on the extent to which these competencies could be developed in vocational education in Latvia (Q5) were included in the questionnaire. Q4 and Q5 were developed as Likert-type questions with a bi-directional scale of 5 possible answers with one neutral option. The list of 17 items to be assessed was elaborated, based on the list of employability competencies which resulted from operationalisation (Pool, Qualter, & Sewell 2014) of the CareerEDGE employability model (Pool & Sewell, 2007). The list of items was adapted to the needs of the target audience of employers and limitations of the questionnaire. The questionnaire was

reviewed by a member of academic staff and experienced sociologists, which resulted in some refinements.

The general population for the questionnaire survey includes all economically active companies working in Latvia - 210,116 in total (Lursoft, 2018). The sample size is comprised of 750 companies. Considering the size of the general population, the margin of error at the 95 % confidence level is +/- 4.0 %. The overview of respondents is provided in Table 4.4.

Table 4.4
Number and Share of Respondents According to Categories: Sector, Region, Number of Employees, have had Trainees During Last 5 Years, Capital, Export

No.	Categorial variable	Description	Number of respondents	Share of respondents (%) in sample	Share of companies (%) in Latvia according to Central Statistical Bureau data (2015)
1.1	Sector	Production (NACE2 codes: A, B, C, D, E)	162	21.60	13.8
1.2		Trade (NACE2 codes: G)	114	15.20	26.1
1.3		Construction (NACE2 codes: F)	54	7.20	8.9
1.4		Services (NACE2 codes: H, I, J, K, L, M, N, P, Q, R, S)	420	56.00	51.3
2.1	Region	Riga	338	45.07	55.0
2.2		Riga suburb	122	16.27	45.0
2.3		Vidzeme	70	9.33	
2.4		Kurzeme	76	10.13	
2.5		Zemgale	72	9.60	
2.6		Latgale	72	6.60	
3.1	Number of Employees	1-9	467	62.27	88.2
3.2		10-49	183	24.40	9.7
3.3		50-249	65	8.67	1.8
		250 or more	35	4.67	0.3
4.1	Have had Trainees During Last 5 years	Yes	354	47.60	n/a
4.2		No	394	52.53	n/a
4.3		Did not provide information	2	0.27	n/a
5.1	Local or foreign capital	Local	678	90.40	n/a
5.2		Local and foreign	36	4.80	n/a
5.3		Foreign	36	4.80	n/a
6.1	Exporting	Yes	206	27.47	n/a
6.2		No	531	70.80	n/a
6.3		Difficult to answer	13	1.73	n/a

Source: Authors' calculations based on employer survey conducted in 2017. n=750

A sample was created by multistage cluster sampling method. The answers to the questionnaire were collected by the research centre SKDS Ltd, which is a well-known independent research company in Latvia. First, the companies which already had participated in the surveys of the research centre "SKDS" were contacted, then the companies from the public databases of companies were selected according to the random sampling method. The data were collected in two phases: 1) from 27.03.2017 until 04.04.2017, when 499 internet questionnaires were collected, and 2) from 05.04.2017. – 03.05.2017, when 251 telephone interviews were conducted by 19 interviewers. For telephone interviews, there were 587 cases of non-response: in 87.6 % of these cases respondents did not want to participate in the interview, 7 % - did not have time and 5.5 % stopped answering during the interview. The collected data were weighted according to the statistics of the Central Statistical Bureau of Latvia (2015) on the distribution of companies by industry, size and location of a company to ensure their representativeness.

Survey responses were analysed to identify, which personal attributes are the most important in the context of the Latvian labour market and vocational secondary education system. The author used the Importance – Performance analysis (IPA) method for analysing the data.

IPA is a method developed by Martilla & James (1977), widely used in marketing and management research. It combines measures of customers' perceived importance and performance into a two-dimensional plot to facilitate data interpretation (see Figure 4.3).

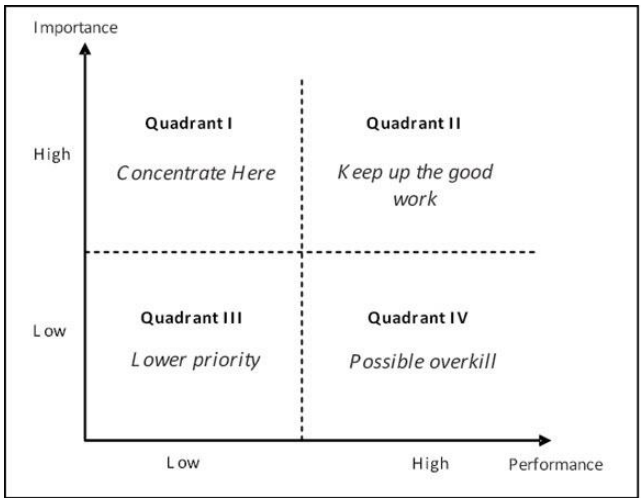

Figure 4.3. The original IPA framework
Source: "Importance – performance analysis" by Martilla & James, 1977, Journal of Marketing, 41(1), 77-79

The Quadrant I (high importance and low performance) is the most critical categorisation. Attributes which fall into this quadrant represent major weaknesses and

threats to competitiveness. Underperformance in these areas requires immediate attention and highest prioritisation.

When constructing the IPA grid, the author used the median values to construct the cross-hair point (2.44; 3.27) as advised by the Sever (2014) and Oh (2001) as the median values represent the data centre better than the mean values in case of ordinal scale type of data, when a true interval scale could not be assumed.

Bacon (2003) proposed to separate regions of different priorities by measuring gap between importance (I) and performance (P) evaluations. The points where I > P are in the area of high priority for improvement and opportunity, while the points falling in the region where I < P indicates low priorities. In the graph, these regions could be separated by a diagonal line. Bacon (2003) used fifteen different datasets to test which of the data-interpretation method for IPA analysis can predict the priorities for obtaining competitive advantage the best and concluded that the performance of this model is relatively better than the other methods. To measure the significance of the gaps between I and P, the author conducted individual paired-samples t-test. Parametric tests, such as the 2-sample t-test, assume a normal, continuous distribution. However, with a sufficient sample size, t-tests are robust to departures from normality and applicable to Likert-type items for two groups (Derrick & White, 2017; de Winter & Dodou, 2010).

To test data validity and reliability, sampling adequacy, several statistical analysis procedures were conducted: a Cronbach's alpha, KMO test, Bartlett's Test, correlation analysis. Sampling error was calculated to check the stability of conclusions i.e., whether sampling error would change the results. Standard deviations, standard errors and 95 % confidence intervals were calculated to estimate the potential shift in location of such points.

The quantitative data collected during interviews with the VET managers were analysed by calculating frequencies of answers.

The purpose of the **third phase of data collection** was to reveal the opinion of the managers of VETIs in Latvia. The main research question for the third research data collection and analysis was, which VET management processes in Latvia are implemented successfully and which – require improvements to facilitate employability of VET graduates? The data were collected by semi-structured face-to-face in-depth 40 to 90 minutes long interviews with few closed questions. One interview was conducted in writing. The interviews were conducted in February and March 2018. The questionnaire used for the interviews is included in the Appendix 13.

In total, 12 interviews were conducted with 15 directors or deputy directors from 12 public vocational education institutions (out of 38 educational institutions in Latvia which offer publicly financed VET programmes). In two cases, several representatives of management participated in an interview. VETIs were selected in order to ensure representation of all Latvian regions, education fields, levels and subordination[5].

The interviews provided qualitative data on methods to develop personal attributes, as well as on the weaknesses and strengths in the VET management processes in relation to facilitating employability of graduates.

Data were analysed according to consensual qualitative research procedure (Spangel, Liu, & Hill, 2012) because of the exploratory and inductive aim of the research. First, the author went through the interview transcripts in Ms Excel table and identified domains of successful aspects and weaknesses in vocational education management processes. Second, the categories were identified (reasons for success and reasons for weaknesses) and data coded accordingly. Third, the author calculated the frequencies of reasons for the successes and weaknesses (Ni) in vocational education management processes and identified the most recurrent ones. To ensure anonymity of respondents, the VETIs were not revealed or even coded when referred to in the analysis of results.

4.2. Results of the Research

4.2.1. Lessons Learnt from VET Systems in Germany, Austria and Finland

Elements and factors of employability, compiled during the preconception phase of the research, based on the analysis of international VET systems, are organised in the mind map included in Appendix 6. It shows that, for example, lean administration and clear and transparent processes, strong involvement of employers, VET responsiveness to changing labour market needs, ensuring learning outcomes-based and individual approach in VET, supporting students to obtain a good job, and ensuring quality of VET are important for employability.

The analysis of German and Austrian VET systems showed that the main success factors of dual vocational education and training systems is strong involvement of social partners, especially employers. The governance of the dual vocational education systems in

[5] 3 VETIs are based in Riga, 2 – Riga region, 2 – Kurzeme region, 2 – Zemgale region, 2 – Vidzeme region, 1 – Latgale region. 10 VETIs were subordinate to the Ministry of Education and Science (out of 20), 2 – to the local municipality (out of 8)). 2 of VETIs are colleges which offer VET at both, secondary and higher education level, and have the official status of higher education institution (out of 7). 1 educational institution which has an agreement with the Ministry of Education and Science for public financing (out of 3).

Germany and Austria is characterised by an overall goal to meet the labour market needs and by strong partnership between the state, employers and trade unions (Hensen & Hippach-Schneider, 2012; Tritscher-Archan & Nowak, 2011). Social partners participate in representative advisory boards, which assist in developing and maintaining curricula at the governmental and federal levels (Eichhorst, Rodrigues-Planas, Schmidl, & Zimmermann, 2015), ensuring that the basic principles of the training are agreed with industry.

The dual system depends on the employers' willingness to provide training placements, and this depends on their sense of ownership and control of the dual system (Steedman, 2005). It is likely that the employers' commitment to provide the necessary number of placements would decrease if their influence on the VET system were reduced by weakening the institutions of self-governance (Juul & Jorgensen, 2011). As co-owners of the system, the chambers have been assigned public tasks in dual training, including the organisational, counselling and monitoring functions, e.g., registering the contracts, verifying the aptitude of companies, advising companies and trainees, organising exams. In Austria, for example, apprenticeship offices of regional economic chambers examine the training enterprises' suitability to provide apprenticeship training; examine and record apprenticeship contracts, as well as provide wide-ranging counselling to apprentices and training enterprises in all matters concerning apprenticeships (Federal Ministry of Science, Research and Economy of Austria [bmwfw], 2014).

Employers and employer organisations consider training the trainees an investment into their competitiveness, productivity, and sustainable employment prospects, and thus could offer vocational training in a systematic and certifiable fashion (Eichhorst et al., 2015). It is very important that benefits outweigh costs to ensure employer engagement in training. Although German firms on average incur a net cost during training, a higher productivity of trained apprentices later facilitates the supply of apprenticeship placements in German firms (Steedman, 2012). To encourage companies to participate in apprenticeship-type training, several public subsidies are available to support training companies both in Germany and in Austria. Short-term targeted government subsidies have been used to compensate companies for the additional cost of taking "hard to place" apprentices in Germany (Steedman, 2012). In Austria, a training company can apply for basic subsidisation at the end of every apprenticeship year. For the first apprenticeship year, there is an available subsidy of three gross apprenticeship remunerations pursuant to the respective collective agreement; for the second year – two remunerations; for the third and fourth year – one remuneration (bmwfw,

2014). This support is meant to compensate to the employers the unproductive time of apprentice at the training company. Additional support is available for companies of specific type, e.g., start-up companies, or for specific groups of trainees, e.g., young women in occupations with a low share of women, disadvantaged young people, adults with employment problems (bmwfw, 2014).

Engaging with employers and social partners to increase the relevance of vocational education and to establish cooperation for providing work-based learning opportunities, including apprenticeship, also increases attractiveness of vocational education in the eyes of young people who prefer a more practical path or the possibility of learning while working. Attractiveness of initial vocational education increases when qualifications have currency in the labour market (Cedefop, 2014). In Germany and Austria, proportion of young people involved in apprenticeship training is the largest in Europe; and these countries demonstrated high youth employment rate results even throughout financial crisis (Bliem et al., 2014, p. 36).

Although it is not possible to transfer dual vocational education system to Latvia, the elements of dual system can serve as an example for gradual evolution of the system (Līce, 2015; Līce, 2015a). For example, strengthening the role and the sense of ownership of employers could be facilitated by delegating them certain state functions in vocational education system and expanding their responsibilities, for example, in ensuring career education and support, in assessing learning outcomes and organising qualification exams; in ensuring support to companies in the process of work-based learning. Work-based learning could be promoted by explaining benefits for employers from engaging in training, as well as by outweighing costs of training by implementing systemic financial incentives (Līce, 2015; Līce, 2015a), probably tax-based, especially after the end of terminated EU-funded support for work-based learning and work-placements.

Although vocational education in Finland is more like the system in Latvia as it is primarily school-based, Finland is among the countries with a very positive image of vocational education system. Agreement that vocational education in Finland offers high-quality learning, demanded in the labour market, is among the highest in the EU (European Commission, 2011a, pp. 22-54). The role of social partners and employer organisations in vocational education in Finland is not as important as in countries with dual vocational education systems. Nevertheless, vocational education institutions are motivated to ensure relevant vocational education and to co-operate with local firms to ensure that students

obtain practical learning and work experience of good quality. The vocational education institution which was visited during a study visit in Pori, Finland (Līce, 2016), had a written procedure for organising work placements and ensuring their quality. Teachers regularly visited trainees in their work place to ensure that the training was going well and according to training regulation, and to solve any issues. This responsibility was appropriately compensated as a part of regular teacher responsibilities. For graduates starting to work or continuing studies at a higher education level, vocational education institution was granted additional funding, motivating it to research labour market needs, co-operate with the labour market partners and ensure relevant education (Līce, 2016a). VETIs in Finland also offer special support for students with special needs, including learning difficulties. These students can receive additional teacher support and take longer learning hours. VETIs receive additional funding for taking care of students with special needs, calculated based on higher coefficient.

This demonstrates that it is possible to achieve a high-level of attractiveness and relevance of vocational education even in a school-based vocational education system, if the vocational education institutions and teachers are motivated and have appropriate processes and instruments in place to do so, and if the state education funding system not only provides funding for covering basic VET functions, but also specific priorities.

4.2.2. Views of the Employers - Members of Employers' Confederation of Latvia

The results of the employers' survey provided an insight into the views of the employers – members of the Employers' Confederation of Latvia. The following personal attributes were evaluated as very important for employment in their companies (in decreasing order): ability to apply knowledge, ability to learn, skills of the Latvian language, discipline / attitude to work, professional knowledge, the communication and cooperation skills, ability to adapt to changes and cope with stress, ability to invest in one's own education and plan it, as well as to take responsibility for the person's own career development, ability to make decisions independently, initiative, willingness to take on new duties. Although *motivation* was not included in the list, many respondents pointed out in the comments that it is very important as well. Motivation is also closely linked to many of the top competencies. These results indicate that the members of the Employers' Confederation of Latvia highly value the **attitude to work (discipline, motivation), social competencies and adaptability (ability to learn and to adapt) in potential employees**.

Therefore, these personal attributes were considered in theoretical and empirical parts of the research.

Previous work experience was very important for only 22 % of companies, at the same time no company indicated that work experience would not be important at all. Even though VET was valued among these employers (47 % of the employers preferred recruiting employees with vocational education) and they offered work placements for students more actively than the national average (Līce, 2017), work placements and WBL was not the top recruitment strategy even for these employers, which indicates towards possible inefficiency of the work-placement and WBL system in Latvia in ensuring transfer to the labour market. Therefore, attention should be paid to both, how to improve initial integratation of graduates into the labour market, and how to ensure their sustainable employment.

4.2.3. The Model of Managing Facilitation of Graduate Employability

The construction of the model of managing facilitation of graduate employability was based on the results of the research question: what model would represent the relationship between and inter-play of the employability factors in ways that might facilitate employability of VET graduates? The author constructed the model, based on the systems theory framework. The elements included in the model are selected, based on the results of theoretical analysis and empirical research.

The construction phases of the model were similar to the phases of constructive research process: first, a practically relevant problem that had the potential to contribute to theory was found; second, a deep understanding of the topic area, both in practice and in theory, was obtained; third, a possible solution was innovated and constructed with the potential for theoretical contribution; fourth, the solution was implemented and tested; fifth, the scope of applicability of solution was considered.

The first version of the model was elaborated before the empirical research phases II and III, but it was finalised at the end of the research process to ensure that the knowledge gained contribute to the elaboration process. The suitability of the model to the Latvian context was tested by using the elements of the model (factors facilitating employability) in the data collection process (II and III research phases) and obtaining the feedback of the VET managers through interviews.

The model of managing facilitation of graduate employability provides an overall framework for understanding employability of graduates and the process of facilitating

employability within a VETI. It is depicted as a system that contains three levels: individual level, VET level and the context level. The model includes the following elements:

I Individual level: individual attributes that determine employability of graduates (Līce & Sloka, 2019b): professional skills; attitude and abilities; work experience and education achievements.

II VET level: education management processes (described in detail in Section 3.2):

1) planning and governance process of education (ensuring lean administration and clear and transparent processes; skills anticipation and using it in VET provision; ensuring employer engagement);

2) implementing VET (ensuring relevant, up-to-date VET programmes; professional development of educators; implementing learning outcomes-based approach);

3) providing transfer from education to the labour market (ensuring relevant work experience; career support);

4) providing adult learning opportunities (ensuring access to adult learning; ensuring recognition of prior learning; embedding andragogy principles; building capacity of teachers; and building relationships with graduates, employees and employers);

5) ensuring quality of VET (monitoring quality, ensuring feedback loop and continuous improvement).

III Context level: external factors affecting employability (described in detail in Section 2.6):

1) recruitment practices;
2) demography;
3) labour market demand factors: structure of the economy, level of activity;
4) flexicurity of the labour market, labour market regulations.

The model of managing facilitation of graduate employability is depicted in Figure 4.4.

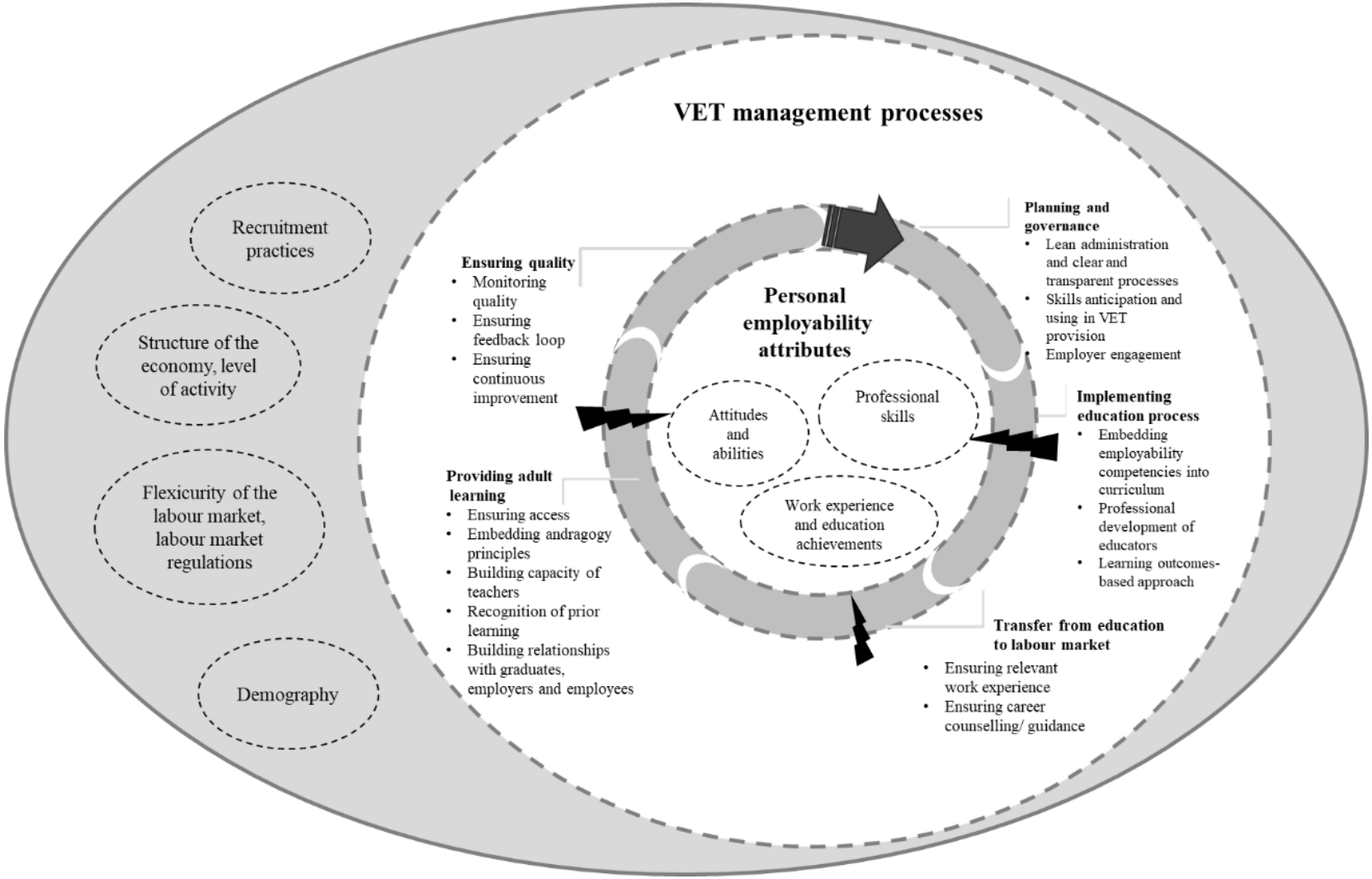

Figure 4.4. A model of managing facilitation of graduate employability
Source: Author's construction based on theoretical and empirical analysis

The model of managing facilitation of graduate employability is formed as a circle to show that the individual employability develops over time as a dynamic, cyclical process. Central to the model is the individual system which is depicted as a range of personal attributes (outcome-oriented employability factors) determining employability such as academic performance, experience and motivation. The individual system can be influenced by the VET system containing VET management processes (process-oriented employability factors) such as planning and governance, implementing education, and providing transfer to the labour market. A self-learning VET system is circular. It includes the VET management processes to ensure that it can increase its own efficiency over time in achieving the goal of graduate employability. A lightning bolt represent a chance to influence the development of employability in VET. An open system is subject to influence from the outside. Broken lines represent the permeability of the boundaries of each system and employability factors. Employability factors are interlinked and closely related to each other. A change in one part of the system will result in a change in another part. Influences of an individual employability may change over time. They include recursiveness, change over time, and chance. Recursiveness incorporates some key aspects of systemic influences such as their being nonlinear, causal, mutual, and multidirectional (Patton & McMahon, 1999).

The model of managing facilitation of graduate employability can be the instrument of managing facilitation of employability of VET graduates. The model envisages that employability is regarded as a system that is constantly formed by the interaction of influences – various interlinked factors. It provides information for policy makers and managers on what needs to be considered and included. It should inform the planning of education programmes and interventions intending to facilitate employability. The model can easily provide acquirable information for VET students and graduates and possibly their parents, as well as VET teachers, without the need to go into complexity of the notion of employability. The model can also be used to demonstrate to employers how VETIs and business can cooperate, and both contribute to employability of graduates. Finally, it is universal and could be adapted for other contexts and countries.

4.2.4. Personal Attributes which should be Developed in VET in Latvia to Facilitate Employability of Graduates

The results of employers' evaluations of importance of employability attributes in the recruitment process in Latvia show that all employability attributes included in the list developed based on CareerEDGE employability attributes by Pool, Qualter, and Sewell (2014), are very important. The overall number of positive evaluations (10436 or 84 %) 5.25 times exceeded the number of negative evaluations (1988 or 16 %). The significant level of importance of all employability attributes in the Latvian labour market indicates that employers are concerned with the changing labour market conditions are looking for employees able to cope with them. The main statistical indicators of employers' evaluations are provided in Table 4.5.

Table 4.5
Descriptive Statistics of Employer Evaluations of Importance of Employability Attributes

	Employability Attribute	Median	Mean	SE of Mean	Mode	SD	Range	Min	Max	NA
1	Attitude to work	3	3.86	0.02	4	0.35	3	1	4	16
2	Ability to work independently	4	3.60	0.02	4	0.53	3	1	4	14
3	Work motivation	3	3.53	0.03	3	0.57	3	1	4	20
4	Responsibility for own decisions	4	3.58	0.02	4	0.61	3	1	4	14
5	Problem solving skills	3	3.46	0.03	3	0.60	3	1	4	20
6	Easily adapt to new situations	4	3.43	0.02	4	0.60	3	1	4	13
7	Working in a team	4	3.53	0.02	4	0.62	2	2	4	13
8	Communication skills	4	3.43	0.01	4	0.65	3	1	4	13
9	Target orientation	3	3.27	0.03	3	0.68	3	1	4	27
10	Planning and organizing skills	3	3.23	0.03	3	0.73	3	1	4	20
11	Computer skills	3	3.21	0.03	3	0.83	3	1	4	39
12	Creating new ideas	3	3.12	0.03	3	0.75	3	1	4	23
13	Relevant work experience	4	2.91	0.02	4	0.81	3	1	4	16
14	Mathematical skills	3	2.83	0.03	3	0.81	3	1	4	30
15	Clarity for career goals	4	2.70	0.02	4	0.81	3	1	4	16
16	Presentation skills	3	2.72	0.03	4	0.91	3	1	4	17
17	Achievements in education (academic skills)	3	2.64	0.03	3	0.84	3	1	4	15

Source: Authors' calculations based on employer survey conducted in 2017, n=750, evaluation scale 1-4, where 1-2 – negative evaluations; 3-4 – positive evaluations. Additional option – "difficult to answer" (NA) was included

Relative frequencies of positive and negative evaluations for each of the employability attribute are included in Figure 4.5.

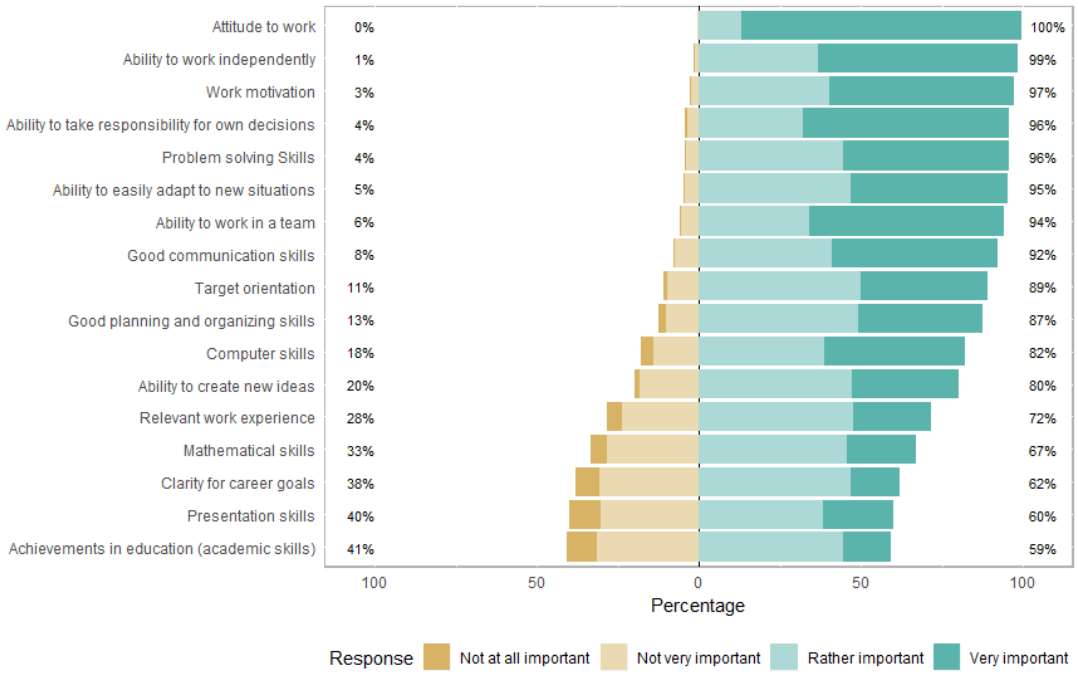

Figure 4.5. Evaluation of importance of personal attributes. Relative frequencies of negative, neutral and positive answers

Source: Authors' calculations based on employer survey conducted in 2017, n=750

Data of table 4.5 and figure 4.5 indicate that the most important employability attribute for employers is "attitude to work" with the highest arithmetic mean and the lowest indicators of variability (lowest standard deviation and standard error of mean). Although the most often given evaluation for "attitude to work" was 4 (mode), full scale of evaluations (1-4) was covered for almost all analysed aspects besides "work in team" where the lowest evaluation was 2. Half of respondents gave evaluations of 3 or more on the scale 1-4 and half of respondents gave evaluations of 3 or less (characterised by median). The second higher evaluated aspect was "ability to work independently" with very high evaluations and one of the smallest standard deviations indicating that employers' evaluations were with smaller variability than most of other evaluated aspects. These were closely followed by "work motivation", "responsibility for own decisions", "problem solving skills", "ability to adopt to new situations", "work in a team" and "communication skills", all exceeding mean value of 3.4.

In scientific literature a very much discussed aspect "presentation skills" had one of the lowest average evaluations by employers but the highest variability in evaluations

(characterised by standard deviation). According to employers, "achievements in education (academic skills)" is the least important element in the list of employability attributes with arithmetic mean of evaluations by respondents 2.64 and standard deviation 0.84. "Relevant work experience" and "mathematical skills" also received comparatively lower evaluations which indicates towards the tendency for employers to value attitudes, emotional and self-management competencies, as well as social and cooperation skills more than prior education or work achievements. Nevertheless, work experience and achievements in education (academic skills) should not be considered unimportant in the eyes of employers as number of positive evaluations still exceed negative evaluations. Moreover, as it is explained in the theoretical part of this research, achievements in education and work experience indicate towards personal traits and are directly linked to many of the employability attributes. The difference lies in the aspect that a person with good education and experience is more likely to possess the desired attitudes and competencies, but not necessarily. A person with desired attitudes and competencies, however, does not necessarily has a convincing record of prior education and experience. Therefore, the choice of employers indicates towards the preference of "learning outcomes" over the "input-based" employability attributes (Līce & Sloka, 2019b). This is favourable for young people without work experience or for those who have not completed an education degree, as they still have good chances in the Latvian labour market to show their potential than it might be possible in other, more regulated and conservative labour markets. It should be noted, however, that it is very difficult to measure or predict attitudes and competences in potential employees, comparing to work experience or education degree obtained. This might be one of the explanations of why personal recommendations are very important for employers in Latvia in the recruitment process.

There were differences in opinions among different groups of employers. Kruskal–Wallis tests or one-way ANOVA tests showed statistically significant differences in opinions among companies from different sectors (at a significance level of 0.01, p-value = 0.003988), among companies with different numbers of employees (at the significance level of 0.01, p-value = 4.344e-08), among companies with local or foreign capital (at the significance level of 0.01, p-value = 0.006669), among companies which had or had not trainees or could not answer (at the significance level of 0.01, p-value < 2.2e-16), as well as among companies which have employees with VET

qualifications and which do not or could not answer (at the significance level of 0.05, p-value = 0.01207). Graphical representation of differences in the opinions among different groups of employers is included in Appendix 9 (Figures A9.1, A9.2, A9.3). As it can be seen in Figure A9.1, the importance of employability competencies is higher in companies which operate in trade and services sectors, compared to companies operating in manufacturing and construction sectors; in companies with 100-249 employees; with foreign capital; which have had trainees during last 5 years and which employ employees with VET qualifications. Kruskal–Wallis tests or one-way ANOVA didn't show a statistically significant difference in the opinions among companies in different regions (p-value = 0.6502) and among companies which are or are not exporting (p-value = 0.2171). Considering the profile and engagement of these employers in educational activities, this might be linked to their practice of more pronounced planning in the long-term and the stability of operation which is less common to small companies. Undoubtedly, the goal of being adaptable to changing labour market conditions requires long-term approach to human resource planning and readiness to invest in education of employees (Līce & Sloka, 2019b).

The evaluation of importance of personal attributes in the labour market by the VET managers was quite similar to evaluation by the employers. The highest evaluations by the VET managers were given to the following competencies as the most important for employability of graduates: "work motivation" (12 "very important" and 1 "rather important"), "attitude to work" (12 "very important" and 1 "neither") and "ability to adapt" (11 "very important" and 3 "rather important"). As the least important, "achievements in education (academic skills)" and "work experience" (received the least number of positive evaluations) were evaluated. The frequency of all evaluations by VET managers is included in the Appendix 14.

In the factor analysis of employer evaluations of importance of initial 17 employability attributes, three complex factors were identified. Results of factor analysis of employers' evaluations are included in Table 4.6.

The extraction method used in factor analysis was principal components analysis, converted in 5 iterations using the rotation method – Varimax with Kaiser normalisation.

Table 4.6
Employability Attribute Complex Factors Obtained in Factor Analysis

Employability Attribute	Component		
	F1	F2	F3
Easily adapt to new situations	0.601	0.269	-0.046
Communication skills	0.727	0.205	-0.075
Creating new ideas	0.590	0.248	0.312
Responsibility for own decisions	0.420	0.530	0.138
Presentation skills	0.692	0.056	0.196
Ability to work independently	0.144	0.754	0.082
Working in a team	0.229	0.650	0.232
Attitude to work	0.098	0.644	0.010
Achievements in education (academic skills)	0.119	-0.017	0.784
Planning and organizing skills	0.557	0.209	0.356
Clarity for career goals	0.366	0.109	0.671
Target orientation	0.502	0.317	0.415
Work motivation	0.253	0.582	0.282
Mathematical skills	0.152	0.185	0.500
Problem solving skills	0.504	0.429	0.186
Computer skills	0.453	0.063	0.387
Relevant work experience	-0.253	0.304	0.571

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
A rotation converged in 5 iterations.

Source: Authors' calculations based on employer survey conducted in 2017, n = 750, evaluation scale 1-4, where 1-2 – negative evaluations; 3-4 – positive evaluations. Additional option – "difficult to answer" (NA) was excluded for calculations

Complex factor F1 was named "Professional skills", complex factor F2 – "Attitude and abilities" where initial factors had the strongest correlation with the second complex factor being more than 0.5, and complex factor F3 – "Work experience and education achievements". Therefore, the number of attributes describing individual employability can be reduced simplifying their use in further research or practice.

4.2.5. Performance of VET Institutions in Developing Employability

A Kruskal-Wallis test and a Wilcoxon–Mann-Whitney test were conducted to determine, whether there are significant differences in evaluations on the performance of VETIs between companies which employ employees with VET qualifications ("experts in vocational education"), and which do not. Both tests confirmed that there is no statistically significant difference between evaluations of both groups. Therefore,

evaluations of all respondents were considered in further analysis. Graphical representation of differences in the opinions among different groups of employers is included in the Appendix 10.

The results of employers' evaluations of performance of VETIs show that the extent to which vocational education develops employability attributes is mediocre. There are almost as many negative evaluations in total (48.28 %) as positive evaluations (51.72 %). The main statistical indicators of employers' evaluations are provided in Table 4.7.

Table 4.7
Descriptive Statistics of Employer Evaluations of Performance of VET institutions

	Empoyability Attribute	Me-dian	Mean	SE of Mean	Mode	SD	Range	Min	Max	NA
1	Attitude to work	3	2.26	0.03	2	0.77	3	1	4	234
2	Ability to work independently	2	2.48	0.03	3	0.73	3	1	4	224
3	Work motivation	2.5	2.32	0.03	3	0.77	3	1	4	224
4	Responsibility for own decisions	3	2.17	0.03	2	0.73	3	1	4	220
5	Problem solving skills	2	2.27	0.03	3	0.72	3	1	4	212
6	Easily adapt to new situations	2	2.38	0.03	3	0.68	3	1	4	206
7	Working in a team	2	2.61	0.03	3	0.70	3	1	4	210
8	Communication skills	3	2.56	0.03	2	0.66	3	1	4	224
9	Target orientation	2	2.40	0.03	3	0.72	3	1	4	256
10	Planning and organizing skills	3	2.32	0.03	2	0.70	3	1	4	245
11	Computer skills	3	3.19	0.03	3	0.58	3	1	4	234
12	Creating new ideas	3	2.44	0.03	2	0.73	3	1	4	249
13	Relevant work experience	3	2.22	0.03	2	0.74	3	1	4	232
14	Mathematical skills	2	2.54	0.03	3	0.72	3	1	4	225
15	Clarity for career goals	3	2.44	0.03	2	0.76	3	1	4	216
16	Presentation skills	2	2.75	0.02	3	0.66	3	1	4	171
17	Achievements in education (academic skills)	3	2.63	0.03	2	0.67	3	1	4	239

Source: Authors' calculations based on employer survey conducted in 2017, n=750
Evaluation scale 1-4, where 1-2 – negative evaluations; 3-4 – positive evaluations. Additional option – "difficult to answer" (NA) was included

Relative frequencies of all positive and negative evaluations are included in Figure 4.6.

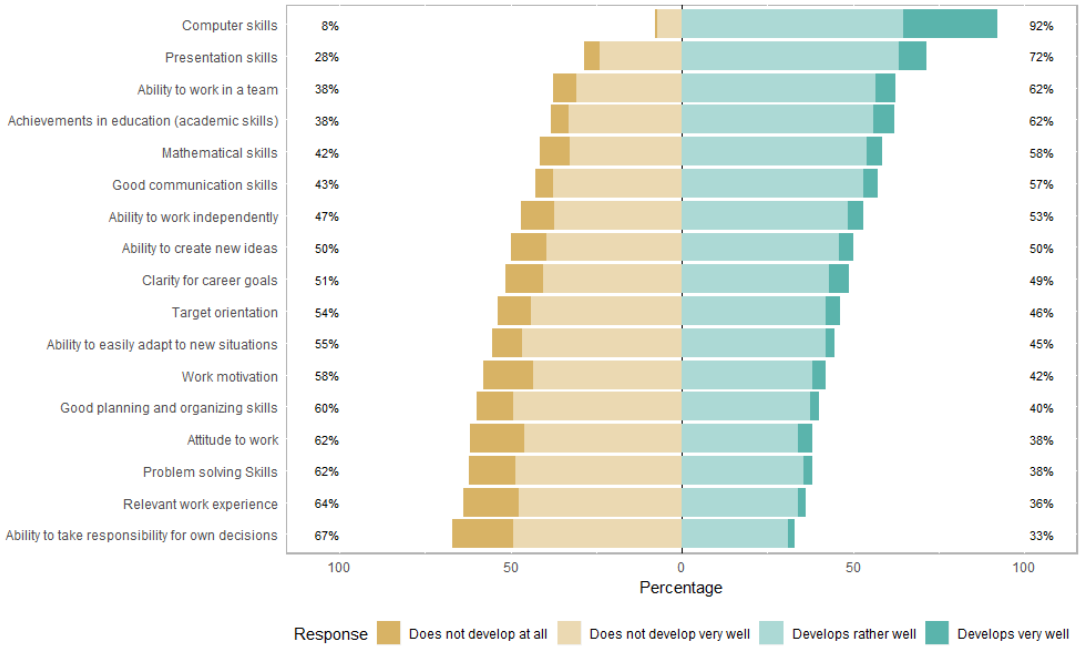

Figure 4.6. Evaluation of performance of vocational secondary educational institutions in developing personal employability attributes in students
Source: Authors' calculations based on employer survey conducted in 2017, n=750

As it can be seen from Table 4.7, the mode for all attributes was either 2 (for 8 items) or 3 (for 9 items); the median evaluations were between 2 and 3, the arithmetic mean – between 2.17 and 3.19. The variability of evaluations (characterised by indicators of variability or dispersion: standard error (SE) of mean and standard deviation (SD)) by the respondents were quite similar for all attributes.

"Computer skills" received significantly more positive evaluations (92 %) than other employability attributes. Other employability attributes which received more positive than negative evaluations, were: "presentation skills", "ability to work in a team", "achievements in education (academic skills)", "mathematical skills", "good communication skills" and "ability to work independently". The employability attributes which received most negative evaluations were: "ability to take responsibility for own decisions","relevant work experience", "problem-solving skills" and "attitude to work". These results show that VET in Latvia is best at developing competencies that are more traditional for education curriculum. In contrast, vocational education rather does not develop competencies and attitudes which are linked to person's self-management and emotional intelligence (Līce & Sloka, 2019a), which are very important for employability in the context of changing labour market.

The managers of VETIs were more positive than employers in evaluating the performance of VETIs. Unlike employers, VET managers were convinced that all of

the personal attributes are developed to some extent, none received negative evaluation. On the contrary, almost half of employer evaluations on performance of VETIs were negative. Like employers, VET managers felt that VETIs were best at developing "computer skills" (received most positive evaluations - 14) (see Appendix 14). Other personal attributes that students have good opportunities to develop at VETI according to the managers are "ability to adapt" and "communication skills" (5 "very well develops" and 8 "rather develops" for both), "obtain relevant work experience", as well as "develop ability to work in a team", "target orientation", "work motivation", "presentation skills", "ability to work independently" (each received 12 positive evaluations). The most "neither" and the least positive evaluations were received for "ability to create new ideas" and "planning and organising skills". There were controversial opinions of the managers of VETIs and employers on opportunities to develop "ability to adapt" and "work motivation", as well as to obtain "relevant work experience" at VETIs: the managers felt that they are well developed at VETIs – but employers – rather not. However, employers more positively evaluated development of "ability to create new ideas" than VET managers.

These results show that although employers and managers of VETIs have similar views about the labour market demands, their views about the success of VETIs in developing employability in students is significantly different. Not only are the opinions of managers more positive, but they are also different with regard to which competencies vocational education are best at or wost at developing. This indicates towards a gap between vocational education and employers and a lack of confidence among employers in vocational education and underlines the importance of cooperation between VET and employers.

4.2.6. Importance – Performance Analysis Results

The results of the IPA analysis in a graphical form can be read from Figure 4.7, which indicates the priority areas for vocational education in Latvia to improve the employability of vocational education graduates. The graph indicates that the most urgent action is needed to develop the employability competencies falling into the area of high importance in the labour market and low performance of vocational education institutions (quadrant I), namely, the development of (7) "attitude to work", (3) "ability to take responsibility for own decisions", (17) "work motivation", (14) "problem-solving skills", (2) "ability to adopt" and (16) "target orientation". These competencies

could be described as self-management and emotional competencies. Reviewing curriculum and extra curricular activities and their availability to students, as well as by encouraging self-reflection activities of students should be considered to better develop these competencies.

It should be noted, however, that as results are subject to a maximum sampling error of +/- 4 % at the 95 % confidence interval, the results of the survey are within 4 % (higher or lower) of the true results for the entire population. Taking into account that for any of the point (p; i) falling outside of the I quadrant the following is true: p-(p*0.04)<median(P) and i+(i*0,04)>median(I) (where i – mean importance evaluation; p – mean performance evaluation; median(P) – median of all performance evaluations; median(I) – median of all importance evaluations), although at a small probability, the sampling error might change the results and potentially shift these points to quadrant I.

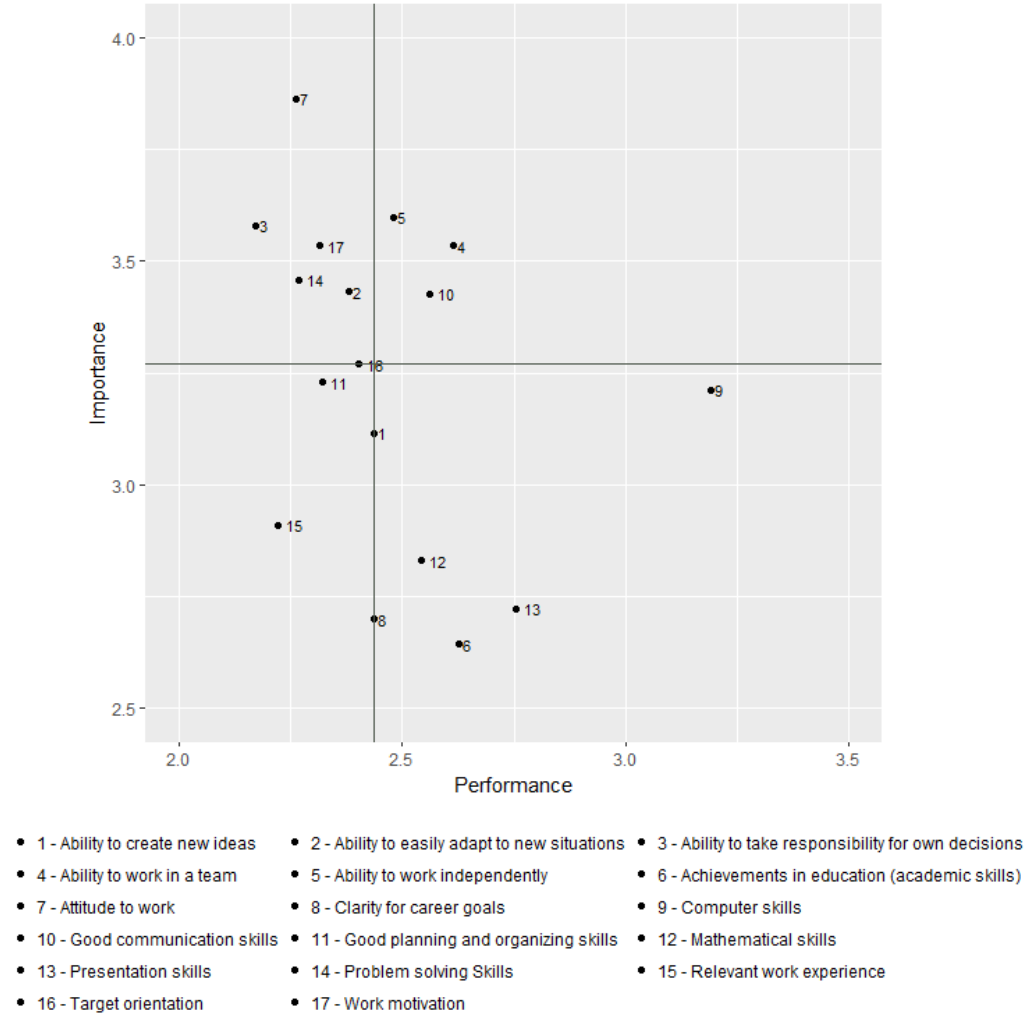

Figure 4.7. Importance-Performance Analysis results of importance of employability competencies and performance of vocational education institutions
Source: Authors' calculations based on employer survey conducted in 2017, n=750

The results of paired samples t-test showed statistically significant differences between I and P for all employability attributes (at an α-level of 0.05) except for (6) "achievements in education (academic skills)" (p-value = 0.35). This means that the process of acquiring the content of current education programmes and developing academic skills is at satisfactory level, however, development of all other employability attributes requires improvement.

4.2.7. Successful Aspects and Weaknesses in the VET Management Processes

According to the managers of VETIs, employability is a very important goal of their VETIs, even the most important. Some of them were convinced that the data about graduate employment indicates the effectiveness of their work. The mean evaluation of importance of employability on a scale from 1 – 10 was 9.5 with a range of only 2. One manager who evaluated with an "8" stressed that although employment right after graduation is important, they also strive to ensure the opportunities to develop further by undertaking higher education which is done by ~ 1/3 of graduates.

The managers were asked about the main activities their VETIs implement to facilitate employability of graduates. Almost half of interviewees stressed that the main activity of VETIs to ensure employability of graduates is providing work experience through work placements and WBL both in Latvia and abroad. Others mentioned their effort to ensure relevant and quality VET programmes, succession by facilitating transfer to higher education (especially in the case of colleges) and further on to adult education, co-operation with employers, career support and development of personal attitudes.

On the question about the main obstacles, almost half of VETIs answered that there are no significant obstacles for VETIs to fulfil their goal of ensuring employability of graduates. As many believed that the most significant obstacles are the attitude and motivation of students, low level of their prior knowledge and their socio-economic background.

VET managers were invited to comment on how particular personal attributes are developed at their institutions. As the main methods, practical learning and extra-curriculum activities were mentioned, as well as international mobility. Practical learning and extra-curriculum activities were mentioned in relation to the majority of employability competencies. Practical learning may include practical lessons at school or work placements and WBL at the company. Sometimes students have the

opportunity to go abroad for work placement. VET schools offer a wide range of free extra-curricular activities: workshops, artistic collectives, chorus, dancing, self-government of students, organisation of conferences, balls and other events, etc. According to managers, all students have an opportunity to get involved in extra-curricular activities, but the real involvement depends on their motivation. VETIs also actively offer international mobility opportunities. Some VET managers estimated that around 20-50 % of students take part in these activities. According to the official data, 5.4 % of vocational education students (Ministry of Education and Science, 2019) are mobile.

The following quote from the interview illustrates an example, of how a VETI is trying to develop employability competencies through extra-curricular activities:

"Currently we are preparing a sort of "beauty contest" for students about being a real professional. The contest will include the tasks of dancing the waltz, demonstrating a talent, answering questions about occupation and psychological tasks. If graduates will be more comprehensive, more intelligent, they will be also better employees. Taking into account that students come from very diverse family backgrounds and not all have the same opportunities, the VET school tries to ensure opportunities to expand their horizons, to get to know culture, to experience positive emotions by going together to the concerts, theatre, cinema, and even by skating together. Afterwards, they discuss this experience in the lessons. By participating in different events, they also learn to dress appropriately".

The list of other activities done by VETIs according which were not as frequently mentioned as practical learning, extra-curricular activities and international mobility, are provided in Appendix 15.

The analysis of the interviews pointed out to the existence of 18 distinct domains of successful aspects and 25 distinct domains of weaknesses in vocational education management processes (Līce, 2019). An overview of all identified domains of successful aspects and their subcategories – reasons for successes – is provided in Table 4.8. An overview of all identified weaknesses and reasons for weaknesses – in Table 4.9. The quotes from the interviews illustrating different aspects are included in the Appendix 16.

Table 4.8
Overview of Domains and Reasons for Successful Aspects in VET Management

Domains of successful aspect (Nm*)	Reason of successful aspect (subcategories) (Ni**)
1. Planning and governance (total Nm = 28)	
1.1. VET governance and processes (Nm = 3)	VET governance and processes are clear and transparent (Ni = 2) Good quality of policy planning documents (Ni = 1)
1.2. Implementation of reforms (Nm = 4)	Ministry supports VETIs in implementing the reforms (Ni = 3) VETI is willing to implement the planned reforms (Ni = 1)
1.3. Cooperation with labour market partners (Nm = 15)	Cooperation with SECs and employer organisations (Ni = 6) Good cooperation with employers (especially with long-term partnerships, personal relations) (Ni = 3) Employers are eager to employ trainees (Ni = 2) Employers participate in implementing VET programmes (Ni = 2) Employers provide work experience for students (Ni = 2)
1.4. Considering labour market demands in VET provision (Nm = 6)	Labour market demands are considered in VET (Ni = 4) Occupational standards - useful, basis for programme development (Ni = 2)
2. Implementing education (total Nm = 57)	
2.1. Ensuring relevant education programmes (Nm = 15)	Reviewing and updating programmes according to labour market needs (Ni = 8) Employers contribute to VET programmes (including as lecturers) (Ni = 4) Modernised infrastructure at VETIs (buildings and learning materials) (Ni = 3)
2.2. Education methods (Nm = 3)	Interdisciplinary learning (Ni = 1) Learning theory and practice at the same time (Ni = 1) Students are doing presentations (Ni = 1)
2.3. Parallel secondary general education (Nm = 4)	Secondary general education as important part of VET (Ni = 3) All students have to pass centralised exams in general education subjects (Ni = 1)
2.4. Flexible, learning outcomes based approach to learning (Nm = 8)	Modular programmes (Ni = 3) Individual approach to learning (if number of students in a group does not exceed 16) (Ni = 2) Learning outcomes based approach (Ni = 2) { Cooperation among different VETIs (Ni = 1)
2.5. Development of employability competencies (Nm = 8)	Development of employability competencies (Ni = 5) Development of social competencies (Ni = 2) Development of lifelong learning competencies in modular programmes (Ni = 1)

Table 4.8, Continued

Domains of successful aspect (Nm*)	Reason of successful aspect (subcategories) (Ni**)
2.6. Teacher education (Nm = 19)	Diverse offer of teacher further education courses (Ni = 8) VETI organise further teacher education themselves (Ni = 3) Teacher further education (36 h/3 years mandatory) (Ni = 2) Attracting new teachers (Ni = 1) Mobility opportunities for teachers (Ni = 1) Municipality offer support to teachers (Ni = 1) Teachers as mentors for students (Ni = 1) Teachers had to validate qualifications (Ni = 1) Teachers learn also by participating in WBL process (Ni = 1)
3. Transfer from education to the labour market (total Nm = 23)	
3.1. Providing work experience (Nm = 15)	Work-based learning, based on good cooperation with employers (Ni = 8) Designated employees at VETI to ensure quality of work placements and WBL (Ni = 2) Providing work experience for all students (Ni = 2) Students work parallelly to education (Ni = 1) Training of in-company trainers (Ni = 1) VETIs are responsible for quality of education, including during WBL (Ni = 1)
3.2. Career education (Nm = 8)	EU project on career education (Ni = 5) Many different opportunities of career education (Ni = 2) Employers provide career education (Ni = 1)
4. Monitoring quality, ensuring feedback loop and continuous improvement (total Nm = 24)	
4.1. Accreditation system (Nm = 7)	Accreditation system works well (Ni = 3) Accreditation system ensures compliance to minimum standards (Ni = 2) Self-evaluation process - useful (Ni = 2)
4.2. Ensuring feedback (Nm = 8)	Collecting information about graduate employment (Ni = 4) Student surveys (Ni = 2) Employers participate in examination (Ni = 1) Meeting graduates to obtain feedback (Ni = 1)
4.3. Internal quality assurance system and continuous improvement (Nm = 9)	Internal quality assurance system (N = 3) Regular teacher evaluation (Ni = 2) Teachers do self-evaluation (Ni = 2) ISO certificate (Ni = 1) Planning regular improvements (Ni = 1)
5. Providing adult learning (total Nm = 34)	

End of Table 4.8

Domains of successful aspect (Nm*)	Reason of successful aspect (subcategories) (Ni**)
5.1. Capacity to ensure adult education (Nm = 12)	Participate in EU funded project on adult education (Ni = 4) Offer teacher training on how to deal with adults (Ni = 3) Teachers consider andragogy principles in adult education provision (Ni = 3) Modernised equipment as important asset for offering adult learning (Ni = 1) Offer consultations for teachers on how to deal with adults (Ni = 1)
5.2. Recognition of prior learning (Nm = 4)	Recognition of prior learning works well (Ni = 4)
5.3. Ensuring relevant adult education opportunities (Nm = 18)	Develop offer based on demands of employers and employer organisations (Ni = 6) Maintain link to graduates (e.g., graduate days, inform about education opportunities, invite to events) (Ni = 4) Adults are interested in short courses (Ni = 2) Graduates continue their studies at a higher education level (Ni = 2) Opportunities to improve in the area of maintaining link to graduates (Ni = 2) Analysing adult needs when developing an offer (Ni = 1) Widely advertise adult education opportunities (Ni = 1)

**Ni = number of vocational education institutions evoking the successful aspect, max(Ni) = 12*
***Nm = number of mentions*
Source: Author's analysis, based on the interviews with the managers of VETIs, conducted in 2018 (n=12)

The analysis of the interviews shows that most frequently mentioned domains of successful aspects in vocational education management that facilitates employability of graduates were: "teacher education" (Nm = 19) (mainly because of diverse offer of teacher further education courses (Ni = 8) and further teacher education courses organised by vocational education institutions themselves (Ni = 3)); "ensuring relevant adult education opportunities" (Nm = 18) (mainly due to developing offer based on demands of employers and employer organisations (Ni = 6) and attempts to maintain the link to graduates (e.g., graduate days, informing about education opportunities, inviting to events) (Ni = 4)); "cooperation with labour market partners" (Nm = 15) (mainly due to successful cooperation with the Sectorial expert councils and employer organisations (Ni = 6)); "ensuring relevant education programmes" (Nm = 15) (mainly due to regularly updating education programmes according to labour market needs (Ni = 8), involving employers in vocational education programmes (Ni = 4) and modernised infrastructure (Ni = 3)); "providing work experience" (Nm = 15) (mainly due to work-based learning, based on good cooperation with employers (Ni = 8)) and "capacity to

ensure adult education" (Nm = 12) (mainly due to EU project supporting adult education (Ni = 4) and ensuring that the training is appropriate for adults by offering special courses for teachers (Ni = 3) and ensuring andragogy principles in adult learning provision (Ni = 3)). Other frequently mentioned reasons for successes were the opinion that labour market demands are considered in vocational education (Ni = 4), development of employability competencies in vocational education (Ni = 5), implementation of EU project on career education (Ni = 5) ensuring availability of career education to students and collecting information about graduate employment (Ni = 4). Many of these aspects are linked to recent reforms in VET, as well as the increased capacity in VET due to EU funded projects. For example, Sectorial expert councils were established in 2010, initially – within an EU funded project. The following years, up to this point, mark significant progress in updating occupational standards, revising vocational education programs through developing modular education programmes and updating the content of qualification exams, activating employers to engage in internships and work-based learning, as well as in renovating vocational education institutions and investing in modernizing learning materials of programmes. Most of the vocational education reform measures were supported by the EU-funded projects.

When it comes to existing weaknesses in vocational education management processes, the most significant weaknesses, having been mentioned at least 10 times were: lack of stability, lack of leadership and coordination, problems related to VET financing model, problems related to teachers, problems related to students and lack of labour market partners.

Table 4.9
Overview of Domains and Reasons of Weaknesses in VET Management

Domains of weaknesses (Nm*)	Reason of weaknesses (subcategories) (Ni**)
1. Planning and governance (total Nm = 59)	
1.1. Lack of stability (Nm = 14)	Lack of long-term planning, strategy (Ni = 5) Constant process of reforms (Ni = 3) Frequent changes in priorities (Ni = 3) Workload too high (Ni = 2) Unclear vision and priorities (Ni = 1)
1.2. Lack of leadership and coordination (Nm = 10)	Lack of mutual coordination, hasty implementation of EU projects (Ni = 5) Conflicting procedures in EU projects (Ni = 3) Frequent changes of staff in the ministry (Ni = 1) Lack of responsibility (Ni = 1)

Table 4.9, Continued

Domains of weaknesses (Nm*)	Reason of weaknesses (subcategories) (Ni**)
1.3. Problems related to funding system (Nm = 14)	Public financing does not cover real costs (Ni = 3) Promotes competition among educational institutions (Ni = 2) Low teacher salaries (Ni = 2) Does not stimulate development (Ni = 1) Limited autonomy to decide on spending (Ni = 1) Can't save due to public funding regulation, does not motivate to attract private funding (Ni = 1) Promotes quantity, not quality (Ni = 1) Not all occupations are insured against accidents (Ni = 1) Institutions that are subordinate to municipalities should be financed from state resources to be included in the joint education planning (Ni = 1) Institutions that are subordinate to municipalities do not have opportunities to develop infrastructure (Ni = 1)
1.4. Problems related to regulation (Nm = 2)	Too normative and limiting (Ni = 1) Procurement procedures limit opportunities to choose best co-operation partners (Ni = 1)
1.5. Low vocational education prestige (Nm = 6)	Persistent stereotypes about vocational education (Ni = 3) Lack of opportunities after graduation (Ni = 1) Lack of information about vocational education (Ni = 1) Employers and municipalities do not value vocational education (Ni = 1)
1.6. Lack of support (Nm = 6)	Lack of methodological support (Ni = 2) Lack of support by municipalities (Ni = 2) Lack of cooperative attitude (Ni = 1) Lack of co-operative attitude by employers (Ni = 1)
1.7. Labour market requirements and future skills needs (Nm = 7)	Lack of future skills needs planning in the long term (Ni = 3) Insufficient understanding by/ cooperation with the sectorial expert councils (Ni = 2) Requirements by employers too high (Ni = 2)
2. Implementing education (total Nm = 44)	
2.1. Problems related to teachers (Nm = 18)	Inappropriate qualification requirements (Ni = 5) Lack of teachers of vocational subjects, especially outside of Riga (Ni = 4) Low capacity of teachers to ensure quality teaching (Ni = 3) High average age of teachers (Ni = 2) Inappropriate further teacher education (Ni = 2)Teachers lack practical experience of the labour market (Ni = 1) Teachers do not have time for further education (Ni = 1)

Table 4.9, Continued

Domains of weaknesses (Nm*)	Reason of weaknesses (subcategories) (Ni**)
2.2. Problems related to education programme (Nm = 3)	Lack of co-ordination between subjects, overlapping 1) Too many issues included in the programme 1) General education subjects taught separately from vocational education subjects 1)
2.3. Contemporary teaching (Nm = 2)	Lack of modern equipment for learning, especially in small institutions (Ni = 2)
2.4. Modular programmes (Nm = 5)	Unclear methodologies (Ni = 3) Doesn't change anything in essence (Ni = 2)
2.5. Problems related to students (Nm = 15)	High drop-out rate (Ni = 4) Low prior education level (Ni = 3) Motivation of students (Ni = 3) Low socioeconomic status (Ni = 2) Low language skills (national, foreign) (Ni = 1) Not all are able to complete secondary general education (Ni = 1) Bad health (Ni = 1)
2.6. Problems related to learning process (Nm = 1)	Too many students in a group for individual learning (Ni = 1)
3. Transfer from education to the labour market (total Nm = 24)	
3.1. Lack of employment opportunities (Nm = 3)	Lack of jobs for young graduates (Ni = 2) Low salaries in the labour market (Ni = 1)
3.2. Lack of labour market partners (Nm = 14)	Lack of companies providing work-placements or WBL (Ni = 5) WBL regulation too restrictive (Ni = 4) Lack of support by professional/employers' associations (Ni = 2) Lack of financial incentives for companies (Ni = 1) Formal approach to organising WBL (Ni = 1) Difficult to embed WBL programmes in curriculum (Ni = 1)
3.3. Quality of practical learning (Nm = 2)	Different learning opportunities at different companies (Ni = 1) Not all employers have modern environment to ensure good quality learning for students (Ni = 1) Training of in-company trainers done by higher education institutions without involvement of vocational education institutions (N = 1)
3.4. Career support (Nm = 3)	Career support offered too late (Ni = 1) Lack of state financing for career support (Ni = 1) Lack of understanding about occupation (Ni = 1)
3.5. Recognising prior learning (Nm = 2)	Too few hours for consultation before examination (Ni =1) Private educational institutions should not have the right to recognise prior learning (Ni = 1)
4. Monitoring quality, ensuring feedback loop and continuous improvement (total Nm = 13)	
4.1. Problems related to qualification evaluation (Nm = 3)	Decentralized examination committees do not guarantee similar requirements, lack of objectivity (Ni = 2) Lack of objectivity in accreditation procedures (Ni = 1)

End of Table 4.9

Domains of weaknesses (Nm*)	Reason of weaknesses (subcategories) (Ni**)
4.2. Problems related to quality assurance (Nm = 6)	Accreditation does not support development (Ni = 3) Lack of support to institutions to develop meaningful internal quality assurance system (Ni = 1) Procedures too beuracratic (Ni = 2)
4.3. Problems related to collecting feedback (Nm = 3)	Lack of information about employment of graduates in the longer term (Ni = 2) Lack of support to teachers to organise feedback collection and analysis (Ni = 1)
4.4. Problems related to Centralised examination (Nm = 1)	Requirements for number of hours in vocational education too high (Ni = 1)
5. Providing adult learning (total Nm = 11)	
5.1. Involvement in EU project on adult learning (Nm = 4)	Unmotivating conditions for institutions and teachers to participate in the EU project on adult learning (Ni = 3) Adults can participate only once in this EU project (Ni = 1)
5.2. Lack of demand for adult learning (Nm = 4)	Limited demand, adults and employers not ready to finance adult learning (Ni = 2) Lack of funding for adult learning (Ni = 1) Limited resources to develop new programmes for adults (Ni = 1)
5.3. Capacity of vocational education institutions (Nm = 3)	Teachers are not prepared to work with adults (Ni = 2) Lack of human resources to engage in adult learning provision (Ni = 1)

**Ni = number of vocational education institutions evoking the weakness, max(Ni) = 12*
***Nm = number of mentions*
Source: Author's analysis, based on the interviews with the managers of VETIs, conducted in 2018 (n=12)

In the area of planning and governance, most important domains of weaknesses were the problems related to funding system (Nm = 14), lack of stability (Nm = 14) and lack of leadership and coordination (Nm = 10).

Although the managers mostly agreed that the funding system of vocational education was problematic, the reasons they highlighted were very different. Most frequently mentioned reasons were that public financing does not cover real costs of implementing quality education, that it promotes undesirable competition among educational institutions and that teacher salaries are too low.

The most important reasons for the lack of stability in governance and management of vocational education was the lack of long-term planning, constant process of reforms and frequent changes in priorities. This was also closely linked to the lack of leadership and coordination due to lack of mutual coordination and hasty implementation of EU projects, as well as sometimes conflicting procedures.

In this area, managers also pointed out other reasons of weaknesses that hinder development of vocational education: lack of planning of labour market requirements and future skill needs (Nm = 7), lack of support from central and regional governments (Nm = 6) and low vocational education prestige (Nm = 5).

In the area of implementing education, the most important domains of weaknesses were problems related to teachers (Nm = 18) and students (Nm = 15). They were concerned by the lack of teachers of vocational subjects (Ni = 4). They believed that this problem is also linked to inappropriate qualification requirements for teachers (Ni = 5). A few of them also mentioned low capacity of teachers to ensure quality teaching, including resistance to improve their competencies (Ni = 3). Regarding problems with students, managers pointed out to the following reasons: high dropout rate (Ni = 4), low prior education level (Ni = 3), motivation (Ni = 3) and low socioeconomic status (Ni = 2). Managers were also concerned by modular programmes (Nm = 5), due to unclear methodology.

In the area of transfer from education to labour market, the main domain for concerns was the lack of labour market partners (Nm = 14). The main reasons for that were the lack of companies providing work-placements or work-based learning (Ni = 5), too restrictive of regulations of work-based learning (Ni = 4) and lack of support by professional/employers' associations (Ni = 2).

In the area of monitoring quality, ensuring feedback loop and continuous improvement, managers didn't have any serious concerns. Some of mentioned negative aspects which are the following: accreditation procedure did not support development, but rather just monitored compliance to minimum standards (Ni = 3). Managers of two institutions also pointed out that decentralised system of professional qualification exams did not provide comparable, objective evaluation of learning outcomes (Ni = 2) and to the lack of information about employment of graduates in the longer term, not just immediately after graduation, (Ni = 2).

In the area of adult learning, there were no serious concerns either. Mentioned negative aspects were: unmotivating conditions for institutions and teachers to participate in EU project on adult learning (Ni = 3), limited demand, adults and employers are not ready to finance adult learning (Ni = 2) and that teachers were not prepared to work with adults (Ni = 2).

To summarise, the research showed that the main improvements in the VET management processes are needed in the mutual collaboration between the national and institutional level, especially when it comes to bottom-up communication and mutually coordinated implementation of reforms and projects; the lack of guidance and support on the national level to VETIs. Although recent improvements in VET systems are appreciated and opportunities provided by EU-funded projects are very appreciated, VETIs feel overwhelmed by the uninterrupted, parallelly-taking place and uncoordinated changes. The financing system of VET should be reviewed to support goals of VET and intentions of VET reform, especially by motivating VETIs to work towards their strategic goals, by motivating educational institutions to cooperate rather than compete, by covering real costs of quality education, including more competitive teacher salaries to ensure availability of good, qualified teachers. The financing system should also consider the diverse learning needs of students and ensure that VETIs can cover additional costs related to supporting students with learning difficulties. The processes that have been successfully started within the context of VET reform should be further implemented, including cooperation with labour market partners, especially by ensuring sustainable work of Sectorial expert councils; ensuring relevant education programmes by reviewing their content and implementing modular learning programmes, taking into account competence-based approach and the importance of employability competencies; ensuring career education and adult learning opportunities. Additional support is needed in the area of ensuring quality opportunities of work placements and WBL and reducing drop-out rate, especially by ensuring support to students with learning difficulties and difficult socio-economic conditions.

4.3. Evaluation of the Quality of the Research

In this section, the process for verification of the quality of the research is discussed. The basis for this assessment is the classification of quality areas by Mårtensson, Fors, Wallin, Zander and Nillson (2016) which are presented in Table 4.2 and the criteria of reliability and validity described by Bryman (2012) and Cropley (2002), which considers the quality of quantitative and qualitative data.

Contributory Research. The goal of the research was to research and find appropriate opportunities for Latvia to manage promotion of employability of VET graduates. It was done by finding employability factors, constructing a model representing the process of managing facilitation of graduate employability, as well as

by empirically researching the situation and the opportunities to manage promotion of employability graduates of VET in Latvia. The previous research done in Latvia has been investigated. Only research on aspects of employability was conducted in Latvia, but not on employability in a holistic way, therefore this research is novel in how it views employability and attempts to provide guidance on how to facilitate it.

The topic of the research is essentially relevant because of the low employability of VET graduates later in their careers, as well as the importance of employability to young people, adults and policy makers. The research context and the topic are presented in detail in Chapter 1, which describes the importance of employability, labour market demand and VET in Latvia, as well as employability of VET graduates in Latvia. The relevance of the research is in the practical concern to ensure sustainable employability of VET graduates in Latvia, which is also a concern in other EU countries.

The main results of this research include the model of managing facilitation of graduate employability, IPA results of personal attributes in Latvia, and interview results about VET management processes. The author considers these results to be useful and contributory in various ways. The model of managing facilitation of graduate employability can be used for guiding action and for policy making. The scientific value of the model lies in its examination of employability in a holistic way that has not been done before. The IPA results provide information on personal attributes which are the most important in VET in Latvia for graduate employability, considering the labour market demands and the performance of VETIs. The way how importance and performance evaluations have been linked in one analysis is unique in Latvia. The methodology applied in quantitative data analysis provides guidance on how the IPA framework could be used also in other education studies. It could be applied in any country, in relation to any type of education. The research also offers detailed analysis and recommendations for VET in Latvia. Also, the theoretical framework of the research can be used to provide a more holistic view of the employability and employability factors in VET. It can serve as a useful awareness-raising source to the researchers and practitioners interested in employability. The research results and conclusions have been presented to policy makers and stakeholders in education and the private sector, nationally and internationally. The recommendations for

practitioners and essential results of the research will be published in Latvian for interested stakeholders. Thus, this research contributes to both, the theory and practice.

Credible Research. The theoretical findings for the research lie in employability, management and system's theories. The empirical research design is related to the research questions, as well as the philosophical stance of the author: epistemology and ontology affected the choice of the research methods. The research methodology is discussed in Section 4.1. The author used the constructive research approach as a methodological umbrella and the pluralistic methodological approach.

Considering the experience and interest of the author with the topic of the research, the author's own experience affects the results and conclusions of the research. The author became interested with the topic while she worked for the Employers' Confederation of Latvia (2010-2018). There, she was involved in policy making processes on behalf of employers. She also coordinated the process of stakeholder involvement in VET through the sectorial expert councils and implemented initiatives and projects to promote co-operation between VET and the private sector. Thus, the author was familiar with the research area and was in close and continuous contact with the various stakeholders. To mitigate the biasing factors that might affect the neutrality and objectivity of the research, the author has attempted to report the process for data collection and analysis in detail, to present the preconceptions of the author and to report conclusions of a research in objective manner. The empirical procedures used in the research (the design of the research, data collection and data analysis tools and techniques) are described in detail in Chapter 4. In this chapter, the reader can follow the choices of empirical procedures made by the author.

The author designed the data collection instruments. Data analysis procedures were selected to analyse the collected data according to the research questions and research methods. The quantitative data was analysed using various statistical methods, including: descriptive statistics, frequency analysis, correlation analysis, factor analysis, and statistical hypotheses testing. The qualitative data were analysed using consensual qualitative research procedure, in which the categories were driven from the data. Examples of practice and bright quotes were also collected to better illustrate the data collected.

At the preconception phase of the research, the author conducted the data collection with three international study visits and a survey of employers. The

methodology for collecting data at the international study visits was the instrumental and critical case study aiming at gaining insight into a phenomenon and to obtain a better understanding. The cases were not systematically analysed. Elements and factors which were collected from them, were compiled into the mind map. The reports which were used for compiling employability elements and factors were prepared by the author and agreed with other participants of the study visits (representatives of VET policy makers, social partners and VETIs). The information obtained from the study visits enriched the theoretical analysis and construction of the model for managing facilitation of graduate employability. The response rate reached for the employer surveys was 60 %. The results of the first phase contributed to the design of the research, as well as the development of the theoretical model of managing facilitation of graduate employability.

The author conducted the quantitative data collection with an extensive employer survey (N=750). The questionnaire was developed for this research, and based on previous research. The questionnaire was reviewed by a member of academic staff and by two experienced sociologists, which resulted in some refinements. The general population for the questionnaire survey includes all active companies working in Latvia. A sample was created by multistage cluster sampling method. The answers to the questionnaire were collected by the independent research centre SKDS Ltd. Before conducting statistical analysis, data validity and reliability and sampling adequacy were checked with statistical analysis procedures: Cronbach's alpha, KMO test, Bartlett's test, correlation analysis. Considering that not all employers are experts in VET to evaluate its performance, questions on whether employers have employees with VET qualifications was included in the questionnaire, and the difference in opinions was checked. Since no significant difference was detected, all answers were considered in further analysis. The analysis of personal attributes was done with IPA methodology developed by Martilla and James (1977). Interpretation of the IPA results was conducted with caution, considering recent research about IPA methodology and sample error.

The third data collection was accomplished with interviews of representatives of the management of VETIs (directors or deputy directors). VETIs were selected in order to ensure representation of all Latvian regions, education fields, levels, and subordination. All of the VETIs invited by the author agreed to an interview. The

standardised questionnaire was used which was elaborated for this research. Interviews with all of 15 VET managers were conducted face-to-face and took 40 – 90 minutes.

Each data collection was systematic and thorough. The raw data is stored in electronic format. This allows the analysis to be reproduced by another researcher, if necessary. The data analysis procedures are transparent, and the reader can follow the research from data analysis to results and conclusions. The conclusions from the data and results are reported in Chapter 4. Thus, the research can be repeated.

Communicable Research. The research questions in this research (see Introduction) can be easily understood, they are specific, answerable, interconnected and relevant to the research. The research process, its description, as well as the description of research results follows research questions and is therefore well structured, easily readable and understandable. The author has clearly mentioned in the discussion of the results which results include new knowledge to ensure that it can be easily found.

The results of the research are communicated to the social world through the discussion of the results section and also in the recommendation to practitioners and researchers. The main results of the research have been presented and published in academic journals.

Conforming Research. The sincere intention of the author is to be honest with others and with herself, to maintain dignity and to conform to the legal regulation and ethical standards. She reported and documented the research carefully to ensure that the process and conclusions can be followed throughout the whole research. All raw data and working records were maintained.

According to Behi and Nolan (1995) most ethical guidelines for research involving human subjects by researchers in Western cultural tradition require that anonymity and/or confidentiality is guaranteed, consent is informed, dignity is maintained and the individual and society receive more benefit than harm. In the employer survey, anonymity of respondents was guaranteed by the questionnaire design. In interviews with the managers of VETIs, the anonymity of respondents was ensured in the process of entering and analysing data. VETIs were also not revealed in the description of the results. They were not coded, and codes were not added to the quotes used in the description of results to ensure anonymity of respondents. Participation of the respondents in the research was voluntary. When invited for the

interview, all respondents were informed about the topics of the interview in advance. The author asked for their permission to record the interview. The author maintained dignity and neutrality during the interviews so as not to affect the answers. Before starting the research, the author discussed the topic of the research and methods with various stakeholders in vocational education. Thus, the process and methods were open and beneficial to stakeholders. The research intends to address issues of importance to them in a helpful way.

Conclusions

In this chapter, the author presented the empirical research programme and the results of the research according to the research questions. The main results of the research are the following:

- The model of managing facilitation of graduate employability which demonstrates, which factors facilitate the employability of VET graduates and how they are interlinked.
- A list of priority personal attributes which should be developed in VET in Latvia to facilitate the employability of graduates.
- A list of successful aspects and weaknesses in the VET management processes to facilitate employability of graduates.

The verification of the quality of the research was discussed according to its contribution, credibility, communicability and conformity.

In the following chapters, the main results of the research are discussed, the main conclusions are drawn and the recommendations for VET managers and policy makers are made.

DISCUSSION OF THE RESULTS

In the following chapter, the results of the research and the relationship of the current research to prior research are discussed.

The model of managing facilitation of graduate employability represents the system of managing employability of VET graduates. It demonstrates that the individual employability develops over time as a dynamic, cyclical process, and at the same time also provides guidance on how to manage this process. The work of Patton and McMahon (1999) on the system's theory approach to career development served as the basis for the development of this model. In particular, its approach to describing career development elements of the individual and context system levels (Patton & McMahon, 1999, p. 160) was useful for this dissertation. However, the model of managing facilitation of graduate employability focusses on explaining the management process by encompassing the main elements of the desired outcomes and of the processes needed to achieve these outcomes, which is important for the practical value of the research. Since employability does not guarantee employment but rather increase the chances in the labour market, understanding how to manage employability facilitation is more important that just understanding what employability is. The scientific value of the model lies in its examination of employability in a holistic way, and not just by answering the question "what", but also "how", that has not been done before. The model provides valuable information and guidance for action for education policy makers, practitioners, students and their parents, teachers and employers. It is universal and may be applicable in different contexts. In the future research, it could be developed further to elaborate a practical measurement tool to evaluate the level of student employability or the level of institutional effectiveness in facilitating employability.

This research acknowledges although important, but limited role of education in ensuring employability of graduates. When interpreting graduate employment data, it is important to note, how external factors, as well as other national policy areas affect employability results. The author agrees with Tomlinsen (2012) who has pointed to the need for further research on the overall management of graduate careers over the longer-term course of their careers – to explore the way in which graduates' employability and career progression is managed both by graduates and employers. Indeed, managing faciliatation of graduate employability is not only in the hands of

educational institutions or policy makers, but also employers and individuals themselves.

The high evaluation by employers of importance of the list of individual employability attributes, developed based on CareerEDGE model by Pool, Qualter, and Sewell (2014), in the recruitment process in Latvia, shows that the labour market demands in Latvia reflect global tendencies in future skills needs (Cedefop, 2016). The research showed that employers most value the emotional and self-management competencies and attitudes, as well as communication and cooperation skills. Similar trends have been confirmed by other studies about skills demands carried out in Latvia (Lapiņa, Ščeulovs, Gaile-Sarkane, Dubickis, & Ņikitina, 2017; Līce, 2017; Līce, Volkova, & Zvaigzne, 2017; Project and Quality Management Ltd, 2013). Therefore, skills, competencies and attitudes which help employees to be more employable in the ever-changing labour market, including finding fulfilling employment and changing jobs easier, are also highly valued by employers in the recruitment process in Latvia. It means that employers seriously consider the need to adapt to changing markets and are looking for employees that are able to adapt and to facilitate organizational change.

Achievements in education (academic skills) were evaluated as the least important for employability both by employers and by managers of VETIs. Similar tendencies in employer evaluations – a comparatively low trust of employers in education diploma compared to the importance of personality of a potential employee – were also observed in other studies (for example, Klāsons, Pavlina, Danneberg, & Urb, 2018; Līce, Volkova, & Zvaigzne, 2017). It should be noted, however, that there is evidence that high academic performance is linked to proactive personalities (Ruge & McCormack, 2017) and the level of education obtained – to participation in lifelong learning (e.g., European Commission, 2015). People with high academic skills are motivated to invest more in their skill improvement which would be reasonable considering increasing requirements for employee skills and participation in lifelong learning. Thus, the importance of academic achievements should not be underestimated in the author's point of view. However, low evaluation of importance of academic performance might indicate both low trust in the outcomes of the education system in Latvia, as well as the readiness to invest in competency development of employees themselves. Thus, more should be done to improve employers' trust in qualifications,

both by taking steps to improve the quality of education and by improving co-operation between the world of work and the word of education.

According to employers, VET in Latvia is best at developing skills and competencies which are more traditional for education curriculum: computer skills, presentation skills, the ability to work in a team, as well as academic skills. In contrast, VET rather does not develop competencies and attitudes which are linked to person's self-management and emotional intelligence, for example, ability to take responsibility, attitude to work, planning and organizing skills, work motivation, ability to adapt to new situations (which includes ability to learn), target orientation, all of which are very important for employability in the context of a changing labour market. This evaluation might be explained both by the lack of attention in the education system to these issues, and by too high of expectations of employers for the education system. The opinion of employers about the performance of VETIs was also more critical than of managers of VET institutions. The differences in opinions could be explained in different ways. Firstly, it indicates towards too high optimism in certain areas among the managers of VETIs and the need to reconsider the educational priorities. Secondly, the real learning outcomes of students depend not just on the efforts of VETIs, but also on many external factors such as students' socio-economic background and prior knowledge. According to the managers of VETIs, these student-related factors constitute the most important challenges for VETIs in ensuring employability of students.

The most obvious differences between the views of employers and the managers of VETIs were expressed in relation to facilitating ability to adapt and work motivation, as well as ensuring relevant work experience. VET managers insisted that work-placements and WBL, study tours and meetings with employers and graduates, as well as upbringing lessons facilitate development of adaptability and motivation to learn and to work. These attributes are also closely related to the type of personality, personal circumstances and motives. It is very challenging for VETIs alone to develop them in students. Employers should also take responsibility for developing these and other employability attributes in their trainees.

When it comes to different opinions on ensuring relevant work experience by VETIs, where employers were very negative about performance of VETIs in contrast to VETIs themselves, it should be considered that VET managers were referring to work placements and WBL provided by employers which are their good co-operation

partners. But the employer survey was representative on the national level and also included companies that do not provide work placements or co-operate with educational institutions, and thus the more critical view of companies is natural. However, the assessment of employers affects the employment opportunities of graduates and should therefore be seriously considered. Only 36 % of employers believed that vocational education ensures opportunities for obtaining relevant work experience. This is aligned with the conclusion of Klāsons (2017, p. 4-5) that employers in Latvia do not consider work placements an alternative to work experience, which might have negative consequencies on competitiveness of recent graduates in the labour market. The interviews with VET managers confirmed that there are problems with quality of work placements even among partners of VETIs, moreover, there is also a problem with the lack of labour market partners. Only few VETIs have a process and a person responsible for quality of VET placements. This confirms that quality work placements are available to only a portion of students. As it was described by Līce (2018), work placements can ensure very useful learning and work experience, and can boost the employability of students, therefore VETIs should consider undertaking action to ensure the quality of work-placements and WBL, e.g., by implementing work-placement and WBL quality management processes and assigning responsible employees like in the case of Finland.

The IPA results indicated that the development of almost all personal employability attributes require improvement in VET in Latvia. Only acquiring the content of current education programmes and developing academic skills are at satisfactory levels. Employability attributes which received the highest evaluation for their importance and the lowest – for performance of VETIs in developing them, require the most urgent action. It should be that noted these attributes are included or are linked to the Goleman's emotional intelligence competence framework (Goleman, 1998, p. 32). Thus, the development of emotional intelligence should be considered in VET curriculum. Rode, Arthaud-Day, Ramaswami and Howes (2017) have empirically proven that emotional intelligence has a significant and positive effect on subsequent salary levels as it helps individuals acquire the social capital needed to be successful in their careers. So far, little has been discussed and researched about the role of emotional intelligence in education and career success and the ways to include it in the curriculum of education programmes along with other employability competencies. Further

research in this area would be important and relevant not just for education researchers, but also for managers and policy makers.

This research also demonstrates how the IPA analysis, which is widely used in marketing research, could be used in education management to facilitate the planning of the curriculum and desirable learning outcomes, considering the evaluations of the involved stakeholders, which has not been done before in education in Latvia. Considering the raising importance of discussions about the future of education, this analysis can provide valuable information and directions for future action.

According to the interviews with the managers of VETIs, employability is the most important goal of their VETIs. This research result allowed the author to analyse further how the education management processes of VETIs facilitate employability, as education management has to be centrally concerned with the goals of education (Blūma, Celma-Zīda, & Ivanova, 2017; Bush, 2006).

Accordind to the managers of VETIs, the most significant obstacles for VETIs to ensure employability do not lie within VETIs themselves or the education system but are linked to students: their motivation, prior knowledge and socio-economic background. This means that financial support, especially targeting support to those from low socio-economic background, is very important in Latvia to ensure access to VET. Access to VET in a broader sense means not just entering studies, but also being able to afford to study (for example, to afford to pay for dormitories and food), to undertake work placement (travel expenses to the venue) and to complete studies (without making exclusive choice between studies and work). A survey of VET students conducted within an Erasmus+ project "VET for employment" confirmed that transport and dormitory costs are important obstacles for students to participate in work placements (Employers' Confederation of Latvia, 2016). Interviews with the VET managers confirmed that many students no not complete their studies due to their full-time work which many undertake due to financial reasons.

Low level of prior knowledge is also a significant obstacle for VETIs which makes it even more challenging to obtain the general education subjects at the secondary level, considering reduced number of hours compared to general secondary education. A special programme of additional classes should be considered for those who have a low level of knowledge (thus, the overall level of learning would be raised), as well as for those who aim to reach higher grades at centralised exams and perhaps to

continue into higher education (thus, additional opportunities and a more challenging learning environment would be provided for capable students). Both options would raise the attractiveness of VET in the eyes of students with good grades and ambition to continue their studies at a higher level.

It may be challenging to motivate unmotivated students as motivation is an intrinsic, personal driver for action, nevertheless, it should be considered that pedagogical methods and educational environments can have an important impact on student motivation. For example, student-centered learning approaches (Barrie, 2005; Biggs, 2003), less didactic and more enquiry and problem-based learning methods (Hager, 1992), as well as meaningful work experience periods or WBL, developing professional identity (Jackson, 2016) may enhance student engagement and motivation.

The methods most frequently mentioned by VET managers to raise motivation of students were financial awards: scholarships and remuneration for work placements and WBL. However, as it was pointed out by one manager, students quickly understand that they can earn more at a job and are not motivated to learn or to attend lessons to receive full scholarship anymore. Thus, it is very important that the development of intrinsic motivation is facilitated during studies, for example: by pedagogical approaches, career support and self-reflective activities, not just by financial incentives. And, considering that ensuring WBL is a teameffort between VETIs and employers, the motivating of young people should be done also by employers. According to Līce (2018), companies of good practice in Latvia invest their resources in motivating and supporting their trainees, for example, by offering remuneration or other financial support, investing in their development, ensuring challenging and interesting learning environment, and supporting their studies.

This research showed that in spite of many external factors and obstacles, educational institutions can successfully contribute to facilitating employability (Perez, Kozovska, & Garrouste, 2010), as long as it is their goal both in strategy and daily practice. For example, Fallows and Steven (2000) have described in detail, how the process of embedding employability into curriculum could take place and what benefits it brings to an educational institution. In Latvia, the main method of facilitating employability in VETIs is work placements and WBL. At the same time, employer involvement and opportunities to ensure work placements of good quality were also frequently mentioned obstacles. Considering this, as well as other studies about

availability and quality of work placements (e.g., Klāsons & Spuriņš, 2015), it is especially important for VETIs to pay attention to organising work placements according to good practice as described by Līce (2018). Employer organisations should also continue supporting and promoting employer engagement in VET, as well as explore new ways how to motivate employers, especially SMEs to provide work placements and WBL of good quality.

Other most frequently applied methods to facilitate employability are extra-curricular activities and international mobility. Considering that these activities are voluntary, only motivated students and those who have spare time can engage. Therefore, VETIs should consider how to better integrate the development of employability competencies into the curriculum and how to offer activities for student employability that would be available for all students, for example, visits to companies, other schools, guest lectures, meeting alumni, quality work placements for all etc.

This research has also triggered a question about the meaning and usage of terms. Considering that the changing world reality is affecting the education system, the terms that are used to describe the education system should change along with it. Considering the importance of sustainable employability throughout career in dynamic labour market is gaining importance (de Grip, Van Loo, & Sanders, 2004; European Commission, 2010b), the VET system should adjust accordingly to ensure sustainable employability. VET that combines vocational training and general education is proven to have better labour market outcomes in the long term (Green, 1998; Hanushek et al., 2017). Receiving not just VET training but also general education is especially important in small countries with a dynamic labour market such as Latvia where graduates are faced with the need to be flexible, adapt to changes easily, constantly learn and to frequently undertake employment in different areas than one's education field. Graduates are also expected to be emotionally intelligent, solve complex problems, have initiative, be creative and capable of thinking. These are the properties which students can develop in education, not training. Therefore, it would be more correct if the term "Vocational education" would be used to describe education in Latvia, instead of the widely used international term- "Vocational education and training". Likewise, the term "learning" should receive more attention in describing education process than "teaching", as we wish to emphasise the importance of student centered learning, learning outcomes and the role of the student in the education

process. Moreover, the process of "learning" does not take place only in the classroom but can take place anywhere in both formal and non-formal education. Educational institutions that experiment with innovative methods to facilitate the development of students are aware of that. The range of opportunities to engage in extra-curricular activities and methods to obtain practical and career educations at VETIs in Latvia indicates that they have already taken the new role of developmental centers rather than just vocational training centers, which is a very positive sign for the VET system in Latvia.

CONCLUSIONS AND RECOMMENDATIONS

In the Doctoral thesis the set tasks have been completely fulfilled and the proposed theses have been defended. The aim of the doctoral thesis has been achieved.

Implementation of the set tasks

1. Theoretical approaches about the notion of employability have been investigated, developing theoretical justification for the model of employability factors.
2. Acaemic research based theoretical justification on the personal attributes and VET management processes facilitating employability of VET graduates has been developed.
3. Theoretical literature about management of educational institutions and system's theory has been researched, developing theoretical justification for the model on the managing facilitation of VET graduate employability.
4. The preconception phase of the research has been completed by participating in international study visits and researching VET systems in Germany, Austria and Finland, carring out a survey of the members of the Employers' Confederation of Latvia, and summarising outcomes.
5. A model representing factors facilitating employability of VET graduates and their interplay has been constructed.
6. A questionnaire survey among employers about the most important personal attributes in the labour market and the performance of VET system in Latvia in developing them has been conducted and results – analysed.
7. Interviews with managers of VETIs about personal attributes important for employability in Latvia, the ways how VETIs facilitate development of these personal attributes, as well as successful and unsuccessful aspects in the current implementation of VET management processes to facilitate employability of graduates have been conducted and results – analysed.
8. Recommendations on how the facilitation of employability of VET graduates could be managed in Latvia have been developed.

Defending the proposed thesis

1. VET focuses more on the development of occupational and academic skills, but less on development of emotional and self-management competencies.

Emotional and self-management competencies are essential for individual employability.

This has been proved by the results of the employer survey results conducted in 2017 (n = 720). VETIs are best at developing computer skills, presentation skills, ability to work in a team, ensuring achievements in education and academic skills, as well as development of mathematical skills. However, VETIs are worst at developing the ability to take responsibility for own decisions, to obtain relevant work experience, to develop problem solving skills, appropriate attitude to work, planning and organising skills, motivation and ability to adapt to changing conditions. The opportunity to develop these attributes in VETIs was evaluated negatively by majority of employers. At the same time, competencies linked to emotional intelligence and self-management, are valued most by employers in the recruitment process in Latvia, including attitude to work, ability to work independently, work motivation, ability to take responsibility and ability to adapt to changing conditions. Moreover, these competencies are not just highly valued in the labour market, but also, according to the results of theoretical research, help individuals to achieve better results in education, development social capital, acquisition of valuable experience, which has a positive effect on employability and labour market outcomes, including employment, salary level and job satisfaction.

2. Although employability of graduates is important goal for VETIs in Latvia and VETIs implement activities to support graduate employability development, they reach only a portion of students, reducing the chances for students to develop employability.

The results of the interviews with the managers of VETIs conducted in 2018 (n=12) confirmed that employability of graduates is a very important goal for VETIs, in fact, the most important. The mean evaluation of importance of employability on a scale from 1 – 10 was 9.5. Interviews showed that VETIs implement various activities to support development of student employability, but the most common are work placements and WBL, extra-curricular activities and international mobility. Not all students can benefit from these activities due to the following reasons:

1) As work placements are of various quality (confirmed both by the interviews and by previous research), not all students can benefit that comes from obtaining useful work experience and developing employability. The employer survey conducted in 2017 (n=750), confirmed that 64 % of employers negatively evaluate the provision of

relevant work experience at VETIs in Latvia, which was the second lowest evaluation of all. According to Klāsons and Spuriņš (2015), students' assessment of the quality of work placements is in line with the assessment of employers, as 12 % of trainees confirmed that his or her work-placement did not provide useful knowledge and skills for work in their occupation. The interviews with the managers of VETIs confirmed that only few VETIs have processes or designated employees to ensure quality of work placements. Thus, only a portion of students can benefit from access to useful learning and work experience during their work-placements, organised within VET programme.

2) Extra-curricular activities are voluntary and engaging in them require extra time, which is more difficult for employed students. Taking into account that student grants in VET in Latvia vary from 10 to 150 euros and are awarded based on learning performance, earning a living for many students is a necessity. Therefore, only a portion of students, mainly those who are the most motivated, get engaged in extra-curricular activities and benefit from opportunities to develop their employability by developing skills such as organisational and social skills.

3) Opportunities of international mobility are of limited availability – according to the data of the Ministry of Education and Science (2019), only 5.4 % of students are mobile in VET.

4) According to the employer survey results, conducted in 2017 (n=720), the extent to which VET develops employability attributes in students is mediocre. There were almost as many negative evaluations given by employers as positive. Development of the following individual employability attributes received more negative evaluations than positive: clarity for career goals, target orientation, ability to adapt to new situations, work motivation, planning and organising skills, attitude to work, problem solving skills, relevant work experience and taking responsibility for own decisions.

Considering that the main methods of how VETIs develop student employability (practical experience during work placements and WBL, extra-curricular activities and international mobility) are supplements to VET programmes rather than core curriculum, their implementation to a large extent depends on external actors and factors (e.g., employers, affordability of students), and they reach only a portion of students, as well as the mediocre performance of VET institutions in facilitating

development of student employability, the chances for all students to develop employability at VETIs are currently reduced.

3. **Personal attributes that determine employability can be successfully developed in VET, if the facilitation of graduate employability is managed appropriately.**

The theoretical analysis, as well as the analysis of international VET systems has demonstrated the approaches and methods of how education can facilitate employability of graduates. The interviews with the managers of VETIs conducted in 2018 (n=12) showed that VETIs in Latvia use diverse methods to develop employability. The most common methods (work placements and WBL, extra-curricular activities and international mobility) benefit just a portion of students. The interview results also provided a list of weaknesses in VET management processes in facilitating graduate employability, which require action by education policy makers and managers. The model of managing facilitation of graduates demonstrated that factors facilitating employability, including learning outcomes and VET management processes, are closely interlinked. Therefore, facilitation of graduate employability requires purposeful management of VET by reviewing and adapting goals and strategy and implementing improvements, based on the analysis of existing situations.

Conclusions

1. Employability develops over time as a cyclical, dynamic process. Employability helps a person to get work and to keep fulfilling work. Three main complex factors ensuring employability are: professional skills, attitude and abilities, work experience and achievements in education.

2. The labour market demands in Latvia reflect global tendencies in future skill needs. Employers in the recruitment process in Latvia highly value individual employability attributes that allow individuals to flexibly adapt to changes in the labour market. Employers above all value the emotional and self-management competencies and attitudes, as well as communication and cooperation skills. Compared to other employability attributes, employers are least likely to appreciate achievements in education.

3. The importance of individual employability attributes is higher in companies which operate in trade and services sectors (in comparison to companies operating in

manufacturing and construction sectors), in companies with 100-249 employees, in companies with foreign capital and those that have had trainees during the last 5 years.

4. Vocational education in Latvia is best at developing skills and competencies that are more traditional for education curriculum: developing computer skills, presentation skills, and ability to work in a team, as well as ensuring acquiring the education programme and developing academic skills. In contrast, vocational education does not well develop competencies and attitudes which are linked to person's self-management and emotional intelligence, for example: the ability to take responsibility, attitude to work, planning and organizing skills, work motivation, ability to adapt to new situations, target orientation, all of which are very important for employability in the context of the changing labour market.

5. Although the main goal of VETIs is to ensure graduate employability, the positive effect of the main methods applied by VETIs to facilitate graduate employability do not reach all students. The main methods are practical learning through work placements and WBL, and extra-curricular activities, in which students participate on voluntary basis, as well as international mobility, where only 5.4 % of students participate.

6. The most successful aspects in VET management processes in regards to facilitating graduate employability are linked to recent reforms in VET, especially the EU-funded initiatives, for example: the modernised infrastructure of VETIs, established Sectorial expert councils, reviewing VET curriculum and updating occupational standards, reviewing programmes and implementing modular approach, ensuring teacher training opportunities, career education and adult learning opportunities.

7. The most significant weaknesses in VET management processes are lack of stability, lack of leadership and coordination, problems related to VET financing model, problems related to teachers (especially their availability and competence), problems related to students (especially prior knowledge, socio-economic background and motivation) and lack of labour market partners in providing work placements and WBL.

8. To improve employability of VET graduates, VET management processes require the following improvements: ensuring development of employability competencies for all students within the mandatory curriculum of VET; reviewing and adjusting curriculum and pedagogical methods to facilitate development of social, self-

management and emotional competencies, including motivation, attitude to work, sense of responsibility and adaptability; tackling the dropout rate by setting a set of complementary measures, including support in basic skills for those students lagging behind and offering financial support for students from low socioeconomic background; implementing measures to ensure quality of all work-placements and WBL.

9. The results of the research bring new knowledge and understanding to the phenomenon of sustainable employability and the ways to facilitate it in VET. The methodology applied in the research is novel in relation to the research topic. The research contributes to both theory and practice. The results of the research have implications for different stakeholders in the area of VET policy planning and management, as well as a broader area of human resource planning and development as they better explain the elements of individual employability and methods to facilitate it. The research also provides a solid basis for further research on other aspects of employability of education, for example: employability of VET graduates in the context of adult education and employability of other types of education.

Recommendations to VET Managers and Policy Makers in Latvia

The priority recommendations to the managers of VET institutions, based on the research results, are the following:

1. To review the strategy and the plan of activity of a VETI, assessing their relevance to the objective of promoting the employability of graduates, as well as the past performance and priorities in this area.

2. Research labour market needs and more actively develop co-operation with employers while seeking support from employer organisations, sectorial expert councils and municipalities. Engage teachers in these activities and reward them for their efforts.

3. To implement measures to ensure quality of work-placements and of WBL.

4. To review and adjust curriculum and pedagogical methods, including strengthening student-centred learning and competence-based learning approaches and implementing self-reflection activities to facilitate development of social, self-management and emotional competencies.

5. If needed, co-operate with other VETIs and employers to ensure student access to modern learning equipment and good teachers.

6. To implement targeted support activities for disadvantaged students, including those with financial difficulties and with learning difficulties.

7. Based on labour market needs, ensure regular offer of adult education opportunities, and promote it to employers and graduates

The priority recommendations to the VET policy makers are the following:

8. Strengthen the leadership and VET policy governance, ensuring strategic leadership, horizontal and vertical coordination of policy domains and systems, goals shared by all relevant stakeholders, responsibilities for all actors, engagement of relevant stakeholders, effective communication, monitoring and evaluation. Particular attention should be paid to more consistent coordination of EU funded projects ensuring their effectiveness in regard to implementing VET reform. It is very important for efficient implementation of reforms to timely identify the difficulties and inefficiencies in implementing projects and ensuring necessary support or improvements.

9. Consider reforming VET funding systems to ensure that: full costs are covered (including competitive teacher salaries); positive results of VETIs in terms of employability of students are rewarded; additional expenses of ensuring quality work placements and WBL, cooperation with employers, as well as covering the support of disadvantaged students and students with learning difficulties.

10. Significantly reduce the reliance on EU funds in the area of VET development by developing self-learning and adapting VET systems and developing mechanisms to ensure sustainability of activities currently funded by EU funds, including: career education, adult education, modernisation of infrastructure and educational programmes, reviewing and updating occupational standards, professional development of teachers, employer engagement in ensuring work placements and WBL.

11. Maintain general education as part of VET in Latvia and raise its quality by implementing competence based approaches and by ensuring additional support to students with learning difficulties. Students without capacity to successfully fulfil requirements of completing the secondary general education should be able to acquire at least the professional qualification or certificates for learnt modules.

12. Improve flexibility of VET provision in both initial and adult education, by implementing the modular approach and ensuring better recognition of qualification components. Widen opportunities to obtain vocational qualification for those who have

completed only secondary general education or who have dropped out of higher education programme.

13. Ensure better collection and analysis of graduate employment data by implementing a national graduate monitoring system, including the collecting and analysing of information within longer period after graduation and by analysing their involvement in adult education. Develop motivational instruments for VET graduates to engage in adult education.

14. Consider using the term “vocational education” instead of “vocational education and training” to describe the system of vocational education in Latvia.

More detailed recommendations can be concluded from the detailed analysis of VET management processes provided in Sub-section 4.2.

Areas for further research

- Employability of other types of education and the methods to facilitate it. Employability in the context of lifelong learning.
- Management of graduate careers over the longer-term course by exploring the way in which graduates’ employability and career progression is managed both by graduates themselves and by employers.
- The role of emotional intelligence in education and career success and the ways to develop it in the curriculum of education programmes.

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APPENDICES

Appendix 1

List of Terms

Vocational education

Vocational education is known by many names: industrial education, technical education, manual education or career education. The common element to different forms of vocational education is the practical and applied character of instruction, usually aimed at matching pupils with work positions in the labour market (Benavot, 1983, p. 67), whether in terms of (re)integration into work or increased effectiveness of those currently being in work. According to UNESCO (2012), vocational education is one of two categories of orientations of education, the other orientation being general education. The orientation of a programme is distinguished at ISCED levels 2 to 5, with the possibility of use at ISCED levels 6 to 8. At tertiary education levels, the terms "academic" and "professional" are used in place of general and vocational respectively. In the UNESCO's international standard classification of education ISCED, vocational education is defined as education programmes that are designed for learners to acquire knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades (UNESCO, 2012). Vocational education programmes may have work-based components (e.g. apprenticeships, dual-system education programmes). Successful completion of these programmes leads to labour market-relevant, vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market (UNESCO, 2012).

Cedefop (2014b) defines vocational education and training (VET) as education which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market.

In Latvian, a corresponding term "profesionālā izglītība" (vocational education) is usually used, skipping the word "training." According to the official translation of the Education Law (1998), vocational education in Latvia is "practical and theoretical preparation for the practice of a particular profession, and for the acquisition of professional qualification and improvement of professional competence." The Law on Vocational education states that vocational education qualification can be acquired on the primary, secondary and higher education levels, as well as outside of formal education (Vocational Education Law, 1999). Academic Information Centre offers to translate "training" into Latvian as "apmācība" which is explained as a stage or part of education that includes information and/ or instructions for acquisition of practical skills and abilities (Academic Information Centre, 2016).

To ensure uniformity and coherence in the use of terms, the term "vocational education and training" (VET) was used in this research to describe any form of vocational education in Latvia and in any other country.

Graduate

A graduate is a person who is a holder of school completion certificate (Andrejs Veisbergs, 1999-2007, in letonika.lv).

Labour market

The term "labour market" refers to the total labour supply and demand (Treimanis et.al., 2009). It can be also described as the nominal market in which workers find paid work, employers find willing workers, and wage rates are determined. Labour markets may be local, national or international in their scope and are made up of smaller, interacting labour markets for different qualifications, skills, and geographical locations. They depend on exchange of information between employers and job seekers

about wage rates, conditions of employment, level of competition, and job location (businessdictionary.com, 2018).

Employed

According to the International Labour Organisation (ILO) (1982), the employed comprise all persons of working age who during a specified brief period, such as one week or one day, are in the following categories: a) paid employment (whether at work or with a job but not at work); or b) self-employment (whether at work or with an enterprise but not at work).

Employability

There is no single universally accepted definition of the notion "employability." For the purpose of this dissertation, the term's broad conceptualisation of "being capable of getting and keeping fulfilling work" (Hillage & Pollard, 1998) is used. This research also considers different factors that are essential to employability and that may broaden and explain the concept in more detail. Employability is described in detail in Chapter 2.

Learning outcomes

UNESCO (2012) has defined "learning outcome" as the totality of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours an individual is expected to master upon successful completion of an education programme. Learning outcomes should be easily understandable and verifiable in terms of what the student has actually achieved at the end of the programme (European Commission & Bologna Follow-up Group, 2015).

The Cedefop in its definition of learning outcomes has included also the reference to non-formal and informal education (2014b): "a set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal" or "Statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence". This aspect is important also in the context of this research, as the author pays attention to all forms of education provided or facilitated by VET system that promote employability.

Knowledge

Keevy & Chakroun (2015) define "knowledge" as the ability to recall and present information. According to Cedefop (2014b), knowledge is the body of facts, principles, theories and practices related to a field of study or work. In European qualifications' framework, knowledge is defined as the outcome of assimilation of information through learning (European Parliament & Council, 2008).

Skill

Cedefop defines "skills" as the ability to apply knowledge and use know-how to complete tasks and solve problems (Cedefop, 2014b). In the context of the European qualifications' framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments) (Cedefop, 2014b; European Parliament & Council, 2008).

Competence

According to Cedefop (2008), the term "competence" means the ability to apply learning outcomes adequately in a defined context (education, work, personal or professional development). It is not limited to cognitive elements (involving the use of theory, concepts or tacit knowledge); it also encompasses functional aspects (involving technical skills) as well as interpersonal attributes (e.g. social or organisational skills) and ethical values. As Keevy and Chakroun (2015) explains simply, competence is

about the application of knowledge and skills. They have identified three main interrelated subdomains in how competence can be used: applied competence (the application of knowledge and skills in a specific context, which includes foundational, practical and reflexive aspects), core/key competence (the sum of skills needed to live in contemporary knowledge society), and affective competence (the application of knowledge and skills in relation to personal, behavioural and attitudinal dimensions) (Keevy & Chakroun, 2015).

Skills mismatch

According to Cedefop (2014b), the term "skills mismatch" refers to the situation of imbalance in which the level or type of skills available does not correspond to the labour market needs. Skills mismatch can be a surplus or a lack of knowledge, abilities and competences; it can be analysed at different levels (individual, enterprise, sectoral, economy). Vertical skills mismatch is when the level of education/skills is higher or lower than required, and horizontal skills mismatch – when the level of education/skills matches job requirements, but the type of education/skills is inappropriate for the current job (Cedefop, 2014b).

Work placement

A term "work placement" refers to a planned period of experience outside the institution (for example, in a workplace) to help students to develop particular skills, knowledge or understanding as part of their programme (European Commission & Bologna Follow-up Group, 2015).

Work-based learning

As defined by Cedefop, "work-based learning" (WBL) is acquisition of knowledge and skills through carrying out – and reflecting on – tasks in a vocational context, either at the workplace (such as alternance training) or in a VETI (Cedefop, 2014b). Sometimes the term is used only in relation to workplace learning, excluding educational institution as the venue for WBL, for example, by the European Commission & Bologna Follow-up Group (2015) which define WBL as "the learning delivered by a university, college or other training provider in the workplace, normally under the supervision of a person from the same company as well as a professional teacher from outside the company". According to the European Commission (European Commission, 2013), there are three main types of WBL:

1) alternance schemes of apprenticeships typically known as "dual system";

2) WBL as school-based VET which includes on-the-job training periods in companies and

3) WBL integrated in a school-based programme through on-site laboratories, workshops, kitchens and restaurants, junior or practice firms, simulations or real business/industry project assignments.

WBL that leads to portable vocational qualifications or certificates is normally certified by public authorities: ministries of education or vocational training authorities, for example. However certificates or qualifications may also be issued by well-established social partner organizations (Keevy & Chakroun, 2015).

There is a large variety of different types of WBL tradition in different education systems. The ILO offers (Steedman, 2012, p. 3) descriptive comparison between different types of workplace-based learning arrangement modules (Table A1.1):

Table A1.1
Comparison of Principal Attributes of Different Types of WBL Arrangements

	Trainee-ship	Internship	Informal Apprentices hip	Work-place Learning	Apprentices hip
Wage	Maybe	No	Pocket money or in-kind	Yes	Yes
Legislative Frame-work	No	No	No	No	Yes
Work-place based	Yes	Yes	Yes	Yes	Yes
Programme of learning	No	No	No	No	Yes
On-the-job training	Maybe	Maybe	Maybe	Maybe	Maybe
Off-the-job training	No	No	No	No	Yes
Formal assessment	No	No	No	No	Yes
Recognized certification	No	No	No	No	Yes
Duration	Variable	Variable	Variable	Variable	Fixed

Source: Steedman, 2012, p. 3.

Before implementing WBL in VET system in Latvia, on-the-job component of the VET programme was included only within work placements which was a part of practical part of VET programme. Work placements, in comparison to WBL, are regulated less in detail. Description of WBL arrangements in Latvia is included in the Chapter 1.

Apprenticeship

"Apprentice training" is characteristic to dual VET systems, for example, in Germany, Austria, and Switzerland. Its main parameter is the two-fold path of training that takes place on the one hand in schools (or other relevant institutions) and on the other hand at the work place. The type and dimension of the training at the work-place, however, differs in some aspects from country to country (Bliem, Petanovitsch, & Schmid, 2014). The Cedefop (2014b) attempts to define apprenticeship as "systematic, long-term training alternating periods at the workplace and in an educational institution or training centre." The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation. (Cedefop, 2014b). Thus, this definition establishes the existence of a contractual relationship between the employer and the student (linked to remuneration) as a "sine-qua-non" requirement for defining an apprenticeship specific scheme. Given the diversity of VET systems in European countries, EU has adopted a more open and less restrictive definition (European Commission, 2012): "apprenticeships are those forms of initial VET and training that formally combine and alternate company based training (periods of practical work experience at a workplace) with school based education (periods of theoretical/practical education followed in a school or training centre), and whose successful completion leads to well and nationally recognised initial VET certification degrees.

Appendix 2

VET in Latvia

VET in Latvia is governed by the Education Law (1999) and Vocational Education Law (1999). According to the Education Law of the Republic of Latvia, VET is "practical and theoretical preparation for the practice of a particular profession, and for the acquisition of professional qualification and improvement of professional competence" (Education Law, 1998). The Vocational Education Law defines three levels of VET in Latvia:

1) primary VET;
2) secondary VET;
3) professional higher education: first-level professional higher (college) education and second-level professional higher education. The Latvian education system is represented diagrammatically in the Appendix 2.

Primary VET programmes (*arodizglītība*, ISCED-P 353 level, 3rd level of Latvian qualification system (LQS)) and secondary VET (*profesionālā vidējā izglītība*, ISCED-P 354 level, 4th LQS level) programmes are available for students with a certificate of general primary education. Full list of possible formal VET qualifications at primary or secondary level is included in the Table 1.1. Usually secondary VET programme (3-4 years long) lead to both, a diploma for vocational secondary education and a professional qualification at LQF level 4. To obtain diploma for vocational secondary education, students must take state centralised exams in general subjects such as Latvian, mathematics, foreign language and one subject selected by the student – the same exams as in general secondary education. This provides students with a certificate of general secondary education and the right to enter higher education. To acquire a professional qualification, students have to take a State qualification exam at the end of the education programme (Cedefop, 2015b). There are also 1 - 1.5 year-long programmes available for those who already have obtained general secondary education and wish to obtain professional qualification certificate. All possible formal VET documents are provided in Table A2.1.

Secondary VET programmes are mainly provided by vocational secondary schools (profesionālā vidusskola) and technical schools (tehnikums) but can be provided also by other type of educational institutions. In total, there are 38[6] educational institutions in Latvia which offer publicly financed secondary VET programmes. 29 of them are VETIs, 9 – higher education institutions. Majority of students are enrolled in educational institutions which are subordinate to the Ministry of Education and Science. These educational institutions receive state funding: 20 VETIs (20) and 7 colleges. 3 educational institutions have agreements with the Ministry of Education and Science for State funding: 1 VETI and 2 higher education institutions which offer secondary VET programmes. 8 VETIs are subordinate and receive funding from local governments. 23 of the VETIs have the status of a vocational education competence

[6] The researcher obtained information about the number of educational institutions offering publicly financed VET programmes from the Ministry of Education and Science in May 2018.

centre (National database on educational opportunities, 2017), which is assigned to the largest VETIs which meet certain criteria. In total, 38.62 % of students study in secondary VET programmes (2016/2017 study year), 61,38 % - in general secondary education programmes (Ministry of Education and Science, 2017).

Table A2.1

Possible Formal Education Documents (Qualifications) in Latvia

Education documents (qualifications) – in Latvian	Education documents (qualifications) – in English	LQS level
Apliecība par profesionālo pamatizglītību	Certificate of vocational primary education	2
Profesionālās kvalifikācijas apliecība (pamatizglītības pakāpē)	Professional qualification certificate (in primary education)	2
Atestāts par arodizglītību	Attestation of vocational primary education	3
Profesionālās kvalifikācijas apliecība (arodizglītības pakāpē)	Professional qualification certificate (in primary education)	3
Diploms par profesionālo vidējo izglītību	Diploma for vocational secondary education	4
Profesionālās kvalifikācijas apliecība (vidējās izglītības pakāpē)	Professional qualification certificate (secondary level)	4

Source: Par LKI (n.d.), author's translation

The content of VET programmes is defined by the State VET standards, occupational standards and professional qualification requirements. Employer representatives are involved in development of occupational standards and professional qualification requirements.

VET programmes are mainly school-based, with practical learning periods (work placements) at schools or enterprises. In 2012 in Berlin, a memorandum was signed between Germany and Latvia, Portugal, Greece, Spain, Slovakia and Italy, which set the basis for dual VET system to become a role model for reforming VET systems (Memorandum on Cooperation in VET in Europe, 2012). Nevertheless, it became apparent that it was not possible for Latvia to implement dual VET system according to German model, as it was based on strong, long-lasting tradition of employer involvement in VET provision. This consideration marked the beginning of development of Latvian own, unique WBL system (Ministry of Education and Science, 2014, 2014a). In 2015, amendments to the Vocational Education Law passed which foresaw WBL as a new form of implementing VET programme. According to the regulation, adopted by the Cabinet of Ministers on July 15, 2016 (Cabinet of Ministers, 2016a), WBL has to be implemented in line with the following requirements:

- WBL is implemented according to licensed VET programme leading to professional qualification except s4th and 5th level professional qualifications. Therefore, WBL can take place only in secondary VET.

- WBL includes both, theoretical and practical part of VET programme, unlike work placements, which include only practical part of the programme;

- WBL takes place in a VETI and in a company. Learning in a company has to be at least 25% of the total learning time of VET programme;

- WBL is implemented according to the individual plan, elaborated for each student;

- during WBL, vocation education institutions should ensure methodological support to employers;

- Employers must nominate mentor who has appropriate pedagogical education;

- Unlike in case of work placements (Cabinet of Ministers, 2012), employer has to pay remuneration or the grant to the student during WBL. In case of remuneration, a work-contract has to be signed between employer and student (or his or her parents or representative if the student is underage). In case of work placements, payments to students are not regulated and it is up to the employer to decide whether to sign the work contract parallelly to or after the end of work placement or not.

A tripartite agreement between the trainee, the education institution and the employer has to be signed for work placement or WBL. It is not legally possible to organise work placement for someone who is not a student at the education institution. Working at the employer without employment contract, even if there is a bi-partite agreement for training signed, will be considered as illegal employment in Latvia.

Considering the labour market forecasts (described in Chapter 1.2), VET is seen as a solution to youth unemployment in Latvia. Providing second chance VET programmes is one of activation measures offered to young unemployed people within EU's Youth Guarantee programme in Latvia (2014 – 2018) (Ministry of Welfare, 2014). According to the data of the Public Employment service, the majority of young unemployed people have a low education level and no qualification (Ministry of Education and Science, 2014, p. 139).

Appendix 3

Employability Models in Theoretical Literature

In theoretical literature, researchers offer different combinations of factors influencing employability, combined into employability models. This appendix describes some of the most well-known of employability models.

The Centre for Employability at the University of Central Lancashire in the United Kingdom has been developing practical solutions to enhance employability of United Kingdom's graduates, and the basis for their work has been the DOTS model elaborated by Law and Wats in 1977 which consists of:

- Decision learning – decision making skills;
- Opportunity awareness – knowing what work opportunities exist and what their requirements are;
- Transition learning – including job searching and self-presenting skills;
- Self-awareness – in terms of interests, abilities, values, etc (Law & Watts, 2003).

Hillage and Pollard (1998) proposed that employability consisted of four main elements: "employability assets" which consists of knowledge, skills and attitudes, "deployment" which includes career management skills, including job search skills, "presentation" which is concerned with job getting skills, for example, CV writing, work experience and interview techniques, and finally, for a person to make most of their employability assets, a lot depends also on personal circumstances (for example family responsibilities) and external factors (for example the level of opportunity within the labour market).

Bennett, Dunne and Carre (1999) proposed a model of course provision in higher education including all necessary elements of achieving graduates' optimal employability level (see Figure A3.1):

(1) disciplinary content knowledge;
(2) disciplinary skills;
(3) workplace awareness;
(4) workplace experience; and
(5) generic skills.

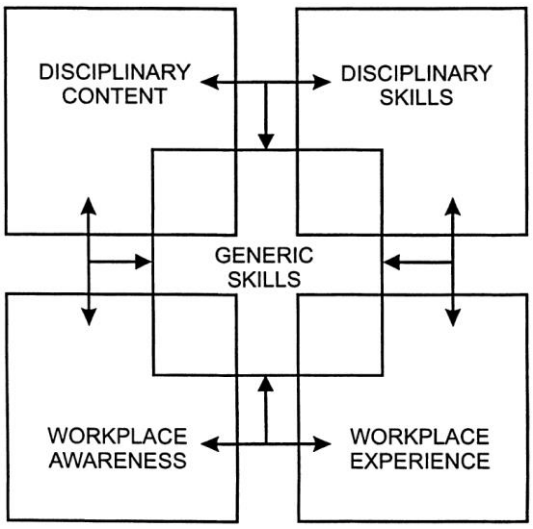


Figure A3.1. A Model of Course Provision.

Source: "Patterns of Core and Generic Skill Provision in Higher Education" by N. Bennett, E. Dunne, & C. Carre, 1999, Higher Education, 37(1), 71–93, p. 80.

Fugate et al. (2004) argue that the employability embodies a synergetic combination of career identity, personal adaptability, and social and human capital (see Figure A3.2). Person-centered active adaptation provides the conceptual glue that integrates the three component dimensions of employability. Employability facilitates the identification and realization of career opportunities within and between organizations. Researchers also acknowledge that each of the dimensions of the employability has value in its own right (i.e., independently) (Fugate et al., 2004).

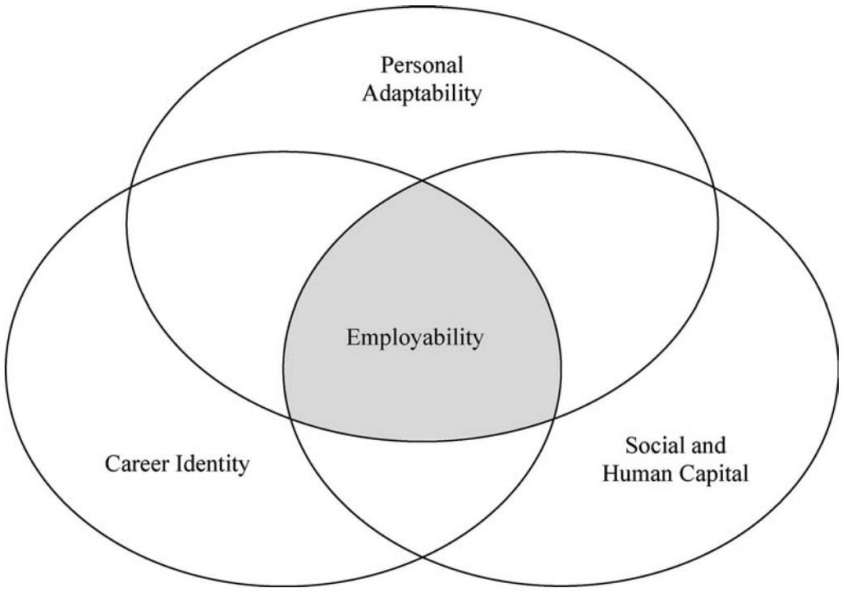


Figure A3.2. Heuristic Model of Employability.

Source: "Employability: A psycho-social construct, its dimensions, and applications" by M. Fugate, A. J. Kinicki, & B. E. Ashforth, 2004, Journal of Vocational Behavior, 65(1), p. 19.

Researchers Yorke and Knight (2004) have proposed a well-known and respected in the field model of four inter-related components of employability – USEM (see Figure A3.3):

(1) understanding;
(2) skills (subject specific and generic);
(3) efficacy and beliefs (and self-theories generally); and
(4) metacognition (including reflection).

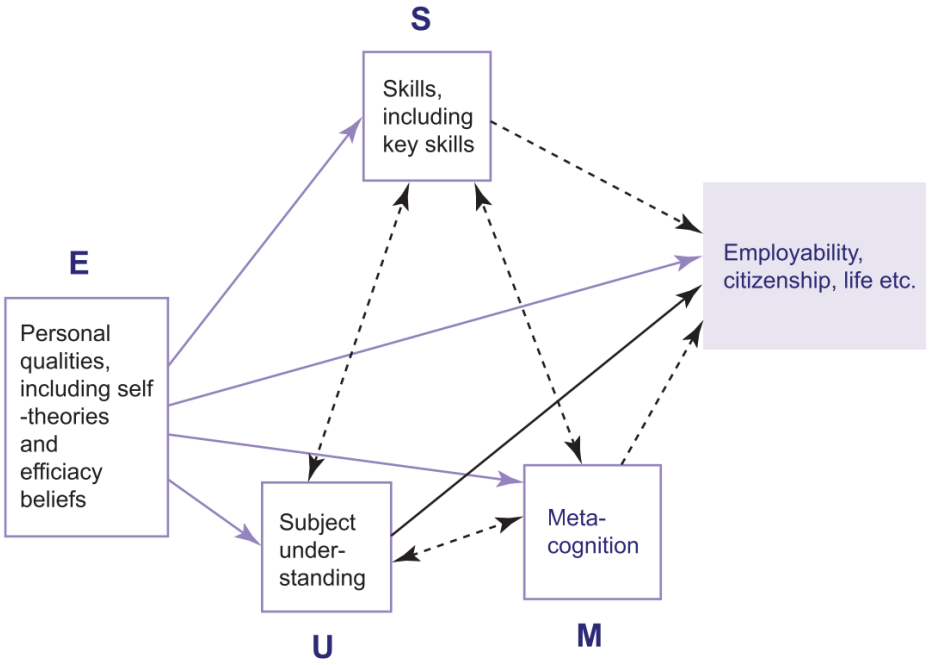


Figure A3.3. The USEM model of employability.
Source: "Embedding employability into the curriculum" by M. Yorke & P. T. Knight, 2004, Learning and Employability, 3, p. 5.

In the USEM model, "skills" is taken to mean "skilled practices" or "skilful practice" with the implications that this hinge on awareness of, and responsiveness to, the context. As for efficacy beliefs, advantages of a student having malleable, rather than fixed, beliefs about the self should be considered. Malleable self-theories go with a disposition to see tasks as opportunities for learning rather than as performance-oriented opportunities to demonstrate competence. There are correlations between deep learning and a personal commitment to the pursuit of learning goals, and between surface of learning and an orientation towards performance. Metacognition, however, is seen as subsuming elements of "learning how to learn"; or reflection in, on and for practice; and a capacity for self-regulation (Yorke & Knight, 2004, 6).

USEM model is widely considered as a major development in employability research since for the first-time employability was conceptualized in relation to other constructs such as skills, subject understanding, meta-cognition and personal qualities. However, the model is largely theoretical. It's complexity does not allow practical use of this model to explain the concept to students and parents evidence (Pool & Sewell, 2007).

Bridgstock (2009) advocates for importance of career management skills in developing employability. Career management can be viewed as the ability to build a career; to intentionally manage the interaction of work, learning and other aspects of the individual's life throughout the lifespan. Her model (see Figure A3.4) demonstrates

that career management, which includes self-management skills and career building skills, plays an integral part in enhancement of graduate employability.

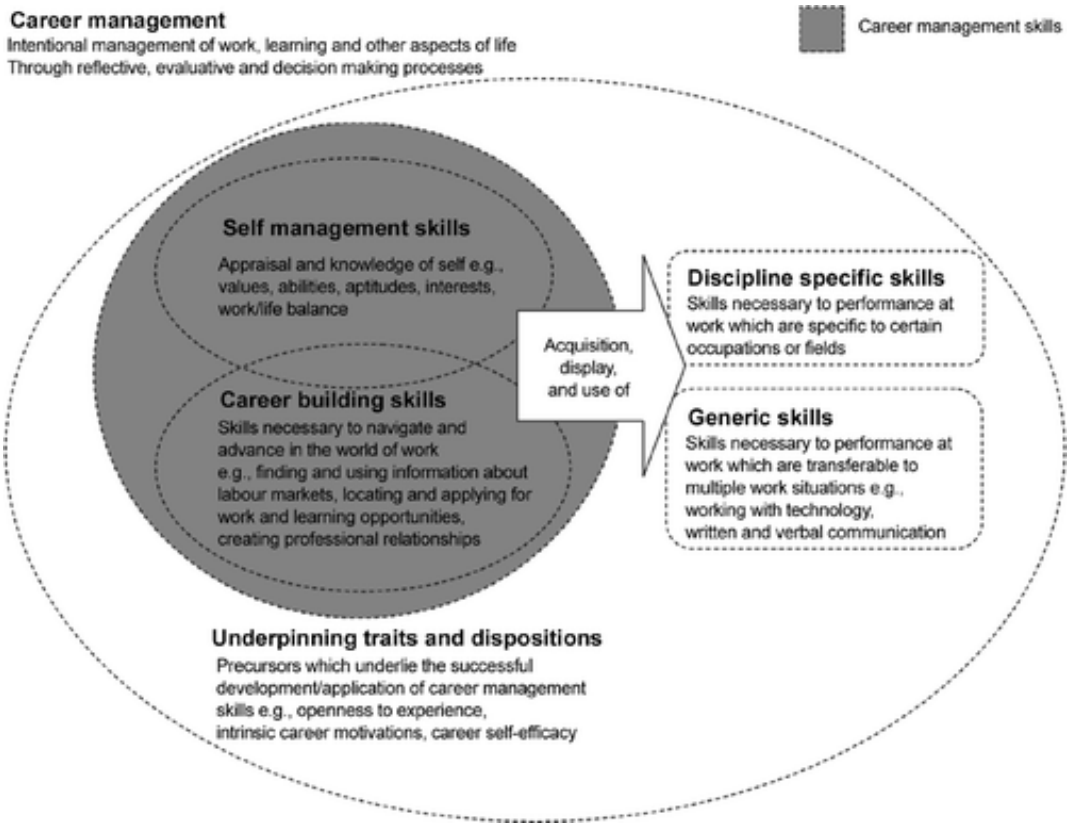


Figure A3.4. Conceptual model of graduate attributes for employability including career management skills.

Source: "The graduate attributes we've overlooked: enhancing graduate employability through career management skills" by R. Bridgstock, 2009, Higher Education Research & Development, 28:1, p. 36.

Other notable employability models include JET (Journey of Employment) proposed by Copps and Plimmer (2013) which states that employment process is not linear and many of the factors contribute towards it (see Figure A3.5). Also it is mentioned that since everyone's journey is different there is no guarantee that one single factor will ensure employability for all (Sumanasiri et al., 2015). The JET framework highlights aspects of young people's lives that are important to achieving a successful job outcome. As it is explained by the authors, "The framework can be used to help develop strategy or review existing plans. By highlighting the key factors that are important in a young person's "journey to employment", the framework provides the raw materials to create a "theory of change" for the work of an organisation (Copps & Plimmer, 2013, 15).

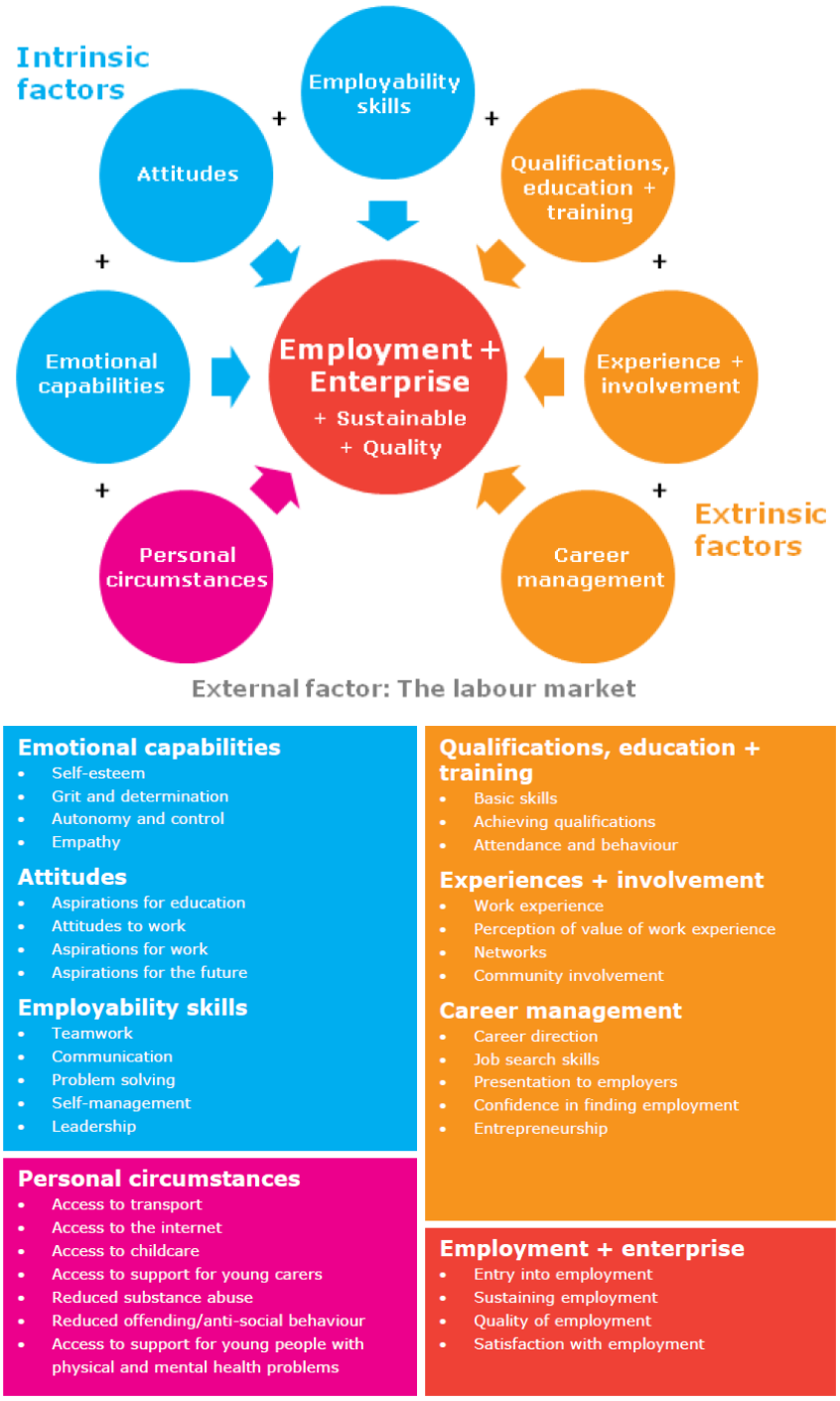


Figure A3.5. Journey to EmploymenT framework (JET).

Source: "Inspiring Impact. The Journey to EmploymenT (JET) Framework. Outcomes and tools to measure what happens on young people's journey to employment" by J. Copps & D. Plimmer, 2013, p. 17.

Researchers Pool and Sewell (2007) proposed an alternative model of components of employability that combines all the main factors of USEM, but which in an easy and practical way explains the concept of employability and indicates that it is a "key" to choosing and securing occupations in which graduates has the opportunity to achieve satisfaction and success. The model explains the way in which five factors, namely, career development learning, experience, degree subject knowledge understanding, and skills, generic skills, and emotional intelligence can lead towards

employability through a complex interaction with social concepts such as self-esteem, self-efficacy, and self-confidence (see Figure A3.6).

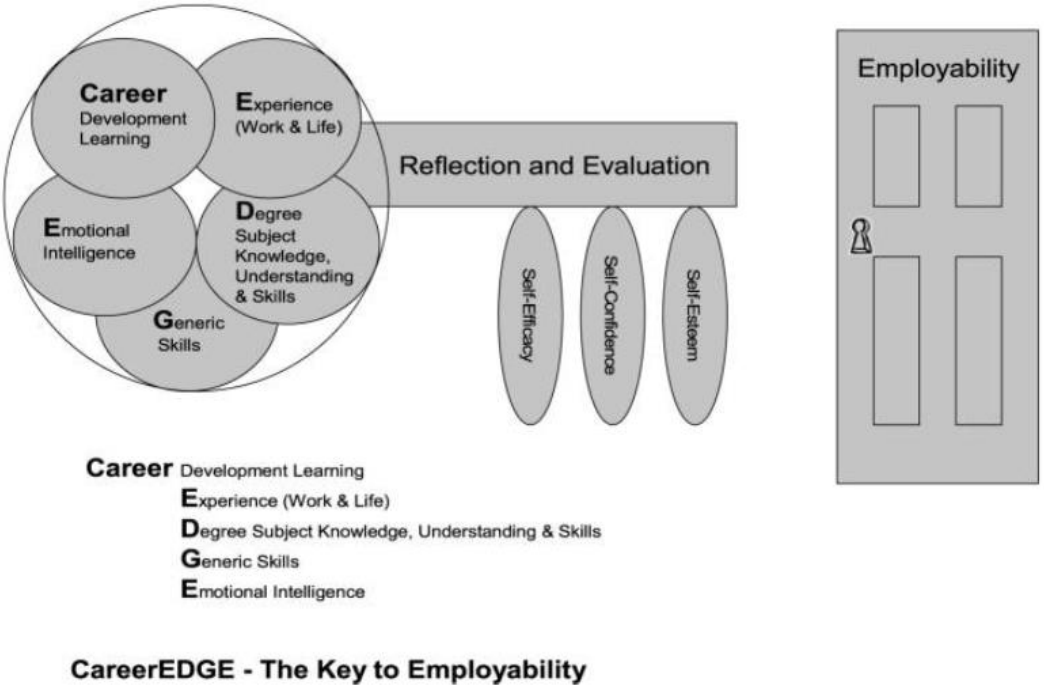


Figure A3.6. A metaphorical model of employability: Career EDGE – The Key to Employability.
Source: "The key to employability: developing a practical model of graduate employability" by L. D. Pool & P. Sewell, 2007, Education + Training, 49(4), p. 281.

CareerEDGE model signifies an attempt to operationalize the concept of employability since for the very first time in employability research this model appears ready for quantitative testing which will allow generalization of findings unlike most previous studies which were either qualitative or case-study based which limits the application of findings (Sumanasiri et al., 2015). The operationalization of the CareerEDGE model was performed by Pool, Qualter and Sewell in 2014 by exploring the factor structure of the model's employability development profile with the help of exploratory and confirmatory factor analysis. As a result, five components (factors) were found which were labelled as (1) *Emotional Intelligence & Self-Management*, (2) *Academic Performance & Study Skills*, (3) *Career Development Learning*, (4) *Problem-solving Skills* and (5) *Work/Life Experience*. A table of 26 items (personal attributes) that loaded onto each factor was provided. The CareerEDGE employability development model can be a useful, practical tool for both developmental work with students and for measurement purposes, suitable for use with students of any higher education institution (Pool, Qualter, & Sewell, 2014).

The overview of the different employability models and the most frequently mentioned outcome-oriented factors included therein, is provided in the Table 2.2.

Appendix 4

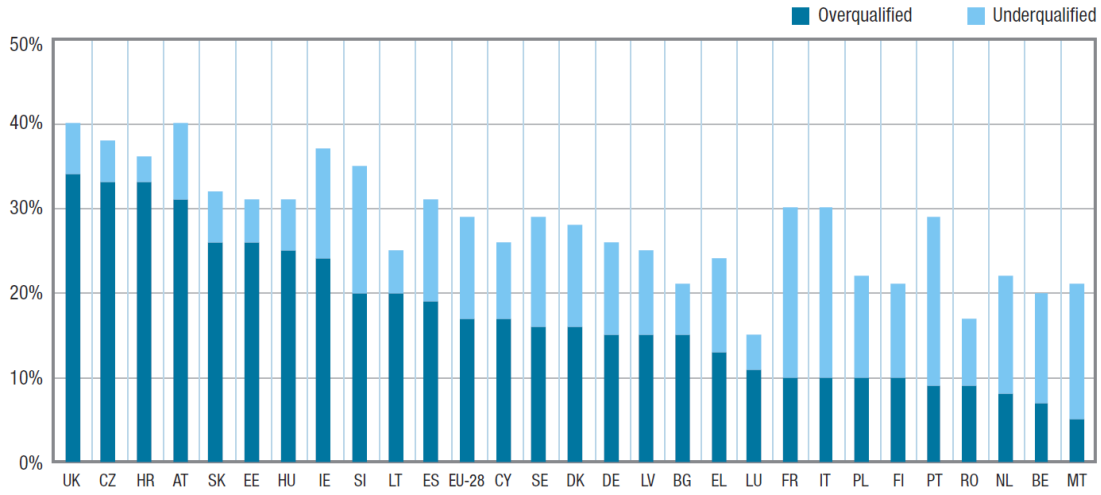
Emotional Competence Framework

Personal Competence These competencies determine how we manage ourselves	
Self-Awareness Knowing one's internal states, preferences, resources, and intuitions	• **Emotional awareness**: Recognising one's emotions and their effects • **Accurate self-assessment**: Knowing one's strengths and limits • **Self-confidence**: A strong sense of one's self-worth and capabilities
Self-Regulation Managing one's internal states, impulses, and resources	• **Self-Control**: Keeping disruptive emotions and impulses in check • **Trustworthiness**: Maintaining standards of honesty and integrity • **Conscientiousness**: Taking responsibility for personal performance • **Adaptability**: Flexibility in handling change • **Innovation**: Being comfortable with novel ideas, approaches, and new information
Motivation Emotional tendencies that guide or facilitate reaching goals	• **Achievement drive**: Strive to improve or met a standard of excellence • **Commitment**: Aligning with the goals of the group or organization • **Initiative**: Readiness to act on opportunities • **Optimism**: Persistence in pursuing goals despite obstacles and setbacks
Social Competence These competencies determine how we handle relationships	
Empathy Awareness of others' feelings, needs, and concerns	• **Understanding others**: Sensing others' feelings and perspectives, and taking an active interest in their concerns • **Developing others**: Sensing others' development needs and bolstering their abilities • **Service orientation**: Anticipating, recognizing, and meeting customers' needs • **Leveraging diversity**: Cultivating opportunities through different kinds of people • **Political awareness**: Reading a group's emotional currents and power relationships
Social Skills Adeptness at inducing desirable responses in others	• **Influence**: Wielding effective tactics for persuasion • **Communication**: Listening openly and sending convincing messages • **Conflict management**: Negotiating and resolving disagreements • **Leadership**: Inspiring and guiding individuals and groups • **Change catalyst**: Initiating or managing change • **Building bonds**: Nurturing instrumental relationships • **Collaboration and cooperation**: Working with others toward shared goals • **Team capabilities**: Creating group synergy in pursuing collective goals

Source: Goleman, 1998, p. 32.

Appendix 5

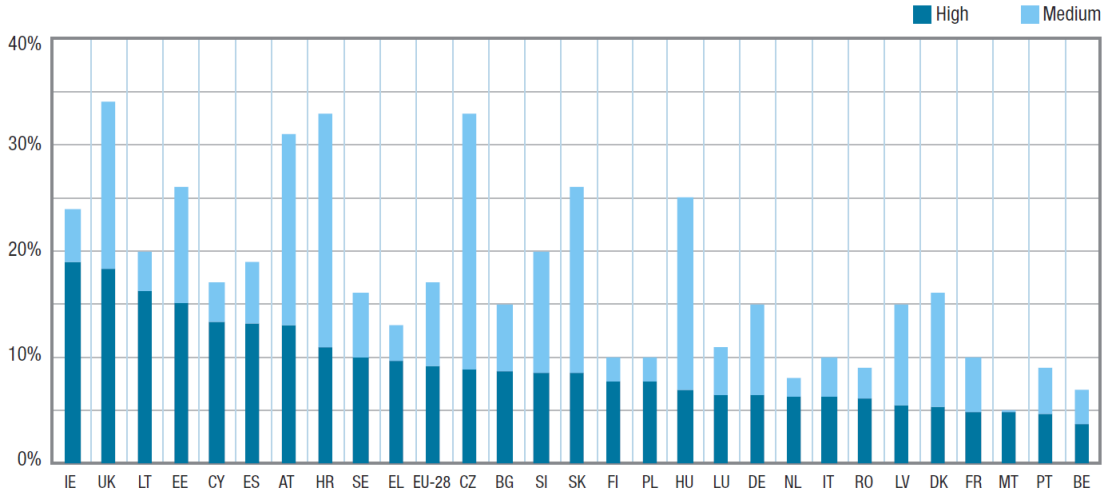
Qualification mismatches in EU



NB: Based on comparisons of an individual's highest level of education qualification with the (self-perceived) level of education qualification actually needed to do his/her current job.

Figure A5.1. Average incidence of qualification mismatch, adult employees, 2014, EU-28.

Source: Reprinted from "Skills, qualifications and jobs in the EU: the making of a perfect match? Evidence from Cedefop's European skills and jobs survey" (p. 34), by Cedefop, 2015, Luxembourg: Publications Office of the European Union. Copyright (2015) by Cedefop. Reprinted with permission.



NB: Based on comparisons of an individual's highest level of education qualification with the (self-perceived) level of education qualifications actually needed to do his/her current job.

Figure A5.2. Breakdown of overqualification by level of education, adult employees, 2014, EU-28.

Source: Reprinted from "Skills, qualifications and jobs in the EU: the making of a perfect match? Evidence from Cedefop's European skills and jobs survey" (p. 34), by Cedefop, 2015, Luxembourg: Publications Office of the European Union. Copyright (2015) by Cedefop. Reprinted with permission.

Appendix 6

Mind Map of the Elements and Factors of Employability

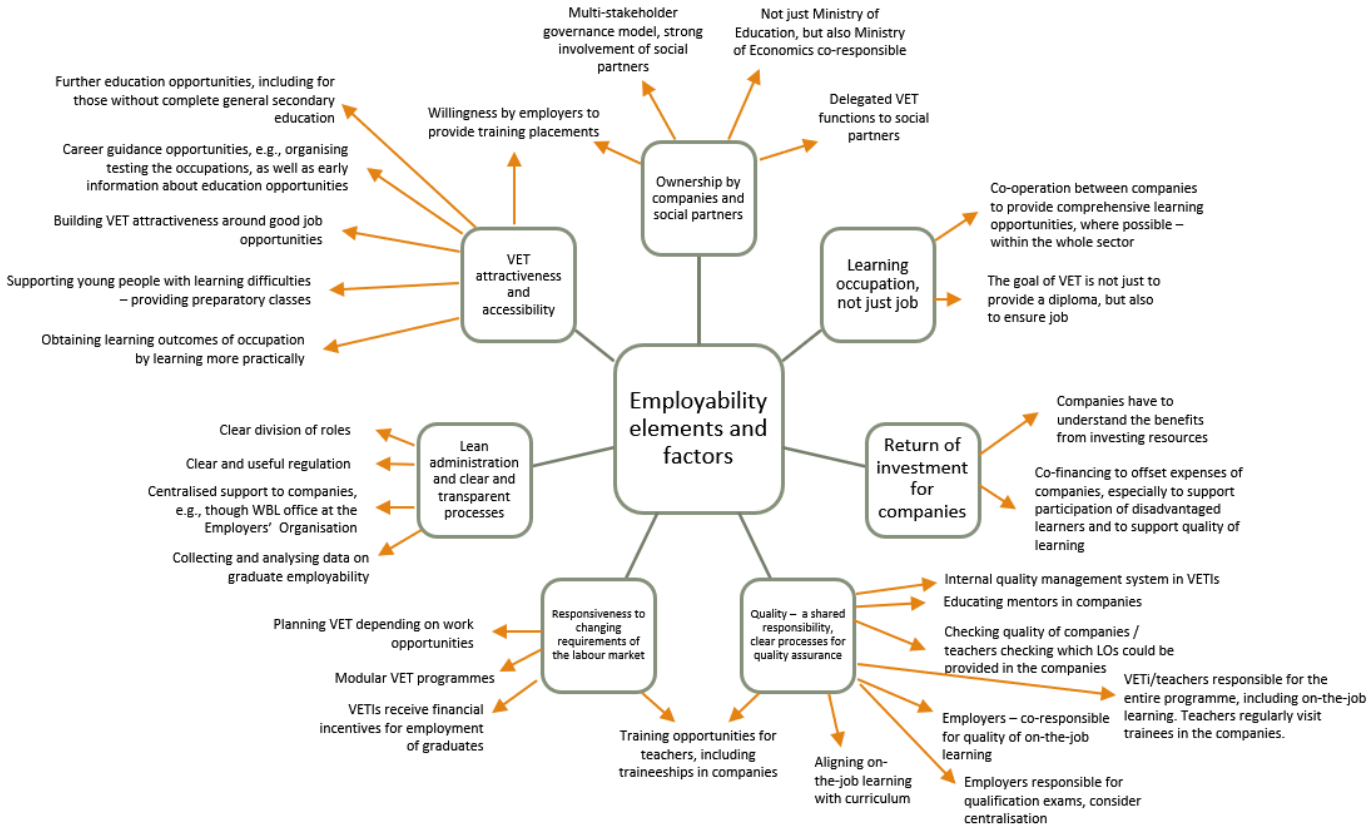


Figure 6.1. Mind map of the elements and factors of employability, compiled within the preconception phase of the research
Source: Author's construction based on preconception phase of the research

Appendix 7

Questionnaire for the Survey Among Latvian Employers

In Latvian

LATVIJAS UZŅĒMUMU APTAUJA 2017

Q1	**Vai pēdējo piecu (5) gadu laikā Jūsu uzņēmumā ir bijuši praktikanti?**	Jā Nē *Grūti pateikt*	1 2 99

Q2	**Vai Jūsu uzņēmums būtu ieinteresēts tuvākā gada laikā piesaistīt praktikantus?**	Noteikti jā Drīzāk jā Drīzāk nē Noteikti nē *Grūti pateikt*	1 2 3 4 99

Q3	**Vai pēdējo piecu gadu laikā Jūsu uzņēmumā ir nodarbināti darbinieki, kuri ir ieguvuši profesionālo vidējo izglītību?**	Jā Nē *Grūti pateikt*	1 2 99

Q4 **Domājot par darbinieku atlasi Jūsu uzņēmumam, cik svarīgi ir šādi faktori attiecībā uz potenciālajiem darbiniekiem?**
Lūdzu, norādiet par katru no tiem, vai tas ir ļoti svarīgs, drīzāk svarīgs, drīzāk mazsvarīgs vai nemaz nav svarīgs?

		1 Ļoti svarīgs	2 Drīzāk svarīgs	3 Drīzāk nav svarīgs	4 Nemaz nav svarīgs	*99* *Grūti pateikt*
01	Spēja viegli piemēroties jaunām situācijām	1	2	3	4	*99*
02	Labas komunikācijas prasmes	1	2	3	4	*99*
03	Spēja radīt jaunas idejas	1	2	3	4	*99*
04	Spēja uzņemties atbildību par saviem lēmumiem	1	2	3	4	*99*
05	Prezentācijas prasmes	1	2	3	4	*99*
06	Prasme strādāt patstāvīgi	1	2	3	4	*99*
07	Prasme strādāt komandā	1	2	3	4	*99*
08	Attieksme pret darbu	1	2	3	4	*99*
09	Sasniegumi mācībās (akadēmiskās prasmes)	1	2	3	4	*99*
10	Labas plānošanas un organizēšanas prasmes	1	2	3	4	*99*
11	Skaidrība par karjeras mērķiem	1	2	3	4	*99*
12	Mērķtiecība	1	2	3	4	*99*
13	Darba motivācija	1	2	3	4	*99*
14	Matemātikas prasmes	1	2	3	4	*99*
15	Problēmu risināšanas prasmes	1	2	3	4	*99*
16	Datora lietošanas prasmes	1	2	3	4	*99*
17	Atbilstoša darba pieredze	1	2	3	4	*99*

Q5 **Jūsuprāt, cik lielā mērā <u>profesionālā vidējā izglītība Latvijā</u> šobrīd attīsta šos faktorus jauniešos?**
Lūdzu, norādiet par katru no tiem, vai, Jūsuprāt, šo faktoru profesionālā vidējā izglītība jauniešos šobrīd pilnībā attīsta, drīzāk attīsta, drīzāk neattīsta vai nemaz neattīsta?

		1 Pilnībā attīsta	2 Drīzāk attīsta	3 Drīzāk neattīsta	4 Nemaz neattīsta	99 Grūti pateikt
01	Spēja viegli piemēroties jaunām situācijām	1	2	3	4	*99*
02	Labas komunikācijas prasmes	1	2	3	4	*99*
03	Spēja radīt jaunas idejas	1	2	3	4	*99*

04	Spēja uzņemties atbildību par saviem lēmumiem	1	2	3	4	*99*
05	Prezentācijas prasmes	1	2	3	4	*99*
06	Prasme strādāt patstāvīgi	1	2	3	4	*99*
07	Prasme strādāt komandā	1	2	3	4	*99*
08	Attieksme pret darbu	1	2	3	4	*99*
09	Sasniegumi mācībās (akadēmiskās prasmes)	1	2	3	4	*99*
10	Labas plānošanas un organizēšanas prasmes	1	2	3	4	*99*
11	Skaidrība par karjeras mērķiem	1	2	3	4	*99*
12	Mērķtiecība	1	2	3	4	*99*
13	Darba motivācija	1	2	3	4	*99*
14	Matemātikas prasmes	1	2	3	4	*99*
15	Problēmu risināšanas prasmes	1	2	3	4	*99*
16	Datora lietošanas prasmes	1	2	3	4	*99*
17	Atbilstoša darba pieredze	1	2	3	4	*99*

PALDIES JUMS PAR ATSAUCĪBU!

In English

SURVEY OFLATVIAN COMPANIES 2017

Q1	**Did you have trainees during last five (5) years?**	Yes	1
		No	2
		Difficult to tell	99

Q2	**Would your company be interested in attracting trainees within a year?**	Definitely yes	1
		Rather yes	2
		Rather no	3
		Definitely no	4
		Difficult to tell	99

Q3	**Did your company have any employees with vocational education degree during last five years?**	Yes	1
		No	2
		Difficult to tell	99

Q4	**When recruiting new employees for your company, how important are the following factors in potential employees? Please, indicate about each of them, whether they are very important, rather important, rather not important or not at all important?**					
		1 Very important	2 Rather important	3 Rather not important	4 Not at all important	*99 Difficult to tell*
01	Ability to easily adapt to new situations	1	2	3	4	*99*
02	Good communication skills	1	2	3	4	*99*
03	Ability to create new ideas	1	2	3	4	*99*
04	Ability to take responsibility for own decisions	1	2	3	4	*99*
05	Presentation skills	1	2	3	4	*99*
06	Ability to work independently	1	2	3	4	*99*
07	Ability to work in a team	1	2	3	4	*99*
08	Attitude to work	1	2	3	4	*99*
09	Achievements in education (academic skills)	1	2	3	4	*99*
10	Good planning and organizing skills	1	2	3	4	*99*
11	Clarity about career goals	1	2	3	4	*99*
12	Target orientation	1	2	3	4	*99*
13	Work motivation	1	2	3	4	*99*
14	Mathematical skills	1	2	3	4	*99*
15	Problem-solving skills	1	2	3	4	*99*
16	Computer skills	1	2	3	4	*99*
17	Relevant work experience	1	2	3	4	*99*

Q5	**In your opinion, to what extent vocational secondary education in Latvia develop these factors in young people at the moment? Please, indicate about each of them, whether vocational secondary education very well develops, rather develops, rather does not develop or does not develop at all this factor in young people.**					
		1 Develops very well	2 Develops rather well	3 Does not develop very well	4 Does not develop at all	99 Neither
01	Ability to easily adapt to new situations	1	2	3	4	*99*
02	Good communication skills	1	2	3	4	*99*
03	Ability to create new ideas	1	2	3	4	*99*
04	Ability to take responsibility for own decisions	1	2	3	4	*99*
05	Presentation skills	1	2	3	4	*99*
06	Ability to work independently	1	2	3	4	*99*
07	Ability to work in a team	1	2	3	4	*99*
08	Attitude to work	1	2	3	4	*99*
09	Achievements in education (academic skills)	1	2	3	4	*99*
10	Good planning and organizing skills	1	2	3	4	*99*
11	Clarity about career goals	1	2	3	4	*99*
12	Target orientation	1	2	3	4	*99*
13	Work motivation	1	2	3	4	*99*
14	Mathematical skills	1	2	3	4	*99*
15	Problem-solving skills	1	2	3	4	*99*
16	Computer skills	1	2	3	4	*99*
17	Relevant work experience	1	2	3	4	*99*

THANK YOU FOR YOUR CO-OPERATION!

Appendix 8

Technical Information for the Questionnaire Survey

LATVIJAS UZŅĒMĒJU APTAUJAS TEHNISKĀ INFORMĀCIJA

PĒTĪJUMA VEICĒJS	Pētījumu centrs SKDS
ĢENERĀLAIS KOPUMS	Visi aktīvie Latvijas uzņēmumi
PLĀNOTĀS IZLASES APJOMS	750 respondenti
SASNIEGTĀS IZLASES APJOMS	750 respondenti
IZLASES METODE	Vairākpakāpju kvotu izlase no uzņēmumu datubāzes*
APTAUJAS VEIKŠANAS METODE	CATI (telefonintervijas), CAWI (interneta aptauja)
ĢEOGRĀFISKAIS PĀRKLĀJUMS	Visa Latvija
APTAUJAS VEIKŠANAS LAIKS	CAWI – no 27.03.2017. līdz 04.04.2017. CATI – no 05.04.2017. līdz 03.05.2017.

1.) pirmām kārtām tiek kontaktēti uzņēmumi, kas ir piedalījušies iepriekšējās regulārajās pētījumu centra SKDS aptaujās;

2.) pēc nejaušās izlases principa tiek kontaktēti uzņēmumi no publiski pieejamām uzņēmumu datubāzēm.

Realizēto CAWI interviju skaits	499
Realizēto CATI interviju skaits	251
Intervētāju skaits telefonintervijām (CATI)	19
CATI nerespondence	587

Telefonintervju (CATI) nerespondences raksturojums

	Skaits	Īpatsvars (%)
Respondents nevēlas piedalīties aptaujā	514	87.6
Respondentam nav laika atbildēt uz aptaujas jautājumiem	41	7.0
Intervijas vidū respondents atteicies to turpināt (pārtraukta intervija)	32	5.5
Kopā	**587**	**100.0**

Datu svēršana

Dati tika svērti atbilstoši CSP 2015. gada statistikai par uzņēmumu sadalījumu pēc pazīmēm: nozare, uzņēmuma lielums un atrašanās vieta.

Nozare	
Ražošana (NACE2 kodi: A, B, C, D, E)	13.8%
Tirdzniecība (NACE2 kodi: G)	26.1%
Būvniecība (NACE2 kodi: F)	8.9%
Pakalpojumi (NACE2 kodi: H, I, J, K, L, M, N, P, Q, R, S)	51.3%
Uzņēmuma lielums	

Līdz 9 darbiniekiem	88.2%
10 līdz 49 darbinieki	9.7%
50 līdz 249 darbinieki	1.8%
250 un vairāk darbinieku	0.3%
Uzņēmuma atrašanās vieta	
Rīga	55.0%
Ārpus Rīgas	45.0%

Pētījuma darba grupa

Projekta vadītājs	Jānis Zoldners
Aptauju vadīja	Vineta Puķe, Linda Mežsarga
Datu masīva veidoja	Ilze Grase

Appendix 9

Differences in the Opinions Between Companies on the Question of Importance of Employability Attributes in the Recruitment Process in Latvia

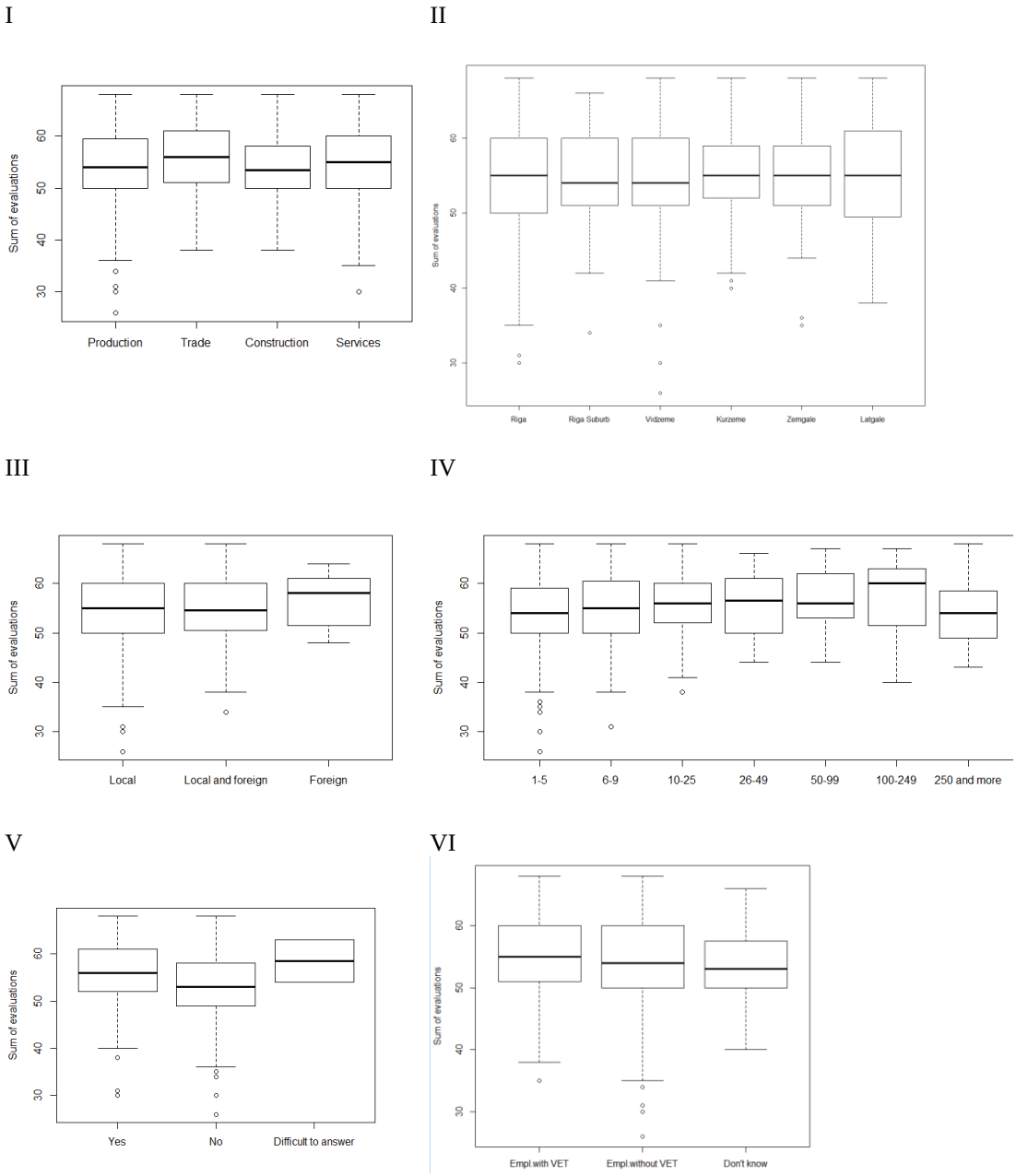


Figure A9.1. Distribution of employer evaluations of importance of employability attributes in the recruitment process according to different criteria: I – sector; II – region; III – local or foreign capital; IV – number of employees; V - have had trainees during last 5 year; VI – have employees with VET qualifications.

Source: Authors' calculations based on employer survey conducted in 2017. n=750

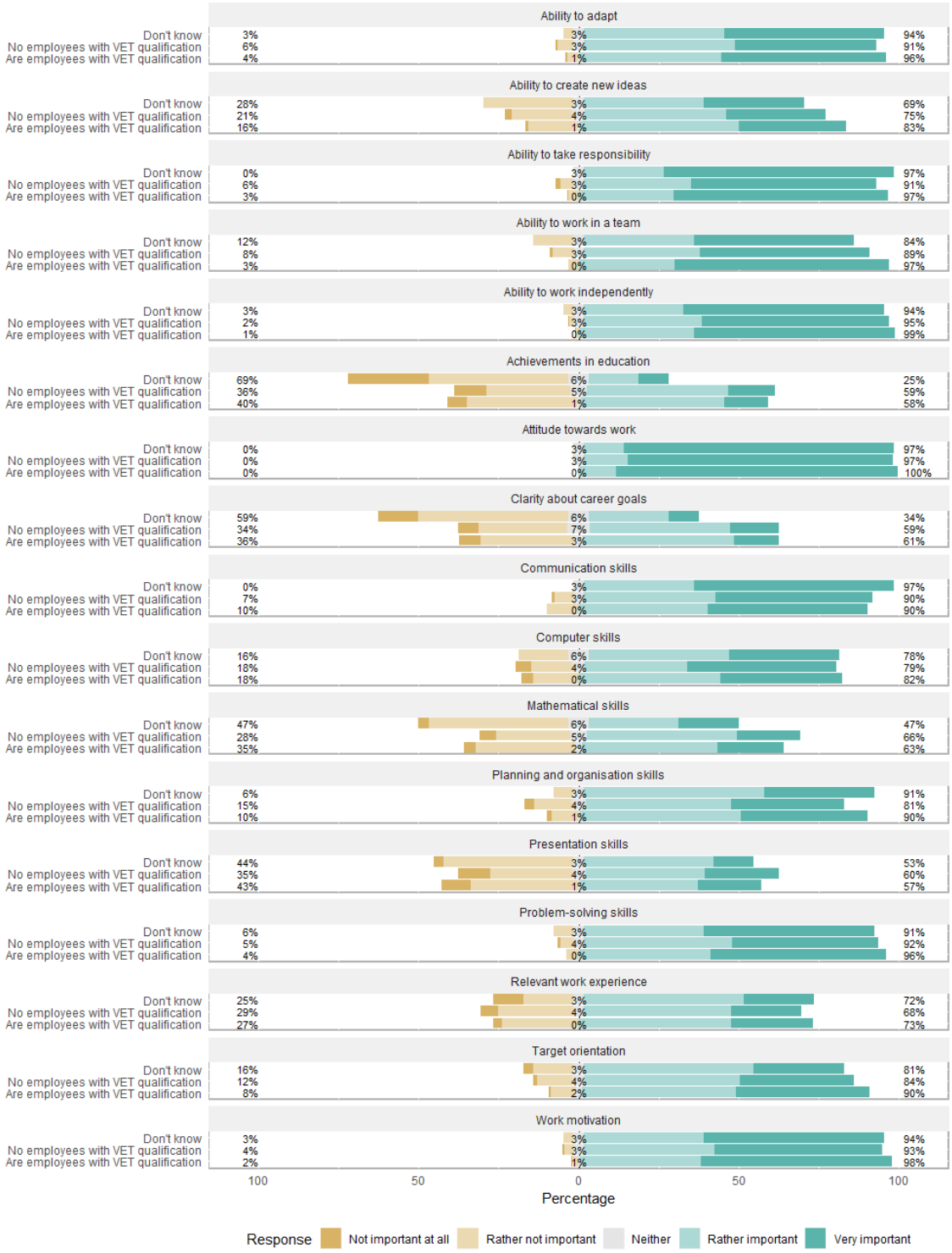


Figure A9.2. Employer evaluations of importance of employability attributes in the recruitment process; by criterion: employing workers with VET qualifications; not employing workers with VET qualifications; cannot answer.

Source: Authors' calculations based on employer survey conducted in 2017. n=750

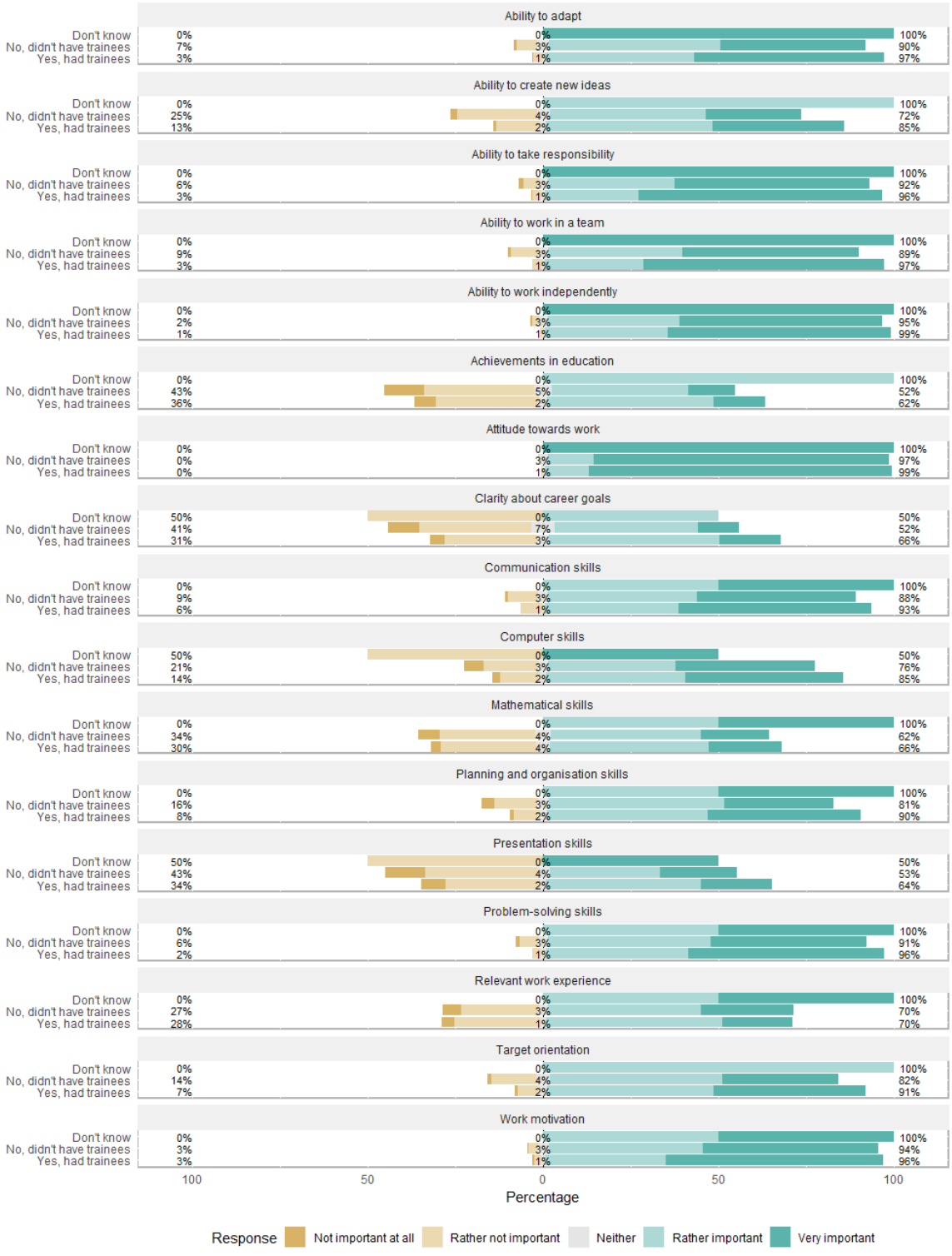


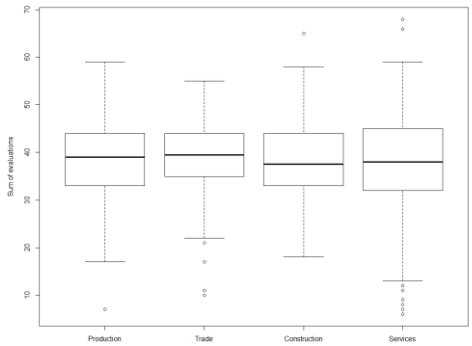
Figure A9.3. Employer evaluations of importance of employability attributes in the recruitment process; by criterion: have had trainees in the last 5 years; have had not trainees in the last 5 years; cannot answer.

Source: Authors' calculations based on employer survey conducted in 2017. n=750

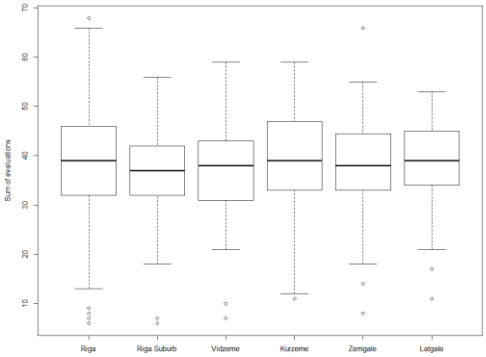
Appendix 10

Differences in the Opinions Between Companies on the Question of Performance of VET Institutions in Latvia

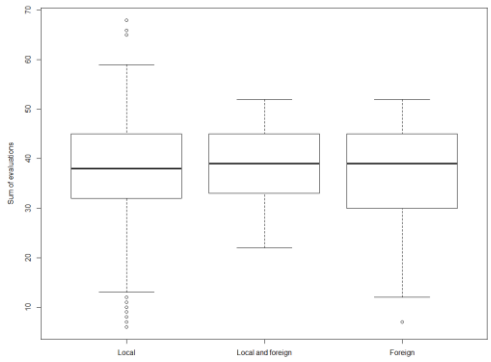
I



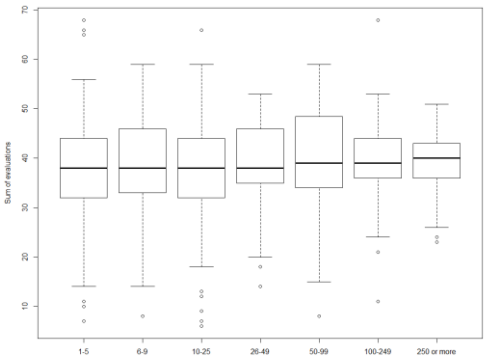
II



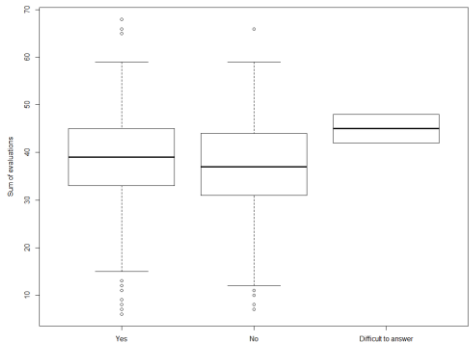
III



IV



V



VI

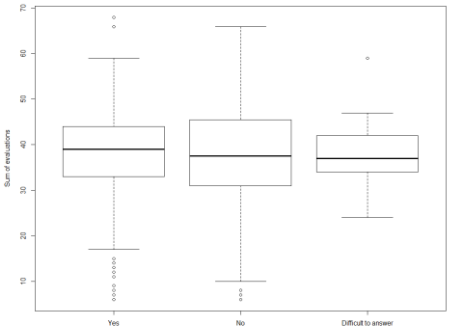


Figure A9.1. Distribution of employer evaluations of performance of VET institutions according to different criteria: I – sector; II – region; III – local or foreign capital; IV – number of employees; V - have had trainees during last 5 year; VI – have employees with VET qualifications.

Source: Authors' calculations based on employer survey conducted in 2017. n=750

Appendix 11

Relative Frequencies of Evaluations of Personal Attributes

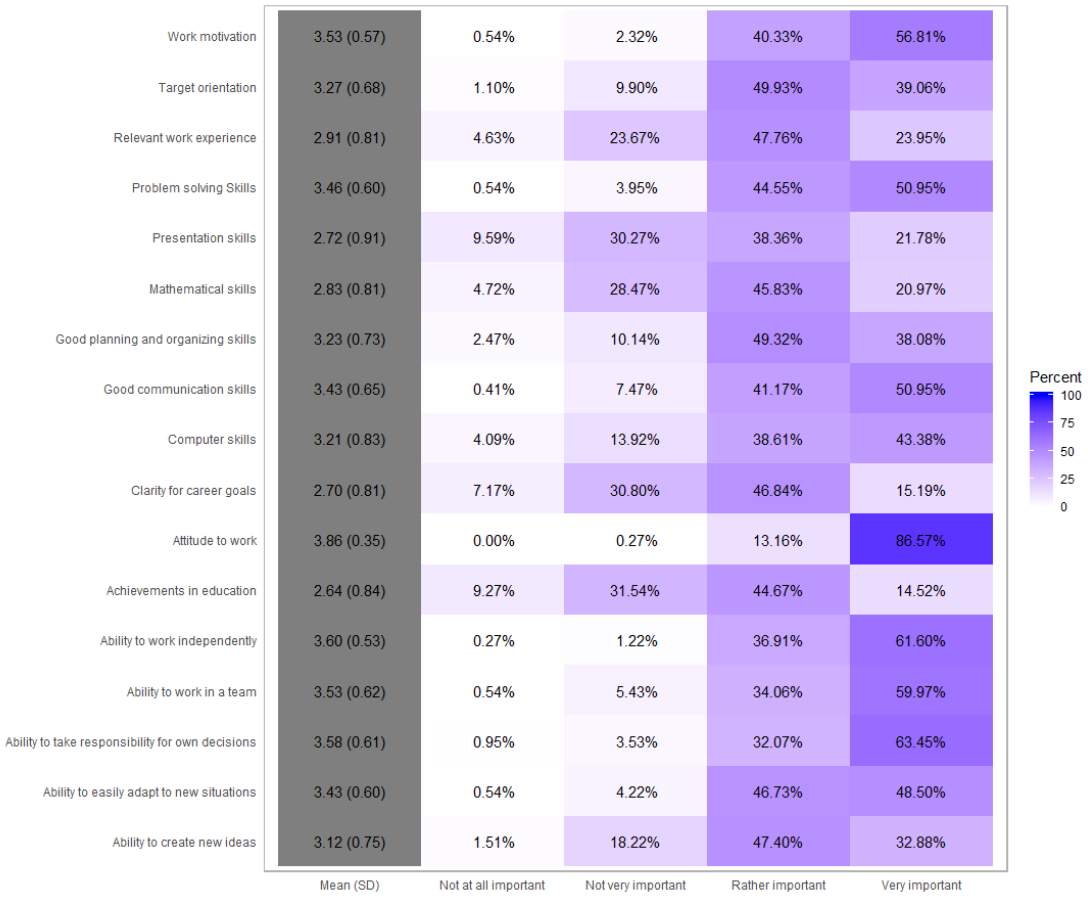


Figure A10.1. Answers to the question "When recruiting new employees for your company, how important are the following factors in potential employees?" (Mean, SD, relative frequency)

Source: Authors' calculations based on employer survey conducted in 2017, n=750

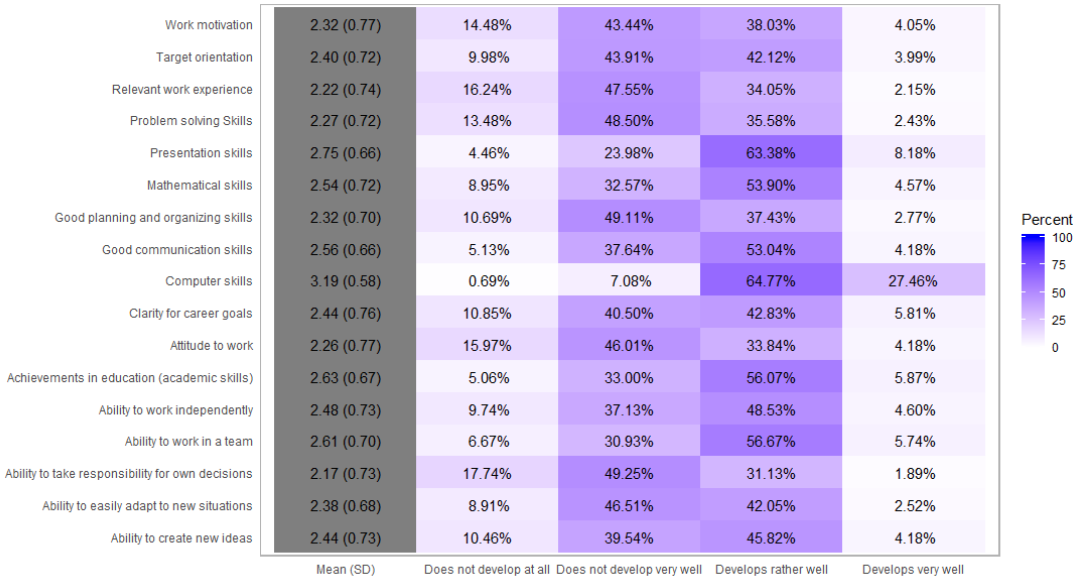


Figure A10.2. Answers to the question "To what extent vocational secondary education in Latvia develop these factors in young people at the moment?" (Mean, SD, relative frequency)

Source: Authors' calculations based on employer survey conducted in 2017, n=750

Appendix 12

Paired Samples Test Results

Paired Samples Test

		Paired Differences					t	df	P-value or the Significance level (2-tailed)
					95% Confidence Interval				
Pair of Importance and Performance evaluations		Mean difference	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Ability to adapt	-1.047	.954	.050	-1.145	-.948	-20.927	363	.000
Pair 2	Communication skills	-.945	.879	.046	-1.036	-.854	-20.511	363	.000
Pair 3	Ability to create new ideas	-.733	1.006	.053	-.837	-.629	-13.899	363	.000
Pair 4	Ability to take responsibility	-1.414	.924	.048	-1.509	-1.319	-29.203	363	.000
Pair 5	Presentation skills	-.156	1.130	.059	-.273	-.040	-2.638	363	0.009
Pair 6	Ability to work independently	-1.121	.859	.045	-1.209	-1.032	-24.887	363	.000
Pair 7	Ability to work in a team	-.843	.895	.047	-.936	-.751	-17.984	363	.000
Pair 8	Attitude to work	-1.574	.899	.047	-1.666	-1.481	-33.388	363	.000
Pair 9	Achievements in education (academic skills)	-.052	1.063	.056	-.162	.057	-.936	363	0.350
Pair 10	Planning and organizing skills	-.903	.962	.050	-1.002	-.804	-17.911	363	.000
Pair 11	Clarity about career goals	-.316	1.042	.055	-.424	-.209	-5.795	363	.000
Pair 12	Target orientation	-.840	.969	.051	-.940	-.741	-16.549	363	.000
Pair 13	Work motivation	-1.151	.972	.051	-1.251	-1.051	-22.607	363	.000
Pair 14	Mathematical skills	-.087	.644	.034	-.153	-.020	-2.563	363	0.011
Pair 15	Problem-solving skills	-.589	.527	.028	-.643	-.534	-21.309	363	.000
Pair 16	Computer skills	.085	.477	.025	.036	.135	3.420	363	.001
Pair 17	Relevant work experience	-.349	.609	.032	-.412	-.287	-10.944	363	.000

Appendix 13

Questionnaire for the Interviews with Managers of VETIs in Latvia

In Latvian

Anketa profesionālās izglītības iestāžu vadības pārstāvjiem

Ievads:

Šobrīd izstrādāju pētījumu Latvijas Universitātes doktorantūras programmas ietvaros par profesionālās izglītības (PI) absolventu nodarbināmību.

Ar nodarbināmību pētījumā saprot absolventu konkurētspēju darba tirgū ilgtermiņā. Piemēram, ne tikai jebkāda darba iegūšanu uzreiz pēc izglītības ieguves, bet laba darba, atbilstoša izglītības līmenim, vēlams, iegūtajai profesijai karjeras attīstības laikā.

Pētījumi rāda, ka PI priekšrocības darba tirgū, salīdzinot ar vidējo vispārējo, ir augstākas, taču ar laiku PI savas priekšrocības zaudē. Iegūtās kvalifikācijas noveco, un PI absolventi piemērojas mainīgiem darba tirgus apstākļiem salīdzinoši sliktāk, īpaši, ja salīdzina ar augstākās izglītības absolventiem. Pētījuma mērķis ir noskaidrot, kā šīs spējas saglabāt nodarbināmību ilgtermiņā labāk veicināt sākotnējā PI.

Jūsu viedoklis un pieredze ir ļoti svarīga pētījuma veikšanā, liels paldies, ka piekritāt veltīt laiku intervijai!

Intervija būs daļēji strukturēta. Būs daži slēgtie jautājumi ar atbilžu variantiem, un daži atvērtie jautājumi, kas Jums ļaus runāt par tiem jautājumiem, kas Jums šķiet svarīgi.

1. Jautājums. Par Jums:

1.1.Profesionālās izglītības iestāde (PII): _____

1.2.Vārds Uzvārds: _____

1.3.Amats _____

1.4.Cik gadus jau strādājiet PII vadībā? _____

1.5.Cik gadus jau strādājiet PI kopumā? _____

2. Jautājums. Cik svarīgu Jūsu PII ir veicināt absolventu nodarbināmību? Ja Jums būtu jānovērtē no 1 – 10, kur 10 ir ļoti svarīgi, kā Jūs novērtētu? Vai Jūs varētu, lūdzu, īsi paskaidrot, kā Jūs veicināt absolventu nodarbināmību vai minēt kādus piemērus?

3. Jautājums. Kas Jums traucē to darīt labāk? Vai variet, lūdzu, minēt būtiskākos piemērus?

4. jautājums. Kādā mērā Jūsuprāt minētās individuālās īpašības veicina absolventu nodarbināmību ilgtermiņā? Lūdzu novērtēt no 1 – 5, kur 1 – nemaz neveicina, 5 – ļoti veicina, 3 – grūti pateikt (ne veicina, ne neveicina).

		1 Nemaz neveicina	2 Drīzāk neveicina	*3* *Grūti pateikt*	4 Drīzāk veicina	5 Ļoti veicina
01	Spēja viegli piemēroties jaunām situācijām					

02	Labas komunikācijas prasmes					
03	Spēja radīt jaunas idejas					
04	Spēja uzņemties atbildību par saviem lēmumiem					
05	Prezentācijas prasmes					
06	Prasme strādāt patstāvīgi					
07	Prasme strādāt komandā					
08	Attieksme pret darbu					
09	Sasniegumi mācībās					
10	Labas plānošanas un organizēšanas prasmes					
11	Skaidrība par karjeras mērķiem					
12	Mērķtiecība					
13	Darba motivācija					
14	Matemātikas prasmes					
15	Problēmu risināšanas prasmes					
16	Datora lietošanas prasmes					
17	Atbilstoša darba pieredze					

5. jautājums. Cik lielā mērā minētās individuālās īpašības Jūsuprāt attīsta Jūsu audzēkņi, iegūstot profesionālo izglītību? Lūdzu, novērtējiet no 1 – 5, kur 1 – nemaz neattīsta, 5 – ļoti labi attīsta, 3 – grūti pateikt (ne attīsta, ne neattīsta). Ja attīsta, lūdzu, sniedziet piemēru!

		1 Nemaz neattīsta	2 Drīzāk neattīsta	*3* *Grūti pateikt*	4 Drīzāk attīsta	5 Ļoti labi attīsta	Piemērs
01	Spēja viegli piemēroties jaunām situācijām						
02	Labas komunikācijas prasmes						
03	Spēja radīt jaunas idejas						
04	Spēja uzņemties atbildību par saviem lēmumiem						
05	Prezentācijas prasmes						
06	Prasme strādāt patstāvīgi						

07	Prasme strādāt komandā						
08	Attieksme pret darbu						
09	Sasniegumi mācībās						
10	Labas plānošanas un organizēšanas prasmes						
11	Skaidrība par karjeras mērķiem						
12	Mērķtiecība						
13	Darba motivācija						
14	Matemātikas prasmes						
15	Problēmu risināšanas prasmes						
16	Datora lietošanas prasmes						
17	Atbilstoša darba pieredze						

6. Jautājums. Vai Jūs varētu, lūdzu, komentēt par minētajiem profesionālās izglītības vadības procesiem: kas strādā labi, kas nestrādā labi attiecībā uz absolventu nodarbināmības veicināšanu? Kāds atbalsts Jūsu PII ir nepieciešams, lai labāk veicinātu absolventu nodarbināmību? Var komentēt gan par PII, gan par valsts līmeni.

Vadības un administrācijas process	Kas strādā labi attiecībā uz nodarbināmības veicināšanu?	Kas nestrādā pietiekami labi attiecībā uz nodarbināmības veicināšanu?	Kāds atbalsts Jūsu PII ir nepieciešams, lai labāk veicinātu nodarbināmību?
Profesionālās izglītības (PI) plānošana un pārvaldība			
PI pārvaldība, skaidru un pārredzamu procesu nodrošināšana			
Nākotnē nepieciešamo prasmju/ darba tirgus prasību apzināšana, un šīs informācijas pielietošana PI nodrošināšanā			
Darba devēju iesaistīšanās nodrošināšana PI īstenošanā			
Profesionālās izglītības īstenošana			
Darba tirgus prasībām atbilstošas, mūsdienīgas izglītības programmas			
Nodarbināmības kompetenču iekļaušana PI mācību programmā			
Pedagogu profesionālā pilnveide			
Uz mācību rezultātiem balstītas pieejas ieviešana PI			
Pārejas nodrošināšana no izglītības uz darba tirgu			
Atbilstošas darba pieredzes nodrošināšana			

Karjeras atbalsta nodrošināšana			
PI kvalitātes uzraudzība, atgriezeniskās saites nodrošināšana un pastāvīga uzlabošana			
PI kvalitātes uzraudzības process			
Atgriezeniskās saites nodrošināšanas process			
Nepārtrauktu uzlabojumu nodrošināšanas process			
Pieaugušo izglītības iespēju nodrošināšana PII			
Pieaugušo izglītības iespēju nodrošināšana			
Ārpus formālās izglītības apgūto kompetenču atzīšana			
Pieaugušo mācīšanās īpatnību (andragoģijas) principu ievērošana, organizējot pieaugušo izglītības iespējas PII			
Skolotāju kapacitātes stiprināšana nodrošināt pieaugušo izglītību			
Saiknes uzturēšana un attiecību veidošana ar absolventiem, darbiniekiem un darba devējiem			

Vai Jums ir kādi papildu komentāri par individuālajām īpašībām vai profesionālās izglītības vadības procesiem? Vai tie Jūsuprāt atspoguļo absolventu nodarbināmības veidošanās procesu?
Paldies!

In English

Questionnaire for the Managers of Vocational Education Institutions

Introduction:
I am currently elaborating a research on the employability of VET graduates at the University of Latvia doctoral programme. Within the framework of this research the term "employability" means the competitiveness of graduates in the labour market in the long term. It means, that graduates can acquire good, relevant, preferably appropriate to the education job not just right after graduation, but also later throughout their career. Research shows that the benefits of VET in the labour market are higher than for the general education. With time, however, VET loses its benefits. The qualifications obtained are becoming outdated; but VET graduates are relatively poorly adapted to changing labor market conditions, especially when compared to higher education graduates.
The aim of the research is to find out how initial VET can better facilitate employability of graduates in the long term.
Your opinion and experience are very important for the research! Thank you very much for agreeing to give an interview! The interview will be partially structured. Some questions will be closed-ended with options given for answers; some questions will be open-ended which will allow you to speak about issues which are seems the most important for you.

Question 1. About you:

1.1. Vocational education institution: _____
1.2. Name, surname: _____
1.3. Position: _____ _____
1.4.How many years do you work as the manager at VETI? _____
1.5.How many years do you work in VET? _____

Question 2. How important it is for your VETI to facilitate employability of graduates? If you would evaluate from 1 to 10 where 10 is "very important", how would you evaluate? Could you please explain shortly or provide any example on how you facilitate employability of graduates?

Question 3. What prevents you from doing it better? Could you please provide any example?

Question 4. To what extent in your opinion the following personal attributes facilitate the employability of graduates in the long term? Please, indicate about each of them, whether they do not facilitate employability at all, rather do not facilitate, rather facilitate, very well facilitate, or neither.

		1 Does not facilitate at all	2 Rather does not facilitate	*3* *Neither*	4 Rather facilitate	5 Very well facilitate
01	Ability to easily adapt to new situations					
02	Good communication skills					
03	Ability to create new ideas					
04	Ability to take responsibility for own decisions					
05	Presentation skills					
06	Ability to work independently					
07	Ability to work in a team					
08	Attitude to work					
09	Achievements in education (academic skills)					
10	Good planning and organizing skills					
11	Clarity about career goals					
12	Target orientation					
13	Work motivation					
14	Mathematical skills					
15	Problem-solving skills					

16	Computer skills					
17	Relevant work experience					

Question 5. To what extent the following personal attributes could be developed by students at your VETI? Please, indicate about each of them, whether cannot be developed at all, rather cannot be developed, rather can be developed, can be very well developed, or neither. If can be developed, please provide an example!

		1 Cannot be developed at all	2 Rather cannot be developed	*3 Neither*	4 Rather can be developed	5 Can be developed very well	Example
01	Ability to easily adapt to new situations						
02	Good communication skills						
03	Ability to create new ideas						
04	Ability to take responsibility for own decisions						
05	Presentation skills						
06	Ability to work independently						
07	Ability to work in a team						
08	Attitude to work						
09	Achievements in education (academic skills)						
10	Good planning and organizing skills						
11	Clarity about career goals						
12	Target orientation						
13	Work motivation						
14	Mathematical skills						
15	Problem-solving skills						
16	Computer skills						
17	Relevant work experience						

Question 6. Could you please comment regarding different VET management processes: what works well, what does not with regards to facilitating employability of graduates? What support do VETIs need to better facilitate employability of graduates? Comments regarding both, institutional and national levels are appreciated.

Management and administration process	What works well with regards to facilitating employability of graduates?	What does not work well with regards to facilitating employability of graduates?	What support do VETIs need to better facilitate employability of graduates?
Planning and governance process of vocational education			
Ensuring lean administration and clear and transparent processes			
The process of skills anticipation and using them in VET provision			
Ensuring employer engagement in provision of VET			
Implementing VET			
Ensuring relevant, up-to-date VET programmes			
Embedding employability competencies into curriculum			
Professional development of educators			
The process of implementing learning outcomes-based approach			
Providing transfer from education to the labour market			
The process of ensuring relevant work experience			
The process of organising career support			
Monitoring quality, ensuring feedback loop and continuous improvement			
The process of monitoring quality of VET			
The process of ensuring feedback loop			
The process of continuous improvement			
Providing adult learning			
Providing adult learning opportunities			
Ensuring recognition of prior learning			
Embedding andragogy principles in the process of organising adult learning			
Building capacity of teachers to provide adult learning effectively			
Building relationships with the graduates, employees and employers			

Do you have any other comments about personal attributes or VET management processes? Do they reflect the process of facilitating graduate employability in your opinion?

Thank you!

Appendix 14

Frequency of Evaluations by the VET Managers

Table A12.1
Importance of Personal Attributes for Graduate Employability (Frequency of Evaluations)

		Very important	Rather important	Neither	Rather not important	Not important at all
1	Ability to easily adapt to new situations	11	3	0	0	0
2	Good communication skills	10	3	1	0	0
3	Ability to create new ideas	4	6	3	1	0
4	Ability to take responsibility for own decisions	10	4	0	0	0
5	Presentation skills	5	7	2	0	0
6	Ability to work independently	10	3	1	0	0
7	Ability to work in a team	9	5	0	0	0
8	Attitude to work	12	0	1	0	0
9	Achievements in education (academic skills)	2	6	5	0	1
10	Good planning and organizing skills	9	4	1	0	0
11	Clarity about career goals	6	6	1	1	0
12	Target orientation	9	5	0	0	0
13	Work motivation	12	1	0	1	0
14	Mathematical skills	1	9	4	0	0
15	Problem-solving skills	8	6	0	0	0
16	Computer skills	4	9	1	0	0
17	Relevant work experience	3	4	6	1	0

Source: Authors' calculations based on VET manager survey conducted in 2018, n=14.

Table A12.2
Performance of VET Institutions in Ensuring Opportunities for Students to Develop Personal Attributes (Frequency of Evaluations)

		Very well develops	Rather develops	Neither	Rather does not develop	Does not develop at all
1	Ability to easily adapt to new situations	5	8	1	0	0
2	Good communication skills	5	8	1	0	0
3	Ability to create new ideas	3	6	5	0	0
4	Ability to take responsibility for own decisions	4	7	3	0	0
5	Presentation skills	4	8	2	0	0
6	Ability to work independently	4	8	2	0	0
7	Ability to work in a team	6	6	2	0	0
8	Attitude to work	5	5	3	0	0
9	Achievements in education (academic skills)	3	7	4	0	0
10	Good planning and organizing skills	4	4	6	0	0
11	Clarity about career goals	7	4	3	0	0
12	Target orientation	5	7	2	0	0
13	Work motivation	5	7	2	0	0
14	Mathematical skills	2	9	3	0	0
15	Problem-solving skills	4	6	4	0	0
16	Computer skills	8	6	0	0	0
17	Relevant work experience	8	4	2	0	0

Source: Authors' calculations based on VET manager survey conducted in 2018, n=14.

Appendix 15

Activities and Methods Implemented by VETIs to Facilitate Development of Employability Competencies

This table includes activities and methods to facilitate development of employability competencies implemented by VETIs in addition to practical learning, extra-curriculum activities and international mobility. The table entries are arranged in the alphabetic order. The second column of the table includes examples of related personal competencies determining employability, as mentioned by the managers of VETIs.

Table A12.1
Activities and Methods Implemented by VETIs to Facilitate Development of Employability Competencies

Activity or method implemented by VETIs	Personal attribute determining employability facilitated by the activity/method
Arranging the workshop before and after study/ work.	Attitude to work.
Career support and education by career specialists.	Clarity about career goals.
Changing learning and work placement schedule.	Ability to adapt.
Competition of business plans.	Ability to create new ideas and entrepreneurship skills.
Conferences, seminars.	Different employability skills depending on the type of event and involvement.
General secondary education.	Development of basic and mathematical skills.
Independent tasks.	Ability to work independently.
Many classes take place in computer classes, libraries; learning advanced computer programmes.	Computer skills.
Meetings with employer representatives and graduates.	Clarity about career goals, motivation.
Mixing different groups of students, sometimes even between different VETIs.	Ability to work in a team, communication skills.
Open door events and graduate days.	Clarity about career goals.
Preparing a diploma paper.	Ability to work independently.
Preparing cost estimates, doing calculations during practical learning.	Mathematical skills.

Table A12.1, Continued

Presentation opportunities (presenting during lessons, defending work placement, presenting diploma paper, presenting about VETI during conferences, presenting herself/himself to the employer.	Communication skills and presentation skills.
Professional competitions and other team competitions.	Ability to create new ideas, ability to work in a team.
Remuneration for work placement or WBL.	Work motivation.
Scholarship up to 150 EUR/ month. The amount of scholarship is determined depending on the learning success and attitude.	Facilitates motivation to learn and attitude to work.
Study tours to companies.	Clarity about career goals, study and work motivation, opportunity awareness.
Teachers as mentors who support and motivate.	Motivation for not just learning process, for also for higher personal and career goals.
The qualification exam includes arranging the work place and cleaning up.	Attitude to work.
Training companies (a programme organised by the Junior Achievement – Young Enterprise).	Clarity about career goals, initiative, entrepreneurship skills, ability to create new ideas, ability to work in a team, communication skills, problem-solving skills.
Trying to change the perspective of the students that there is no need to be afraid of the problem.	Problem-solving skills.
Upbringing lessons.	Study and work motivation, clarity about career goals, problem-solving skills, self-reflection.
Visiting other VETIs.	Clarity about career goals, study and work motivation.
Working groups.	Communication skills and ability to work in a team.

Appendix 16

Quotes from the Interviews with Managers of VET Institutions

Leadership and coordination.

"There are 8 projects for each VETI; the coordination is weak. Before requests come to the VETIs, they should be co-ordinated. If we have any problem, for example, we cannot involve teachers in one project because they are already involved in the other, we are said to solve this problem ourselves. The project should be based on co-operation between equal partners. If it's not the case, it's not possible to achieve good result."

"We have had interesting situations: the same teachers had to participate in two different events (of ESF projects - author) – professional development and in elaboration of the modules. It is difficult for the administration to plan their presence in the VETI.."

Planning and governance. Cooperation with labour market partners.

"We have very positive experience of close co-operation with the employers and research institutions to develop new occupations. We have already developed 6 new education programmes."

Planning and governance. Funding system.

"The fact that schools are fighting between each other for young people makes young people the victims, it does not give them the opportunity to get to know different possibilities."

"Although we have a unique programme on a national level, we cannot have any financial support for the development of the programme and of the infrastructure."

Teachers.

"The offer of courses is huge. Sometimes it is even difficult to choose. Teachers are confused It is like a game of luck – sometimes the courses are very useful, sometimes they could be improved. Teachers complain that the courses repeat and that some are too simplistic, general. More specific courses, for example, for teachers of Physics and Mathematics, would be needed."

"Chefs or top managers will not go to the university to obtain pedagogical degree to teach at the VETI. The quality of higher pedagogical education is low, and it does not give needed knowledge in methodology. How many university teachers are ready to teach at VETI themselves?"

"Teachers too frequently use tests because they are easier to evaluate."

"Innovations are created in co-operation with the employers, not with the teachers."

"Many teachers are already pensioners who are afraid to go to the factories for practical training. It is hard to attract other teachers."

"It is difficult to hope for a miracle with the human resources the VETI has."

"You cannot ask a lot of teachers. A lot of teachers are over 50 years old. There are motivated people who try to develop, but there are also unmotivated teachers to change anything. The foundation of what needs to be taught doesn't

change. Teachers of vocational subjects do not stand in line for school. Professionals can earn much more money on the labour market than at school."

Education programmes.

"Students in VET are taught according to the standards and programmes and they are prepared for qualification exams, not for life. Students are too busy, they obtain both vocational and general education at the same time, without holidays. Employability competencies could be developed in extra-curriculum activities, but only few engage. We should think more of how to organise learning in groups, teams, how to develop initiative in students, as well as ability to express themselves."

"The approach to implementing modular programmes was changed. Before, it was different."

"We implemented a modular programme. Students were already graduating, but the qualification exam was done according to the old programme because the modular programme did not correspond to the occupational standard. We organised a preparation for an exam for students which took place for one month during their work-placements."

Students.

"It is difficult to teach mathematics because the previous knowledge is very bad. It is rather learning about mathematics, not mathematics itself. Even calculating primitive things is too difficult. Teachers try to help as much as possible, but is it possible to teach primary education again?"

"The family situation and the environment influence the students a lot. Many have arrived from other cities, rural areas. Many search for the ways to earn money during studies. Frequently, the job is not related to their field of study."

"Young people have big problems with communication. They are passive, they don't discuss; they are afraid to make mistakes because someone might make fun of them. Bullying is present in the secondary school."

"Latvian and Russian-speaking young people know English better than Russian and Latvian, respectively. But Latvian labour market requires both Latvian and Russian. In recent years, the situation has deteriorated significantly, especially in Riga."

"*Also, negative attitude is an issue. Sometimes Russian-speaking student simply states that he will not speak Latvian."*

"It depends – for some students, scholarships and receiving the maximum is important, but for some – not. Those who work might not consider it important because they can earn more at work."

"Often you have to wonder about those young people who come to the VETI after secondary general education – how could they compete their studies with the knowledge they have?"

Secondary general education.

"The general education is not for everyone. It is difficult to ensure acquisition of mathematics and other general education subjects to all who came to VET. Many students are suffering, they need only an occupation. We should think of 2nd, 3rd qualification level VET so that graduates can go straight to work."

"The main exam in VET is the qualification exam. If you pass the exam of car mechanic well, it means that you know mathematics at your level. The centralised exams should be easier for VET students and there should be an opportunity to take additional secondary schooling and to take the exam again if necessary."

"If you want to sit on two chairs placed next to each other at the same time, you can sit down in the gap in between. Move them together purposefully. Two identical exams, where in one case there is 1/3 less hours. If there is a secondary vocational education, then it should be, not the general secondary education plus vocational education."

"A general secondary school is absolutely necessary. The most for those who want to study further. So what that there are less hours for general subjects – it is challenging to prepare students for the same exam, bet it all depends on what methods the teacher uses. The most difficult is mathematics."

"If you are a young person who cannot obtain neither secondary general education, not VET, you can obtain the lower level VET (arodizglītību). The real problem is how to integrate in education those young people who do not work and do not study, in obtaining at least lower level VET".

Labour market partners.

"There are companies which are ready to take students to work placements, but do not want to get involved in the ESF project to provide WBL. They don't need financial compensation if they are required to do paperwork for this.".

"We have two specially designated employees who work only on organising work placements and WBL (they seem to be the only ones in Latvia): they visit companies to ensure that learning is up to a standard, they help students to find employers, solve problems, and help to fill in documentation required."

Work placemens and WBL.

"There is both positive and negative experience. Young people are hoping to do something more serious during work placements. But there are also primitive and very poor work placements organised by employers."

"One girl returned from her summer work placement with her hands drawn. It turned out that she had cleaned beets for all summer. The girl had a good education, international experience. A young person cannot do only auxiliary work, she will never return to this company".

"It works to our advantage that our VETI is small. We have very personal contacts with our students and we find out immediately if the work placement is of low quality or employers use students as cheap labour. It is important to act immediately to ensure that students trust us, as well as to facilitate responsibility of employers."