

THE CONCEPT OF LEARNING OUTCOMES IN THE LATVIAN VOCATIONAL EDUCATION

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Abstract

Recently learning outcomes, which are statements of what a learner knows, understands and is able to do after learning, have gained more attention at education policy level in Latvia. International discussions about the terms connected with learning outcomes have been raised by the development of the European Qualifications Framework – an eight level reference system – and consequent elaboration of national frameworks in the Member States. For the referencing process and other reforms to be successful, all stakeholders should share a common understanding of the used terms. This study aimed at exploring the education participants' views about the concept and use of learning outcomes in the Latvian vocational education. In terms of the study the questionnaire was completed by 577 vocational education students, and five vocational education teachers' and five employers' interviews were conducted. The results of the study indicate that the respondents do not have a thorough understanding of learning outcomes. Prior introducing learning outcomes in practice, national informative and educational activities should be arranged for education participants and general public in order to support vocational education stakeholders during the ongoing education reforms initiated by the shift towards learning outcomes based education.

Key words: *learning outcomes, students' learning assessment, vocational upper-secondary education.*

Introduction

The term of learning outcomes is comparatively new in Latvia; it has gained more interest due to the education reforms related to the referencing of the national qualifications to the European Qualifications Framework (EQF) for lifelong learning established by the European Parliament and the European Council in 2008. The EQF is an eight level reference system, which level descriptors are based on learning outcomes and which may be applied to link qualifications awarded in various national education contexts including all stages, forms and sectors of education.

The most evident shift towards learning outcomes oriented education may be observed in the vocational education sector (Cedefop 2010), which is the focus of this paper. This reform requires the involvement of all partners – policy makers, employers, employees, education providers and students – because a complete reorganization of education management and provision is indispensable. Yet prior actual changes in classrooms, a common understanding and use of learning outcomes should be achieved as the concept is the core of this process. Therefore, in this study the comprehension of the concept “learning outcomes” in the Latvian vocational education context was analysed to determine what the state of art was for the mentioned reforms.

Problem of Research

The introduction of learning outcomes in the Latvian vocational education through the referencing of the national qualifications to the EQF has made a certain progress at education policy level. Meanwhile, at school level the developments are not as evident.

The concept of learning outcomes may have different approaches not only internationally, but also within a national education system. For example, an opinion exists that learning outcomes are already implemented in the Latvian vocational education through occupational standards, state vocational education standards and vocational education programmes. The occupational standards describe specific professional duties and tasks; knowledge and skills necessary to perform basic tasks; relevant professional competence (knowledge, skills and responsibility necessary in particular working situations); and the place of occupation in the sectoral qualification system and description of potential employability. The education standards define the strategic aims for education programmes, compulsory education content, and the ground principles and procedure for assessment. The vocational education programmes include main objectives, content, implementation plan of education programmes, and determine requirements for the previous education and necessary resources for its implementation (Vocational Education Law 1999). However, having some elements of learning outcomes in normative documents does not mean that learning outcomes based approach to education has been introduced and exercised.

Research Focus

In this study more emphasis is put on the actual education participants' – students, teachers and employers – understanding of the role of learning outcomes in vocational education and students' learning assessment. Employers are considered as participants since they are involved in the implementation of education, for example, ensuring practical training places for vocational education students, and employing the graduates.

The aim of the study is to explore the concept of learning outcomes in the Latvian vocational education including the aspect of students' learning assessment and recommend further steps to be taken in order to promote the use of learning outcomes.

The hypothesis is that the application of learning outcomes in vocational education promotes the attractiveness of vocational education and raises students' interest in learning and understanding of their future occupation.

The research question was whether vocational students, teachers and employers are ready for the changes related to the shift towards learning outcomes based education.

This study refers to the Latvian vocational upper-secondary education, which is provided after nine-year basic education or general upper-secondary education. The Vocational Education Law (1999) determines professional qualification system of five levels, which may be referenced to the EQF levels 3-7. The duration of vocational upper-secondary education programmes is four years, and their graduates are awarded with a diploma of vocational upper-secondary education and the Latvian professional qualification level 3 (EQF level 4); the graduates have rights to enrol in higher education programmes or labour market. Three-years long vocational education programmes also belong to the upper-secondary level, as a part of vocational upper-secondary education programmes leading to the Latvian professional qualification level 2 (EQF level 4), which allows graduates to continue their education in vocational upper-secondary education programmes or move to labour market.

Learning outcomes in this study are defined as statements describing what a learner knows, understands and is able to do when completing a certain period of learning (European Parliament and Council 2008). The majority of discussions is concerned with the concepts which may be used to describe expected learning outcomes. In the context of the EQF learning outcomes are expressed by knowledge, skills and competences. Learning outcomes may include more dimensions, e.g., values and attitudes, but for the EQF only knowledge, skills and competences were selected as these categories include both ethical and autonomy aspects. This approach has been also accepted in Latvia at education policy level with the amendments of October 2010 to the Cabinet of Ministers Regulations “Regulations on the classification of Latvian education” (2008); therefore, this approach is also used in this study.

Knowledge is a set of systematic cognitive items developing in the course of learning, work or life situations. Skills comprise the ability to perform both cognitive and practical operations acquired through learning situations. Competences feature the manner how particular knowledge and skills are applied in various situations (Vocational Education Administration 2007).

The greatest confusion is about the term “competence” – whether learning outcomes or competence is more general concept. Two main approaches may be observed regarding competence:

- Competence as abilities in a large professional field, i.e. competence is considered as a holistic term imparting knowledge and skills;
- Competence as mastering skills in line with previously formulated standards or performing specific tasks (Cedefop 2009).

The first approach is common in competence based education systems, for example, in Germany and in other continental countries. The other approach more refers to the Anglo-Saxon countries; it has been accepted also for the EQF level descriptors and in this study. However, more important is raising awareness that in various national contexts the terms are defined differently and some of disagreements may have been created only due to an imprecise translation.

Students’ learning assessment may be explained as a set of actions conducted to observe students’ progress in their learning. Often two types of assessment are differentiated: formative – performed constantly during the learning to improve or alter learning programme regarding students’ needs – and summative – conducted at the end of a particular education period to clarify whether students’ knowledge, skills and competences correspond to the standard determined previously and what improvements should be introduced in education programme for future (Khatti, Reeve, Kane 1998). In learning outcomes based education the more emphasis is put on the formative assessment since it involves more active participation of students in learning process. Yet the combination of both assessment types provides a complete overview of students’ progress. Students’ self-assessment is a crucial part of assessment, which helps the students in growing aware of their own progress and directing their learning accordingly. The self-assessment promotes the autonomy of learners, according to Black (2003), since the students need to assume some responsibility about their learning (Black 2003).

Methodology of Research

General Background of Research

The study was conducted from October 2010 to March 2011 involving 670 participants

from 10 Latvian vocational education institutions and five enterprises. To support the data collected, three different focus groups – students, teachers and employers – were involved in this study, as well as similar studies about learning outcomes were explored.

The following data collection instruments were applied: vocational education students' questionnaire, vocational education teachers' interviews, and employers' interviews.

Sample of Research

The sample was made using two-stage sampling procedures: stratified and random. First, one large and one small school regarding the number of students from each of five regions of Latvia were selected. As the focus of this study is the process at school, at school level randomly 2nd year students were selected, which means that 2nd year students have got acquainted with the activities at school, but they do not possess so evident experience at a work place.

The questionnaire was completed by 577 students (566 were included in data analysis) from 10 Latvian vocational education establishments. Thus, 251 females and 315 males at age from 14 to 24 (majority of students were 17 (63.5%) and 18 (21.5%) years old) completed the questionnaire. The students represented 20 education programmes. The greatest proportion of the respondents' programmes were related to hotel and restaurant sector (32.5%), manufacturing industry (22.6%), as well as operation with real estate, rental and other businesses (19.6%).

The teachers' interviews were done in five vocational schools each located in different regions of Latvia. Four of interviewed teachers were females and one – male including one teacher of general subjects and four – vocational subjects in various sectors. The interviewees' work experience at vocational schools had lasted from 2-20 years.

In total five interviews with the representatives of labour market were conducted, of which two were females and three – males, representing five various enterprises of different economic sectors. These interviewees were selected because their enterprise cooperated with a vocational school (e.g. providing places for practical training, participating in qualification exam commission, supporting school with material supply) and the activity of the company was related to the economic sectors, which were also represented by the students completing the questionnaire. The following sectors were represented: food production; hotels and restaurants; car sale, service and maintenance; furniture production; as well as heat energy production and supply.

Instruments and Procedures

The students' survey aimed at exploring the respondents' opinion on education process, their percept about knowledge, skills and competences necessary for a good specialist, as well as about students' learning assessment. The central question was about graduates' learning outcomes – the respondents had to evaluate in four-point Likert scale, which of 19 learning outcomes statements would be more important. The four-point Likert scale assisted in avoiding neutral answers. The statements referred to general knowledge, skills and competences and were not related to a particular occupation. International policy planning documents and guidelines (European Parliament and Council 2006, 2008; Rychen, Salganik 2001) were used as sources.

Prior the survey the questionnaire was given to 83 vocational education students in order to pilot the designed instrument in terms of potential errors and misleading formulations. The convenience sampling was used for the pilot survey including respondents of both sexes. Thereafter, the questionnaire was improved according to gained results.

Vocational education teachers' interviews aimed at exploring the interviewees' understanding of the meaning of learning outcomes and how the teachers conduct students' learning assessment. The aim of employers' interviews was to analyse the interviewees' views

regarding the role of learning outcomes in vocational education. Partly structured interviews were carried out; the teachers' interviews included eight questions and the employers' interview – six questions, which also comprised warming-up questions about the interviewees' (results outlined above).

The central question both in teachers' and employers' interviews included a list of eight learning outcomes statements that the interviewees' had to analyse focusing on their formulation. These examples were developed grounding on occupational standards, the Cabinet of Ministers regulations "Regulations on the state vocational secondary education standard and the state vocational education standard" (2000), and the Vocational Education Law (1999).

Data Analysis

The SPSS programme was used for the data processing and analysis of the students' survey. First, descriptive statistics methods (frequencies, percentage) were applied to state potential data processing errors and obtain a general view of the collected data. Second, Pearson's correlation coefficient was calculated to state potential connections between various variables, for example, between conditions determining the respondents' choice of education.

The teachers' and employers' interviews were analysed with content analysis method. Initially the detailed structure of interviews was designed on the basis of the transcripts to categorize collected data. After the analysis of individual interviews, the views of interviewees within and between the two focus groups were compared according to the set structure.

Results of Research

The Students' Survey

Comparatively large proportion of students (30.2%) did not write correctly the title of their future qualification. Often the titles of qualifications in Latvia are quite complicated consisting of three or more words and may not directly reflect a "traditional" occupation (well-known in public); thus, providing some confusion both for students and employers. Yet the greatest part of students selected their education programme (see figure 1) because the respondents were interested in the occupation (49.5% replied "yes") and there was an opportunity to start earning earlier (35.9% replied "yes"); less influential for the respondents seemed friends (18.4% replied "yes"), parents (12.5% replied "yes") and mass media (9.7% replied "yes").

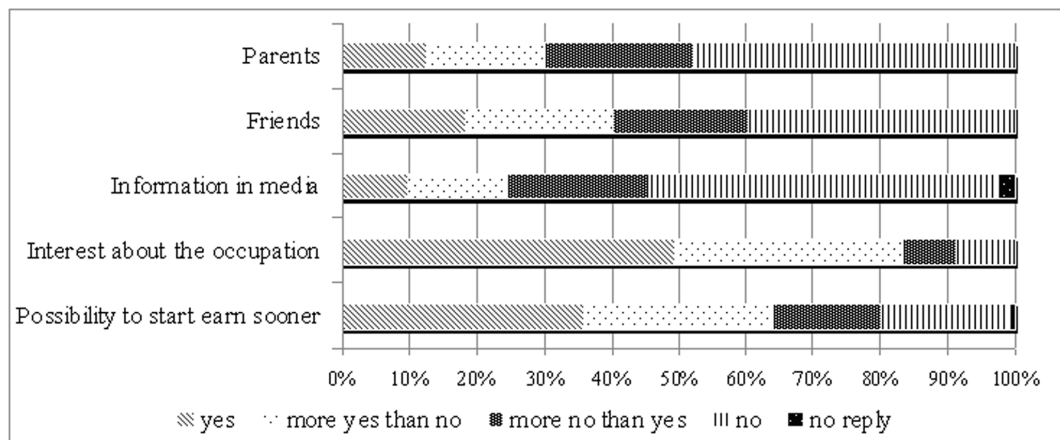


Figure 1: The aspects that impacted the respondents' choice of education (%).

Calculations of Pearson's correlation coefficient did not show any significant correlations between the aspects influencing choice of education, nor between the mentioned aspects and change in percept of occupation since the respondents had studied in the particular education programme, as well as whether the respondents had written the title of their qualification correctly.

When evaluating 19 statements of general learning outcomes that would be important for a good professional, mainly respondents were quite positive about the importance of these examples – 98.1% to 75.3% of respondents replied “yes” or “more yes than no”. To illustrate the results of this question, the data gained in four-point Likert scale were grouped in “positive” (yes, more yes than no) and “negative” (more no than yes, no) replies. Regarding the volume of this paper only four the most important and four the least important learning outcomes to be a good professional are shown in the table 1 below.

Table 1. The most and least important learning outcomes in general (N/%).

Learning outcomes	Positive reply (freq. / %)	Negative reply (freq. / %)	No reply (freq. / %)
Ability to take responsibility	542/95.8	22/3.9	2/0.4
Ability to learn and acquire new technologies	555/98.1	10/1.8	1/0.2
Ability to use various cognitive and practical skills	475/83.9	87/15.4	4/0.7
Ability to work independently	542/95.8	18/3.2	6/1.1
Familiarity with the surrounding environment and people and their mutual relationships	531/93.8	28/4.9	7/1.2
Ability to manage daily work of other people	548/96.8	18/3.2	0/0.0
Ability to use their understanding of math, natural sciences and technologies at work	532/94.0	33/5.8	1/0.2
Grasp of their country and world culture	458/80.9	104/18.4	4/0.7
Number of respondents			566

Then the students had to list three the most important learning outcomes of the 19 statements for their future occupation. The answers were diverse and proportion of students choosing the same sentence varied from 1.3-13.8%. The order of three learning outcomes named was not taken into account in this case; thus, to analyse the data, the absolute frequency for each statement of learning outcomes were used. The results are summarised in the table below showing only the four most important and the four least important learning outcomes in the future profession.

Table 2. The most and least important learning outcomes in the respondents' future occupation (N/%).

Learning outcomes	Absolute freq./ % of freq. in total
Ability to take responsibility	196/13.8
Ability to work independently	195/13.8
Ability to work in team	145/10.2
Ability to communicate in the foreign languages	107/7.6
Ability to take initiative in work situations	34/2.4
Ability to use their understanding of math, natural sciences and technologies at work	30/2.1
Ability to use ICT at work	28/2.0
Grasp of their country and world culture	19/1.3
Total	1417/100.0
Number of respondents	566

No significant correlations were observed between learning outcomes in general, or between learning outcomes valuable in the respondents' future occupation, or between both of these aspects.

The results of the survey indicate that the students as the most crucial improvements to be done in their education programme consider practical training in enterprises (23.9%) and in school (22.1%), school equipment (22.1%) and acquisition of vocational subjects (20.9%); while less improvement seemed necessary for the acquisition of general subjects (8.2%).

The students' survey shows that teachers usually (44.9% of the respondents) or always (33.4% of the respondents) informed students about assessment criteria. In more specific learning situations these criteria were quite clear for the majority of the respondents in four-point Likert scale providing affirmative or partly affirmative answers (see figure 2 below). The most students considered the criteria to be understandable (replied "yes") in the following situations: tests in vocational subjects (67.5%) and practical training in school (64.5%). Comparatively fewer students agreed to the clarity of the assessment criteria for home assignments in vocational subjects (39.9%) and general subjects (34.5%).

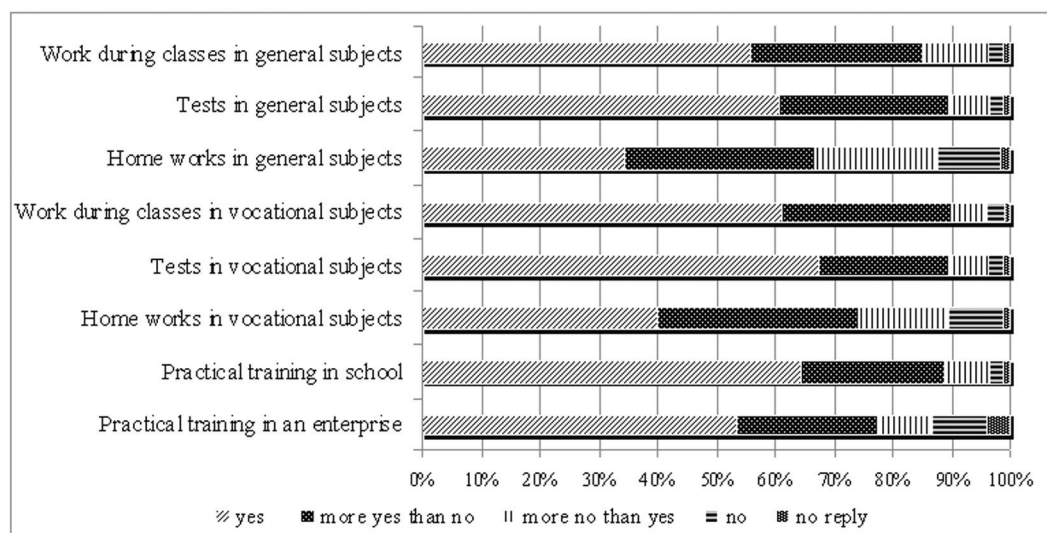


Figure 2: The clarity of assessment criteria in various learning situations (%).

Pearson's correlation coefficient was not significant between teachers informing students about assessment criteria and the clarity of these criteria in various learning situations. Yet a moderate correlation was noted between the understanding the assessment criteria for home works in vocational subjects and in general subjects ($r=0.538$; $\alpha=0.05$), as well as between "tests in vocational subjects" and "work in class during the vocational subjects" ($r=0.528$; $\alpha=0.05$).

In the opinion of the most students (85.3%) all vocational subjects assist in forming learning outcomes necessary for their future occupation. Still the most respondents responding affirmative either did not justify their reply (17.2%) or their answers were non-interpretive (18.6%).

Finally, the respondents provided replies whether their perception of future occupation has changed since enrolling in their education programme. The positive and negative answers were quite similar – 46.5% and 47.3% accordingly.

The Teachers' Interviews

First question was about the main difficulties teachers had to face when implementing education programme. The interviewees mainly focused on issues concerned with their students – lack of motivation, discipline problems, low class attendance and insufficient level of students' preliminary knowledge. Other complications named were: over-sophisticated education standards; lack of specific exercise books for vocational and general subjects in vocational education programmes; and lack of administrative support for teachers. Due to these problems, which are time-consuming and require resources, the teachers could not manage to search for possibilities how to improve their qualification or class work.

In the second question the teachers were asked to give a general characterisation of their students in terms of their knowledge, skills, attitude towards learning and understanding of their occupation. The teachers admitted that the students' preliminary knowledge and skills were insufficient for a successful learning. Furthermore, the students lacked motivation to learn because either the students did not relate their future to particular occupation or the students were not certain about their choice of education. The students' attitude towards learning greatly depended on the reasons of choosing a certain education programme – if the students had not selected their education independently, their interest in learning was insignificant. According to the teachers, the students' understanding of their occupation really formed during the work-based practice in an enterprise; therefore, practical learning should be more stressed in education programmes. Thus, the teachers did not consider that a school was able to provide a wholesome basic acquisition of occupation. The students' understanding of their occupation could also be influenced by the title of qualification awarded, whether the title was related to a "traditional" profession or it was complicated and misleading.

In the third question the interviewed teachers had to analyse formulation of eight learning outcomes examples, but the interviewees focused more on the content of statements and actual learning outcomes achieved by their students. Although occupational standards and other normative documents were used to compose these sentences, without particular context the interviewees could not comprehend some terms and expressions. Generally the teachers had rather different views about the clarity of the statements, but there were also some similarities, for example, the teachers thought that the students would not understand some specific terms or over-general sentences. According to the teachers' interviews, some learning outcomes could not be achieved due to the personal traits of the students, which indicates that the teachers do not have explicit understanding of the use of learning outcomes. The teachers agreed that a sentence, which was quite particular and in meantime – not too detailed, was very clear.

The fourth question was whether these statements of learning outcome would be clear for employers. The interviewees' opinions differed, yet in general the teachers under-estimated the

employers' capability of looking in the issues of school. The teachers noted that the sentences should be specific, but without complicated terms for the employers to understand them.

The fifth question explored the principles the teachers used when developing the students' learning assessment criteria. The interviewees said that they assessed the students' knowledge and skills, their logical thinking and ability to apply theoretical knowledge in practice, and attitude, which was highlighted as crucial. Mainly the teachers used point system – for each task a certain number of points was allocated, which at the end was expressed as a mark. The teachers agreed that the point system could not be applied in all assessment situations, and stressed the role of formative assessment during the classes.

The sixth question was whether and how the teachers explained the assessment criteria to students. The teachers were positive that the students were mostly well-informed about the assessment criteria, particularly when the point system was used.

The Employers' Interviews

In the first question the employers were asked to provide a general characterisation of students' and graduates' knowledge and skills. The employers considered that students' and graduates' knowledge and skills were quite different varying with study year, student group, education programme, school, as well as with occupation. Namely, if the qualification to be mastered did not correspond to a certain post in the enterprise, the students would perform other tasks and not acquire learning outcomes necessary for their occupation. The employers' interviews also showed that the students' knowledge and skills are insufficient, particularly regarding their practical skills, and often graduates are not ready for work and to perform independently. Yet the employers admitted that schools could not equip students with all necessary learning outcomes due to the lack of resources; therefore, the interviewees highlighted the role of work-based learning in enterprises. The employers stressed that the students' attitude was highly important, since it influenced how much the students acquired during the work-based learning.

The second question focused on the students' and graduates' understanding of the occupation obtained. The students' understanding of their occupation, as noted by the employers, also varied with economic sector education programmes represented and particular occupation. If the future qualification was specific and in the same time more frequent, the students had more profound understanding of their occupation. Otherwise, referring to the employers and the teachers, the students' understanding of their occupation developed only during the practical training in enterprises. The employers said that the students could perform certain tasks, but not comprehend the entire process established at the enterprise. Frequently the students from technical education programmes were not aware of the need to use soft (interpersonal) skills in their work, for example, dealing with clients.

The third question invited the interviewees to analyse the eight examples of learning outcomes. The employers similar to the teachers paid more attention to the content of the statements. Yet the interviewees pointed out some faults in the formulation of the sentences, although not all of the suggested corrections could be applied in learning outcomes based education. Some terms and expressions also hindered the employers to comprehend the sentences without additional context. Thus, often the misunderstanding of the sentences was connected to the lack of particular background information how, why and when these sentences were used. The employers similar to the teachers preferred specific sentences, but those learning outcomes that describe a longer study period. Like the teachers, the employers considered that mastering some learning outcomes was closely related to the students' personal traits, which disagrees with the standpoint of learning outcomes based education.

The fourth question was how the employers stated a potential employee's knowledge

and skills and whether the title of qualification written in the diploma helped. To determine a potential employee's knowledge and skills, the employers usually used job interviews and prohibition. The title of qualification written in an applicant's diploma might help only partly in this case, for example, a diploma indicated the economic sector and also the professional qualification level of the Latvian vocational education. The other view was that formal education documents did not have any meaning comparing to the actual knowledge and skills possessed by the applicant. As was stressed by an employer, also a university graduate could acquire the same learning outcomes as vocational education student, but through work experience.

Discussion

The Students' Understanding of Their Occupation

Although the majority of the students in the survey could not write the title of their qualification correctly, the main reason for choosing their education was interest about the occupation. The data analysis indicated that for the students the title of qualification was not important or the respondents did not really relate it to their future occupation. The employers agreed that the title of qualification did not have an explicit meaning. Thus, qualifications awarded after graduating a vocational education programme do not include sufficient and clear reference about the holder's knowledge, skills and competences. Also according to Cedefop's study (2009), the employers were more concerned about graduates' knowledge and skills, not diploma or qualification they had. Learning outcomes may provide not only guidelines for arranging study process, but also promote the transparency of education programmes and awarded qualifications (Cedefop 2009). This non-reliance in the capability of education establishment to ensure a complete acquisition of occupation raises doubts about the value of education and the role of education in economy. Due to the negative demographic tendencies and ongoing vocational school network reform in Latvia, the competition between schools increases and the school administrations have to take measures showing the added value of the education on offer to attract students.

Another contradiction observed was that the students had interest about the occupation without a thorough understanding of particular profession. Of course, the students might not wish to admit their ignorance regarding the future occupation. Regarding the teachers and the employers, the students completely comprehended the occupation only during the practical learning in enterprises; although the students' understanding could vary with particular profession. The teachers and the employers stressed that the interest about occupation was crucial to motivate the students. Yet the evidence from the survey supported view that actually the students did not really link learning at school with their future occupation; consequently, the students were not interested in participating in education process. Hence in general the information about vocational education possibilities is insufficient for the potential students to take a sound decision about their future education.

Students' motivation could not be promoted only with the help of the learners' interest about their occupation, as the students did not always link learning situations with the work life. Therefore, learning outcomes should be used not only for informing students about their future profession, but also for changing the entire learning process and fostering the students' active participation in planning and conducting their learning. Other research shows that motivation and work performance is fostered by students' active participation in decision taking (Latham, Pinder 2005). The formulated learning outcomes also ensure a clear direction for learning. According to Locke and Latham (2006), the performance is improved when specific and difficult aims are defined comparing to the use of easy or ambiguous aims (Locke, Latham 2006). Since individuals choose their aims in line with their needs, values or with their perception of their

identity (Latham, Pinder 2005), learning should be organized in a manner for students to believe that they are capable to reach the defined learning outcomes.

Therefore, the challenge for the students was following the requirements of education standards, as stated by the teachers, due to the insufficient level of the students' general preliminary knowledge and skills. Yet the students and the employers stressed practical and vocational skills indicating that general subjects were not highly important for acquiring a profession. General subject syllabi in vocational education programmes are condensed versions of education standards for general education programmes. And stronger links between general and vocational subjects would help the students to grasp the context how learning situations are related to their occupation. In this case school could raise its importance as an institution where useful qualifications are acquired, and students would have a better understanding of their occupation prior practical training in an enterprise. Naturally such measures cannot be implemented without reviewing national education standards and introducing changes in the organization of education programme.

Learning Outcomes

Speaking about the most important general learning outcomes for a good specialist, the students in the survey focused more on various cognitive aspects and abilities to apply them in practice. In the respondents' future occupation the most significant learning outcomes were more related to social and interpersonal aspects, which would help in developing better contacts with clients and colleagues. The employers said that the students from technical programmes lacked skills to work with clients; thus, the students in a way were aware of the observed drawbacks. On one hand, the students saw themselves as individual and responsible workers and, on other hand, highlighted the meaning of teamwork and interpersonal relationships. Learner's autonomy is a crucial aspect in learning outcomes based education, and regarding research results, the students seemed to lack ability to work independently. Therefore, the promotion of vocational students' independence in their learning should be encouraged by arranging learning situations, in which the students solve meaningful problems and take decisions.

The differences in less important learning outcomes for a good specialist and the students' future occupation show that the students separated the acquisition of their qualification from a real professional activity. The grasp of culture and ability to use math, natural sciences and technologies seemed less important for the students both in general and in their occupation. These learning outcomes are included in the document of the European Parliament and of the Council (2006) on the key competences for lifelong learning; while math and natural sciences are considered as priority study directions in Latvia and in other countries. The students' view about the insignificance of the mentioned learning outcomes confirmed again that vocational students did not see general subjects as valuable. Regarding Cedefop's study (2009), in the European vocational education more stress on general knowledge, skills and competences may be observed, since they are required along with technical and practical learning outcomes. Hence, vocational education has to be managed in the way to comprise equally strong general and vocational aspects (Cedefop 2009).

The interviews with the teachers and the employers revealed that the interviewees did not have a clear understanding of the meaning of learning outcomes. For example, the interviewees said that achieving some learning outcomes depended on the students' personal traits. Naturally, all students cannot obtain expected learning outcomes equally or in the same way, but to a certain extent all students should be able to achieve the expected learning outcomes. Similarly in Cedefop's study (2009), in which the use of learning outcomes concept was explored in 32 European countries, conclusion was made that often the term of learning outcomes was not explicitly defined and a common understanding of its meaning did not exist. Therefore,

when introducing reforms to shift towards learning outcomes based education, all relevant stakeholders should be included (also students) for the process to be meaningful and accepted (Cedefop 2009). To build up some understanding of this concept, educational activities should be organized for teachers and employers in Latvia. The teachers' interviews also showed that the teachers, particularly general subject teachers, lack information about knowledge and skills necessary for their students' future occupation out of frames of a single subject. Therefore, to be able to introduce students with expected learning outcomes, their teachers should engage in their formulation in order to plan teaching and learning accordingly.

An unexpected issue in the teachers' and the employers' interviews was that some content items hindered the understanding of the whole learning outcomes sentences, because the examples were developed using normative documents. The conclusion may be drawn that information provided in these documents is not foreseen for a larger public and directly may not be used for informing education participants about expected learning outcomes. Thus, a specifically designed guide including relevant context should be designed for informative purposes involving all the stakeholders in the elaboration of these materials. This and similar collaboration between teachers and employers would improve the exchange of experiences to build up a mutual trust and a common understanding of the needed learning outcomes.

The employers paid more attention to the formulation of learning outcomes than the teachers, yet not all the corrections the interviewees mentioned could be used in learning outcomes based education. Partly these mistakes were made due to the lack of context, since the formulation of learning outcomes vary with their use scale (lesson, course or study year), context and target group. Referring to the conclusions of Cedefop's study (2009), a single correct way to formulate and use learning outcomes does not exist, and defining learning outcomes depends on several factors, e.g. level of activity, context of learning outcomes use and interaction between the stakeholders (Cedefop 2009). The teachers and the employers tended to accept the formulation of learning outcomes, which were comparatively general that were not related to a specific aspect of an occupation and simultaneously which were rather detailed providing relevant context for the use of learning outcomes.

Cedefop's study (2009) showed that the introduction of learning outcomes approach was often connected with the decentralization of national education management (Cedefop 2009). In a way the teachers and partly the employers wished to have more centralized approach to education management, which suggests that the stakeholders are reluctant regarding the reforms. Using learning outcomes in education, as stated in Cedefop's study (2010), requires changes in the decision making procedures, placing greater autonomy to education establishments and teachers to develop education process regarding students' needs. Yet the teachers and students in Germany and Netherlands did not support the shift to learning outcomes pointing out that this approach was too open and poorly structured (Cedefop 2010).

Students' Learning Assessment

Regarding the students' survey and the teachers' interviews, the teachers usually informed their students about assessment criteria, and mostly these criteria were clear for the students. However, the teachers seemed to refer to the point system they applied for the students' assessment. The teachers agreed that the point system could not be used for all learning situations. The point system may help in determining numeral assessment of students' work, yet the criteria mentioned by the interviewees did not include descriptions of knowledge, skills and competences students should obtain. This aspect was also proved by the fact that the students appeared to have less comprehension of assessment criteria for home assignments, which the students had to do independently. The learning outcomes may serve as guidelines for students' learning assessment, but as the learning outcomes were not used to formulate assessment

criteria, the students had no reference when learning individually. In broad terms, the point system may assist the teachers to express the students' performance in a certain numerical value, but this approach does not aid the students to become active participants of learning, who plan and direct their learning in line with certain education standards.

Cedefop's study (2009) also showed that the use of learning outcomes for students' performance assessment was quite limited; therefore, this aspect should be particularly addressed when shifting towards learning outcomes based education. To implement the mentioned approach to education, formative assessment methods should be used more and traditional final exam system or the use of tests' results should be changed (Cedefop, 2009).

Conclusions

The interviewed teachers and employers do not have a profound understanding of the concept and use of learning outcomes in vocational education. When introducing reforms related to learning outcomes, at national level informative educational activities about learning outcomes based education and students' assessment should be organized, also via social networks, for all stakeholders of vocational education. Specifically designed materials and guidelines should be applied for public information purposes.

When using learning outcomes in vocational education, the attractiveness of vocational education is promoted because potential and present students are provided with comprehensive guidelines about vocational education possibilities, and the students may become active and more autonomous participants in planning and conducting their learning. Learning outcomes assist in raising students' interest in learning and understanding of their future occupation, since learning outcomes draw links between general and vocational subjects, provide relevant professional context for learning situations. Thus, the hypothesis of this study was verified.

According to the results of this study, vocational students, teachers and employers are not ready for the changes related to the shift towards learning outcomes based education.

The qualifications awarded to vocational education graduates are not sufficiently transparent because these qualifications do not include necessary information for employers about holder's knowledge, skills and competences. Providing this information is highly important since the employers are more interested in actual learning outcomes of qualification holder regardless how the qualification has been acquired.

Students' interest about their future occupation does not always imply an active participation in learning situations because the students do not directly relate theoretical learning to their profession. Thus, attraction to an occupation may not serve as the only aspect when recruiting new students. Since the students do not fully consider themselves as becoming independent professionals, the learning should foster students' responsibility and autonomy. This aspect also engages the general decentralization of education management providing a greater autonomy for schools and teachers.

When formulating learning outcomes, relevant context, scale and target group should be considered for the learning outcomes to be useful. Public learning outcomes should be sufficiently general statements without very specific professional terms, yet the sentences should describe a particular aspect of knowledge, skills or competences providing some professional field context.

The point system used for students' learning assessment does not include sufficient information about the students' knowledge, skills and competences, particularly in case of independent learning. Applying learning outcomes for the students' assessments would promote the learners' autonomy to plan and direct their learning.

The suggested changes in the education process organization also require reviewing education standards and the procedure of national final exams. The vocational education

programmes may not be based only on practical learning since present economic developments demand acquisition of general knowledge, skills and competences, which ensures flexibility and autonomy in changing work and life situations.

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