

WORK-BASED-LEARNING DEVELOPMENT IN LATVIA: SUCCESS AND FURTHER CHALLENGES BY VIEWS OF EDUCATORS, EMPLOYERS AND STUDENTS

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ABSTRACT

Latvia is among countries showing significant results in the introduction and implementation of work-based learning – being a country with historically school based vocational education and training system. The current research is devoted to the analysis of developments and challenges of work-based learning in Latvia - by views of entrepreneurs, educators and students. Research methods used were: scientific publications and previous conducted research analysis, analysis of survey results of entrepreneurs, educators and students on several aspects of work-based-learning. To have deeper analysis of specific aspects of work-based-learning the respondents were asked to evaluate the analysed aspects in scale 1 – 10, where 1 – do not agree and 10 – fully agree. In the implementation of the survey the Confederation of Employers of Latvia was involved. Survey data analysis methods were: descriptive statistics (indicators of central tendency or location – arithmetic mean, mode and median, indicators of variability – standard deviations, standard error of mean), cross-tabulations of evaluations by educators, entrepreneurs and students by their information level on entrepreneurship development possibilities in Latvia, testing of statistical hypotheses on differences of arithmetic means by t-test, by analysis of variance (ANOVA) for significance of evaluations' differences regarding the received support for the implementation of work-based learning. Results of analysis has indicated that Latvia has made a significant progress and presents achievements in the education and training of qualified specialists, as well as is aware of challenges. This refers to several innovative approaches that could be applied to find best solutions for a successful implementation of work-based-learning for the preparation of qualified specialists for the economic development of Latvia.

Keywords: *Educators, Employers, Public administration, Students, Work-based-learning*

1. INTRODUCTION

Academic research world-wide has paid great attention to various aspects of employees' qualification, as the development of new technologies requires staff with varied skills and flexibility in adopting to new approaches and paradigms. In many European countries work-based learning has been introduced as a successful mode of training in preparing qualified and highly skilled employees for companies. The employers' in this way are able to satisfy their requirements for highly skilled and well educated personnel familiar with recent technology and industry developments. Latvia has had a successful history for introducing work-based learning in a country with basically a school-based vocational education system. Since 2013 the governments took serious consecutive steps, including a piloting phase, before respective legislation was adopted in 2016. The public consultancy in this respect involved various stakeholders: employers, vocational education institutions, students, public administrations. By 2019 a substantial experience had been gained allowing to consider work-based learning one of mainstream forms for acquiring a vocational qualification.

The current research is devoted to the perception of work based learning developments and challenges by views of entrepreneurs, educators and students based on the results of a survey performed in 2019. Research methods used: scientific publications and previous conducted research analysis, analysis of survey results of entrepreneurs, educators and students on several aspects of work-based-learning. To have deeper analysis of work-based-learning aspects respondents were asked to evaluate the analysed aspects in scale 1 – 10, where 1 – do not agree and 10 – fully agree. The Confederation of Employers of Latvia was involved in the survey to ensure a higher coverage of entrepreneurs involved in work-based learning processes. Survey data analysis methods: descriptive statistics (indicators of central tendency or location – arithmetic mean, mode and median, indicators of variability – standard deviations, standard error of mean), cross-tabulations of evaluations by educators, entrepreneurs and students regarding their information level on entrepreneurship development possibilities in Latvia, testing of statistical hypotheses on differences of arithmetic means by t-test, by analysis of variance (ANOVA) for significance of evaluations differences regarding support for implementation of work-based learning. Results of analysis has indicated that Latvia has significant achievements in education and training of qualified specialists through work-based learning schemes. Challenges were also identified indicating that several innovative approaches could be applied to invent better solutions for a successful implementation of work-based-learning in preparing qualified specialists for the economic development of Latvia, including the development and application of generic skills.

2. THEORETICAL FINDINGS

Various aspects of work-based-learning organisation and outcome findings are analysed by researchers from different perspectives world-wide: by employers' view, by educators view, by education management (including public administration) view. Specific methodologies and approaches for research on aspects of work-based-learning have been worked out by researchers (Costley, Elliott, Gibbs, 2010). Researchers world-wide are seeking for best solutions (Costley, Armsby, 2007; Costley, Lester, 2012) regarding various aspects of this process (Garnett, Abraham, Abraham, 2016) and for different models and approaches (Major, 2016), conceptualisation (Lester, 2004), like the purpose of (Lemanski, Overton, 2016) paper was to describe a new tool that can be used to help in the design and evaluation of work-based elements within programmes or to evaluate whole programmes. The paper has taken a case study approach to describe the development of the mapping tool ((Lemanski, Overton, 2016). The tool designed by (Lemanski, Overton, 2016) was based on a matrix which enables users to map four variables: teacher-centred delivery, employer-centred delivery and students outcomes in terms of knowledge and skills. The mapping tool (Lemanski, Overton, 2016) provides a useful approach to evaluating the outcomes for work-based learning activities. Aspects of work-based-learning are of great interest also in European Union institutions (CEDEFOP, 2010; CEDEFOP, 2011; CEDEFOP, 2012; CEDEFOP and European Training Foundation, 2013). The purpose of the paper of researchers from Australia - Baker, Peach, Cathcart was to assess the extent to which work-based learning could potentially improve education and training pathways in Australia (Baker, Peach, Cathcart, 2017). The paper of Baker, Peach, Cathcart reviews education and training provision in Australia through a contextualisation of the Australian Qualification Framework (AQF) with work-based learning pedagogy to determine the extent to which it might contribute to improved outcomes for learners. People seeking to advance their career aspirations can consider the application of work-based learning to support lifelong learning pathways through the AQF (Baker, Peach, Cathcart, 2017). The application of effective WBL approaches has the potential to create a much larger flow of learners from experiential and vocational backgrounds into undergraduate programmes and onto higher education programmes using a consistent and effective pedagogy (Baker, Peach, Cathcart, 2017).

By actively considering the opportunities for learning at work and through work, learners, educators and business managers may recognise that there would be more demand for work-based learning (Baker, Peach, Cathcart, 2017). Australian researchers are going deep into the process and discuss innovative approaches (Pitman, Vidovich, 2013). Researchers in different countries apply different methodologies in their research (Rowe, Perrin, Wall, 2016) in various study fields (Pavlova, 2013) taking into account varied approaches in curriculum development (Painter-Morland, et al, 2016) and diverse fields (Nonet, Kassel, Meijs, 2016), as well as different stakeholders (Meakin, Wall, 2013) and circumstances at practice (Billett, 2014) and working for sustainability (Akrivou, Bradbury-Huang, 2015) paying special attention to the role of leadership (Raelin, 2011). The aim of the paper by researchers (Siebert, Mills, Tuff, 2009) was to evaluate the role of learning from participation in a group of work-based learners. (Siebert, Mills, Tuff, 2009) study has relied on qualitative data obtained from a survey of perspectives of students on two work-based learning programmes: a group of 16 undergraduate and seven postgraduate students participated in a focus group and a number of one-to-one interviews. It was found that work-based learners learn effectively from both their community of practice in the workplace and their learning group of work-based learners within the university (Siebert, Mills, Tuff, 2009). The study suggests that a learning group experience is valued highly by work-based students and that dialogue with other students in the learning group appears to make a significant contribution to enhancing their knowledge (Siebert, Mills, Tuff, 2009). The findings of the researchers have implications for the design of work-based learning programmes (Siebert, Mills, Tuff, 2009). The approach of researchers that integrate learning from the students' workplace community of practice and learning from the learning group at the university appears to be most effective (Siebert, Mills, Tuff, 2009). The research results of researchers from United Kingdom have been discussed in the paper (Wall, et al, 2017), including data from action research to present a case study of a Climate Change Project conducted through a work-based learning module at a mid-sized university in the UK. Researchers (Wall, et al, 2017) have developed approaches to sustainability and climate literacy and their case study has demonstrated how a form of work-based learning can create a unifying vision for action, and do so across multiple disciplinary, professional service, and identity boundaries. In addition, the project-generated indicators of cultural change including extensive faculty-level climate change resources, creative ideas for an innovative mobile application, and new infrastructural arrangements to further develop practice and research in climate change (Wall, et al, 2017). This paper provided an illustrative example of how a pan-faculty work-based learning module can act as a catalyst for change at a higher education institution (Wall, et al, 2017).

3. EMPIRICAL RESEARCH RESULTS

This empirical part of current research is devoted to the analyse of development and challenges of work-based-learning by views of entrepreneurs, educators and students. The survey was developed for all above mentioned stakeholders having both – target group specific questions as well as common questions for all three target groups, e.g., the most needed generic skills for a modern and qualified employee. In the implementation of the survey the Confederation of Employers of Latvia was involved. Main indicators of descriptive statistics of survey results of entrepreneurs, vocational education school management and vocational education school students are reflected in table 1.

Table following on the next page

Table 1: Main statistical indicators of evaluations on question “Do you think that WBL is useful approach in education to obtain good professional education?” by employers, vocational education students and school management in 2019 in Latvia

		Employers	Students	School management
N	Valid	671	683	35
	Missing	177	219	14
Mean		8,26	7,81	8,09
Standard Error of Mean		0,063	0,078	0,311
Median		8	8	8
Mode		10	10	8; 10
Standard Deviation		1,627	2,028	1,837
Variance		2,647	4,112	3,375
Range		9	9	9
Minimum		1	1	1
Maximum		10	10	10

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

It is a promising finding that the highest evaluations were given by the entrepreneurs with arithmetic mean of the evaluations 8,26 (in scale 1-10) although, however, were lower than for vocational education school management and vocational education school students characterised by indicators of variability - these were lower as for other groups. Half of entrepreneurs have given evaluation 8 or less and half of entrepreneurs gave evaluation 8 or more (characterised by median). The most often given evaluation by entrepreneurs was 10 (characterised by mode), given by 30.3 percent of all entrepreneurs who answered this question. Since the views of entrepreneurs are crucial for the success of work-based learning, the distribution of evaluations is reflected in the table 2.

Table 2: Distribution of responses of evaluations on question “Do you think that WBL is useful approach in education to obtain good professional education?” by employers in 2019 in Latvia

	Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	0,4	0,4	0,4
	2	1	0,1	0,1	0,6
	3	2	0,2	0,3	0,9
	4	6	0,7	0,9	1,8
	5	36	4,2	5,4	7,2
	6	43	5,1	6,4	13,6
	7	79	9,3	11,8	25,3
	8	195	23,0	29,1	54,4
	9	103	12,1	15,4	69,7
	10	203	23,9	30,3	100,0
	Total	671	79,1	100,0	
Missing	System	177	20,9		
Total		848	100,0		

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The success of work-based-learning is highly evaluated by the vocational education school management with arithmetic mean of the evaluations 7,81 (in scale 1-10), although the whole evaluation scale was covered by vocational education school students. Still, the differences in evaluations were rather low characterised by indicators of variability which were lower as for other groups. Half of vocational education school students have given evaluation 8 or less and half of entrepreneurs gave evaluation 8 or more (characterised by median). The most often given evaluation by vocational education school students was 10 (characterised by mode) given by 25.5 percent of all respondents who answered this question. As the views of vocational education school students – as the future labour force - are so important the distribution of evaluations is reflected in the table 3.

Table 3: Distribution of responses of evaluations on question “Do you think that WBL is useful approach in education to obtain good professional education?” by vocational education students in 2019 in Latvia

	Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	1,6	2,0	2,0
	2	4	0,4	0,6	2,6
	3	5	0,6	0,7	3,4
	4	13	1,4	1,9	5,3
	5	62	6,9	9,1	14,3
	6	49	5,4	7,2	21,5
	7	107	11,9	15,7	37,2
	8	145	16,1	21,2	58,4
	9	110	12,2	16,1	74,5
	10	174	19,3	25,5	100,0
	Total	683	75,7	100,0	
Missing	System	219	24,3		
Total		902	100,0		

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The importance of the work-based-learning is highly evaluated by the vocational education school management with arithmetic mean of the evaluations 8,09 (in scale 1-10) although almost the whole evaluation scale was covered by vocational education school management. Still, the differences in evaluations are rather low characterised by indicators of variability which was the highest as for other groups. Half of vocational education school management have given evaluation 8 or less and half of entrepreneurs gave evaluation 8 or more (characterised by median). The most often given evaluation by vocational education school management was 8 and 10 (characterised by mode) given by 25.7 percent of all vocational education school management who answered this question. As the views of vocational education school management are so important – as the key support stakeholder and intermediare between the student and employer – the distribution of evaluations is reflected in the table 4.

Table following on the next page

Table 4: Distribution of responses of evaluations on question “Do you think that WBL is useful approach in education to obtain good professional education?” by vocational education managers in 2019 in Latvia

	Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	2,0	2,9	2,9
	5	1	2,0	2,9	5,7
	6	2	4,1	5,7	11,4
	7	7	14,3	20,0	31,4
	8	9	18,4	25,7	57,1
	9	6	12,2	17,1	74,3
	10	9	18,4	25,7	100,0
	Total	35	71,4	100,0	
Missing	System	14	28,6		
Total		49	100,0		

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The sustainability of work-based-learning to a great extent is depending on the entrepreneurs and their willingness to accept students in work-based-learning also in future or lack of willingness to accept students in work-based-learning also in future – main statistical indicators are reflected in table 5.

Table 5: Main statistical indicators of evaluations on question “Do you think that WBL is useful approach in education to obtain good professional education?” by employers willing or not to accept students for WBL in future in 2019 in Latvia

Students for WBL in future	N	Mean	Standard Deviation	Standard Error Mean
1	48	7,60	2,039	,294
10	113	9,02	1,598	,150

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The differences of averages in evaluations on entrepreneurs willingness of accepting students in work-based-learning also in future or not willing to accept students in work-based-learning also in future are different – main results of testing the significance of differences with t-test are reflected in table 6.

Table 6: Main statistical indicators on testing of differences by t-test in evaluations on question “Do you think that WBL is useful approach in education to obtain good vocational education?” by employers willing or not accept students for WBL in future in 2019 in Latvia

Levene's Test for Equality of Variances			t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	7,781	0,006	-4,715	159	0,000	-1,414	0,300
Equal variances not assumed			-4,277	72,635	0,000	-1,414	0,331

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The differences of averages in evaluations on entrepreneurs are different – main results of testing the significance of differences with analysis of variance (ANOVA) are reflected in table 7.

Table 7: Main statistical indicators on testing of differences by ANOVA on question “Do you think that WBL is useful approach in education to obtain good vocational education?” by employers wvaluations on willingness to accept students for WBL in future in 2019 in Latvia

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	98.791	9	10.977	4.264	0.000
Within Groups	1263.844	491	2.574		
Total	1362.635	500			

Source: Ilze Buligina organised survey, evaluation scale 1-10, where 1- do not agree; 10 – fully agree

The results of research indicate that entrepreneurs evaluations are varied and it would be useful to have a deeper analysis of reasons and on the possibilities for improving the situation.

4. CONCLUSION

Work-based-learning as an approach for preparation of qualified specialists in different fields of national economies is getting more and more importance world-wide. This has been studied in detail by academic researchers in many counties around the globe, by applying different research methodologies, and by paying most attention to employers', educators' as well as students' role and contribution to the success of the process. All of these stakeholders have their own unique role and importance in the process of work-based-learning. Results of analysis has indicated that Latvia has significant achievements in the education and training of qualified specialists by the implementation of work-based learning. The involved stakeholders acknowledge the offered possibilities and support, as well as the achieved results in training specialists according to modern labour market requirements. At the same time challenges were identified indicating to several innovative approaches that could be applied for a successful implementation of work-based-learning for the preparation of qualified specialists in economic development of Latvia. This is especially true regarding generic skills needed for qualified specialists.

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