

Role of Cooperation with Stakeholders in Work-Based Learning Realization

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Abstract. Work-based learning is becoming a critical factor of vocational education in Latvia. A work-based learning system in this kind of education involves professional education schools, entrepreneurs, municipalities, public administration from the Ministry of Education and Science, several professional associations, and branch expert councils. In our research, we have compared evaluations of entrepreneurs, vocational education school managers, and students on their views on the cooperation of different stakeholders in realizing work-based learning. The assessment was carried out on the importance of cooperation of various stakeholders in realizing work-based learning with the Confederation of Employers of the Republic of Latvia. Most aspects were evaluated on a scale of 1-10 to get views of different groups and use various statistical indicators to analyze those evaluations by descriptive statistics, testing statistical hypotheses with t-test, and analysis of variance, using correlation analysis. Research results indicated that evaluations by different stakeholders are pretty similar on work-based learning analyses aspects by various groups, such as vocational education school managers, students, and entrepreneurs.

Keywords: Work-based learning, entrepreneurs, school management, students

1. Introduction

Work-based learning is becoming a crucial factor of vocational education in Latvia. It is created a work-based learning system in vocational education involving professional education schools, entrepreneurs, municipalities, public administration from the Ministry of Education and Science, several professional associations, and branch expert councils. In our research, we have compared evaluations of entrepreneurs, vocational education school managers, and students on their views on the cooperation of different stakeholders in realizing work-based learning. The evaluation was carried out on the importance of cooperation of various stakeholders in realizing work-based learning in the Employers' Confederation of the Republic of Latvia. Most aspects were evaluated on a scale of 1-10 to get views of different groups and use various statistical indicators to analyze those evaluations by descriptive statistics, testing statistical hypotheses with t-test and analysis of variance, using correlation analysis.

2. Literature Review

Work-based learning in many countries has been recognized as very effective for the education of competitive employees. The approach was needed to have closed cooperation of vocational education and companies, and researchers have investigated all aspects of such an approach (Thurgate, 2021). In order to prepare recommendations for practical policy implications for the successful organization of work-based learning, it is significant to pay attention to all aspects for work-based learning organization and realization, including teaching staff (Rooney-Kron & Dymond, 2021), organization of the teaching process (Siebert et al., 2021; Bezerra et al., 2021) and organization of study process (Rosendale & Wilkie, 2021). Successful organization of all involved parties is of great importance (Wall et al., 2017). Good organization of cooperation of education establishment and industry (Ismail et al., 2021). Researchers have analyzed the best and innovative approaches (Lewis, 2020) and have developed interesting and valuable practical suggestions for better organization of work-based learning. Many countries have studied and used experience in the Netherlands (Onstenk & Blokhuis, 2007), in Australia (Baker et al., 2017), in England (Esmond & Atkins, 2020), in Ireland (Eiríksdóttir, 2020), in Swiss (Sauli et al, 2021), in Indonesia (Rahdiyanta et al., 2018), in Nigeria (Haruna et al., 2019), in European Union (Crisonà, 2021), in Germany and England taking into account cross-national training (Lahiff et al., 2019) with attention on possible future leaders (Aziz, 2020), to theory and practice joint importance (Orozco et al., 2019) and how it changes leaders (Raelin, 2011) and best possible organization of education process (Ciptono et al., 2021; Harris et al., 2013; Carpentier et al., 2011) using innovative and creative approaches (Fletcher & Haynes, 2020; Detgen et al., 2021) and special attention to teaching staff (Crane et al., 2021) to their professional competence regular update and research findings (Fergusson, et al, 2021) as well as

innovative approach of work-based learning organization (Hamdani & Suherman, 2021). For successful education of qualified employees, including by realization of work-based learning crucial role is industry involvement (Overton & Lemanski, 2016; Raudeliuniene et al., 2020; Thompson et al., 2021) as employers have very big importance to get qualified employees whose knowledge and skills correspond with the requirements of labor market taking into account technology development in the respective industry and needs in it.

3. Research Results and Discussion

For evaluation of realization aspects of work-based learning in Latvia, it was organized survey of employers, vocational education school students, and vocational school managers – all of them are essential participants in the efficient realization of work-based learning. All three involved partners were asked the same questions to evaluate the situation from different involved. As in scientific publications, it is recognized that the vocational education process depends on many factors – also from different partner involvement and degree of their interest in education results.

Leading statistical indicators of evaluations by entrepreneurs on cooperation with social partners on work-based learning are presented in Table 1.

Table 1: Leading statistical indicators based on entrepreneurs' evaluations in Latvia in 2019

		Support from the education institution	Support from branch association	Support from branch expert councils	Support from municipality	Support from the regional coordinator	Support by other institution
N	Valid	505	488	480	483	486	252
	Missing	0	17	25	22	19	253
Mean		6.91	5.77	4.96	4.42	5.67	3.62
Standard Error of Mean		0.122	0.139	0.138	0.141	0.140	0.198
Median		8	6	5	4	6	2
Mode		10	1	1	1	1	1
Standard Deviation		2.733	3.080	3.021	3.106	3.083	3.151
Variance		7.471	9.484	9.126	9.646	9.508	9.926
Range		9	9	9	9	9	9
Minimum		1	1	1	1	1	1
Maximum		10	10	10	10	10	10

Source: authors' measurements based on a survey of entrepreneurs' data, evaluation scale [1-10], where 1- do not agree; 1 - agree in full extent

Data indicate that there are relatively similar evaluations with more considerable average evaluations for support by education institution of work-based learning with arithmetic mean of evaluations by 6.91 and median 8: evaluation 8 or less was given by 50% of entrepreneurs and evaluation 8 or more was given by 50% of entrepreneurs. For this aspect, entrepreneurs gave a rather similar assessment with the smallest variability indicators – standard deviation and standard mean error. Other assessment averages also indicate the importance of all analyzed aspects, confirming the importance of good cooperation of companies with education establishments, professional associations, and branch expert councils.

Leading statistical indicators of evaluations by entrepreneurs on cooperation with social partners on work-based learning are demonstrated in Table 2.

Table 2: The most important statistical indicators on evaluations by vocational school students in Latvia in 2019

		Support by other students involved in WBL	Support by employer	Support by WBL supervisor in the company	Support by family	Support by a supervisor at school	Support by school	Support by municipality
N	Valid	438	442	437	439	437	436	436
	Missing	4	0	5	3	5	6	6
	Mean	6.80	7.54	7.63	8.15	7.75	7.59	5.87
	Standard Error of Mean	0.122	0.110	0.103	0.096	0.099	0.100	0.142
	Median	7	8	8	9	8	8	6
	Mode	8	10	10	10	10	10	1
	Standard Deviation	2.557	2.307	2.146	2.009	2.060	2.090	2.965
	Range	9	9	9	9	9	9	9
	Minimum	1	1	1	1	1	1	1
	Maximum	10	10	10	10	10	10	10

Source: authors' measurements based on a survey of students' data, evaluation scale [1-10], where 1- do not agree; 1 - agree in full extent

For vocational education students, most important for their successful studies is support by the family with arithmetic mean of the evaluation by students 8.15 with mode 10 (most often assessed by respondents) and median 9 (half of the students

gave evaluation 9 or less and half of the students gave evaluation 9 or more). For this aspect, the views of vocational education students were alike – it is indicated by the smallest indicators of variability: standard deviation and standard error of the mean. An important aspect is also vocational school managers, as the successful realization of work-based learning largely depends on vocational school managers. Main statistical indicators on the importance of cooperation with different stakeholders by vocational school management are demonstrated in Table 3.

Table 3: Leading statistical indicators on evaluations by the vocational school management in Latvia in 2019

		Cooperation with branch association	Cooperation with branch expert councils	Cooperation with municipality	Cooperation with regional WBL coordinator	Cooperation with other institutions
N	Valid	28	28	27	28	22
	Missing	0	0	1	0	6
Mean		7.61	7.57	6.26	8.57	6.50
Standard Error of Mean		0.389	0.397	0.452	0.319	0.425
Median		8	8.5	7	9	7
Mode		9	9	7	9	5 and 7
Standard Deviation		2.061	2.098	2.347	1.687	1.994
Variance		4.247	4.402	5.507	2.847	3.976
Range		8	7	8	6	9
Minimum		2	3	1	4	1
Maximum		10	10	9	10	10

Source: authors' measurements based on a survey of school managers data, evaluation scale [1-10], where 1- do not agree; 1 -agree in full extent

Data indicate relatively similar evaluations with more considerable average evaluations for cooperation with the regional coordinator of work-based learning with arithmetic mean of evaluations by 8.57 and minimal evaluation 4. For this aspect, vocational education school managers gave similar assessments with the smallest variability indicators – standard deviation and standard error of the mean.

Authors have tested statistical hypotheses to evaluate – are the differences of evaluation average by vocational school managers are statistically different – analysis of variance – ANOVA tests the averages of the evaluations. Data of ANOVA results are presented in Table 4.

Table 4: Analysis of variance ANOVA on differences in expert evaluations by the vocational education school management in Latvia 2019

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	93.012	4	23.253	5.542	0.000
Within Groups	537.078	128	4.196		
Total	630.090	132			

Source: created by authors' calculations based on survey data, evaluation scale 1-10, where 1- do not agree; 1- agree in full extent

Data indicate that there are relatively significant differences in evaluations of vocational school management on different aspects in cooperation of various stakeholders in the realization of work-based learning in Latvia in 2019. Still, according to the ANOVA results, they do not differ statistically significantly by high probability (sig. 0.000).

The difference on highest evaluations of vocational education managers was on cooperation with branch associations and cooperation with regional work-based learning coordinator in Latvia in 2019 was tested with t-test on the statistical significance of differences. The leading statistical indicators of the t-test are demonstrated in Table 5.

Table 5: The most important statistical indicators by t-test on differences in average on cooperation with branch association and cooperation with regional WBL coordinator Latvia in 2019

Levene's Test for Equality of Variances			t-test for Equality of Means				
	F	Ssig.	t	ddf	Sig. (2-tailed)	Mean Difference	Standard Error Difference
Equal variances assumed	20.137	00.150	- 1.916	54	0.061	-0.964	0.503
Equal variances not assumed			-1.916	51.973	0.061	-0.964	0.503

Source: authors' measurements based on a survey data, evaluation scale [1-10], where 1- do not agree; 1 - agree in full extent

Research results indicated that many analyzed aspects are essential. Even some differences in evaluations of all involved parts in work-based learning have stressed the right way of organization and realization of the process.

4. Conclusions

- 1) Cooperation of different stakeholders in the realization of work-based learning is an essential aspect for the teaching of competitive employees for successful development of entrepreneurship and economic development, taking into account rapid technology changes and requirements in different industries.
- 2) In Latvia, entrepreneurs have been evaluated as most important for work-based learning successful development good cooperation with education establishments and professional associations.
- 3) Vocational education students, as most important, have indicated support by the family and local coordinator for work-based learning.
- 4) Vocational school managers, as the most important, have indicated good cooperation with regional work-based learning coordinators and professional associations.

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