Competence-Based Development Of Curriculum In Higher Education Institutions, In Accordance With Dynamic Labor Market Requirements: The Case Of Kosovo

Bekim Marmullaku, PhD
University for Business and Technology, Prishtina, Kosovo
Email: bekimi05@yahoo.de

Arsim Marmullaku, MA
Email: arsim@t-online.de

Abstract—**Matching the competencies achieved in studies with labor market needs and the effects of business - university cooperation are some of the questions raised in this research and Kosovo is taken as a study case. A quantitative approach was used, collecting data through questionnaires made for samples of three groups (businesses, HEIs and, graduates). The data used in the paper are gathered from the survey that was conducted by the authors during the period March – October 2020, in the Republic of Kosovo. This paper presents descriptive data analysis and empirical findings, the results of which are obtained through various statistical tests, mainly through the Independent Samples t-test the One Way ANOVA Test.**

The results of the empirical findings show a mismatch between the competencies offered by university programs and those that employers and the labor market requirements.

The results of the testing done through statistical tests show that there is a mismatch between businesses (that is employers) and universities and other higher education institutions, in terms of the perception of matching competencies that graduates possess and job requirements.

Keywords—competencies, curricula, higher education institution, industry.

JEL: E24, I23,

1. Introduction

The role of education and especially of higher education is considered to be a decisive factor whose influence promotes social and economic development in modern societies. For this reason, it is becoming increasingly necessary to establish a dynamic relationship between businesses and Higher Education Institutions (HEIs), especially in their cooperation in designing university curricula and in the use of adequate methods in defining and designing the competencies of that program, following the needs of the labor market. Numerous 21'st century studies on the Economics of Education have argued for the need to move away from the traditional approach to academic education towards competency-based teaching. This would be possible through the development of postmodern curricula, which would also enable graduates to access the labor market more easily and more quickly.

Numerous researchers in their research have pointed out that only theoretical knowledge and memorization of this knowledge does not provide students with sufficient skills to face the challenges of the modern labor market. Nowadays, employers are looking for graduates who can operate in complex work environments, characterized by well-defined problems and actions, by accepting conflicting information and, by participating in dynamic and highly integrated processes (Edwards, Sánchez -Ruiz & Sánchez-Díaz, 2009).

Consequently, educational institutions should aim to meet the needs of a dynamic labor market and equip students not only with theoretical knowledge but also with the competencies needed to put it into practice, competencies that need to be clearly defined and measured. by writing and defining Learning Outcomes for each study program and the subjects in particular. "Competencies represent a dynamic combination of knowledge, understanding, skills, and values" (Belasen & Rufer, 2007; Berge et al, 2002) which allow individuals to be responsive to and respond to market signals. only as required in theory, but most importantly to meet the practical requirements required in their workplace.

Since a quality education does not mean that it is just an attempt to achieve some pre-defined skills in the curriculum, but it also has to do with the possibility of realizing the full potential and ability to use these skills for a greater good for oneself and others (Dewey, 1918, 1966; Mille & Seller, 1985), then the task of curriculum development requires a more comprehensive approach.

Even in Kosovo and the region, the higher education system is facing serious challenges. The continuing increase in the number of students enrolled in challenges the limited opportunities and resources of public universities. At the same time, the number of private universities is growing rapidly. It is very

important to increase the commitment to ensure that qualifications in higher education meet the demands of the labor market. Ultimately the value of a university degree is determined by the job market.

1. Overview of the competencies defined in the study programs

2.1. Overview of curricula, contents, processes used in curriculum development in university programs

The term 'curriculum' used within the context of higher education may have different meanings for different groups (Barnett and Coate 2005; Fraser and Bosanquet 2006). Within higher education, a curriculum or study program is the key issue in the relationship between students, teaching staff, and the university.

Education theorists (Mednick, 2006; González, Quesada, J. Mueller, & R. Mueller, 2011) see the curriculum as a broader concept and therefore characterize it as "A body of knowledge" or "product"; as a process; as experience (practice) and as a content.

Despite the value of traditional concepts in curriculum development, the current global dynamics and multidimensional challenges of contemporary society and the ever-increasing demands that curricula adapt to the dynamics of technological change and labor market demands require a different approach and application of new models in curriculum design. For this reason, some experts in the field of education recommend that the curriculum envisage broader goals and learning objectives of educational institutions that include the social, cultural, political, and religious values of a society (Krull & Kurm, 1996) and a wider range. of knowledge and skills, where the student at the end of the study achieves competencies for multiple actions for the benefit of the work and activity where he operates.

2.2. Development of university curricula based on competencies and learning outcomes and access to them in universities of developed countries

In recent decades, the general environment or macroenvironment surrounding educational institutions has undergone drastic and dramatic changes. Causes of these changes include the emergence of a global market that is more connected and integrated; an open and free economic system; a friendly and democratic political investment system; revolutionary changes in the field of information and communication technologies (Hallinger & Snidvongs, 2008). This external influence has led several educational institutions to engage in curriculum revision to identify the desired learning outcomes (Alstete, 2004; Lucas, 2000; Wolf & Hughes, 2007).

A postmodern approach to curriculum development

The dynamics of changing labor market demands, the exponential growth of the number of private and public universities and colleges in the world, and the programs that offer them, advancements and new technological developments, have inevitably led to the process of curriculum development and applied models in their development and design to be in step with these developments. This has led curricula today to experience the postmodern period of their development or as they are otherwise called postmodern curricula.

The concept of postmodernity in curriculum development is still evolving. With this, it can be said that even the definition of postmodernism is still developing. Bullock et al (1988, p. 672) on this issue states: "It remains an amorphous body of developments and directions marked by eclecticism, pluro-culturalism and often appears as a post-industrial and high-tech reference framework, along with a skeptical view of technical progress. "It is clear, then, that the very lack of a definitive definition so far is the best current definition of postmodernity. Hargreaves (1995) sees the signs of postmodernity in philosophical and economic terms.

Another model for the curriculum design process in higher education institutions is that designed by Geraldine O'Neill (2015) from University College Dublin. According to the author, this model has been developed based on the work and experience of her and her collaborators, in previous studies on the curriculum design process (O'Neill et al, 2014; Galvin & O'Neill, 2014; O'Neill & McMahon, 2012; O'Neill, 2010; O'Neill & Hung, 2010; Keenan & O'Neill, 2008).

There is still no clear and definitive definition of the term "competence" in a university curriculum and the content that this term used in this context should have.

Today, there is an increasingly broad community of diverse academics, researchers, and scholars, and especially a strong community of employers, who strongly support the idea that young graduates in addition to needing basic theoretical knowledge, who are at the end of the study program should also be equipped with a set of competencies that enable them to be more comprehensive when faced with new and unknown challenges in the labor market.

For this reason, university stakeholders are increasingly concerned that a study program or curriculum as a whole meets the interests and requirements of employers and the effectiveness of that program in general, in this context. There is a consensus among stakeholders that graduates in addition to theoretical knowledge, at the end of their studies they should be equipped with skills, abilities, and attitudes to respond to the demands of the job

In the modern education system in the world, recently, with a high dynamics is changing the picture in response to the demands of the labor market which is increasingly focused on competencies and requires from the education sector a shift towards learning

based on competencies (Vervenne & Xheneumont, 2005).

2.3. Overview of the labor market in Kosovo

Current statistics show that many young people in Kosovo are unemployed and a large number of them have higher education degrees. The process of searching and finding a job after completing university studies is long. Among other things, such a situation suggests that employers do not have a high rating for university degrees. Such a situation remains to be discussed both by stakeholders in higher education and the labor market, as well as by academic circles.

In Kosovo, there is a very high percentage of youth participation in higher education. Kosovo ranks eighth in the world with the participation rate in higher education with 84.23% registered aged 18-22 years. Whereas, in Europe, with this participation, it is ranked immediately after Greece, Spain, Belarus, and Finland ("Implementation of Kosovo education strategic plan in 2017", KEEN - 2017). The same situation of ranking Kosovo between the countries of the world and Europe results even if we take the ratio of the number of students enrolled in every 100,000 inhabitants of that country.
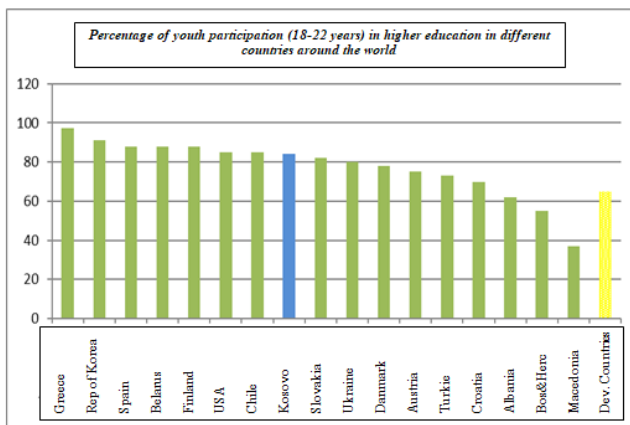

Figure 1- Percentage of youth participation (18-22 years) in higher education in different countries around the world

It is worrying that despite the large number of young Kosovars attending studies, university programs, and the offer of higher education in general in the country, it is inconsistent with the demands of the labor market. This is also stated in the Strategic Plan for Education in Kosovo 2017 -2021, made by the Ministry of Education, Science and Technology of Kosovo (MEST), among other things it states: ". all research in Kosovo shows that there is a large discrepancy between supply of higher education and labor market demands

Thoughts mainly focus on the quality of higher education and the competence of the graduates to perform work of the level and profession for which they graduated. This perception mainly comes from employers in both the private sector and those in state institutions. Also, the large number of students in

relation to the population in Kosovo has influenced the increase of this percentage.

2.4. Research to date on matching competencies and learning outcomes defined in the curriculum with employers' requirements for those competencies and learning outcomes

One of the most important factors in curriculum design is the clear definition of the competencies that a graduate should have at the end of his / her studies. There is still a wide-ranging debate among scholars about what the term actually means and how it can be defined. According to the International Standards Board for Training and Performance Guidance (2005), the term competence refers to the knowledge, skills, or attitudes that enable a person to effectively carry out activities in a particular profession or function to the expected standards of employment.

Competence is the combination of skills, abilities, and knowledge needed to perform a particular task (US Department of Education National Center for Education Statistics (CCS), 2002). Cooperation between HEIs and employers in the development of curricula of study programs is a very current topic in the European Union, and is being discussed with great intensity in the context of the development of employment policies. This collaboration is often known as "university-business collaboration".

In the EU, many higher education institutions work in collaboration with local businesses to adapt existing study programs or to design entirely new programs (Healy et al., 2012). Therefore, in the EU territorial area, industry-HEI cooperation supported by local or regional organizations can promote economic growth in these territories. This cooperation between employers and HEIs is quite common and employers participate in decision-making or consultative bodies within HEIs in 22 EU countries, while they are actively involved in the development of curricula in 19 countries and such who often participate in teaching in 15 countries (Eurydice, 2014: 67).

In the Western Balkans, the trends of cooperation between HEIs and employers are quite low. Sometimes, these collaborations try to be encouraged by government support with various university collaboration projects.

The European Commission research "From the University to Employment: Higher Education Provisions and the Labor Market Needs in the Western Balkans" (2016), provides some data on the level of this cooperation. This study shows that only 21% of employers do this "often", while 34% never cooperate with HEIs in this way. Similarly, only 16% of employers cooperate heavily with HEIs for graduate recruitment and 29% do not cooperate in this way. Regarding the effect that cooperation has on study programs, to increase the matching of graduates' skills with jobs, 62% answered "too much", "too much" or "somewhat", while concerning cooperation on

recruitment, 78% of respondents in this study responded in the same way.

3. Research methodology

The aim of this research is to analyze and measure the match between the demand for Competencies and Learning Outcomes of graduates from employers in the labor market, and the competencies and Learning Outcomes offered by the curriculum of study programs by HEIs.

A survey was conducted with HEIs, businesses and graduates. The questionnaire surveyed 541 businesses, 16 universities and 654 graduates in three different questionnaires, separate for each groups. The survey was conducted during the period May 2020 - October 2020. To analyze the results, three statistical tests were used, such as:

1)A t-test was used to test the perceptions of universities and businesses separately against the maximum degree to test whether the perceptions of businesses or universities are biased to the extremes. The results of this test show that in fact the perceptions of both parties are not biased by extreme levels on the scale. 2) Independent samples t-test was used to compare the average differences between universities and businesses to test the main part of the hypothesis, ie the difference between the demand and supply for competencies that graduates receive from study programs. The results show that there are significant differences when it comes to perceptions about mastering and matching the competencies of study programs with the requirements of the job. 3) One Way ANOVA was used to compare the three research groups, so it was considered necessary to include the sample of graduates in the test to see if in fact they are the ones who contribute to this discrepancy, even in this case the results show that groups are different in perceptions. Therefore, as seen in the last column of the first table through these statistical tests mentioned above, the first hypothesis is not confirmed.

3.1. Description of results

3.1.1. Matching of competencies with the requirements of the workplace

Table 1: Independent samples t-test results to test the differences between businesses and universities in terms of perception of matching competencies that graduates possess and job requirements

Variable/factor	Business/Uni	N	Type of competence	Perceptions scale (P)	GAP (Average difference) $(P-P_{-1})$	t- value	Sig. (2-tailed)
Match of competencies with the labor market	Business	220	Generic	2.6528	-.70172	-6.698	0.000
	Universities	59		3.3545			
	Business	220	Specific	2.6210	-1.87253	-20.625	0.000
	Universities	59		4.4935			

Source: Survey conducted by the author

Table 1. shows the results of the Independent samples t-test for the differences between the perceptions of businesses and universities regarding the compliance of the generic and specific competencies of a study program with the requirements for those in the labor market. Data and GAP analysis clearly show differences in assessment, where the average difference from the degree of perceptions is -0.70 for generic competencies and -1.87 for specific ones. There is a high difference in the evaluation of specific competencies with a t-value of t = -20.62. Clearly, in both types of competencies, there is a statistically significant difference and for both, it is 0.00 <0.05.

3.1.2. Differences between perceptions of businesses, universities, and university graduates (One Way ANOVA test)

In the following tables, we present the results of One Way ANOVA through which we compared the statistical differences between businesses, universities, and graduates at the same time in terms of the averages of perceptions, expectations, and evaluations of these three samples of our research regarding generic and specific competencies.

Table 2: One Way ANOVA results to find differences between businesses, universities, and graduates regarding perceived compliance of generic and specific competencies with labor market requirements.

Variable/factor	Sample	N	Avarage	F- Value	Sig.
Matching of generic competencies with the demands of the labor market	Business	220	2.6528	50.114	.000
	Universities	59	3.3545		
	Graduates	260	3.7868		
	Total	313	2.9082		
Matching of specific competencies with the demands of the labor market	Business	220	2.6210	139.310	.000
	Universities	53	4.4935		
	Graduates	260	3.4026		

	Total	303	3.0259		

Source: Survey conducted by the author

From the table above, the One Way ANOVA results show differences in the averages of businesses, universities, and graduates in terms of matching generic and specific competencies with labor market requirements.

In the first row are the data of the averages of the three groups of this research regarding the compliance of generic competencies with the demands of the labor market. The average of businesses is only b = 2.65, compared to the average of universities with u = 3.35. Graduates give an average even higher than the other two samples with d = 3.78. The F-value is F = 50.11 and the statistically significant difference is sig. 0.00 <0.005, which means that there is less than a 1% chance that the results are random.

So, based on these data we can say that the perceptions of the samples are different even in the case of matching generic competencies with the labor market requirements for those competencies, universities declare significantly greater compliance than businesses, while graduates also more.

A very high discrepancy between the averages of businesses and universities exists in the case of assessing the compliance of specific competencies with labor market requirements. In the second row of Table 46, we read the average data of this assessment, where businesses rate compliance with b = 2.62, universities with u = 4.49, and graduates with d = 3.40. F is very high with F = 139.31, and clearly statistically significant difference, sig. 0.00 <0.005. Thus, there are clear differences between businesses and universities in assessing the compatibility of specific competencies offered by a university program and those required by employees in their workplace. In this case, too, the LSD Post Hoc test was used which shows that there is a statistically significant difference between the three research groups.
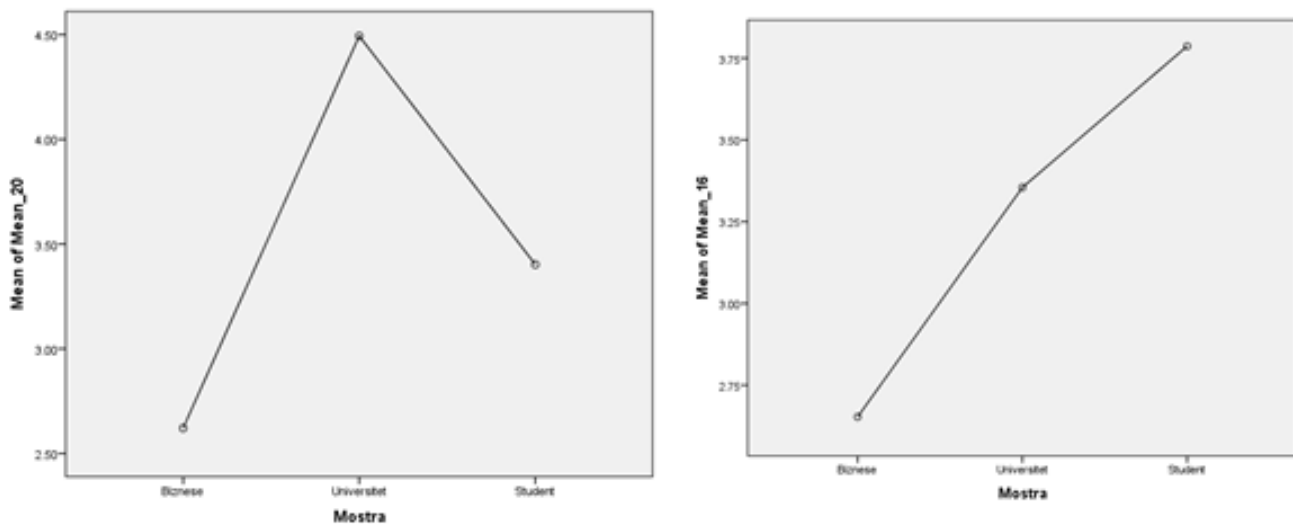

Figure 2: Average ratings of businesses, universities and graduates for matching generic competencies on the left and specific on the right.

Source: Survey conducted by the author

Figure 2. graphically presents the differences in the assessment averages between businesses, universities, and graduates, regarding the compliance of generic competencies with labor market requirements. The figure shows the huge difference between businesses and graduates in this assessment. The figure on the right presents the graph of the evaluation averages of the surveyed samples in relation to the compliance of specific competencies with those required in the labor market.

The biggest difference exists between businesses and universities, while graduates stand in the middle with this assessment.
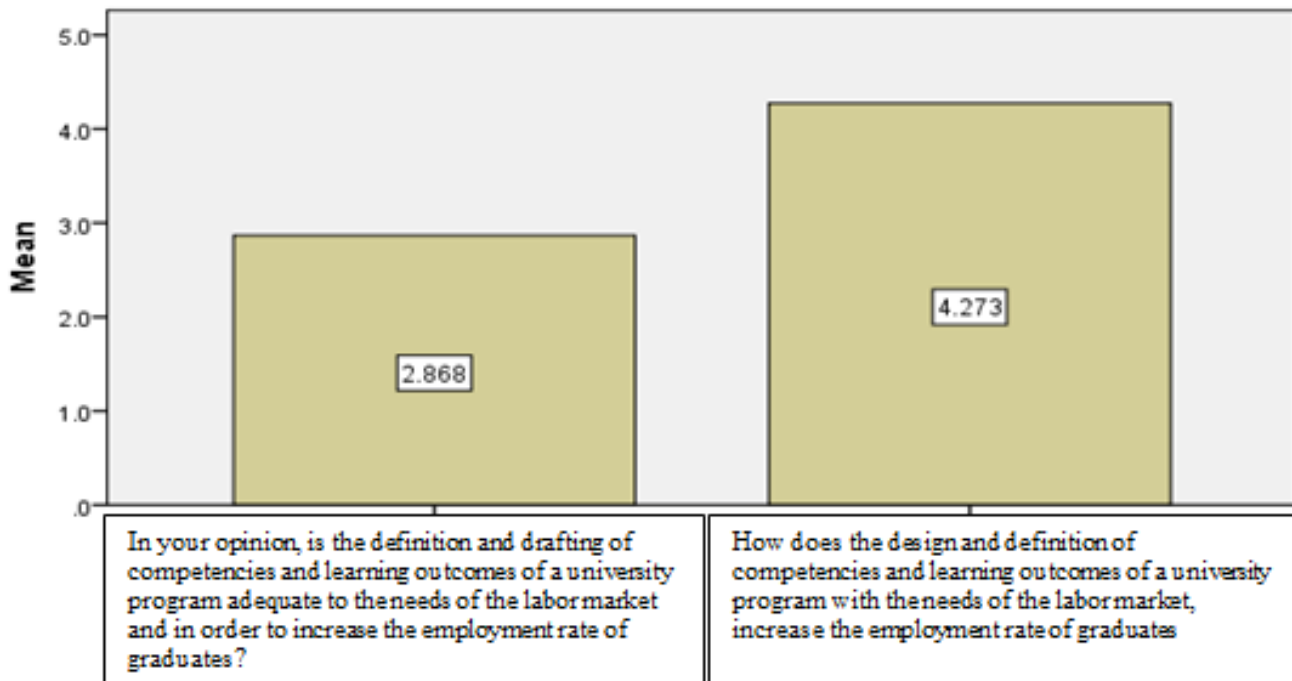
Figure 3: Business perceptions regarding the compliance of programs with the needs of the labor market and assessment of the impact of competencies on employment opportunities.

Source: Survey conducted by the author

Figure 3 presents the average perceptions of the two variables, the column on the right is for the impact of design and adequate definition of competencies in increasing the employment rate of graduates in university programs, while on the left is the opinion of these respondents that currently this design and the definition of competencies and learning outcomes is adequate to the demands of the labor market and because of increasing the employment rate. Regarding the first variable, the average rating of businesses is 4.23 on a scale of 1-5, so they are convinced that an adequate design of competencies and learning outcomes of a study program, has an impact on increasing the employment rate of graduates in university programs. Whereas, regarding the second variable in the same degree of evaluation, only the average evaluation is only 2.86, so the opinion of businesses is that currently this design and definition of competencies and learning outcomes is adequate to the requirements of the labor market and in the function of increasing the employment rate.

4. CONCLUSION

The high dynamics of changes in the labor market and the constant technological changes make it difficult to define the right competencies and conform to the market demand. However, universities have a social responsibility to follow and support the careers of their graduates, so it is imperative that their university programs also be such to enable them more successful employment and career development. It seems that intensive cooperation with businesses is the key factor in achieving this goal. In particular, collaboration in defining and designing the competencies and learning outcomes of a study program.

The results of this research show that competencies and learning outcomes achieved at the end of studies, the relationship between knowledge, skills /competencies, and validity of competencies, are key issues in business-university cooperation and an important factor in business demand for their employees. Also, the findings of this research are generally consistent with the findings from previous studies from other similar research from Tempus "Competence Consortium, 2009", from the European Commission research - "From University to Employment, 2 016" and that of the World Economic Forum - Davos, 2014.

Defining competencies and learning outcomes according to the needs of the labor market is an increasing challenge for universities and a vocal demand for modern businesses. Dynamic labor market demands make this issue increasingly difficult, especially in developed countries. According to Lane (2018), the time is coming to design competencies and learning outcomes for jobs that do not yet exist, but by the end of the study program will come (required) in the job market. The particular focus of businesses is defining skills and abilities in a study program. Descriptive description results represent the difference in rating between businesses and universities. This discrepancy in the supply and demand for skills and abilities defined in the curricula of university programs is also supported by the preliminary research of the World Economic Forum - Davos (2014) and ILO (2013).

All the arguments lead to the conclusion that this connection would make graduates in undergraduate programs, would find a job easier and faster and would be more efficient in performing tasks. Discussions in world forums on this issue are still quite intense today and have become a growing concern for businesses and universities around the world.

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