

**FOUNDING OF THE ACADEMY OF  
VOCATIONAL STUDIES IN NIŠ**

**DRAFT FEASIBILITY REPORT**

TEMPUS 517200 ECBAC

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# 1. INTRODUCTION

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By following the intensive economy growth of the southern and southeastern district of Serbia in the previous period, and by harmonising it with the elements of 2020 Education Development Strategy in the Republic of Serbia, certain conclusions ensued regarding solutions which are in the best interest of the society as a whole. After the short period of GDP growth in the first half of the previous decade, its latter decline along with the economic crisis in Serbia in 2009, which had global reverberation, resulted in arresting the growth and development of economic activities. After a sharp decline in GDP of 3,5% in 2009 Serbia lived to see a very slow growth that borders on stagnation. Another decline ensued in 2012 (1,7%) only to expect a planned GDP growth of 1,2 % to 1,3% in 2015. These data should serve as clear indicators of the challenges we faced in the previous period, as well of those we are yet to meet in the period to come. A slow GDP growth implies a reduction of the need for highly educated manpower. On the other hand, the promise of a long-term GDP growth implies the increase in the need for highly educated manpower. The degree of GDP growth is directly proportional to the need for highly educated manpower, i.e. for trained professionals holding at least the first level of higher education degree. The positioning of our country as a so-called developing country which bases the largest part of its income on primary products, or on simple processing of those products, clearly points to a small percentage of intensive investments in the economy by poor implementation of professional and applied research the aim of which is to secure a faster transfer of knowledge and technology to the economy. With a larger income at one's disposal and more capital available for investment one could expect an increase in the need for highly educated manpower. At a time when unemployment rate is rather high (especially among the younger population) additional training and improvement of the existing workforce becomes a must. However, the increase in GDP growth can also increase the need for highly educated manpower, especially with respect to the staff who possess professional knowledge and competences necessary to answer to the requirements of the economy.

The data used in this study are the result of the 2011 census conducted in the period between the 1<sup>st</sup> and 15<sup>th</sup> of October 2011. In the period between 16<sup>th</sup> and 20<sup>th</sup> of October the census was conducted in the largest cities, and those citizens who for whatever reason were not listed

during the specified period had the opportunity to be subsequently listed on the premises of the census commission or by mobile census teams. The data on the number of inhabitants have been presented according to the territorial conditions at the time of the 2011 census.

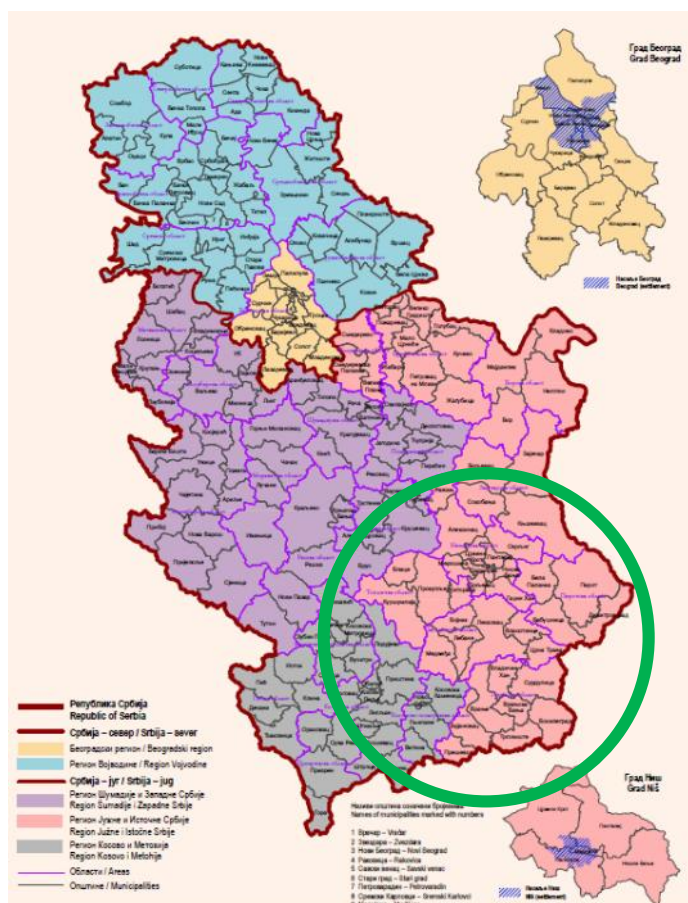


Figure 1. A map of the Republic of Serbia according to districts

This study covers either entirely or partially the eight districts in the Republic of Serbia which are roughly inhabited by 1.278.456 people.

Table 1. A number of inhabitants according to observed districts in the Republic of Serbia (2011 census)

Districts	N° of inhabitants
The Nišava District	378319
The Pirot District	92479
The Jablanica District	216304
The P inja District	159081
The Toplica District	91754
Part of the Zaje ar District (Knjaževac, Boljevac, Soko Banja)	60506
Part of Rasina District (Kruševac, Aleksandrovac, Brus)	171591
Part of the Morava District	108431

Total	1.278.456
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In the observed population, regarding the employment status in these districts, the largest percentage belongs to the employed, only to be followed by independent farmers, while employers, i.e. self-employed persons make a very small percentage out of the total number of an active working population.

Table 2. The economically active population who perform tasks according to their work status

District	Employed	Employer	Self-employed.	Ind. farmers	Total
Morava	43473	1633	2676	7563	60824
Rasina	47710	1872	2879	13593	73998
Jablanica	35701	1450	2084	13430	63585
Nišava	88873	2938	3698	5486	107692
Pirot	21096	579	651	1958	25854
Pinja	35765	819	1533	3642	45317
Toplica	17713	379	689	1756	22039
Zaječar	23652	815	1106	10533	40649

A careful data analysis, followed by a remark that the population structure is dominated by people with secondary education, reveals that the fluctuation of the employed in the observed districts is utterly expected.

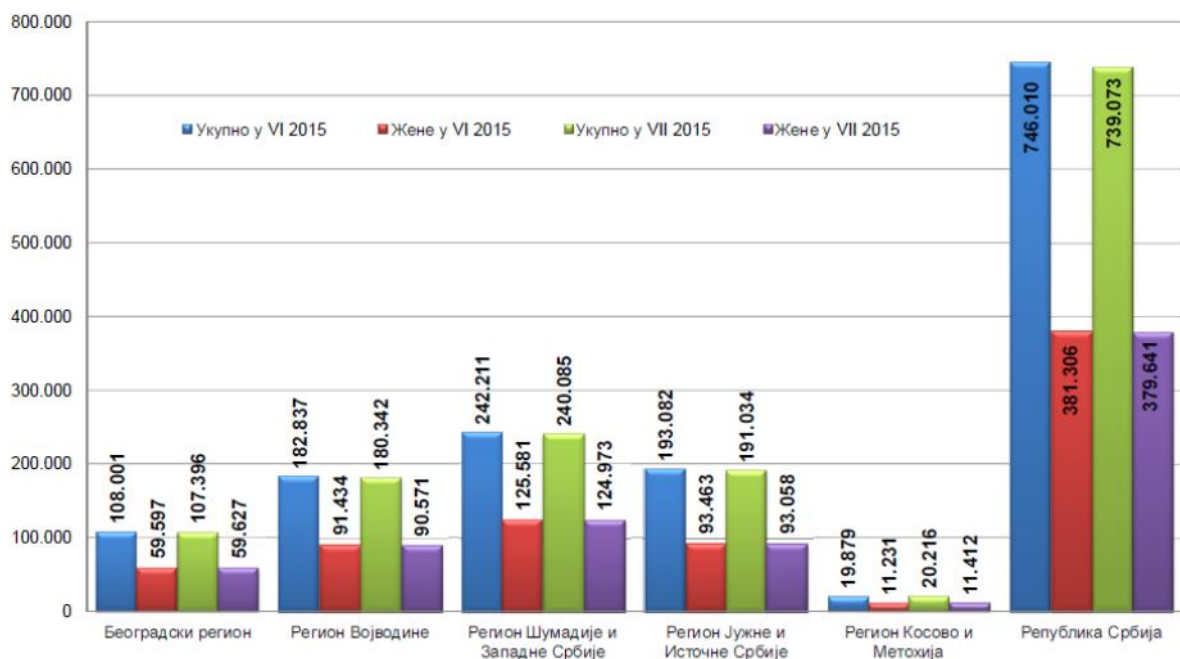


Figure 2. A change in the number of unemployed for the period of June/July 2015 according to the observed regions

## **2.1 HIGHER VOCATIONAL EDUCATION AND THE STATE OF THE ECONOMY OF SOUTHERN SERBIAN DISTRICTS**

The purpose of this feasibility report regarding the founding of the first Academy of Vocational Studies of Southern Serbia in Niš is to identify its significance, as well as to make recommendations with respect to the model of forming and functioning of eight vocational higher education institutions from Nišava, Pirot, Pinja, Jablanica, Toplica, Rasina and Morava districts, bearing in mind the existing capacities (study programmes, teaching staff, infrastructure and technical capacities, and the number of students), the significance of these institutions for the local development, as well as the current and future labour market needs in these districts.

In order to achieve the set aims we have performed an analysis of the existing higher education institutions and their study programmes, an analysis of the work fields and labour market needs, as well as an analysis of students' and parents' attitudes, of municipality representatives and key social actors, with the purpose of making inquiries into the necessity of founding one such immense higher education entity.

Bearing in mind the complexity of the set aims the research was conducted by means of different methods which encompass a secondary analysis of statistical data, a document analysis, a survey, field and qualitative research. The analysis confirmed that on the level of the aforementioned districts 25 % of secondary school pupils graduate from grammar schools, while 75% of them graduate from vocational secondary schools, mostly after attending four-year secondary education. Being mindful of the strategy of education in Serbia, as well as of clear students' preferences to choose four-year vocational profiles which enable them to continue with their education, one could rightfully expect that the number of students who attend vocational colleges would remain stable.

The quality of education offered by these eight institutions through their accredited study programmes is quite evident, and one can notice constant improvement, especially with respect to teaching staff competences, working conditions, equipment and international co-operation. Aside from these eight higher education institutions, in these districts there are four more accredited higher vocational education institutions: College of Business Studies in Blace, College of Business Studies in Leskovac, Teacher Training College in Aleksinac and Teacher Training College in Gnjilane, Bujanovac. Aside from these state schools, there are

also public higher education institutions: College of Traffic Management in Niš, College of Business Studies “Dr Radomir Bojkovi ” in Kruševac, and College of Criminology and Security in Niš. According to the official CAQA data, only College of Business Studies in Blace has got an officially accredited outpost in the field of vocational education in these districts and it is situated in the town of Dimitrovgrad. On the other hand, in the southern region the University of Niš is known as an institution of renown and it represents one of the key factors of the development of the aforementioned districts. The University of Niš includes 13 faculties, two of which are not situated in Niš (Teacher Training Faculty in Vranje and Faculty of Technology in Leskovac). Some of the faculties at the University of Niš have accredited vocational study programmes, but there is a lack of interest among the potential student population.

The number of persons holding a higher education diploma varies from one district to another. According to the 2011 census data in the aforementioned districts there is the largest number of persons with a secondary school diploma. The situation regarding education level is best by far in the city of Niš, which is expected, while the worst situation is encountered in marginal parts of Toplica and Jablanica districts, towards the administrative border with Kosovo and Metohija (Fig.1).

Percentage-wise, in the Nišava District 6,31% of the total population holds a college degree, while 11,61% holds a university diploma; in Jablanica District 4,82% of the total population holds a college degree, and 6,02% holds a university diploma; in Pirot District 5,67% of population holds a college degree, while 6,98% holds a university diploma; in P inja District 5,08% holds a college degree, and 7,52% holds a university diploma; in Toplica District 5,01% holds a college degree, and 5,67 % holds a university diploma; in Rasina District 5,35% holds a college degree, and 7,10% holds a university diploma; in Morava District 4,0% holds a college degree, while 7,67% holds a university diploma. If one compares these numbers with the rest of the country, these data can be considered relatively balanced and there are no drastic deviations. However, when one considers the data of the Statistical Office of the Republic of Serbia in view of an income in certain economic fields, one can observe drastic deviations with respect to salaries. These deviations are reflected in differences in salaries which in some cases reach even 30%. This last piece of information should be considered within an increasingly conspicuous issue of internal migrations. According to the Statistical Office, during 2014 some 124.472 people changed their place of residence, i.e. they moved from one place to another within the Republic of Serbia. The average age of people who changed their place of residence was 33,2 years of age. Out of 24 districts in Serbia the

largest amount of migrations has been noted in the territory of Belgrade, this district being the only one with a positive migration balance (larger number of immigrants than emigrants). Out of 168 municipalities/cities in Serbia, 35 municipalities/cities had a positive migration balance in 2014, while in 133 municipalities/cities one could note a negative migration balance. The municipality of Voždovac keeps the most positive migration balance which is 2459. It is followed by Novi Sad municipality, with the balance of 1983, Zvezdara municipality with 1803 and Palilula (the City of Belgrade) with 1233, etc.

The larger number of emigrants than immigrants is noted in the territory of Kraljevo, where migration balance is -336. It is followed by Kruševac (-329), Leskovac (-280), Prijepolje (-264), Savski venac (-257), etc. This negative trend is also noted in Pirot, Vranje, Prokuplje. If one should consider the activity of migrants, 60% of them are dependent, 33% are active and 7% of them have their own income.

In order to keep the population in a certain area it is necessary to resort to centralisation and active employment policy. Investments, potential donations and brave steps towards restructuring the system of education are most welcome, especially bearing in mind the significance of various institutions for the municipalities and cities in which they are situated. Every year in Serbia some 250.000 people move from villages to towns. Serbia thus faces a depopulation of certain areas, which has both demographic and economic repercussions. If one should also consider financial investments in education of the population which can be measured in millions of euros (around 4,55% of GDP), one faces the fact that these financial means remain virtually unused with the departure of highly educated manpower.

According to the data of the National Employment Service from June 2015, the structure of unemployed persons depending on the level of education (high education) in the observed districts is as follows:

Table 3: Distribution of population according to the level of higher education per district

District	VI/1	VI/2	VII/1	VII/2	VIII
Nišava	2137	953	5117	59	6
Toplica	463	260	695	5	1
Pirot	586	267	756	4	2
Jablanica	878	568	1625	9	0
Pinja	910	552	1532	7	0
Rasina	1103	687	2002	11	1
Morava	538	537	1494	8	2



These data can be realistically perceived if one bears in mind that in Nišava District there are currently 48.384 persons waiting for employment. In Toplica District that number is 15.334, in Pirot District 12.406, in Jablanica District 34.134, in P inja District 27.984, in Rasina District 28.118, and in Morava District 20.633 people waiting for employment.

By comparing these two groups of data one can easily reach the conclusion that highly educated persons, in spite of a poor economic situation, find job more easily. According to the data of the National Employment Service, it is evident that labour markets of these districts show a slight recovery. In the previous period in the entire country almost all sectors experienced a decrease in the number of employees.

The only resistant sectors were the IT sector, agricultural sector and public sector. Highly educated people were the least resistant to the effects of financial crisis, especially those who obtained their diplomas in the field of humanities. In the largest numbers of companies which operate in these districts the share of highly educated employees who obtained vocational degrees cannot be considered satisfactory. The reason for this can be sought in the structure of production process in the region. Let us remind ourselves that the role of highly educated employees with vocational degrees is to control and monitor the staff with secondary school diplomas who manipulate the equipment and directly participate in the process of production. The sectors in which one can encounter the largest number of people with university diplomas and college degrees are the IT sector, agriculture, public sector, pre-school education, sector for general affairs (legal sector) and financial sector. Certain companies occasionally hire highly educated professionals for the purposes of design and quality improvement, as well as for product modification.

It is necessary to emphasise that certain companies have moved particular sectors from the said districts to Belgrade (management, sales, legal and financial sector).

Likewise, on the basis of the National Employment Service data, the analysis of the required profiles indicates that the eight colleges of vocational studies, members of the future Academy of Vocational Studies, with their accredited study programmes can meet the requirements of the regional labour market.

The city of Niš, as a university centre, is very attractive for those who wish to continue with their education. Its industrial tradition is rather shaken, but a large number of highly educated people offer hope in an effective economy launch and its rapid recovery, especially in the field of advanced technologies. At the same time, all previously mentioned towns (Niš, Leskovac, Vranje, Pirot, Prokuplje, Kruševac, uprija) had once been strong centres with a

long tradition in the field of industry, agriculture, tourism, trade and services. Bearing that in mind, all these towns still represent strong centres of secondary vocational education which fall under the jurisdiction of four school administration centres: Niš, Kruševac, Leskovac and Jagodina.

On the other hand, colleges of vocational studies are independent higher education institutions which autonomously devise their study programmes and elect teachers, although they do not possess a critical mass of teachers, which is reflected in the quality of the teaching process. Colleges of vocational studies in the past ten years have not used the opportunity of forming an academy of vocational studies.

The system of vocational studies has been inefficient regarding its own manner of organisation. The Conference of the Academies of Vocational Studies, as a successor to the Conference of College Directors has not established functions necessary for integration and co-operation on a national and European level. As a result, the goals of the system of vocational studies have not been achieved.

Colleges of vocational studies still cannot organise master vocational studies due to the condition which requires that these programmes are realised only by teachers with a doctorate who have obtained appropriate college ranks at academies of vocational studies, while there are still no standards for accreditation of such academies.

## **2. STRATEGIC FRAMEWORK FOR THE DEVELOPMENT OF VOCATIONAL STUDIES**

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Strategy for Education Development in Serbia 2020 has defined that the system of vocational studies needs to be co-ordinated with the principles of a unique education space in Europe and based on internationally comparable basis of a binary system of higher education. It is necessary to establish clear programme and institutional policies and to avoid overlapping of academic and vocational studies.

The outcomes of vocational studies need to work towards achieving the set mission which is harmonised with the needs of the labour market, and the profiles should be tightly connected with the work fields and public sector. The quality of vocational studies is based on the quality of learning outcomes and on the necessary competences of graduates from vocational colleges.

Vocational studies need to establish a relationship with secondary education, as well as with academic studies. The basis of co-operation with secondary education should be reflected in the quality improvement of study programmes in certain fields and orientations, in mutual co-ordination and development, as well as in a more rational use of teaching and laboratory facilities.

The co-operation with academic studies should be based on the exchange of teachers, on a mutual harmonisation of the horizontal and vertical student mobility, on a joint participation in scientific projects and research activities, as well as on other forms of co-operation.

Vocational studies need to work on the development and improvement of study programmes in accordance with the needs of the labour market and they need to define competences of graduate students in those areas where graduates of vocational studies represent the source of highly educated professional workforce. In that respect one should equally appreciate the work fields, health sector, public administration, the army, the police, and other segments of the society. Various forms of co-operation are a possibility with respect to applied research, the use of technological and organisational resources for the purposes of teaching, the engagement of professional staff for the purposes of teaching, professional improvement of the teaching staff and other forms of co-operation. The said co-operation needs to encourage an active participation of the National Employment Service and the Chambre of Commerce.

Establishing co-operation with the labour market on the local and regional levels which would imply public-private partnership is especially significant for vocational studies in Southern Serbia, which is an underdeveloped and impoverished region.

Let us bring to mind that the Strategy for Education Development in Serbia 2020 foresees innovations in the system of budget funding and the harmonisation of enrolment policies with the labour market and developmental priorities of the country. Likewise, the Strategy anticipates that in the year of 2020 there will be at least 38,5% of highly educated people in Serbia between the age of 30 and 34, with the structure of qualifications harmonised with the needs of the labour market and the society's developmental priorities. This implies that 70% of students graduating from secondary schools should decide to continue their education either on a vocational or academic level. The Academy of Vocational Studies with its institutional and integrative aspects would be the warrant of study availability, as well as of the quality and personal development of an individual.

Furthermore, a strategic framework for the founding of the Academy of Vocational Studies of South and Southeastern Serbia should be sought in a geostrategic development of our country, in the revival of underdeveloped areas, especially border areas and in the areas close to the administrative border with Kosovo and Metohija, in strengthening of the economic potentials by creating competent work force, as well as in preventing internal migrations. While collecting data for the purposes of this study the authors bore in mind the real state of affairs of our society at this moment, which inevitably relates to the fact that our unemployment level is one of the highest in Europe. What the study has shown, and it clearly relates to the strategic framework, is the confirmation of the general principle that the unemployment rate is drastically lower among the highly educated people (especially among the vocationally oriented), than in some other population groups. The authors also bore in mind that technological changes, which increase the efficiency in the labour market, reduce the number of job opportunities in the labour market for a large number of the working-age population with a secondary school diploma. By referring to the stated statistical data, a logical conclusion imposes itself: around 11% of highly educated population will not be enough to meet the needs which are expected in the years to come.

### **3. LEGAL FRAMEWORK FOR THE FOUNDING OF THE ACADEMY**

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The Law on Higher Education defines the Academy of Vocational Studies as an independent higher education institution which combines education, research, professional and artistic work, as well as the components of a unique higher education process.

The Academy of Vocational Studies is able to implement undergraduate vocational studies, master vocational studies and specialist vocational studies.

A higher education institution has got a status of an academy of vocational studies if it implements at least five accredited study programmes of vocational orientation in at least two scientific/artistic fields.

An independent higher education institution can be founded by the Republic of Serbia in accordance with the law. The decision on the establishment of an independent higher education institution is made by the Government.

An academy of vocational studies as an independent higher education institution can start with its activities upon obtaining a work permit.

The organisation of a higher education institution is defined by the Statute, and in accordance with the law and the founding act.

An academy of vocational studies as an independent higher education institution establishes higher education units as a form of an internal organisation and in accordance with the Statute.

The Founding Act of a higher education unit defines the status of a higher education unit regarding its role in commerce and business, in managing financial resources and decision-making.

For the purposes of implementing research, artistic work and study programmes in related disciplines, as well as for the purpose of an efficient use of the resources, an academy of vocational studies comprises sections and departments.

The authorities and manners of management which secure a unique and harmonised activity of an academy of vocational studies are established through the Statute of the Academy, the Founding Act of a higher education institution and general acts of a higher education institution.

An academy of vocational studies integrates the functions of all institutions and units which are part of it, and especially of vocational colleges, by conducting a unique policy the aim of

which is to constantly improve the quality of the teaching process, research activities and artistic creation.

For the purposes of achieving the aims mentioned in the previous paragraph, an academy of vocational studies has particular jurisdiction in the following fields:

1. *Establishing unique standards for the functioning of offices and services, as well as unique standards for the creation of a data base*
2. *Strategic planning*
3. *Adoption of study programmes*
4. *Quality assurance and management*
5. *Enrolment policy*
6. *Election of teachers*
7. *Issuing diplomas and diploma supplements*
8. *International co-operation*
9. *Employment policy planning and hiring teachers and associates*
10. *Investment planning*
11. *Forming and developing of a unique IT system*
12. *Lifelong education*

*A higher education unit within an academy has a right to offer suggestions regarding the issues from the previous paragraph, in a manner defined by the Statute of the Academy*

### **3.1 JUSTIFICATION FOR THE FOUNDING OF THE ACADEMY**

By founding an academy of vocational studies and by integrating its functions the quality of the teaching process improves, a long-term co-operation with potential users in the work fields and public sectors develops, a development of applied and developmental research intensifies, a development of vocational education for conducting applied and developmental research is secured, a development of vocational education for acquiring applied skills and knowledge is supported, as well as a development of international co-operation and approach to international projects and funds. First and foremost, the quality of the teaching process is improved through creating the conditions for the improvement of the working results in every field, as well as through an essential raising awareness of all actors in the teaching process. The current state of affairs in the sector of vocational education is such that its development requires the founding of these kinds of institutions, the power of which should be based

precisely on integrative functions. It is necessary to emphasise the gradualness of integration, bearing in mind the importance of most of these institutions for the towns and municipalities in which they are located, and all in the light of the current economical and demographic situation.

### 3.2. QUALITY ASSURANCE OF THE TEACHING PROCESS

The task of assuring the quality of the teaching process is one of the most important tasks in the process of education. By forming a unique system and by establishing quality assurance of the teaching process one places a special focus on study programmes and teaching staff election. Within the Academy of Vocational Studies one secures a critical mass of the teaching staff competent to make decisions regarding the study programmes, which should offer the outcomes that would lead to accomplishing the mission of vocational studies coordinated with the labour market needs and necessary competences of graduate students.

Table 4. The ratio between the teaching and administrative staff in the colleges – members of the Academy

<b>Higher education institution</b>	<b>Teaching staff</b>	<b>Non-teaching staff</b>
Teacher Training College in Kruševac	23	13
College of Textile in Leskovac	31	16
College of Chemical Technology in Kruševac	21	12
College of Agriculture and Food Technology in Prokuplje	42	11
College of Applied Technical Sciences in Niš	42	20
College of Health Studies in Čuprija	38	38
College of Professional Studies for Pre-school Teachers in Pirot	25	10
College of Applied Vocational Studies in Vranje	24	12
<b>Total</b>	<b>246</b>	<b>132</b>

The critical mass of the teaching staff of the Academy of Vocational Studies is entirely competent to make evaluations according to the established criteria and decide upon the election of teachers. The quality of the teaching process is largely influenced by the support of the administrative staff which needs to secure a strong IT system, a strong student service, internationalisation of the system of higher education, as well as the continuity and improvement of the quality assurance policy which is a prerequisite for a future survival in the higher education market. If one carefully observes the structure of the teaching and non-teaching staff in the eight colleges, members of the future Academy, their number and age,

one can easily draw a conclusion that our initiative is sustainable and longlasting from the standpoint of human resources.

Here it is necessary to mention the prescribed standards regarding the mandatory number of teachers which every higher education institution needs to meet. This implies that an institution meets the standards if there are at least 70% of active teaching hours on a study programme for which work permit is required and at least 20 % of full time employed teachers.

The exception to this requirement is made with the study programmes in the field of art, where that number cannot be smaller than 50%. The total number of teachers needs to be sufficient to cover the entire number of active teaching hours on a study programme implemented by the institution, so that a teacher realises 180 active teaching hours on average per year (teaching lessons, consultations, exercises, practical work, field work, etc.), i.e. 6 hours of active teaching per week.

A teacher's load cannot exceed 12 active teaching hours per week. Out of the total number of teachers necessary for the implementation of the teaching process per year of study on a study programme for which one seeks a work permit, the Academy of Vocational Studies needs to have at least 50% of teachers with the acquired PhD title. Bearing in mind the aforementioned data regarding the number of teachers, as well as the number of accredited study programmes, one can easily conclude that the Academy meets the aforementioned conditions.

### **3.3 DEVELOPMENT OF A LONG-TERM CO-OPERATION WITH THE WORK FIELDS AND THE PUBLIC SECTOR**

In order to realise the teaching process within the system of vocational studies it is necessary to establish a long-term co-operation with the work fields and public sector for the purposes of practical teaching realisation and students' placements. This problem has been recognised as a key problem in the future development of vocational education in Serbia and it has been conditioned first and foremost by technologically weak regional economy. A long-term co-operation between higher education and the work fields is a two-way process and as such it should be implemented in practice. In the period after the year 2000 this region welcomed several multinational companies such as Phillip Morris, British American Tobacco, Henkel, Michelin, Leoni, Yura, Johnson Electrics, Falcke, etc. All these names are recognizable by high technology, good business results, as well as by highly qualified professionals. In other words, they can be very useful in developing and creating the future work force in this region,



either through standardisation of the working process, through professional seminars or by offering solutions to concrete problems which appear in practise.

The Academy of Vocational Studies is supported by every aforementioned municipality to which the eight member colleges belong. This support offers the possibility of establishing a long-term co-operation with the work fields and public sector as potential users of the students' acquired knowledge, with special emphasis on the realisation of practical teaching and development of applied and developmental research.

### **3.4 DEVELOPMENT OF INTERNATIONAL CO-OPERATION**

Colleges of vocational studies as independent and isolated units face limited possibilities regarding the participation in and application for the EU projects in the field of education and research. The international staff and student mobility is almost negligible. It is this containment of the system of higher education that represents one of its crucial flaws. The Academy of Vocational Studies with the existing study programmes on undergraduate and specialist levels and with a fairly larger number of students and teachers becomes a recognizable entity within the EU educational framework.

The experience of implementing the Bologna process is extremely precious, and the speed of its implementation is directly correlated with the development of international co-operation. This is especially significant from the standpoint of a speedy transfer of knowledge and technologies from education to the work fields. The standard internationalisation indicators in higher education are more easily obtainable through the system of a single academy than through eight separate colleges. Internationalisation creates a path towards the European values, towards increasing scientific and professional competences and raising the awareness of students and the teaching staff. Likewise, it is necessary to keep both feet on the ground regarding the current capacities of the administrative staff of the future academy, bearing in mind that their role in the process of internationalisation is more than significant. For those purposes, integration in this particular area of the development of higher education institutions is a must.

### **3.5.ECONOMIC FEASIBILITY OF THE FOUNDING OF THE ACADEMY**

By connecting colleges of vocational studies into an academy of vocational studies which should comprise 246 teachers, more than half of which acquired a PhD title in various scientific fields, one creates an enormous professional potential which is absolutely recognizable within the European education framework and opens up the possibilities of an intensive international co-operation. However, the aforementioned attitudes regarding the co-operation with the work fields and the analysis of the possibilities of participating in various developmental projects with the work fields represent the basis for a faster transfer of knowledge and technologies, and therefore increase the need for a highly educated workforce. By uniting the existing scientific and professional resources one creates the possibility for the development of interdisciplinary, i.e. multidisciplinary technical solutions which are, at this moment, necessary for the development of the regional economy. The act of forming joint dispersive laboratories would constitute a support for a more even development of the economy in all parts of the southern and southeastern Serbia. On the other hand, bearing in mind a rather limited accreditation potential of all members of the future academy with respect to the number of teachers, the economic interest in the exchange of the teaching staff is more than obvious.

It is an objective assessment that an academy of vocational studies in the course of international projects can achieve up to three million euros per year. This assessment is based on the data base dealing with the values of the several currently approved projects. These projects were approved at the moment when the level of international co-operation of vocational colleges was negligible.

Finally, in favour of the economic justification of the Academy of Vocational Studies one can state the data regarding the transfer of funds from the budget of the Republic of Serbia to the budgets of local municipalities, which is directly connected with the state of the economy in the analysed districts.

Municipality	Fund transfers in 2015 (in Serbian dinars)
<b>Niš</b>	<b>646,748,000.00</b>
<b>Prokuplje</b>	<b>388.540.000.00</b>
<b>Vranje</b>	<b>397,640.000.00</b>
<b>Pirot</b>	<b>307,841,000,00</b>

<b>uprija</b>	<b>334.600.000.00</b>
<b>Leskovac</b>	<b>956.973.000.00</b>
a ak	339.670.506.00
Novi Pazar	639.031.000.00
Novi Sad	

Direct positive economical effects of the founding of the Academy of Vocational Studies can be observed through the following aspects:

1. The economic impact of students
2. The economic impact of the employees
3. The influence of the Academy on the local economy

By forming the Academy of Vocational Studies, by strengthening the quality assurance policy and by opening towards the labour market, the number of students who attend the universities outside the analysed regions (Belgrade, Novi Sad, Kragujevac, Novi Pazar, Kosovska Mitrovica) should decrease. Those students who would otherwise leave their home to study on some higher education institution outside the aforementioned regions would spend a part of their family budgets intended for studying in some other city in their own region, which would directly influence the increase in regional income as a result of the final consumption. Furthermore, the founding of the Academy implies that teaching and non-teaching staff would not migrate (highly educated population) which is of great significance for the development of the region. Their presence, economically speaking, implies the increase in regional income as a result of the final consumption. However, it is important to emphasise that this act would also mitigate the negative effects of internal migration.

## **4. AN ANALYSIS OF THE CAPACITIES OF THE EXISTING EDUCATIONAL INSTITUTIONS, THEIR CURRICULA AND STATE OF AFFAIRS IN REGIONAL SECONDARY VOCATIONAL EDUCATION**

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Resorting to the data base of the National Employment Service (July 2015) it has already been indicated that the most frequently sought professions in the regional labour market are covered by the realisation of study programmes in these eight aforementioned vocational colleges. To a large degree, most of these study programmes were supported by the regional Chambers of Commerce during the process of accreditation in 2012. At that moment the colleges performed the analysis of the labour market on the one hand, i.e. of the situation in secondary vocational education, on the other, in order to reach fairly well defined outcomes and goals of the courses and study programmes, emphasising the competences of the graduate students. This approach was based on questionnaires which were sent to the members of the Republic Chamber of Commerce, and on the basis of these surveys the colleges approached the process of accreditation very seriously.

The eight colleges which implement study programmes in four scientific fields are: technical and technological field (colleges in Niš, Prokuplje, Vranje, Kruševac and Leskovac); medical field (uprija, Prokuplje); humanities (Piroć, Kruševac, Vranje); art (Leskovac).

At this moment the members of the future academy implement 33 undergraduate study programmes, most of which were accredited in technical and technological field (23), 3 undergraduate study programmes in humanities, 6 undergraduate study programmes in the field of medicine and 1 study programme in the field of arts. The distribution of accredited study programmes corresponds with the needs of the labour market. The main requirements of the labour market are comprised in the outcomes of the accredited study programmes, which is largely recognized by the labour market. In the future the focus should be placed on the development of an efficient model of professional practice. This requirement is supported by the diversity of the future members, not only in regards to their space allocation, but also in regards to their study programmes.

Table 4. The overview of accredited undergraduate and specialist study programmes

Institution	USP	SSP
College of Applied Technical Sciences Niš	Road Traffic Modern Computer Technologies Communication Technology Industrial Engineering Building engineering Environmental Protection  <b>N° of students: 360</b>	Road Traffic Safety Modern Computer Technologies Communication Technology Communal Engineering Environmental Engineering  <b>N° of students: 160</b>
College of Agriculture and Food Technology Prokuplje	Pomiculture and Viticulture Agriculture and Olericulture Plant Protection Livestock Breeding Food Technology Professional Veterinary <b>N° of students: 280</b>	Organic Agriculture Food technology Plant Protection  <b>N° of students: 144</b>
College of Textile Leskovac	Textile Technology Textile Chemistry and Environmental Protection Clothes Design Fashion Design <b>N° of students: 120</b>	Textile Engineering Environmental Protection Digital Design of Clothes  <b>N° of students: 35</b>
College of Applied Vocational Studies Vranje	Environmental Protection Food Technology Wood Technology Road Traffic Production Economy Mechanical Engineering Applied Informatics <b>N° of students: 180</b>	Road Traffic  <b>N° of students: 30</b>
College of Chemical Technology Kruševac	Technology Informatics and Computing Environmental Protection and Safety at Work <b>No. of students: 120</b>	
Pre-school Teacher Training College Kruševac	Professional Pre-school Teacher <b>No. of students: 210</b>	Professional Pre-school Teacher specialist <b>No. of students: 25</b>
College of Professional Studies for Pre-school Teachers Pirot	Professional Pre-school Teacher <b>No. of students: 100</b>	Professional Pre-school Teacher specialist <b>No. of students: 55</b>
College of Health Studies uprija	Vocational Nurse Professional Medical Physiotherapist Professional Medical Radiologist Professional Midwife Nurse Beautician - Esthetician <b>No. of students: 366</b>	Vocational Nurse Specialist Professional Medical Physiotherapist Specialist Vocational Nurse of Clinical Practice - Specialist <b>No. of students: 80</b>

Regarding the second level studies (specialist studies) there are 16 accredited programmes in total, 11 of which belong to technical and technological fields, 2 to humanities and 3 to the medical field. One should emphasise that, according to the CAQA, there are in total 181 accredited specialist study programmes, which means that the aforementioned group of colleges covers around 9% of the total number of accredited specialist study programmes.

Furthermore, these eight institutions are licenced to enrol 2019 students for the first year of undergraduate studies and 529 students for specialist studies. If one bears in mind that, according to the Strategy of development, there are 18.684 places in total for those who wish to enrol for the first year of vocational studies, one draws a conclusion that these eight colleges cover around 11% of the total capacity of vocational education, and this data is in correlation with the piece of information previously presented.

Figure 3. Number of students per college (member of the future Academy)

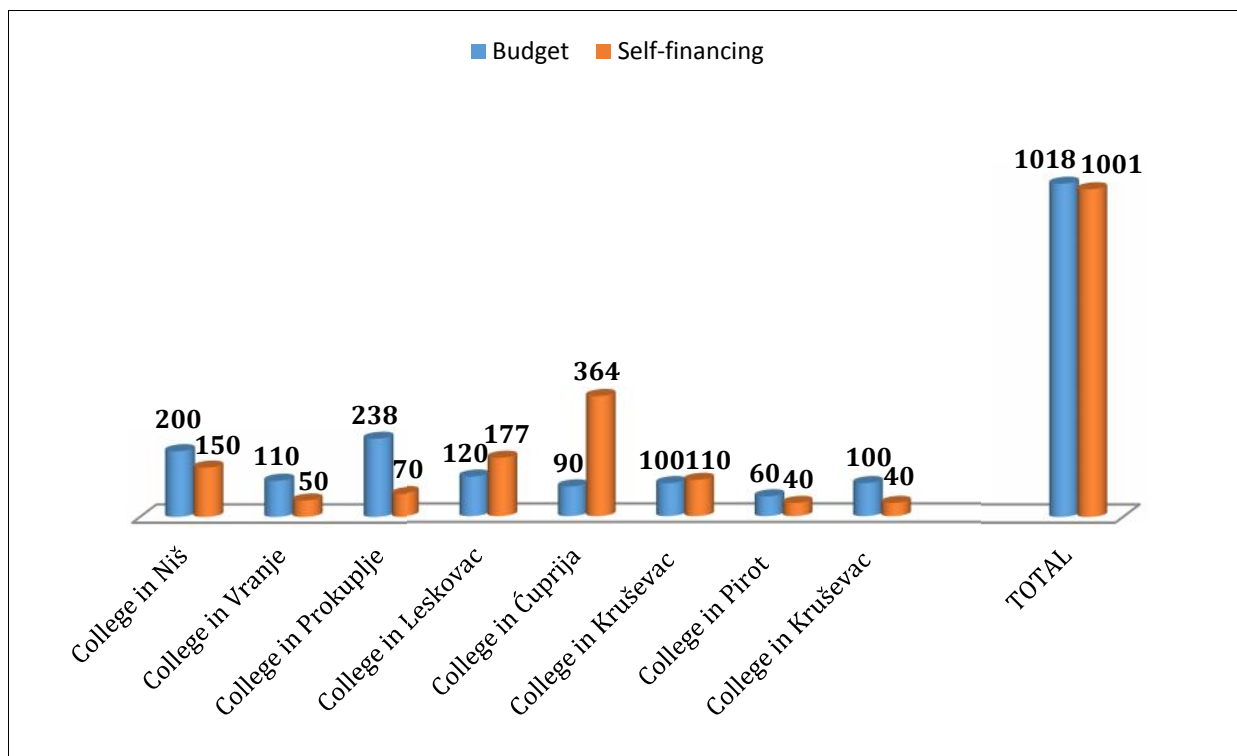


Figure 4. The ratio of budget and self-financed students

For the purposes of implementing the teaching process there are in total 239 teachers and teaching associates 49 years old on average. In the previous period these institutions were exchanging around 10% of the teaching staff. Likewise, the co-operation regarding the use of the existing and rather considerable technical capacities has been intensified. (Annex 1).

These capacities mostly follow the capacities of secondary education in the aforementioned municipalities. The authors used the data of the Statistical Office regarding population, education, demographic trends in this region, which are the data obtained during the 2011 census. What we should emphasise is that 10% out of total number of profile in secondary education belong to three-year education.

Table 5. The overview of secondary education institutions in the districts covered by the first Academy of Vocational Studies

Location	N° of vocational secondary schools	Grammar schools
Aleksinac	2	1
Babušnica	1	1
Blace	1	1
Bujanovac	2	
Vladi in Han	1	1
Vlasotince	1	1
Vranje	7	1
Dimitrovgrad	1	
Doljevac	1	
Žitora a	2	
Knjaževac	1	
Kruševac	7	1
Kuršumljija	2 +11 allocated vsc!	1
Lebane	1	1
Leskovac	11	1
Niš	17	4
Para in	4	1
Pirot	5	1
Preševo	1	1
Prokuplje	3	1
Svrljig	1	
Soko Banja	1	
Surdulica	2	1
uprija	3	1
Crna Trava	1	

On the basis of the presented data one can observe that there are 79 vocational secondary schools and 20 grammar schools. These data are enough to direct the future steps regarding the issue of forming the network of secondary schools, as well as regarding the potentials of the higher education in the future. However, in order to create a realistic image of a potential student base one should take into consideration a downward demographic trend, as well as the

presence of other higher education institutions in the region. Furthermore, it should be expected that those who graduate from secondary schools in Preševo and Bujanovac mostly continue with their education in Kosovo and Metohija. Likewise, we should not forget the activities of the Ministry of Education of the Republic of Bulgaria in border areas. Namely, they tend to grant scholarships to the members of Bulgarian national minority in Serbia, encouraging them to continue with their studies in higher education institutions in Bulgaria. Poor economic and financial situation in the regions of Southern and Southeastern Serbia, as well as the issues previously mentioned, somewhat change the presented image of the availability of potential capacities and require an adequate response.

During the course of conducting this study, and relating to the potential number of graduates from secondary schools, the authors had some issues with collecting precise data, bearing in mind that there is no official system of collecting this kind of data. Everything is done on the basis of estimates. According to those estimates, the number of students graduating from secondary schools on the level of Niš school administration is as follows:

Table 6

District	Four-year vocational secondary education	Three-year vocational secondary education
Nišava	3434	436
Pirot	672	124
Toplica	890	114
Total	4996	674

The data regarding Jablanica, P inja, Rasina and Morava districts are estimated to be slightly higher than 7000.

However, the economies of these districts have traditionally been designed to rely on the existing vocational support which, luckily, can still be found in these eight institutions. Hence the enrolment results in the past have been more than satisfactory. Staring from the year 2011 there has been a positive enrolment trend. Slight deviations occurred this year when it comes to pre-school teacher training colleges, although this is a general issue for all institutions of this type in Serbia.

As a basic economic indicator the authors used the GDP which has been observed on the level of the Republic. Respecting the specificities of certain districts, the authors used some local economic indicators (average salary per month), purely for the sake of a comparative



approach, although we did bear in mind that the analysis of business in these districts does not depend merely on the strength of individual districts, but on global economic trends in Serbia. The data of the National Employment Service and those of the Statistical Office unequivocally point to negative trends (economic, demographic, migration).

While collecting data for the purposes of analysing the existing educational institutions, their study programmes and educational profiles, the authors did not encounter some major issues, aside from the aforementioned lack of a secondary school graduates monitoring mechanism. The fact is that there is no systemic monitoring regarding the continuation or cancellation of education, employment or unemployment of the graduates from secondary schools.

A field research was conducted in the following towns and cities: Niš, Leskovac, Prokuplje, Pirot, Kruševac, Vranje, uprija and Knjaževac. Target groups comprised representatives of counties and municipalities, secondary school headteachers, representatives of youth offices, as well as other relevant actors. Aside from the aforementioned surveys, we have also organised four student fairs in uprija 8 (February 2015), Užice (March, 2015), Niš (April, 2015) and Belgrade (May, 2015). In all four instances the hosts were higher vocational education institutions located in these cities. In a direct contact with students and representatives of both National Employment Service and regional Chambers of Commerce the goal of these fairs constituted an attempt to form a framework for further activities which should raise the quality and recognizability of vocational studies, as well as the percentage of graduate employment rate.

The analysis of the needs of work fields was based on the analysis of in-depth, well structured questionnaires intended for different business sectors. A research sample regarding the attitudes of employers, on the basis of their needs with respect to the founding of a higher education institution such as the Academy of Vocational Studies, was presented in the consortium meeting in Niš, in April 2015. On that occasion, in the presence of the president of the Nišava District, the members of the board of ICT, as well as the members of the board of Communal Service unreservedly supported our endeavours and efforts and pointed out the importance of a closer co-operation between work fields and higher vocational education.

The sample of the research was created on the basis of an overview of all key indicators of the companies and enterprises which run business in this region, with the aim of securing the presence of all relevant economy sectors (agriculture, industry, services, etc.), of small and medium-sized enterprises which are the carriers of the economic development, of the representatives of multinational companies (there are currently seven multinational giants in

the region), of export-oriented companies, of companies whose activities are focused on the national market, of companies which are in the national restructuring programme, etc.

The companies have been chosen in agreement with the representatives of the municipalities and the Regional Chamber of Commerce. Likewise, during the visits to secondary vocational schools and grammar schools the seniors were surveyed and they went through interviews regarding the topic of the founding of the Academy of Vocational Studies. The aim was to assess the capacity of the first generations enrolling for the Academy. Since this was an applied research we have chosen the suitable quantitative method – surveying. The data was processed by means of the SPSS 20.0, frequency analysis and distribution of responses, as well as by means of analysis of variance and chi-square distribution. The questionnaire comprised two sections. The questions in the questionnaire related to the basic information on the respondent, socio-demographic data, information regarding respondents' education, type of school, profile, achieved success and plans for the future. The questionnaire also included instructions. The questionnaires were distributed between February and May, 2015.

On the basis of the processed data we have concluded that the sample comprised 2027 respondents (M=1217, F=1010). The survey was equally conducted among the students of four-year and three-year education. The respondents were born in 1995 and 1996 and 7% of the responding students attended three-year vocational education, 69% of them attended four-year vocational education, while 22 % of them attended grammar schools. The 2% of empty or inadequately filled questionnaires were not taken into consideration. Most of the responding students come from the families in which parents have a secondary school diploma (58% of mothers and 64% of fathers). There are 23% of mothers and 20,9% of fathers with a faculty diploma. There were 8% of parents with a primary school diploma. Grade Point Average (GPA) of the students who attended grammar schools was 4.23, while GPAs of students who attended four-year and three-year vocational schools were 4.11 and 3.89, respectively.

It is encouraging to learn that over 80% of responding students plan to continue with their education: 74% of grammar school graduates plan to enrol for faculties, while 76% of secondary vocational school graduates plan to enrol for vocational colleges. These data correlate with the viewpoints of their headteachers who emphasised the issues of working with gifted children and encouraging their further improvement, i.e. of monitoring their work. One of the conclusions of the survey was that the Academy needs to deal with this population of students and build the mechanisms of their development, starting from secondary schools all the way to master and PhD studies. An approach to these students needs to be systemic,

the procedures of working with them and developing their talents need to be devised and they need to be included in finding the solution for problems in the society. Headteachers pointed to the problem of profile structures in secondary vocational schools and this was in their focus while talking about the issues of secondary vocational education development.

The survey intended for the employers was conducted with the assistance of the regional Chambers of Commerce. Their representatives participated in the creation of the questionnaire. The most conspicuous detail ensued: aside from the ICT sector, in almost all other companies (excluding multinational companies) there exists a negative age structure. In some cases, in these companies one encounters younger staff trained by the experienced colleagues who are either about to retire or simply introduce the young to their future profession. This is an example of good practice and testifies to owners' commitment to further development. The employers emphasised their need for educated and competent staff. However, their needs were much under the expected level. On several occasions they pointed out the legal issues, as well as the lack of incentives by the state when it comes to employing young people who have no previous experience. All of the above is in a direct correlation with the development and survival of these actors on the market. On the other hand, certain sectors such as ICT sector and service sector, showed significant interest in engaging practitioners and graduate students, as well as in developing a model for the realisation of professional practice for the purposes of training the future employees.

On the basis of the aforementioned, and bearing in mind the specificities of the region, we suggest the following model of the Academy of Vocational Studies with a partial integration in the following fields:

1. Quality Assurance
2. International Co-operation
3. Student Service
4. IT Service

## **5. MODEL OF THE ACADEMY OF VOCATIONAL STUDIES**

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### **5.1 GENERAL PROVISIONS**

The Academy of Vocational Studies is an independent higher education institution which implements vocational study programmes of the first and the second level of higher education. In performing its activities the Academy of Vocational Studies combines scientific, educational, research oriented, professional and artistic work, as well as the components of a unique process of higher education.

A higher education institution has got a status of an academy if it implements at least five accredited vocational study programmes in at least three scientific, educational and artistic fields.

### **5.2 STRATEGIC GOALS OF THE ACADEMY**

By connecting on a regional level and by integrating functions the Academy should strengthen the existing colleges of vocational studies which are relatively small and incoherent units and integrate in the fields of strategic planning, study programmes adoption, quality assurance, teacher election, issuing diplomas and diploma supplements, international co-operation, enrolment policy and other fields in accordance with the Statute of the Academy.

The Academy of Vocational Studies and colleges of vocational studies shall focus on the development of a long-term co-operation with potential beneficiaries in the domain of economy and public sector, and they shall adjust to the needs and possibilities of the region, which offers the possibility of development and survival of colleges of vocational studies which are the only higher education institutions in some cities (Uprija, Pirot, Prokuplje).

At academies of vocational studies which dedicate attention to applied and developmental research, and have at their disposal sufficient number of teachers with acquired PhD titles master vocational studies can be accredited (120 ECTS).

By integrating functions within the Academy one obtains a critical mass necessary for making decisions in various boards and bodies, especially regarding teachers' election and study programmes adoption.

Within the Academy one creates the possibility of adopting integrated multidisciplinary study programmes on all study levels, with the opportunity of a rational use of expensive equipment, regardless of its location.

Integration of vocational colleges creates conditions for a joint participation in national and international projects, as well as for the mobility and international exchange of teachers and students.

### **5.3 THE AUTONOMY OF VOCATIONAL COLLEGES – MEMBERS OF THE ACADEMY OF VOCATIONAL STUDIES**

Colleges of vocational studies – members of the Academy of Vocational Studies retain their legal status of higher education institution and the full autonomy in the following areas.

- adopting the Statute and other general documents
- electing the members of the School Council
- electing the director
- forming expert bodies
- managing revenues
- deciding upon the issues relating to the teaching process, scientific research, professional practice
- suggesting and actively participating in deciding upon all integrative functions within the Academy
- forming the Student Parliament
- retaining their own bank accounts, personal identification number, tax identification number, stamp, logo, etc.

### **5.4 INTEGRATIVE FUNCTIONS OF THE ACADEMY OF VOCATIONAL STUDIES**

The Academy of Vocational Studies integrates functions of all higher education institutions and units which are part of it, and especially of vocational colleges by conducting a unique policy with the aim of improving the quality of the teaching process, of scientific research, and artistic work.

For the purposes of realising the said aims and connecting vocational colleges the Academy has special jurisdiction in the following areas.

1. Strategic planning
2. Adopting study programmes
3. Teachers' election
4. Quality assurance
5. International co-operation
6. Issuing diplomas and diploma supplements
7. Investment planning
8. Enrolment policy
9. Planning the employment policy and hiring teachers and associates
10. Forming a unique information system

In all abovementioned areas vocational colleges take an active role by making suggestions and decisions in accordance with the Statute of the Academy

## **5.5 FINANCING OF THE ACADEMY OF VOCATIONAL STUDIES**

The Academy of Vocational Studies acquires the means for performing their activities in accordance with the law and the Statute from the following sources:

- the means which are secured by the founder
- fees for commercial and other services
- projects and contracts relating to the realisation of the research, developmental, professional and consulting services
- additional sources in accordance with the law

## **5.6 BODIES OF THE ACADEMY OF VOCATIONAL STUDIES**

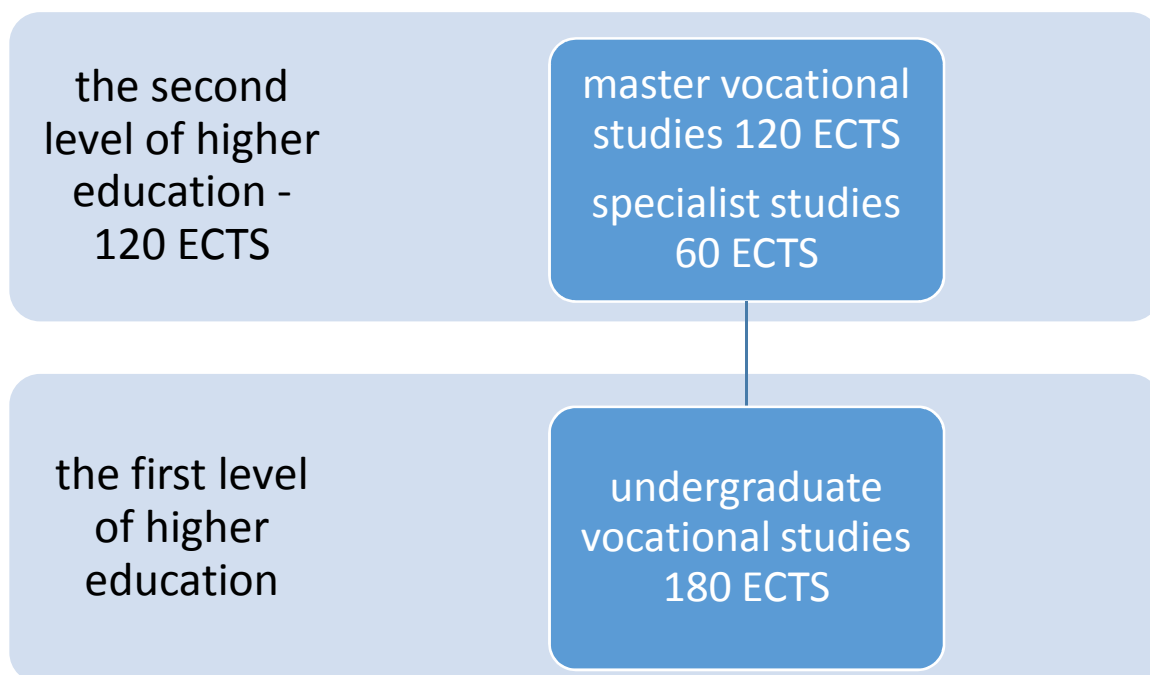
The executive body of the Academy of Vocational Studies is the president of the Academy which is elected by the Council of the Academy for a period of three years and from among the professors of vocational studies

The managing body is the Council of the Academy comprising the representatives of the colleges-members of the Academy, the representatives of students and of the founder

The expert body of the Academy is the Senate of the Academy comprising the president of the Academy, the directors and representatives of the colleges-members of the Academy

Student Parliament comprises the representatives of Student Parliaments of the colleges-members of the Academy

## HIGHER EDUCATION VOCATIONAL STUDIES



### 5.6. RATIONALE

The suggested model of the Academy of Vocational Studies is completely in agreement with the Law on higher education regarding the conditions and manners of foundation, the status of its members, financing and other domains, so much so that there is no need to make any changes in the aforementioned law.

This model of the Academy corresponds to the strategic goals of the adopted 2020 Education Development Strategy in the Republic of Serbia, especially in the part which deals with the higher vocational education.

This model of the Academy does not interfere with the plans of the vocational colleges-members of the Academy, and it represents the continuation of initiated activities in every field.

Vocational colleges actively participate in making suggestions and decisions by being the part of boards and bodies of the Academy.

Vocational colleges autonomously make their decisions in certain areas such as teachers election and study programmes adoption, but they do not always have the critical mass of the teaching staff which reflects on the quality of the teaching process.

The suggested model of the Academy offers the possibility of improvement and development of vocational colleges, as well as of their role in a dual system of higher education. Thus, it becomes a guarantee of the very survival of the existing vocational colleges.



## 6. STANDARDS FOR THE ACCREDITATION OF THE ACADEMY OF VOCATIONAL STUDIES

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The Academy of Vocational Studies is an independent higher education institution which implements vocational study programmes of the first and the second level of higher education. In performing its activities the Academy of Vocational Studies combines scientific, educational, research oriented, professional and artistic work, as well as the components of a unique process of higher education.

A higher education institution has got a status of an academy if it implements at least five accredited vocational study programmes in at least three scientific, educational and artistic fields.

Accreditation of an academy of vocational studies is performed in accordance with the **Rules and Regulations on accreditation standards and procedures of higher education institutions and study programmes (Official Gazette of the Republic of Serbia, N° 106/06)**:

- *Standard 1: Basic aims and tasks of the higher education institution*
- *Standard 2: Planning and control*
- *Standard 3: Organisation and management*
- *Standard 4: Studies*
- *Standard 6: Teaching staff*
- *7: Non-teaching staff*
- *Standard 8: Students*
- *Standard 9: Space and equipment*
- *Standard 10: Library, textbooks, and IT support*
- *Standard 11: Financial resources*
- *Standard 12: Internal mechanisms for quality assurance*
- *Standard 13: Transparency*

*Aside from the indicated standards an academy is accredited in accordance with the Amendments to the standards for the accreditation of higher education institutions regarding particular scientific or artistic fields within which accredited vocational study programmes are implemented.*

Academies of vocational studies are allowed to accredit undergraduate study programmes at the first level, and specialist study programmes at the second level of higher education.

The Academy of Vocational Studies, comprising accredited vocational colleges which are legal entities, is accredited on the basis of the accredited vocational colleges which implement undergraduate and specialist study programmes in three different fields and domains.

*The Academy of Vocational Studies, comprising accredited vocational colleges which are legal entities, is accredited according to the process of accreditation of universities which comprise faculties that are legal entities.*

*In the process of preparing the documentation for the process of accreditation one should follow the instructions of the Commission for Accreditation and Quality Assurance and the Ministry of Education, Science and Technological Development, i.e. of the National Council for Higher Education of the Republic of Serbia.*

## CONCLUSION

The presented economic parameters, demographic trends, as well as conspicuous internal migrations put the observed districts into an unenviable situation. Revitalisation of the economies of the observed districts and their prosperity, as well as the end of negative demographic trends is in a direct correlation with the development of the eight vocational colleges. In the case of Prokuplje, Pirot, Kruševac, and Čuprija the colleges situated in these towns are the only higher education institutions that these towns have. In the case of Niš, Vranje, and Leskovac, aside from the abovementioned colleges, there are also faculties which are a part of the University of Niš.

The founding of the Academy of Vocational Studies is strongly supported by the local and regional structures which perceive the forming of such an entity as a possibility of securing a long-term stability and development of the region. From the standpoint of integrations, the existing confederate model of a university is strongly advocated in Serbia, comprising certain degrees of integration. This precise model guarantees a successful outcome of the struggle against demographic, financial and migration trends which have been mentioned in the previous sections of this study. On the other hand, by means of a total integration which would signify the loss of the status of a legal entity, the position of these institutions within their respective municipalities and regions would somewhat be violated, bearing in mind their

long traditions. In the case of some such scenario, the support of the local and regional political structures would utterly be excluded. On the other hand, modern trends in the system of higher education, as well as affiliation with a unique European higher education space, excludes every other integration model, aside from a total functional integration which secures a full autonomy of higher education institutions in the fields of special interest for their further development. For this reason it is necessary to approach the process of full integration with additional care.

Bearing all this in mind and taking into account the needs of the region and a specific position of institutions of vocational education on the one hand, and modern and functional trends on the other, the founding of the Academy should be carried out in two phases which would deal with a gradual process, from a partial towards a total integration over a certain period. The first stage should deal with the founding of an association in a form of a Network which would cover certain integrating functions, while the second stage, based on the results of the Network, would imply a transformation of the Network into an integrated higher education system. The Network as an association of vocational colleges first and foremost represents an institutional and organisational unit. Within the Network it is necessary to form key bodies which would secure efficient functioning of vocational colleges, whereby efficiency should be defined through precise and measurable indicators. From the standpoint of a necessity for and support of achieving the optimal results, i.e. of a faster and a more efficient transfer of knowledge and technologies from higher education to practice, it is necessary to integrate the following five areas by forming suitable centres and offices.

### **Quality Assurance Centre**

Quality Assurance Centre defines strategies and policies of quality management, control, improvement and development, and it is the task of this centre to perform administrative and organisational activities relating to self-evaluation and improvement of study programmes, teaching process and working conditions at the colleges of vocational studies the representatives of which signed the aforementioned Agreement. The expert body of the Quality Assurance Centre is the Quality Assurance Committee which is appointed by the Senat for the period of three years. The president and members of the Committee are chosen from among the teaching staff, scientists and students of all educational and professional fields. The forms and manners of functioning of the Centre are closer defined by the General Act of the Senate.

### **Information Systems Centre**

Information Systems Centre devises, develops and maintains the information system and performs other activities relating to the design, performance and development of joint IT functions among the vocational colleges-members of the Network, as well as relating to their connection with other IT systems in country and abroad. This Centre is responsible for the improvement, maintenance and reliable operation of a Distance Learning System via the Internet. This Centre possesses a Service for Information Technologies and it is appointed by the Senat for the period of three years. The Service offers recommendations regarding the following:

- a design and implementation of information subsystems intended for educational, scientific, research, management, financial and other activities of the vocational colleges-members of the Network.
- a development and assistance regarding the procurement of communication equipment, maintenance of IT network and programme packages required by the vocational colleges-members of the Network.
- organisation and implementation of training courses regarding the use of the computer equipment
- other activities relating to IT systems and computer network

### **Student Service Centre**

Student Service Centre is a body which:

1. creates suitable conditions in order to meet the needs of students
2. offers consulting services to students
3. suggests and encourages various forms of student organisation: clubs, sport associations, project-based groups, campaign and promotion initiatives, groups responsible for organising certain professional activities relating to culture, science, art, sport and the like
4. creates conditions for the Alumni organisation to perform its activities
5. offers information to students

Information services imply providing information with respect to the following areas:

- improvement of student standard: offering information on student loans, scholarships and other aspects influencing the student standard (paying tuition fees in installments, tuition relief, free textbooks, etc)

- initial orientation: offering information on student life style, activities and obligations during the first year of study, as well as introducing students to the study (campus) rules
- reference to other available services: psycho-social, tutorship, health services, etc
- informing the teaching staff of the experiences of students, of the consequences of the current teaching practice, consultation and examination, etc; encouraging students to become an additional control factor regarding the work of their teachers (these activities should be harmonised with the existing activities regarding the improvement of pedagogical qualifications of teachers)

Activities of the Student Service Centre are closer defined by the General Act of the Senate.

### **Career Guidance Centre**

The mission of the Career Guidance Centre is to offer support with respect to career development, further academic, professional and even personal development of students attending the vocational colleges-members of the Network. The Centre helps the students to form a clear idea of their professional interests, abilities and possibilities for further professional development.

### **The Services of the Career Guidance Centre**

Through discussions with guidance counselors the career guidance centre offers students the possibility of obtaining a good piece of advice and help to review their current careers and plan further professional development.

### **Career info**

Career info offers relevant information to scholarship awardees regarding the current competitions and scholarships, possibilities for professional improvement, practice, courses, volunteering programmes, as well as all other interesting and useful pieces of information.

### **Professional development workshops**

The Career Guidance Centre offers the possibilities of professional development by organising various workshops for professional development.

### **Co-operation with employers**

Organisation of practical trainings and placements for students.

Activities of the Career Guidance Centre are closer defined by the General Act of the Senate.

### **International Co-operation Centre**

International Co-operation Centre initiates, supports, informs and offers advice to teachers, associates and students of the vocational colleges-members of the Network, regarding various international projects.

International Co-operation Centre:

- prepares drafts of annual and perennial plans of international co-operation of the Network
- monitors the realisation of the drafted plans of international co-operation
- prepares the necessary documentation necessary for the participation in international projects and other forms of international co-operation
- makes necessary contacts with other higher education institutions abroad
- prepares the draft of an annual report on international co-operation and submits it to the Senat

The Centre comprises every employee in the vocational colleges-members of the Network who are in charge of international co-operation.

## 7.ANNEX



Tempus

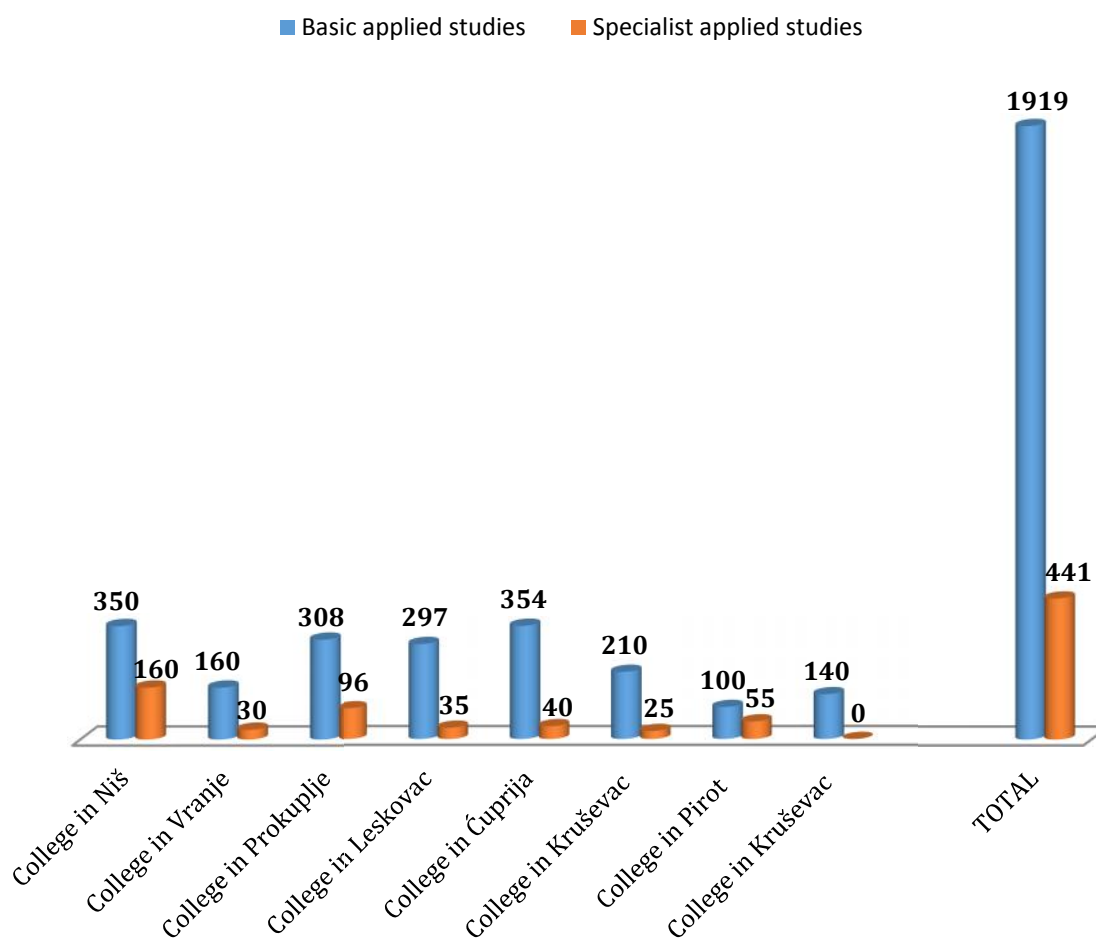
*Establishing and capacity building of the  
Southern Serbian-Academy and the  
National Conference for Vocational Higher  
Education*

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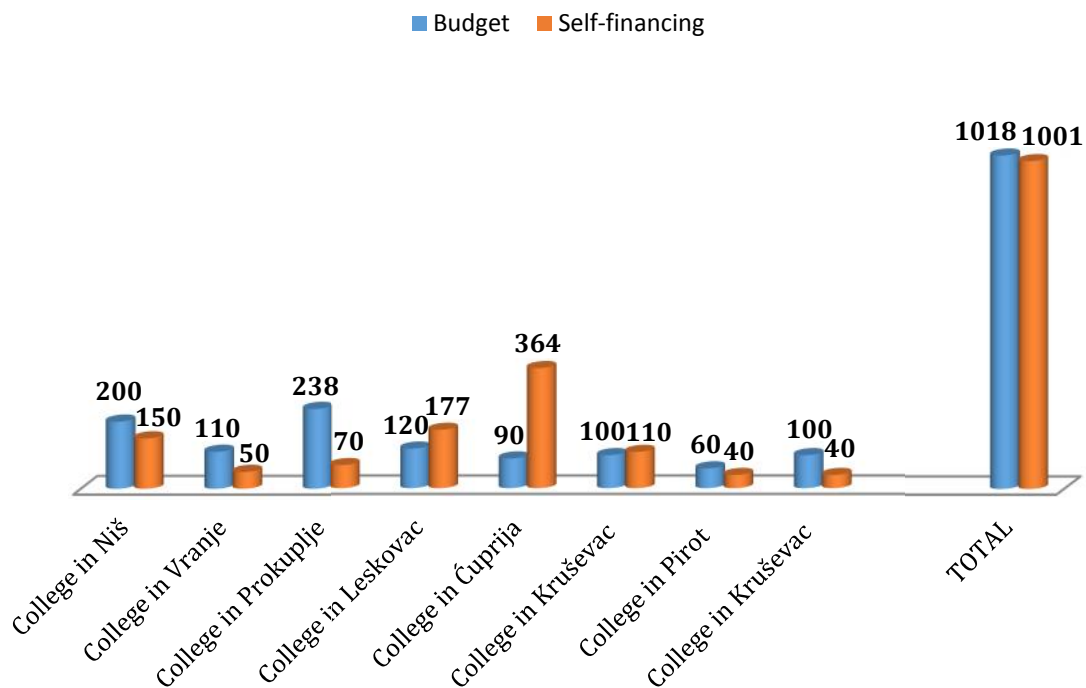


### SUMMARY ANALYSIS OF THE SITUATION IN THE COLLEGES – PARTNERS AT THE PROJECT TEMPUS ECBAC

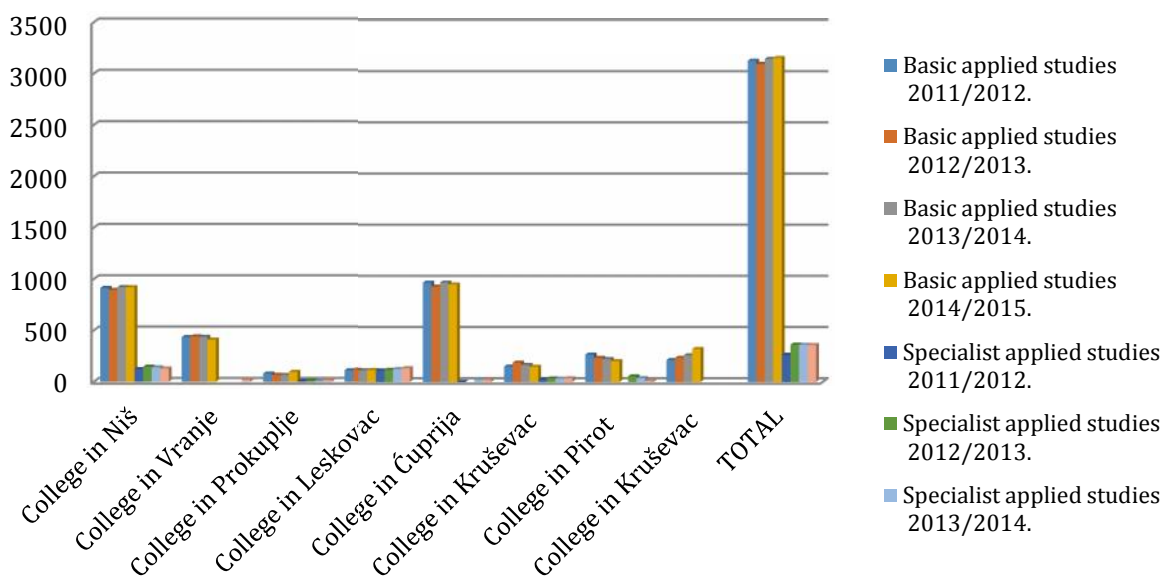
APPROVED NUMBER OF STUDENTS BASED ON THE WORK PERMIT



### TOTAL NUMBER OF STUDENTS ON UNDERGRADUATE VOCATIONAL

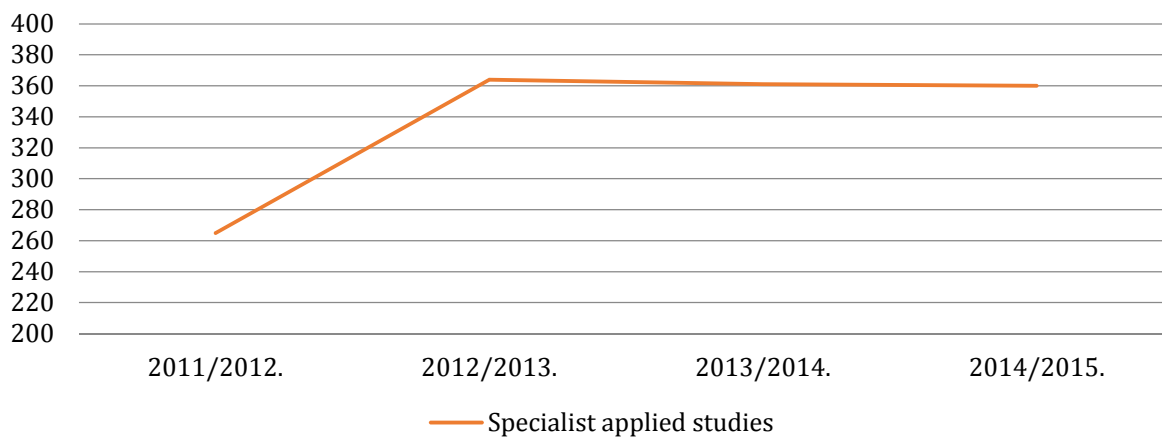


### NUMBER OF STUDENT ENROLLED AT ALL STUDY LEVELS IN THE SCHOOL YEARS OF 2011/2012, 2012/2013, 2013/2014   2014/2015.

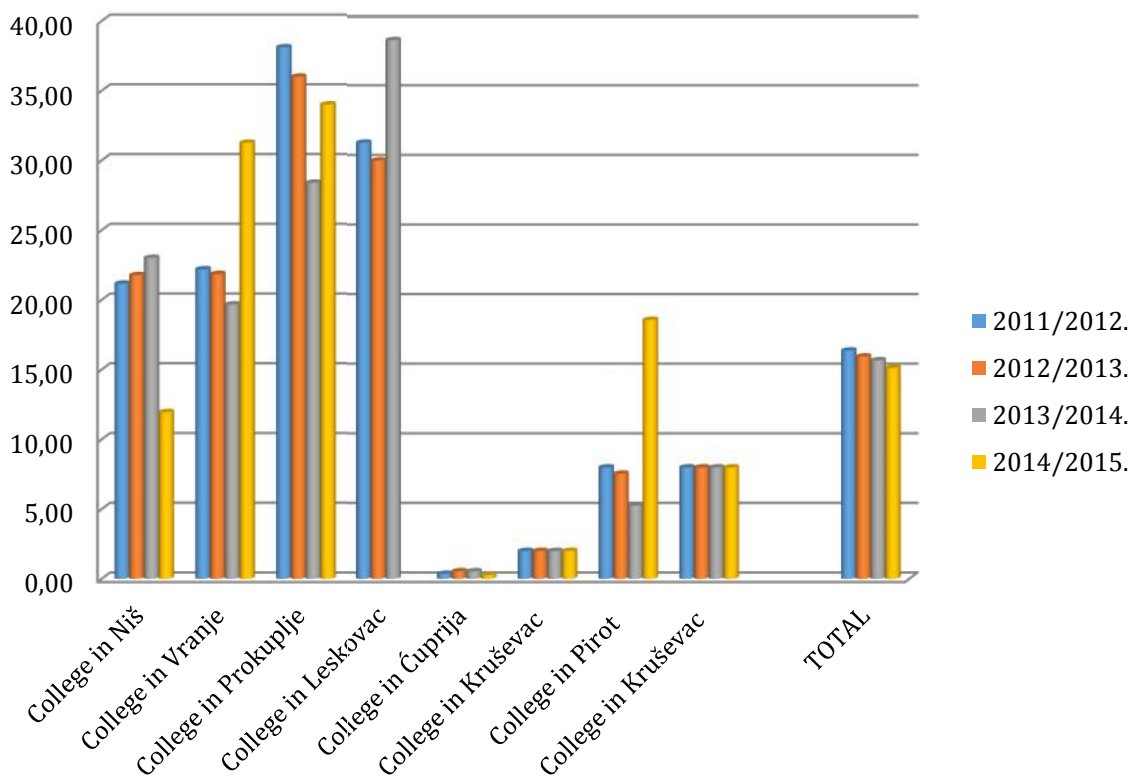




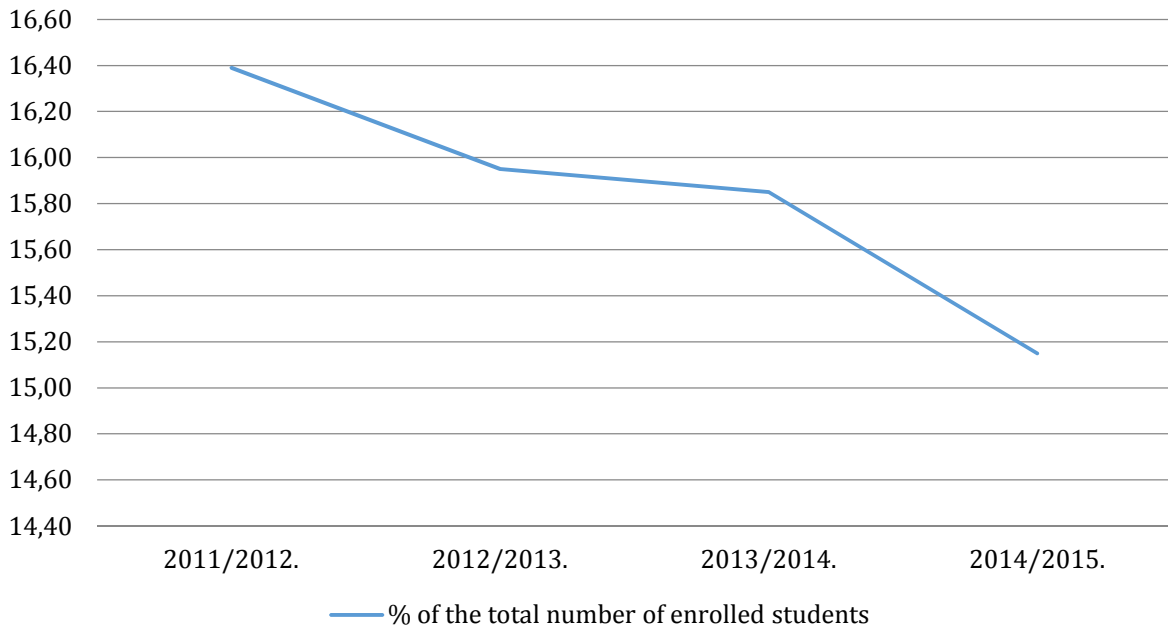
**NUMBER OF STUDENT ENROLLED AT ALL STUDY LEVELS  
SPECIALIST VOCATIONA STUDIES**



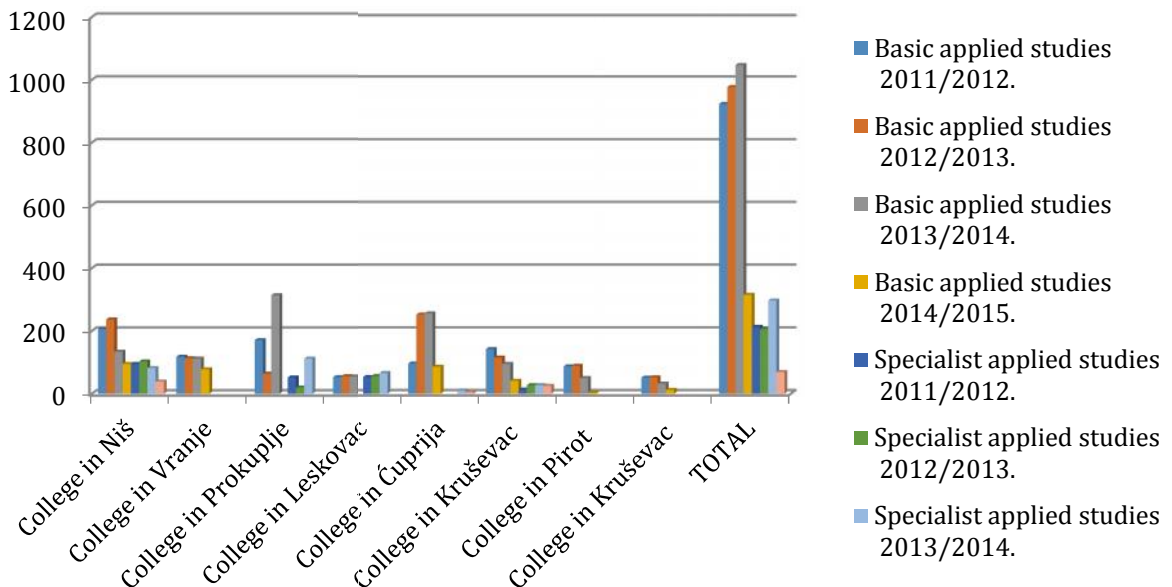
**PERCENTAGE OF STUDENTS WHO ABANDONED COLLEGE AFTER THE FIRST YEARS OF STUDY**



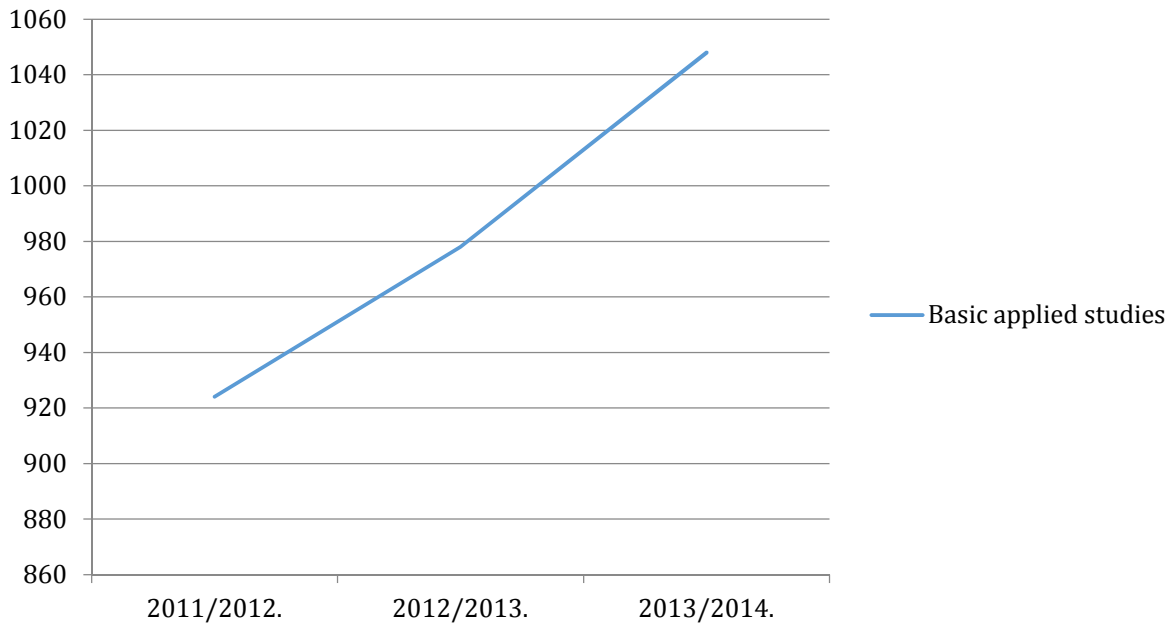
**PERCENTAGE OF THE TOTAL NUMBER OF STUDENTS WHO ABANDONED COLLEGE AFTER THE FIRST YEARS OF STUDY**



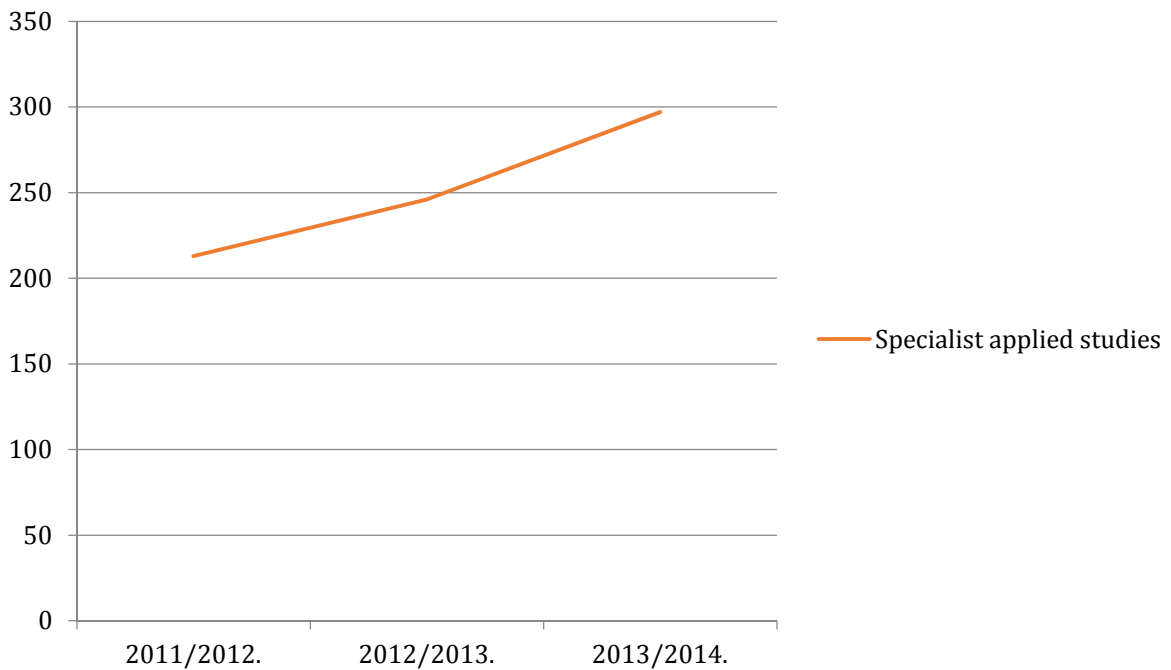
**THE NUMBER OF GRADUATES ON ALL STUDY LEVELS IN THE SCHOOL YEARS OF 2011/2012, 2012/2013 И 2013/2014. ГОДИНИ**



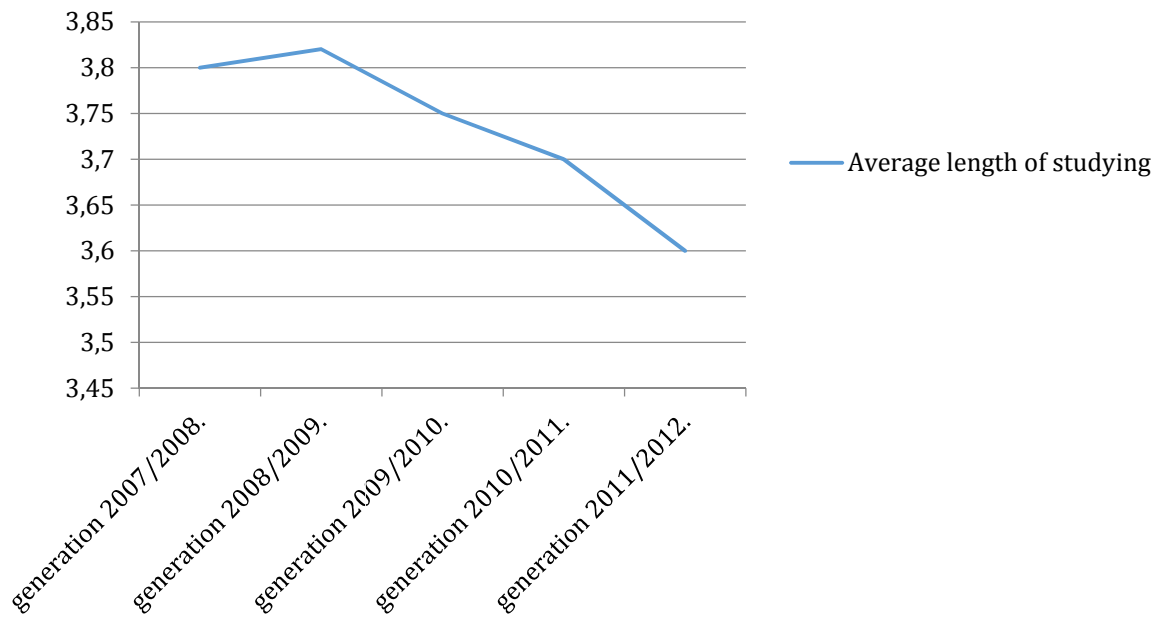
**THE NUMBER OF GRADUATES ON ALL STUDY LEVELS  
UNDERGRADUATE VOCATIONALS TUDIES**



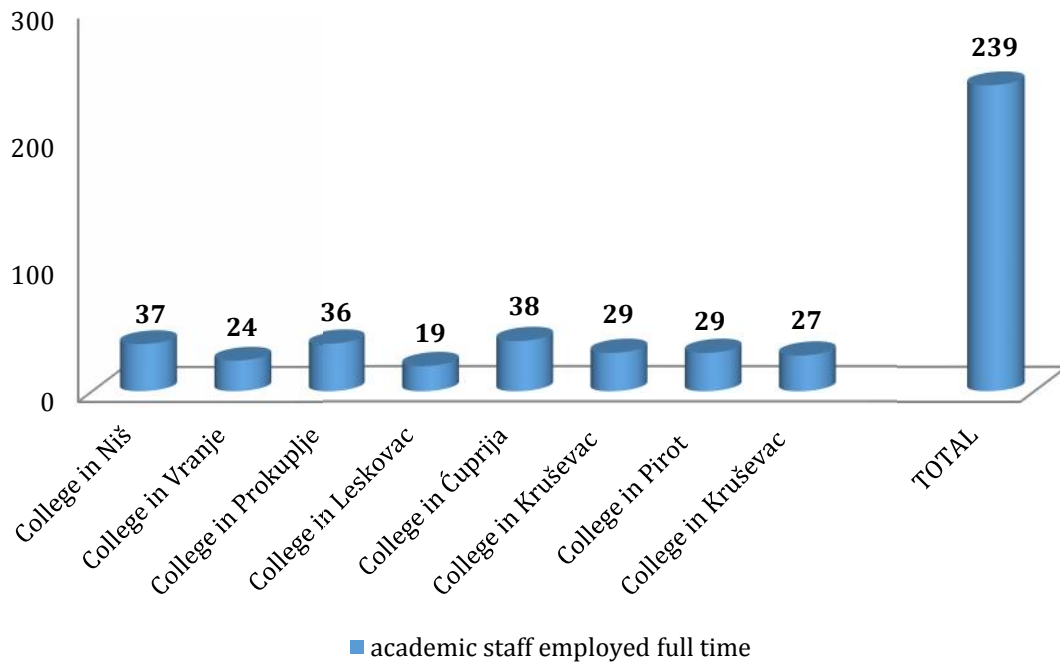
**THE NUMBER OF GRADUATES ON ALL STUDY LEVELS  
SPECIALIST VOCATIONALS TUDIES**



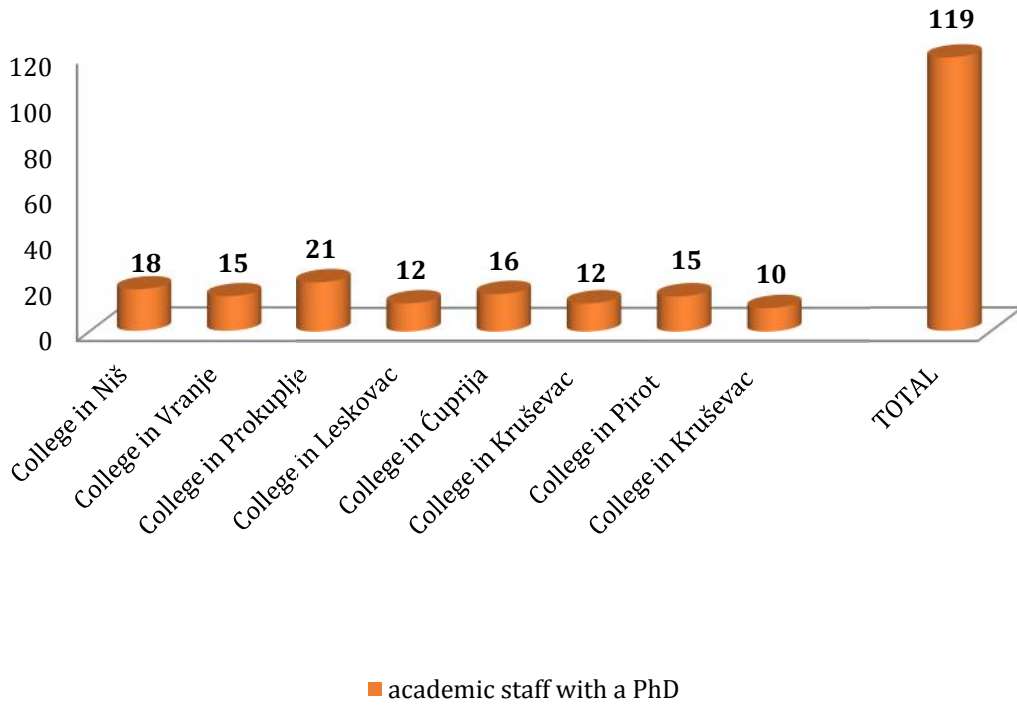
### AVERAGE LENGTH OF STUDYING UNTIL GRADUATION



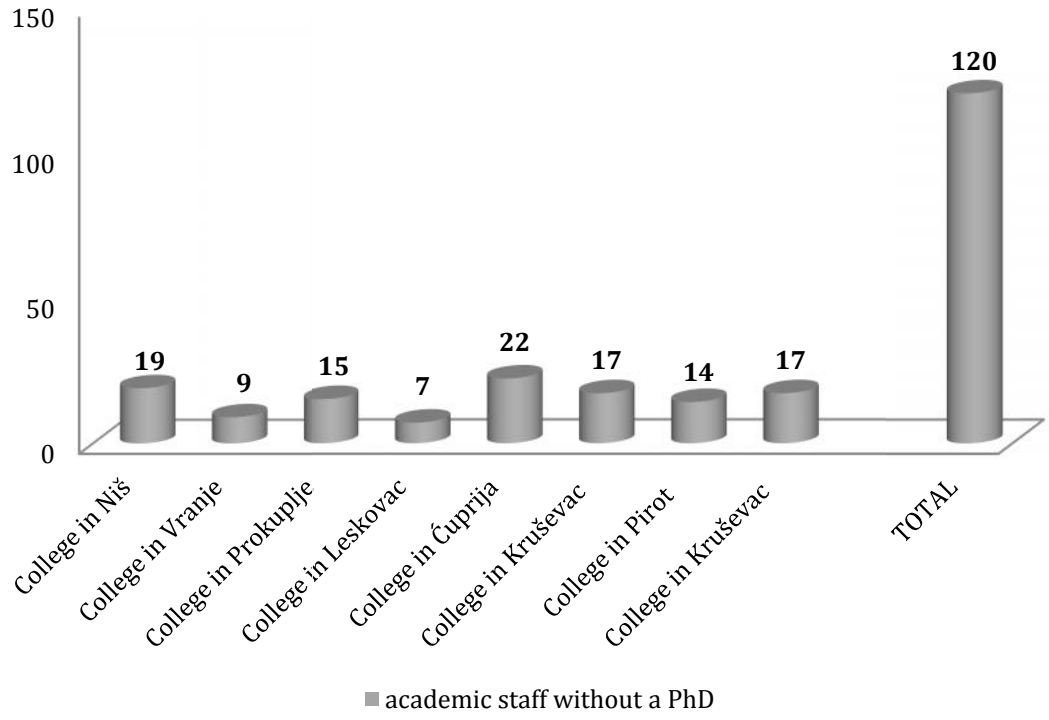
### ACADEMIC STAFF WITH A DOCTORAL DEGREE EMPLOYED FULL TIME AT THE COLLEGE



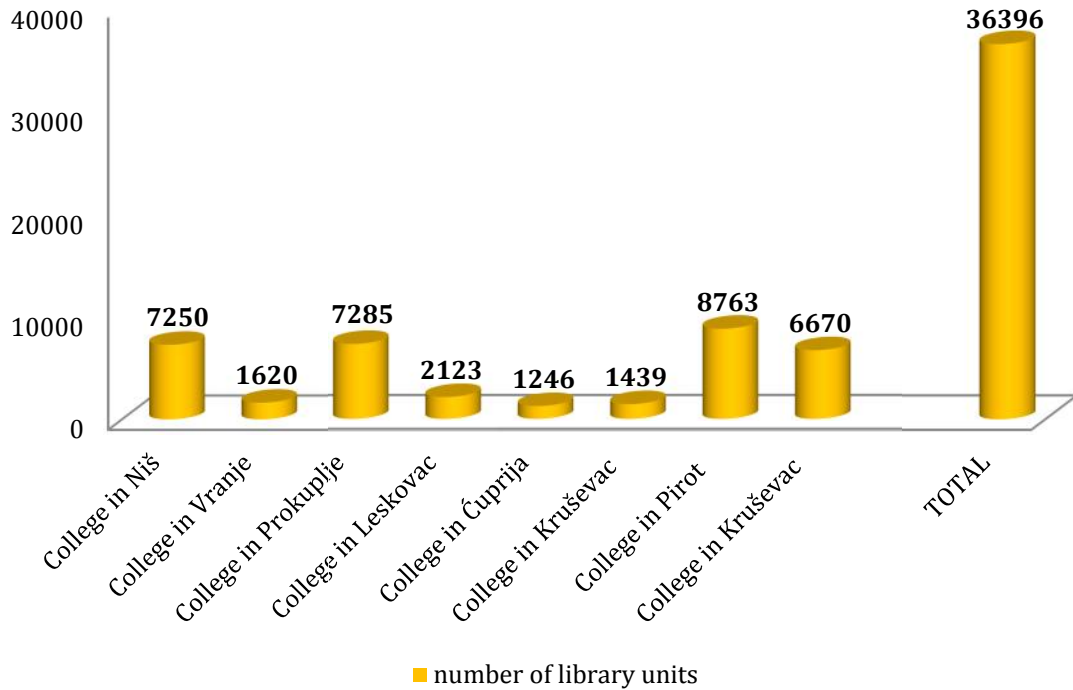
**ACADEMIC STAFF WITH A DOCTORAL DEGREE EMPLOYED FULL TIME AT THE COLLEGE**



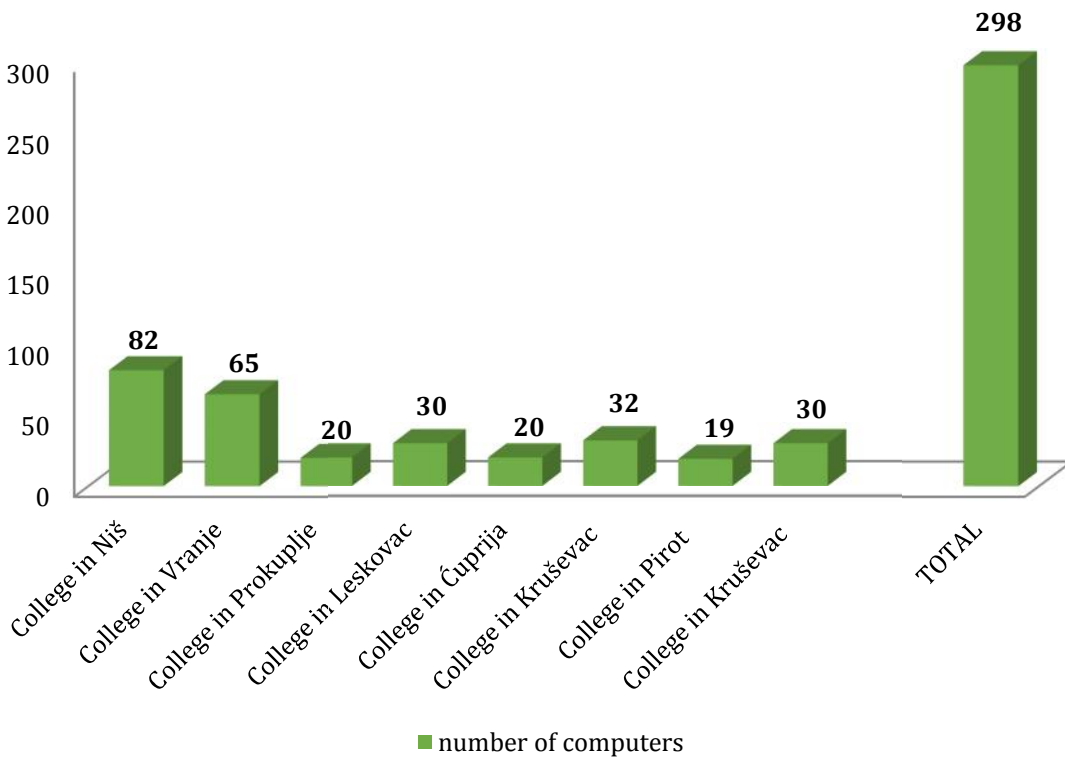
**ACADEMIC STAFF WITHOUT A DOCTORAL DEGREE EMPLOYED FULL TIME**



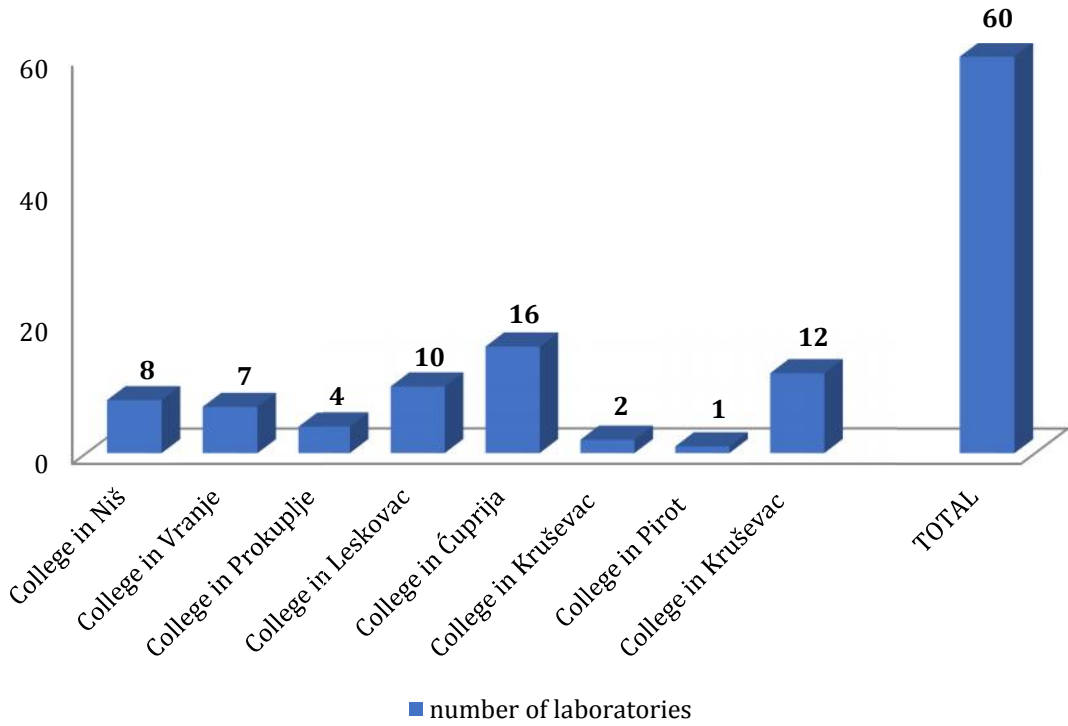
**NUMBER OF LIBRARY UNITS FOR THE NEEDS OF THE STUDY PROGRAMME AND RESEARCH**



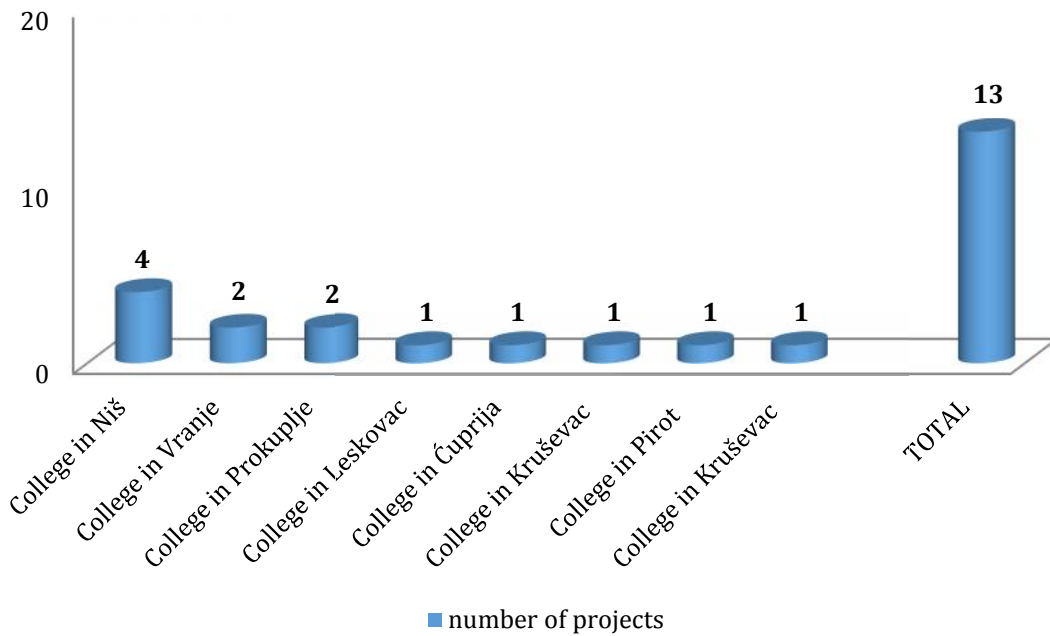
**THE NUMBER OF COMPUTERS FOR STUDENTS AND RESEARCHERS**



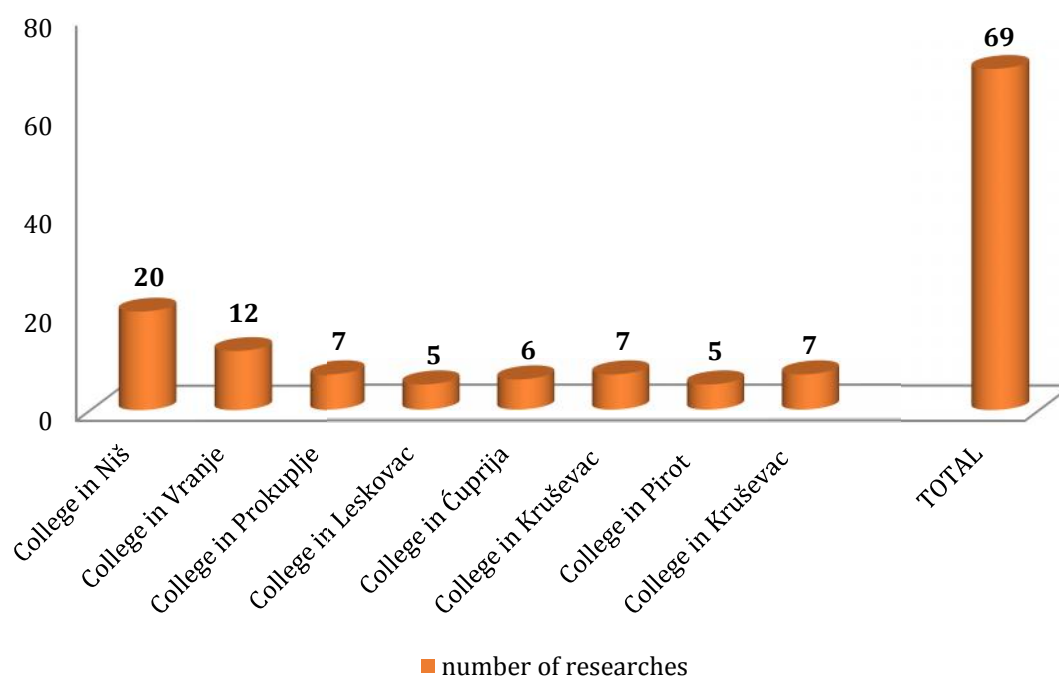
**THE NUMBER OF LABS**



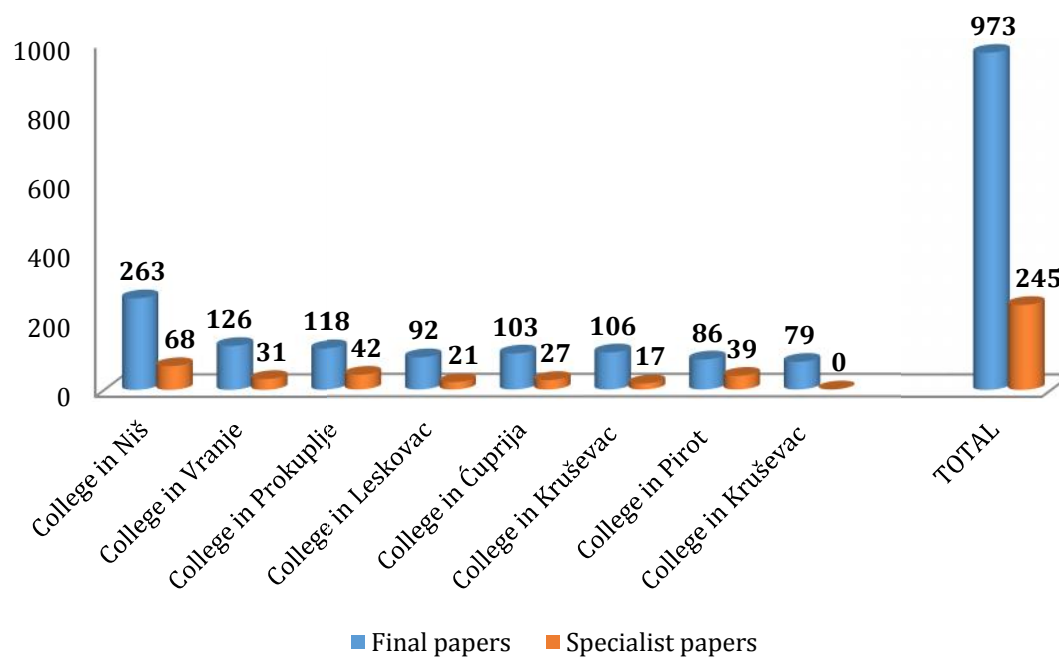
**THE NUMBER OF PROJECTS AND RESEARCHERS INCLUDED IN NATIONAL AND INTERNATIONAL SCIENTIFIC PROJECTS**



**THE NUMBER AND TYPE OF RESEARCH IN CO-OPERATION WITH THE  
WORK FIELDS**

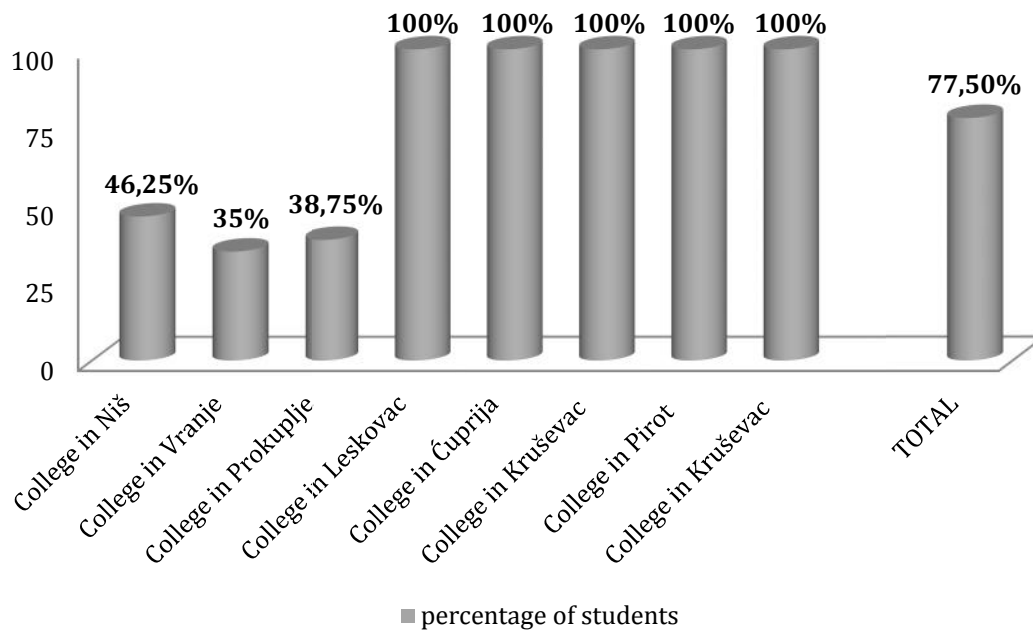


**THE NUMBER OF FINAL PAPERS ON ALL LEVELS OF STUDIES THE TOPIC OF  
WHICH IS INITIATED BY THE WORK FIELDS OR SOME OTHER SUBJECTS  
OUTSIDE THE SCOPE OF EDUCATION**

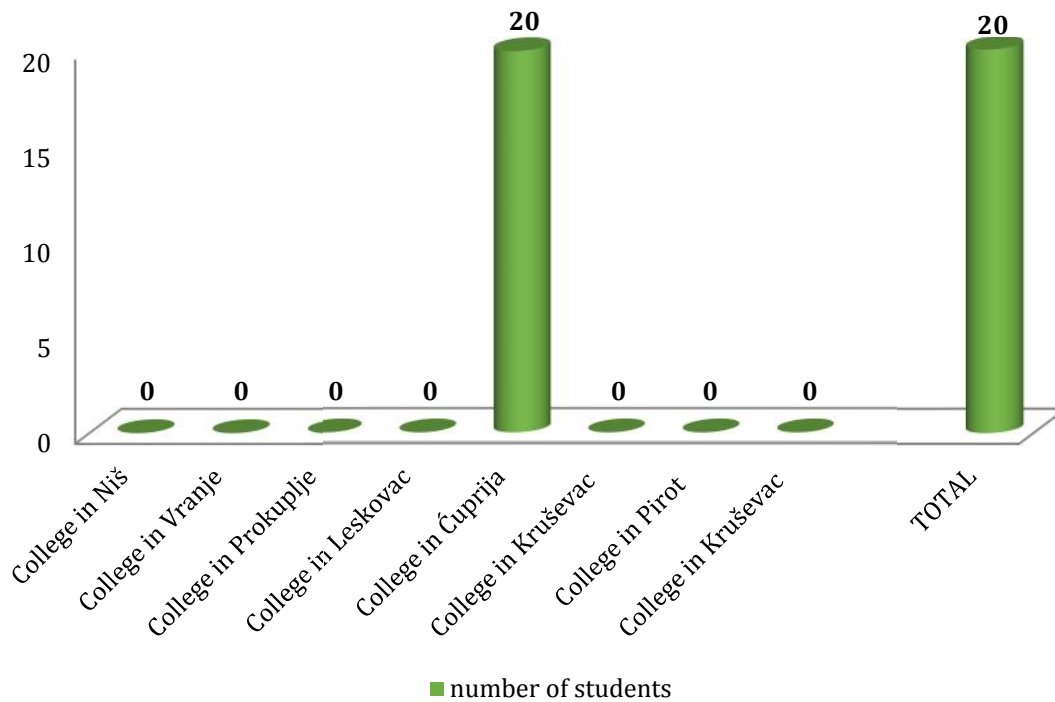




**PERCENTAGE OF STUDENTS WHO HAD THEIR PRACTICAL TRAINING DONE IN AN INSTITUTION IN THE PERIOD OF AT LEAST A MONTH**



**THE NUMBER OF STUDENTS WHO PARTICIPATED IN INTERNATIONAL STUDENT MOBILITY**



## Osnovne informacije o tebi i tvom školovanju

Ova pitanja se odnose na osnovne podatke o tebi i tvom obrazovanju. Molimo te da odgovoriš tako što ćeš zaokružiti broj ispred odgovora ili upisati rečima/brojevima odgovor tamo gde treba.

### 1. Da li si muškog ili ženskog pola?

1. Ženskog
2. Muškog

### 2. Koje godine si rođen/a?

Na crti ispod upiši godinu kada si rođen/a.

\_\_\_\_\_ godina

### 3. Navedi podatke o školi koju trenutno pohađaš.

Dopiši odgovore.

Ime škole:

Obrazovni profil/smer: \_\_\_\_\_

Mesto u kome se nalazi škola:

### 4. Ova škola

Zaokruži jedan odgovor.

1. Srednja stručna škola - pohađam trogodišnji profil
2. Srednja stručna škola - pohađam četvorogodišnji profil
3. Umetnička škola
4. Gimnazija

### 5. Koji je najviši nivo obrazovanja koji je stekla tvoja majka?

Zaokruži jedan odgovor.

1. Bez škole
2. Osnovna škola
3. Srednja stručna škola
4. Gimnazija
5. Fakultet - osnovne studije
6. Fakultet - magistratura ili doktorat
7. Ne znam

**6. Koji je najviši nivo obrazovanja koji je stekla tvoj otac?**

*Zaokruži jedan odgovor.*

1. Bez škole
2. Osnovna škola
3. Srednja stručna škola
4. Gimnazija
5. Fakultet - osnovne studije
6. Fakultet - magistratura ili doktorat
7. Ne znam

**7. Sa kim sada živiš?**

1. Sa roditeljima
2. U domu
3. Sa rođacima/starateljima/kod prijatelja
4. Sa nekim drugim: \_\_\_\_\_

**8. Koliko je škola koju pohađaš udaljena od mesta u kome stanuješ**

*Zaokruži jedan odgovor. Traži se tvoja približna procena.*

1. Do 1 km
2. Od 1,1 do 5 km
3. Od 5,1 do 10 km
4. Više od 10,1 km

**9. Kada uporediš novčana primanja svoje porodice sa primanjima drugih porodica iz tvog mesta, ona su:**

*Na ovo pitanje možeš odgovoriti na osnovu ličnog utiska i procene.*

*Zaokruži jedan odgovor.*

1. Veoma iznad proseka
2. Nešto iznad proseka
3. Slična kao i kod većine
4. Nešto ispod proseka
5. Veoma ispod proseka

**10. Da li si ponovio razred u srednjoj školi?**

*Zaokruži jedan odgovor.*

1. Ne, nikada
2. Da, jednom

**11. Koliki je bio tvoj školski uspeh (prosek) na poslednjem polugodištu?**

Napiši prosek na crtu ispod. Ako ne možeš da se setiš tačnog proseka, napiši najpribližnij prosek.

Tvoj prosek na poslednjem polugodištu: \_\_\_\_, \_\_\_\_\_

## Podaci o tvom budućem školovanju

Naredna pitanja odnose se na tvoje buduće školovanje.  
Molimo te da odgovoriš tako što ćeš zaokružiti broj ispred odgovora ili upisati rečima odgovor tamo gde treba.

**12. Koji nivo školovanja očekuješ da ćeš završiti?**

Zaokruži jedan odgovor.

1. Srednju školu - trogodišnji profil
2. Srednju školu - četvorogodišnji profil
3. Višu školu
4. Fakultet - osnovne studije
5. Fakultet - magistraturu ili doktorat

**13. Prilikom donošenja odluke o nastavku školovanja čime se sve vodiš?**

Označi jedan odgovor u svakom redu. Za svaku tvrdnju označi koliko je važna za tebe kada donosiš odluku o nastavku školovanja. Možeš navesti i nešto što nije ponuđeno.

	Nije mi nimalo važno	Nije mi važno	Važno mi je	Veoma mi je važno
1. Trošak studija - koliko novca je potrebno da izdvojim.	1	2	3	4
2. Vreme koje bih provodio/la u put svaki dan.	1	2	3	4
3. Mogućnost da tokom školovanja/studija živim sa roditeljima.	1	2	3	4
4. Mogućnost da se odvojim od roditelja i živim samostalno.	1	2	3	4
5. Kvalitet društvenog života koji bih imao/la u mestu u kome bih se školovao/la.	1	2	3	4
6. Mogućnost da nađem bolji posao posle studija.	1	2	3	4
7. Kvalitet obrazovanja koji mogu da dobijem.	1	2	3	4
8. Količina truda koju bih morao/la da uložim tokom studiranja.	1	2	3	4
9. Da studiram ono što volim.	1	2	3	4
10. Da studiram ono što sam učio/la u srednjoj školi.				
11. Nešto drugo (navedi šta):				
12. Nešto drugo (navedi šta):				

→ Šta je od navedenog iz pitanja 13 najvažnije za tebe?

Dopiši odgovor

Najvažniji činilac iz pitanja 13 je pod rednim brojem:

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**Da li ćeš nakon završetka srednje škole nastaviti školovanje?**

Zaokruži jedan odgovor.

1. Ne, ne bih nastavio/la školovanje - **pređi na pitanje 18**
2. Da, nakon završenog trogodišnjeg profila upisaću četvorogodišnji, ali ne bih upisivao/la višu školu ili fakultet - **pređi na pitanje 18**
3. Da, nakon završenog trogodišnjeg profila upisaću četvorogodišnji i kasnije višu školu ili fakultet - **pređi na pitanje 15**
4. Da, upisaću fakultet ili višu školu. - **pređi na pitanje 15**
5. Ne znam, nisam siguran/na - **pređi na pitanje 15**

Napiši na crti ispod pun naziv ustanove koju želiš da upišeš nakon škole koju sada pohađaš i mesto u kom se ona nalazi kao na primeru ispod. Ukoliko se dvoumiš između više ustanova napiši samo jednu.

**Primer:**

- a) Naziv ustanove: Visoka tehnička škola
- b) Mesto u kome se nalazi: Niš

a) Naziv ustanove: \_\_\_\_\_

b) Mesto u kome se nalazi: \_\_\_\_\_

*Pitanja u ovom segmentu se bave mogućnošću studiranja u Užicu. Molimo te da odgovoriš tako što ćeš zaokružiti broj ispred odgovora ili upisati rečima odgovor tamo gde treba*

**15. Da li u Užicu postoji ono što te zanima da upišeš, gde bi pre studirao/la?**

Zaokruži jedan odgovor.

1. Pre bih studirao/la u Užicu ako bi postojalo ono što me zanima - **pređi na pitanje 16**
2. Već sam izabrao/la da studiram u Užicu - **pređi na pitanje 16**
3. Nije mi važno gde studiram - **pređi na pitanje 16**
4. Pre bih studirao/la u nekom drugom gradu - **pređi na pitanje 17**

**16. Šta su za tebe prednosti studiranja u Užicu?**

Označi jedan odgovor u svakom redu. Obrati pažnju na to da ti ne mogu svi razlozi biti podjednako važni. Možeš navesti i prednosti koje nisu ponuđene.

	Nije mi nimalo važno	Nije mi važno	Važno mi je	Veoma mi je važno
1. Na taj način bih uštedeo/la dosta novca.	1	2	3	4
2. Trošio/la bih manje vremena za putovanja.	1	2	3	4
3. Mogućnost da tokom studija živim sa roditeljima.	1	2	3	4
4. Mogućnost da se odvojim od roditelja i živim samostalno.	1	2	3	4
5. Imao/la bih kvalitetniji društveni život.	1	2	3	4
6. Na taj način bih lakše došao/la do posla.	1	2	3	4
7. Na taj način bih dobio/la bolji kvalitet obrazovanja.	1	2	3	4
8. Morao/la bih da na taj način uložim manje truda prilikom studiranja.	1	2	3	4
9. Nešto drugo (navedi šta): _____	1	2	3	4
10. Nešto drugo (navedi šta): _____				

**→ Šta je od navedenog iz pitanja 16 najvažnije za tebe?**

Dopiši odgovor.

Najvažniji činilac iz pitanja 16 je pod rednim brojem:

**pređi na pitanje 20**

**17. Zašto ne bi studirao/la u Užicu ukoliko bi u njemu postojao fakultet koji te zanima?**

Označi jedan odgovor u svakom redu. Obrati pažnju na to da ti ne mogu svi razlozi biti podjednako važni za tebe. Možeš navesti i prednosti koje nisu ponuđene.

	Nije mi nimalo važno	Nije mi važno	Važno mi je	Veoma mi je važno
1. Želim da upoznam novi grad.	1	2	3	4
2. Želim da se odvojim od roditelja.	1	2	3	4
3. Imao/la bih kvalitetniji društveni život.	1	2	3	4
4. Da bih lakše došao/la do posla.	1	2	3	4
5. Na taj način bih dobio/la bolji kvalitet obrazovanja.	1	2	3	4
6. Morao/la bih da na taj način uložim više truda prilikom studiranja.	1	2	3	4
7. Plašim se da ljudi neće dovoljno vrednovati diplomu stečenu u Užicu.	1	2	3	4
8. Nešto drugo (navedi šta): _____	1	2	3	4
9. Nešto drugo (navedi šta): _____	1	2	3	4

➔ Šta je od navedenog iz pitanja 17 najvažnije za tebe?

Dopiši odgovor.

Najvažniji činilac iz pitanja 17 je pod rednim brojem:

**pređi na pitanje 20**

**18.** Rekao/la si nam da ne želiš da nastaviš svoje školovanje. Koji su razlozi za to? Proceni koliko se svaki razlog odnosi na tebe.

Označi jedan odgovor u svakom redu. Obrati pažnju na to da ti ne mogu svi razlozi biti podjednako važni za tebe. Možeš navesti i prednosti koje nisu ponuđene.

	Nije mi nimalo važno	Nije mi važno	Važno mi je	Veoma mi je važno
1. Moja porodica nema dovoljno novca da mi priušti za studiranje.	1	2	3	4
2. Želim da odmah počnem da radim.	1	2	3	4
3. Ne volim da učim i zbog toga ne želim na fakultet.	1	2	3	4
4. Ne postoji fakultet u mom mestu, a nemam sredstava da studiram u drugom gradu.	1	2	3	4
5. Mislim da nisam sposoban da završim fakultet.	1	2	3	4
6. Nešto drugo (navedi šta): _____	1	2	3	4
7. Nešto drugo (navedi šta): _____	1	2	3	4

**19.** Da li bi se tvoja odluka da ne studiraš promenila ukoliko bi postojao Univerzitet u Užicu?

Zakruži jedan odgovor.

1. Da, sigurno bih promenio/la odluku.
2. Ne znam, verovatno bih promenio/la odluku.
3. Ne znam, verovatno ne bih promenio/la odluku.
4. Ne, ni pod kojim uslovima ne bih nastavio/la školovanje bez obzira na to da li u Užicu postoji univerzitet ili ne.

**18.** Molimo te da, koristeći navedenu skalu od 1 do 7 za svaku tvrdnju, označiš u kojoj meri se slažeš sa njom. Bez obzira kako si do sada odgovarao, za svaku od ponuđenih tvrdnji proceni koliko se sa njom slažeš.

Označi jedan odgovor u svakom redu.

	Potpuno se slažem		Neodlučan/a sam			Potpuno se slažem	
1. Zato što sa diplomom srednje škole neću uspeti da dobijem dobro plaćen posao.	1	2	3	4	5	6	7
2. Jer uživam u učenju novih stvari.	1	2	3	4	5	6	7
3. Zato što smatram da će mi fakultetsko obrazovanje pomoći da bolje obavljam posao koji bih želeo/la da radim.	1	2	3	4	5	6	7
4. Zbog mogućnosti da sa drugima delim svoje ideje.	1	2	3	4	5	6	7
5. Iskreno rečeno, ne znam. Zaista imam osećaj da u školi gubim vreme.	1	2	3	4	5	6	7
6. Zbog zadovoljstva koje osećam kada tokom učenja prevaziđem sopstvena očekivanja.	1	2	3	4	5	6	7

7. Da pokažem sebi da sam sposoban/na da dobijem fakultetsku diplomu.	1	2	3	4	5	6	7
8. Da bih kasnije dobio/la prestižniji posao.	1	2	3	4	5	6	7
9. Zbog zadovoljstva koje osećam kada otkrivam nepoznato i saznajem nove stvari.	1	2	3	4	5	6	7
10. Jer će mi to omogućiti da jednog dana radim posao koji volim.	1	2	3	4	5	6	7
11. Zbog zadovoljstva koje mi pruža čitanje zanimljivih dela.	1	2	3	4	5	6	7
12. Nekada sam imao/la dobre razloge zbog kojih sam želeo/la da idem na fakultet, a sada se pitam da li bih zaista trebao/la da studiram.	1	2	3	4	5	6	7
13. Zbog zadovoljstva koje osećam kada postignem ili prevaziđem ciljeve koje sam sebi postavio/la.	1	2	3	4	5	6	7
14. Zato što ću se kada uspem na fakultetu osećati bitnim/bitnom.	1	2	3	4	5	6	7
15. Jer u budućnosti želim dobro da živim.	1	2	3	4	5	6	7
16. Zbog zadovoljstva koje osećam kada proširujem svoje znanje iz oblasti koje me zanimaju.	1	2	3	4	5	6	7
17. Jer će mi fakultet pomoći da donesem bolju odluku u pogledu moje karijere.	1	2	3	4	5	6	7
18. Zbog zadovoljstva koje osećam kada u potpunosti razumem ono što su drugi napisali.	1	2	3	4	5	6	7
19. Ne vidim zašto bih išao/la na fakultet i iskreno me baš briga za to.	1	2	3	4	5	6	7
20. Zbog zadovoljstva koje osećam kada ispunjavam teške zadatke.	1	2	3	4	5	6	7
21. Da bih sebi dokazao/la da sam pametan/na.	1	2	3	4	5	6	7
22. Da bih kasnije imao/la bolju platu.	1	2	3	4	5	6	7
23. Jer bi mi studije omogućile da nastavim da učim o mnogim stvarima koje me zanimaju.	1	2	3	4	5	6	7
24. Jer verujem da će mi nekoliko dodatnih godina obrazovanja povećati stručnost kao radnika.	1	2	3	4	5	6	7
25. Zbog dobrog osećanja koji mi pruža čitanje zanimljivih tema.	1	2	3	4	5	6	7
26. Ne znam. Nemam pojma šta ja uopšte radim u školi.	1	2	3	4	5	6	7
27. Jer ću tokom procesa ličnog usavršavanja na fakultetu osećati veliko zadovoljstvo.	1	2	3	4	5	6	7
28. Jer hoću da pokažem sebi da mogu da uspem na studijama.	1	2	3	4	5	6	7



# **BIBLIOGRAPHY**

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