

SUCCESS IN STUDYING AT THE UNIVERSITY OF MONTENEGRO: IS THERE HYPER-PRODUCTION OF DIPLOMAS?

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ABSTRACT

The article presents the results of research of the study success at the University of Montenegro (UoM). The theoretical framework of the study points to the complexity and multidimensionality of the problem studied. The aim of the research was to identify the success of studying at UoM. Some of the variables were observed statistically, with the evidence based on empirical data. We have followed the relationship between the completed secondary school, regional characteristics and gender dimensions at the completion of bachelor studies in the foreseen time period, in the fields of study: natural and technical, social-humanistic and artistic (total of 19 faculties, $N = 4\,517$). The results of research reject the hypothesis about the outstanding success of the study, i.e., the overproduction of diplomas, because 27,5 % of students graduated in natural and technical sciences, and 32 % in the field of social and humanistic sciences up-to-date. Higher success is noted only in the art disciplines (74,6 %). The results and their interpretation point to the need for introducing a qualification exam during enrolment, reducing the number of the enrolled at individual faculties, but also continually improving and innovating teaching and learning at the university. The results suggest the necessity of innovations in order to improve study success. Starting with students' enrolment university need to develop innovative approaches in the area of teaching and learning, but also monitoring and evaluation.

KEY WORDS

educational trajectory, gender, graduation time, predictors of (no) success, regional characteristics, continuous innovation

CLASSIFICATION

JEL: I121

INTRODUCTION

An ideal picture of university studies would probably have been achieved if all the predictors of the success of the study were achieved, that is: students enrolled in studies that they have developed abilities in, but which they were prepared for on the level of previous academic achievements; enrolled candidates were motivated and had developed metacognitive skills or learning skills; students regularly, according to academic years, passed exams with high achievement in learning outcomes, which would also reflect on their grades; all or at least most of the studies were provided with gender-balanced choices (and otherwise the coherent structure of the student population was provided), and there would not have been any feminized or masculinized programs or any other imbalance in the demographic structure [1]; students and teachers were devoted and had a high sense of belonging to the university; teachers got continually professionally trained in the field of teaching methodology and organized student-oriented or learning process-oriented classes [2]; financial circumstances of both students and universities were at a high level; after graduation, students got employed and employers showed satisfaction with their competences. At least three basic interested entities are covered by the previous description: student, university teacher, and employer. Each of them is not an independent individual but is involved in a complex system of social groups and institutions, so the whole society is justifiably interested in university work, and the description of *the ideal image* points to the complexity of the concept of *successful study*.

Apart from the fact that in contemporary circumstances that are attributed to many technical and technological advances, it is necessary to develop innovative pedagogies. Namely, innovative pedagogical approaches are important in order to help our students to learn in an efficient way and to be better prepared for the labor market. University teaching has to be much more oriented towards functional learning and students' needs. That will be possible only through continuous innovations in teaching and learning.

The ideal picture is fictitious and actual universities, on a day-to-day basis, face difficulties with the above-mentioned factors, so it's easy to see that enrolling students at the university is one thing, but secondly, keeping these same university students exactly as long as they were meant to, by predicted rules and standards, is a specific point [3]. In educational systems, there is so-called retention during the study (some students are considerably longer in that status than it was anticipated) or abandonment of studies. In 2008, the OECD average percentage of completion of the study was 69 % [4], which means that even a third of the enrolled students did not complete the studies in the envisaged framework. Retention during the study, or abandonment, carries numerous negative financial and psychological effects. This is a problem of crucial importance for both the individual and the society, and it is necessary to acquaint it from many perspectives. It is of particular importance to look at this problem in the context of the concrete conditions in which a university is functioning, because – as shown by recent comparative studies [5, 6] – national education systems have many differences that do not provide a simple solution for common denominators of (no) success in studying.

In this article, we present the results of the research conducted with the aim of establishing and analyzing statistical and descriptive indicators of the success of the study at the only public university in Montenegro (University of Montenegro) for the enrollment 2013/14 study year. The study included a sample of 4 517 students.

THEORETICAL BASIS OF RESEARCH

Success in studying is a complex construct for which there is no universally acceptable definition or single theory, i.e., it is not viewed equally in various research, systems, times, social conditions, etc. This is a multidimensional phenomenon, as defined in numerous

studies [7-10]. In some studies, success is measured by the average grades [9], which can be done in case of research in smaller national systems. Other and more frequent research as a criterion of success was taken solely to complete studies and acquire a degree [8]. This perspective is also needed in comparative reports [5, 6].

The so-called retention during the study, i.e., prolonged study and abandonment of study or abandonment of the program without its completion, is analyzed in particular [11]. The situation of the diversity of assessment of success in studying is still evident throughout the European education systems [5, 6], after numerous harmonization activities stemming from the Bologna Declaration and the establishment of the European Higher Education Area (EHEA). Even outside Europe, countries do not have the same perception of academic success / achievement [10], although researchers have increasingly relied on OECD reports (e.g., a periodic report *Education at a Glance*), the European Commission or other relevant institutions. These and such reports point to the variety of school systems, but at the same time, they try to present some common denominators. The European Commission's recent report suggests that we still have insufficient research of (no) success in studying and that some European countries have only the implicit attitudes towards the success of university programs and students [5]. On the other hand, as the same report states, some European countries are dealing with this phenomenon explicitly and intensively (e.g., the UK or Germany), and numerous studies have been carried out in non-European countries such as Australia, New Zealand, USA, etc. Therefore, the above mentioned report frequently includes the models and results of research from these systems, which we also apply in this article.

Success in studying is different and always multidimensional [6, 10]. This is normally expected, as all societies do not have the same needs or conditions, as well as opportunities or cultural-historical and traditional experiences. Success is, in any area, seldom socio-culturally decontextualized, and its such nature conditions the difficulty of research in terms of system-wide comparisons, even in terms of comparison in the same system in the diachronical perspective [10]. Every study of success in studying needs to specify contextual conditions, because as a complex of many factors (individual and social), success is only a relative category, inseparable to the level of general conclusions. This is the viewpoint and report of the European Commission, which states:

Not only is success in studying a multidimensional concept – including retention, progress in study, study duration, completion and transition to the next level or the labor market - it is also dependent on many factors on different levels, such as the structure of education systems and trajectories towards higher education, national politics, financial and other incentives, institutional structures, approaches to teaching and learning, curriculum design and student environment, as well as on the interplay of everything [5; p.14].

The most obvious common denominator of the success of the study is its completion [8], which is probably the only attribute of success that has sufficiently reliable and objective general acceptability [6]. National systems use three measures of success assessment: completion of studies, time to graduation, and retention and abandonment [5].

Nevertheless, despite all the differences in defining success, recent research in this domain shows that many of the success factors are identified, although their role and impact are not equal everywhere nor even are they in the same direction. One approach observes the three levels that are to be considered for success predictors: the national (state / social), institutional and individual level [5, 6, 10]. Here, therefore, there are three levels of interested participants. State or social interests are focused on human capital, so higher education institutions are expected to achieve educational outcomes derived from national qualification frameworks and their achievement at a given time interval. Other factors are associated with

this level, so in the research, it is determined that the cultural-economic factors are explaining 32 % and the competitiveness 36 % in the success of the study [7]. Cultural models of evaluation of education are transmitted as inter-generational [7], so it is expected that in Montenegro, there is a very positive attitude towards education [12]. The family, as a core group reflecting cultural and value patterns, has a strong influence, starting with the choice of studies, but this influence is not always positive [13].

Institutional interests are directly linked to the national, primarily through the legislative, but also to the traditionally recognized and defined roles of the University in the care of state / social interests through their progressive education mission and vision. In addition, university programs, according to the legality of didactics and methodology of teaching, therefore, according to the nature of the work they do, have a strong interest that students entering the teaching process in the minimum projected time complete the studies, with the maximum achieved learning outcomes. However, there is often disproportion between time and achievement, so many students stay on the study longer than anticipated. There are also frequent assessments that university teaching has not sufficiently aligned with the needs of new generations [2]. Reasons for this may be many and are often the ones that are considered in the research as a predictor of success [9]. Institutions can offer a more or less flexible regime of study, which has a positive impact on success through increased motivation and interest. However, flexibility in choice may also have a negative role as students do not achieve desired learning outcomes [14]. And the method of study enrollment has an influence on studying [15].

Institutions also have some interests in their public image. Namely, those universities that are recognized as having prolonged retention during studies may find it difficult to have a favorable public image, especially among those categories of citizens who are their special interest groups – future students and their parents. Also, employers gain a negative perception. The prolonged study thus creates a negative reference for future enrollment terms, and gradually, in case it happens to be a continuous phenomenon, leads to worse enrollment rates. Thus, prolonged study and enrollment condition are mutually adversely conditioned. It is worth noting that there is another public rating – as it is often in Montenegro – and that is there is a hyper-production of diplomas in the society, whose quality is questionable [16, 17]. The assessment is impossible to be a priori negated, but it is necessary to reconsider it. It is partly *saltus in concludendo*, because the ratings have been an abstraction of many aspects of university education in the new millennium, and they have also been performed without sufficient precision in real evidence, e.g., without the specification of the degree and type of diploma that is hyper-produced. In addition, the increased number of diplomas in employment bureaus should not be interpreted unilaterally (as exclusively credited to universities), irrespective of the labor market development, from which continuous job security is expected in the conditions of the development of economy and society as a whole. The thesis on overproduction of diplomas is partly implied by the traditional public attitude – good studies are ones for which we get evidence (regarding the duration of the studies, repetition of the same exams, low grades, etc.) that students have to make some extra effort. Nor is it a generalization, and all universities are concerned, although it is realistic to assume that all institutions do not have the same role in the overproduction of graduates. So, the thesis about the *surplus* of diplomas is possible, but it needs to be specified and concretized.

Somewhere between the institution and student level, the important predictor is the informed study choice, so in most studies, it is shown that the so-called informed choice of study program [3] and dedication to studying are of greatest importance to students [10]. Both factors are complex and involve a number of elements which they depend on and / or which they condition, and they themselves are interdependent. Thus, the choice of the study program depends on the student's knowledge, his self-awareness (What can I learn? Do I

have enough knowledge and skills? Does this matter interest me? etc.), self-regulation and a whole range of motivational aspects in three groups (amotivation, extrinsic and intrinsic motivation) on the continuity of self-determination [18-20]. Dedication to studying is also multidimensional, composed of cognitive, affective, and conative factors.

When it comes to students, it would be expected that their interest would be to complete the enrolled studies within the envisaged time. However, for many reasons this is not always the case, so there are few situations that students, after years of attempts, fail to complete the program, which results in formal abandonment of the study (and serious financial losses for the student and / or the one who funds the student), and it essentially heavily affects the personality of an unsuccessful student who loses family support, his/her close environment, becomes anxious and / or depressed, etc. [11], which often provokes persistent psychological difficulties as a result of reduced self-confidence and self-empowerment [21].

Some researchers [15] group predictors of academic success into three groups: psycho-social (student integration into an institution, university dedication, university satisfaction, career orientation, social support, psychological health and financial situation); cognitive and affective (self-efficacy and attributional style, described in terms of *learned helplessness*, and attitudes of optimism / pessimism); demographic (student age, gender, (un)employment and student hardship during study). Other researches also take the predictors by categories; thus, for example, they often analyze socio-demographic data, data on learners' behavior in the learning process (learning skills), personal characteristics, attitudes towards learning and organization of teaching [9]. Researches, based on the evaluation of the obtained grades, single out some fifteen factors of influence from the aforementioned categories, among which some are relevant for this research: duration of the study, tuition, place of study, gender identity [9].

The previous academic achievement is considered to be the main predictor of success, yet these are also important: integration into the university, self-efficacy and student responsibility in terms of his need to be employed [15]. In addition to the academic achievement, observed through the grades obtained during high school, metacognitive, i.e., learning skills, are also included, which shows that previous academic success is not predictable for university grades, but learning skills are [15]. Some demographic factors are highly predictable for success, and the research shows that more successful students are those of the following characteristics: female gender, the status of regularity during studies, younger students and students who had previously been educated for 12 years [3]. Previous research also points to differences in performance depending on the field of study.

Some studies on the success of studying consider the factors of the educational pathway (student trajectory) and the student's socioeconomic status to be of particular importance [10]. While it is expected that better previous achievements and better trajectories (*better* upper secondary school) has a positive correlation with the success of the study, the socioeconomic status of the student can act in the opposite way, i.e., it is not always the case that (too) good financial conditions ensure good students. It is certain that the socioeconomic factor influences the choice of study, but does not provide sufficient probability for its completion. Likewise, some students with poor financial conditions can be very successful because, in the studies, they see a chance to improve their personal position. Thus, the socioeconomic status has a great influence, but this effect is uneven in different circumstances.

Since in the previous analysis there is an inequality in the definition of success, though it is not about contradictory differences, but rather about the differences that confirm the complexity of the phenomenon, in this research, we are treating success in studying as a factor in timely completion of the studies started. The three levels of success that we see are the key ones to our research, so some of them are differentiating certain influencing variables.

Thus, at the national level, important factors are university selectivity (or the possibility of enrollment), flexibility in studying [14], tuition and student support [5]. University selectivity and flexibility in studying can have both a positive and negative impact on success, while, for example, there is no direct link between tuition and success in studying [4, 6]. The university level contains several prediction variables for success: institutional engagement and strategic approach; devotion to learning, teaching and assessment in the context of social constructivism [2, 22]; an informed choice of study, which includes self-identification, overall monitoring and monitoring of students and teaching; university structure (student population structure, student services, organization of studies). Compared to the mentioned factors, there are also a number of subordinate influence variables [5]. The individual level is composed of socioeconomic (and family) status, gender, ethnicity, cognitive competence, and motivation, as well as educational path and its trajectory [5].

RESEARCH METHODOLOGY

In the research, we used a descriptive method [23, 24], which corresponded to the set goal. Quantitative indicators are taken from several variables, which are treated in a number of studies as predictable for the success of studies (gender, educational trajectory, regional affiliation). All data is downloaded from the Information System Center of UoM. Since in the areas of study (natural and technical, social and humanistic, art) there are exceptionally large differences in various factors (number and gender affiliation, modes and methods of work during studies, teacher education etc.) it is not justified to work on intercorrelated statistical analysis, at least not for the purposes of this research. E.g., there are obviously great differences in the education of university teachers, which is certainly one of the factors that make it difficult to compare between groups and areas of study [25]. Therefore, we have divided the data into three groups (according to the fields of study), and for each group, we perceived basic indicators.

The aim of the research was to determine the success of the UoM studies defined by completing the study in a time-limited interval (3 years, 6 semesters, i.e. 4 years, 8 semesters for studies at the Faculty of Economics) in the following fields of study: natural and technical, social and humanistic studies and art studies. We analyzed the enrollment 2013/14 academic year.

VARIABLES

Independent variables are region, educational trajectory, and gender of students. We will show the success of the study regarding these variables.

In education research, it is common practice to treat the territory of Montenegro through three areas: the northern, central, and southern regions. This is not an official division, and the territory of Montenegro is unique in the formal-legal and administrative view. The organization is basically geographic, and the region is distinguished by its natural physical and geographical characteristics. However, this configuration is both social and economical at the same time, as the regions do not develop at the same speed nor they do so equally well. The South is considered the most financially viable, primarily through tourism, but also in trade and other activities based on the Adriatic coast. The central region is the historical, cultural, managerial center of Montenegro, while the northern region is in a somewhat disadvantageous financial and general position. For universities, it is important that the education system in the regions is very similar, i.e., the basic prescribed competences are equal for all primary and secondary school students in Montenegro [12, 26].

The educational trajectory is significant for university studies. The elementary school system is unique in Montenegro (nine years), organized into three cycles, and there are two basic

opportunities for secondary education that are a prerequisite for enrolling a university: occupational high school and grammar school. Both types of schools are free of charge for students, i.e., they are funded from public funds, and both types last for four years. Teaching in the middle schools and gymnasiums take part in partly open curricula (percentage of openness is 20 %), where the central (80 %) share is common for all schools, and 20 % is foreseen to include content for local and regional communities. Matura exam is based on a common part of the subject curricula. At the end of the fourth year, students take an external matriculation examination, the results of which, together with the average grades achieved in four grades of high school and grades from subjects of relevance to the profession, are the basic data on which universities rank candidates. Only a few faculties and / or departments have additional qualification exams [27].

Depending variables are choice of studies and enrollment at faculties and/or areas of study, successful completion of studies in due time.

On choosing a study, future students can be informed via the *Informator* [28]. The end of the study in due time is also reflected in the reports as a factor for measuring the success of the study in Montenegro [5], and this concept is recognized in the way of financing, so the students, as long as they achieve the predetermined time-scale of study, do not have to pay for their tuition.

HYPOTHESES

Main hypothesis: Students enrolled at the University of Montenegro successfully complete their studies in due time. The hypothesis will be interpreted according to the five levels of possible results, i.e., we observe it by the percentage of students completing the studies in the predicted time interval, so achievement in the study is as follows: (i) very unsuccessful if 0-20 % of the enrolled have completed the study; (ii) unsuccessful if 21-40 % of the enrolled have graduated; (iii) medium successful for intervals 41-60 %; (iv) successful for 61-80 % of graduates and (v) very successful if there are 81-100 % of graduates.

The auxiliary hypotheses are:

H1: Students enrolled at the technical and natural fields of UoM study successfully complete the studies within the envisaged time frame.

H2: Students enrolled at social and humanities studies at UoM successfully complete their studies in the foreseen time.

H3: Students enrolled at UoM art studies successfully end their studies in the predicted time interval.

Graduation data was taken at the beginning of the academic year 2018/19. Therefore, students enrolled in 2013/14 were observed two years after the end of their final semester, while the students of the Faculty of Economics were analyzed one year after they had finished their final semester.

SAMPLE

The research involved 4 517 students enrolled at the UoM in the academic year 2013/14. The sample is presented with graphs according to three independent variables, and additional interpretation of the sample was made in relation to specific indicators by the fields of study. Most of the students were from the centra region of Montenegro (56 %), followed by the northern region (26 %) and the souther region (18 %). 52% are females, and 48 % are males, which corresponds with the general trends of predominating females in higher education. Finally, most of the respondents finished high occupational schools (58 %), while the smaller number finished grammar school (42 %).

RESULTS

The first part of the results was directed towards the area of natural and technical sciences, and Table 1 shows a detailed overview of the enrollment in this area.

The total of 1990 students was enrolled at the faculties of natural and technical sciences, accounting for 44,1 % of the total number of enrolled students. In addition, students from the Central Region make up more than half of the enrolled (50,8 %) in this field of study, which is expected percentage considering that this is the most densely populated area in Montenegro (cities: Podgorica, Nikšić, Cetinje, and Danilovgrad). The share of students from this region is the highest in the Faculty of Mechanical Engineering (71,9 %) and is followed by the Faculty of Electrical Engineering (70,6 %). The only two faculties from the area of natural and technical studies that had no more than half of the students in the Central Region are the Faculty of Medicine (with 40 % of these students) and the Faculty of Maritime Studies (29,3 %).

The smallest number of candidates from the Southern Region enrolled these studies (22 %). There is a noticeable smaller share of students from the Southern Region at the Faculty of Mechanical Engineering (0,8 %), Technological and Metallurgical Faculty (5,7 %), Faculty of Medicine (12 %) and Faculty of Natural Sciences and Mathematics (12,7 %). Students

Table 1. Distribution of students enrolled in academic year 2013/14 at the faculties of natural and technical sciences. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Architecture	19 (29,7)	30 (46,9)	8 (12,5)	2 (3,1)	3 (4,7)	2 (3,1)	64 (100)	3,2 %
Biotechnical faculty	45 (24,2)	58 (31,2)	4 (2,1)	5 (2,7)	47 (25,3)	27 (14,5)	186 (100)	9,3 %
Faculty of Electrical Engineering	180 (55,7)	48 (14,9)	26 (8,0)	7 (2,2)	48 (14,9)	14 (4,3)	323 (100)	16,2 %
Faculty of Civil Engineering	65 (33,3)	39 (20,0)	13 (6,7)	8 (4,1)	48 (24,6)	22 (11,3)	195 (100)	9,8 %
Mechanical Engineering Faculty	78 (64,5)	9 (7,4)	1 (0,8)	0 (0,0)	28 (23,1)	5 (4,1)	121 (100)	6,1 %
Faculty of Medicine	21 (9,8)	65 (30,2)	7 (3,2)	19 (8,8)	22 (10,2)	81 (37,7)	215 (100)	10,8 %
Faculty of Metallurgy/Technology	24 (27,3)	39 (44,3)	0 (0,0)	5 (5,7)	2 (2,3)	18 (20,4)	88 (100)	4,4 %
Faculty of Maritime Studies	121 (21,6)	43 (7,7)	255 (45,4)	48 (8,6)	88 (15,7)	6 (1,1)	561 (100)	28,2 %
Faculty of Natural Sciences and Mathematics	68 (28,7)	60 (25,3)	13 (5,5)	17 (7,2)	32 (13,5)	47 (19,8)	237 (100)	11,9 %
Total	621 (31,2)	391 (19,6)	327 (16,4)	111 (5,6)	318 (16,0)	222 (11,1)	1990 (100)	100,0 %

from the Southern Region, as expected, account for more than half of the enrolled at the Faculty of Maritime Studies (54 %). Candidates from the Northern Region are most interested in the Faculty of Medicine (47,9 % of the number enrolled at this faculty) and are least interested in the Faculty of Architecture (7,8 %).

The number of female students is considerably smaller (36,3 %) compared to a number of male students (63,7 %) so that the ratio is 1:2 related to gender. The highest share of female students is at the Faculty of Medicine (76,7 %), Metallurgical and Technological Faculty (70,4 %), Faculty of Architecture (53,1 %) and Faculty of Natural Sciences and Mathematics (52,3 %), while girls are least interested in studies at the Faculty of Mechanical Engineering (11,5 %).

It is one thing to enroll the studies, and it may be quite another thing to complete studies within the regular term, which we can also find out on the basis of the results from Table 2 and Figure 1.

Out of 1990 enrolled students, only 548 have graduated, or 27,5 %, which is the percentage that stays within the 21-40 % interval, marked as “unsuccessful”, which refutes the first auxiliary hypothesis. In this distribution also, students from the Central Region account for more than half of the total number of graduates (52,7 %), followed by candidates from the North Region (27,1 %), and those from the Southern Region (20,1 %), so that in this – not a very encouraging picture – the trend and order, i.e. rank of enrollment has still been preserved.

Table 2. Distribution of students enrolled in the academic year 2013/14 at the faculties of natural and technical sciences that graduated in the envisaged term. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Architecture	11 (28,2)	20 (51,3)	3 (7,7)	1 (2,6)	2 (5,1)	2 (5,1)	39 (100)	7,1 %
Biotechnical faculty	17 (22,4)	25 (32,9)	3 (3,9)	3 (3,9)	14 (18,4)	14 (18,4)	76 (100)	13,9 %
Faculty of Electrical Engineering	48 (59,2)	11 (13,6)	7 (8,6)	3 (3,7)	11 (13,6)	1 (1,2)	81 (100)	14,8 %
Faculty of Civil Engineering	18 (31,6)	14 (24,6)	2 (3,5)	1 (1,7)	10 (17,5)	12 (21,0)	57 (100)	10,4 %
Mechanical Engineering Faculty	5 (33,3)	3 (20)	0 (0)	0 (0)	6 (40)	1 (6,7)	15 (100)	2,7 %
Faculty of Medicine	6 (8,9)	2 (37,3)	1 (1,5)	3 (4,5)	4 (6,0)	28 (41,8)	67 (100)	12,2 %
Faculty of Metallurgy/Technology	2 (10,0)	9 (45,0)	0 (0,0)	2 (0,0)	0 (0,0)	7 (35,0)	20 (100)	3,6 %
Faculty of Maritime Studies	33 (23,6)	18 (12,9)	53 (37,9)	18 (12,9)	16 (11,4)	2 (1,4)	140 (100)	25,5 %
Faculty of Natural Sciences and Mathematics	14 (26,4)	10 (18,9)	5 (9,4)	5 (9,4)	8 (15,1)	11 (20,7)	53 (100)	9,7 %
Total	154 (28,1)	135 (24,6)	74 (13,5)	36 (6,6)	71 (12,9)	78 (14,2)	548 (100)	100 %

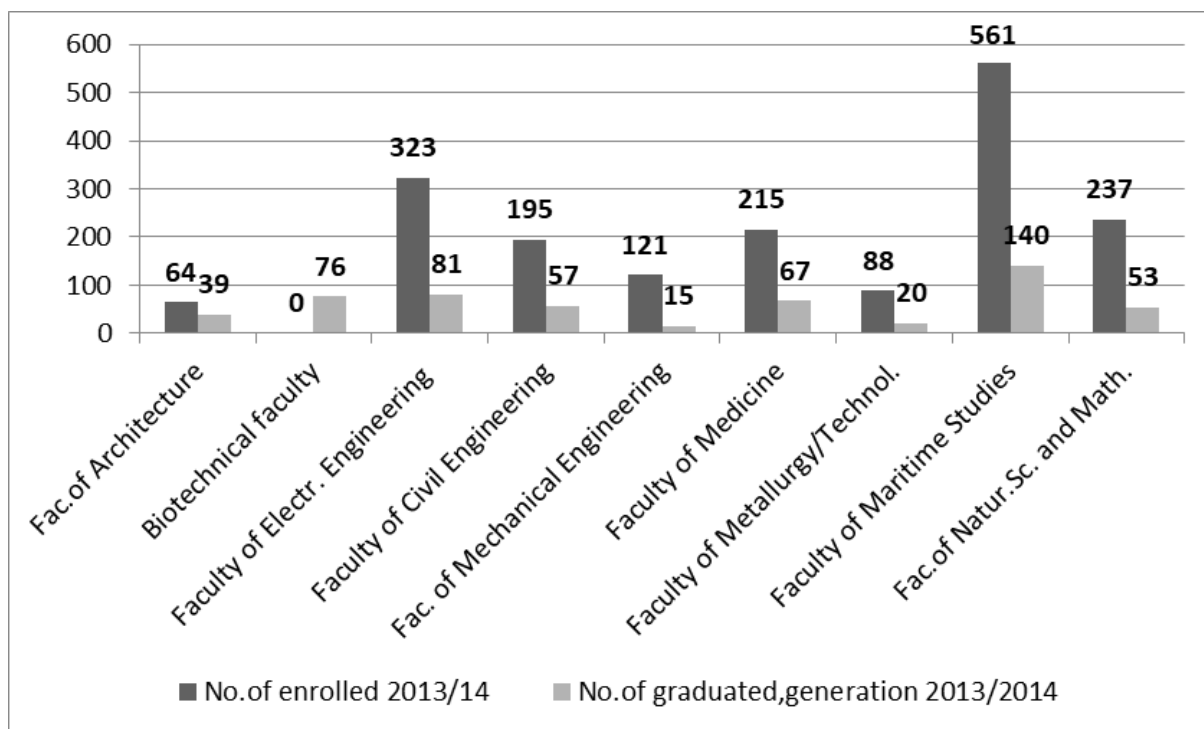


Figure 1. The ratio of enrolled and graduated students from the generation 2013/14 at faculties of natural and technical sciences.

Figure 1 clearly shows the extremely large differences between the number of enrolled students and the number of graduates. These differences between the faculties are not comparable according to the procedures of parametric statistics, since these are quite different areas of study, and the number of enrolled ones significantly differs. However, it can be noticed that the ratio between the enrolled and the graduates is the best at the Faculty of Architecture (60,9 % have graduated), which is partly explained by the fact that a supplementary exam (a kind of qualification examination) is also applied for enrollment at these studies. This exam should make an additional selection of candidates and give them timely information on whether they made the right choice of study. Namely, research shows that enrollment procedures are inadequate, and some candidates who objectively cannot complete a particular curriculum are being enrolled and introduced into a system in which they will not be successful [10], which is probably one of the causes for the situation shown in our sample. Regarding other faculties in this group, the qualification exam is only taken at the Faculty of Medicine. However, the success of students from that faculty (31,2 % of graduates) is not in the categories that we previously identified as successful. The reasons for a fairly small percentage of graduates can be diverse – students are not ready for studies, teaching curriculum is not adapted enough for students, curricula are too demanding, too much loaded with information, etc. A part of the explanation for failure can be found in the educational trajectory (Table 3).

Students being enrolled in this field of study, more often do so after graduating from a high vocational school, compared to those graduating from grammar school. The ratio is almost 3:2, and this factor (the previous educational trajectory) can be treated as important in the overall picture of the (un)successful studying. Namely, it is expected that students who finish grammar school have better developed learning skills because they have experience with learning different subjects. This, however, is not a factor that should have a crucial role in success, as, for example, in Germany, the vocational high school as a predecessor, has no adverse effects on studying [5], while, for example, a Spanish study shows negative effects [29].

Table 3. Distribution of students enrolled at technical faculties and faculties of natural sciences in 2013/14 in relation to the completed high school. Numbers in parentheses denote percentage.

Type of School	Grammar School		High Occupational School		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Faculty of Architecture	51	79,7 %	13	20,3 %	64 (100)	3,2 %
Biotechnical faculty	59	31,7 %	127	68,3 %	186 (100)	9,3 %
Faculty of Electrical Engineering	148	45,8 %	175	54,2 %	323 (100)	16,2 %
Faculty of Civil Engineering	132	67,7 %	63	32,3 %	195 (100)	9,8 %
Mechanical Engineering Faculty	31	25,6 %	90	74,4 %	121 (100)	6,1 %
Faculty of Medicine	82	38,1 %	133	61,9 %	215 (100)	10,8 %
Faculty of Metallurgy/Technology	24	27,3 %	64	72,7 %	88 (100)	4,4 %
Faculty of Maritime Studies	168	29,9 %	393	70,1 %	561 (100)	28,2 %
Faculty of Natural Sciences and Mathematics	148	62,4 %	89	37,5 %	237 (100)	11,9 %
Total	843	42,4 %	1147	57,6 %	1990	100,0 %

In the case of this variable, the curricula and the quality of teaching of high vocational schools and grammar schools should, in particular, be discussed.

The following analyses include studies of social and humanistic sciences, and Table 4 shows the enrollment situation.

Faculties of social sciences and humanities were enrolled by 2 468 students (54,6 % of the total number) in the academic year 2013/14. In this case, as well, the share of students from the Central Region is significant (59,6 %), and there is a significantly small percentage of students from the Southern Region (14,5 %). In addition to the Faculty of Tourism and Hotel Management, where 34,2 % of candidates from the Central Region are enrolled, this share at all other faculties amounts to 50% and more. Female students make up close to two-thirds of the population (64 %) enrolled at this group of faculties, which is in line with European and world trends [6]. Table 5 shows the results of previous studies for this part of the sample.

The number of graduates is not sufficient enough in order to talk about successful studies, as only 32 % of enrolled students completed their studies. This percentage, however, is higher than that achieved in the group of natural and technical sciences (27,5 %), but it is within the same interval we have labeled as “unsuccessful” so that another auxiliary hypothesis was rejected as well. In the overall scores, a trend was noted, among which the highest number of students from the Central Region has the highest number of graduates (54 %), while the smallest

Table 4. Distribution of students enrolled at faculties of social sciences and humanities in 2013/14. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Economics	225 (27,6)	293 (36,0)	34 (4,2)	65 (8,0)	77 (9,5)	120 (14,7)	814 (100)	33,0 %
Faculty of Political sciences	31 (11,7)	101 (38,3)	11 (4,2)	34 (12,9)	18 (6,8)	69 (26,1)	264 (100)	10,7 %
Faculty of Sport and Physical Education	82 (73,9)	8 (7,2)	4 (3,6)	1 (0,9)	16 (14,4)	0 (0,0)	111 (100)	4,5 %
Faculty of Tourism and Hotel Management	24 (10,9)	51 (23,3)	24 (10,9)	60 (27,4)	19 (8,7)	41 (18,7)	219 (100)	8,9 %
Faculty of Philology	53 (16,1)	160 (48,6)	5 (1,5)	31 (9,4)	21 (6,4)	59 (17,9)	329 (100)	13,3 %
Faculty of Philosophy	74 (22,3)	144 (43,5)	5 (1,5)	22 (6,6)	24 (7,2)	62 (18,7)	331 (100)	13,4 %
Faculty of Law	89 (22,2)	137 (34,2)	18 (4,5)	45 (11,2)	32 (8,0)	79 (19,7)	400 (100)	16,2 %
Total	578 (23,4)	894 (36,2)	101 (4,1)	258 (10,4)	207 (8,4)	430 (17,4)	2 468	100 %

Table 5. Distribution of students graduating from faculties of social sciences and humanities. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Economics	58 (23,5)	98 (39,7)	5 (2,0)	26 (10,5)	15 (6,1)	45 (18,2)	247 (100)	31,3 %
Faculty of Political sciences	17 (10,4)	61 (37,2)	10 (6,1)	24 (14,6)	8 (4,9)	44 (26,8)	164 (100)	20,7 %
Faculty of Sport and Physical Education	15 (88,2)	0 (0,0)	0 (0,0)	0 (0,0)	2 (11,8)	0 (0,0)	17 (100)	2,1 %
Faculty of Tourism and Hotel Management	10 (11,6)	21 (24,4)	9 (10,5)	18 (20,9)	9 (10,5)	19 (22,1)	86 (100)	1,9 %
Faculty of Philology	5 (5,8)	42 (48,8)	1 (1,2)	11 (12,8)	2 (2,3)	25 (29,1)	86 (100)	10,9 %
Faculty of Philosophy	14 (14,9)	35 (37,2)	1 (1,1)	15 (15,9)	5 (5,3)	24 (25,5)	94 (100)	11,9 %
Faculty of Law	22 (22,9)	29 (30,2)	2 (2,1)	11 (11,4)	9 (9,4)	23 (23,9)	96 (100)	12,1 %
Total	141 (17,8)	286 (36,2)	28 (3,5)	105 (13,3)	50 (6,3)	180 (22,8)	790	100 %

number of them is from the Southern Region (16,8 %). The Faculty of Sport and Physical Education is the only faculty from this group where the qualification exam is taken.

Figure 2 provides data almost analogous to those in the field of natural and technical sciences.

Figure 2 provides opportunities for identifying the largest and smallest variation ranges between the number of the enrolled students and graduates, with a common suggestion that the analyzed numbers do not show positive trends. The best ratio of the graduated/enrolled students was achieved at the Faculty of Political Sciences (62 % graduated). This faculty is traditionally enrolled by excellent students, and this is probably one of the factors that explain these results. Interestingly, the biggest number of graduates are at the Faculty of Economics (247), but this makes only thirty percent of the number enrolled. However, at this faculty, studies last for eight semesters, which should be kept in mind during further analysis.

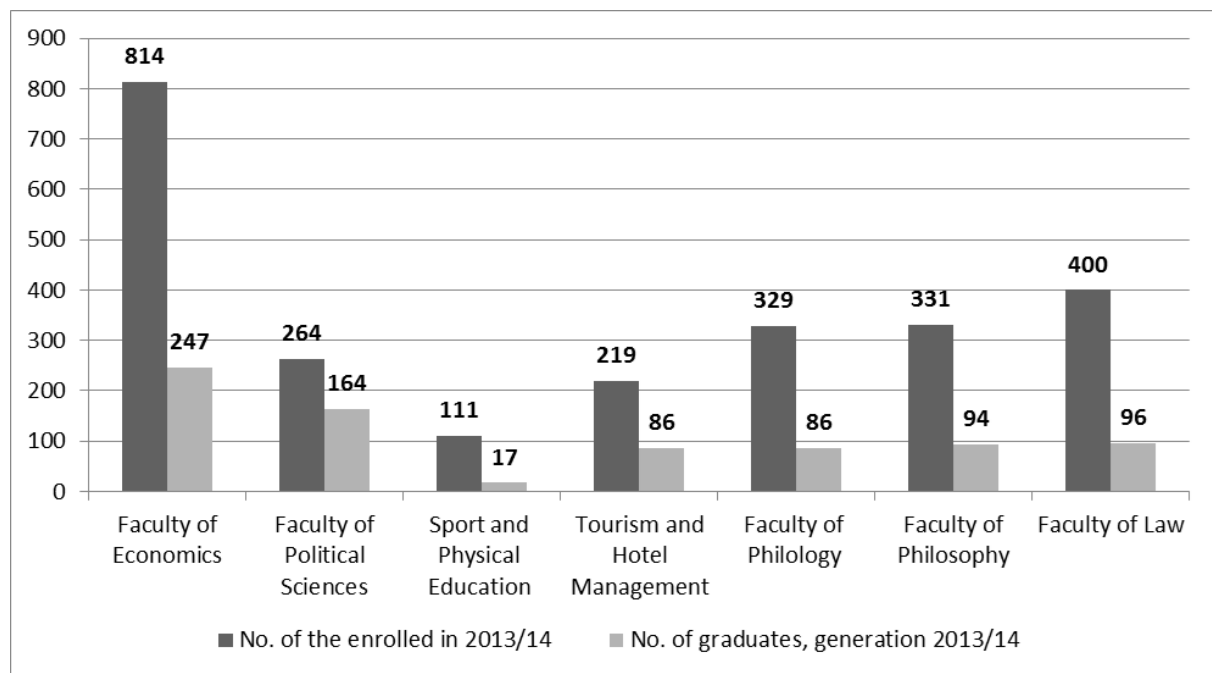


Figure 2. The ratio of the enrolled and graduated from faculties of social and humanistic sciences.

Table 6 shows an overview of the enrolled students with regard to their educational trajectory.

It is interesting that the ratio of the enrolled according to the previous educational trajectory is almost the same as the one we determined for faculties of natural and technical sciences. It is also one of the factors that can affect the final results in terms of success in studying.

An analogous analysis for the faculties of art shall follow, and Table 7 shows the situation on enrollment.

In the case of art studies as well, the share of students from the Central Region is the largest (59,3 %), which definitely points to the trend that it is this region which mostly gravitates towards UoM, which is natural because the majority of faculties from this university is located in that region, and this area is also the most densely populated. The percentage of the students from the Southern Region is the smallest here as well (18,6 %). The ratio of male and female students shows that the structure of the student population in this field of study is the most harmonious (52,5 % F: 47,5 % M). Table 8 shows the percentage and number of graduates.

The percentage of graduates compared to the enrolled ones in this field amounts to 74,6 % and belongs to the category “successful”. This is explained by two factors: all faculties in the

Table 6. An overview of the enrolled at faculties of social and humanistic sciences according to the completed high school.

Type of school	Grammar School		High Occupational School		Total	
Faculty of Economics	300	36,8 %	514	63,1 %	814	33,0 %
Faculty of Political sciences	157	59,5 %	107	40,5 %	264	10,7 %
Faculty of Sport and Physical Education	25	22,5 %	86	77,5 %	111	4,5 %
Faculty of Tourism and Hotel Management	55	25,1 %	164	74,9 %	219	8,9 %
Faculty of Philology	162	49,2 %	167	50,8 %	329	13,3 %
Faculty of Philosophy	109	32,9 %	222	67,1 %	331	13,4 %
Faculty of Law	240	60,0 %	160	40,0 %	400	16,2 %
Total	843	42,4 %	1147	57,6 %	1990	100,0 %

Table 7. Distribution of students enrolled at faculties of art in 2013/14. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Drama Art	7 (36,8)	5 (26,3)	1 (5,3)	1 (5,3)	3 (15,8)	2 (10,5)	19 (100)	32,2 %
Faculty of Fine Arts	5 (25,0)	7 (35,0)	0 (0,0)	2 (10,0)	3 (15,0)	3 (15,0)	20 (100)	33,9 %
Music Academy	7 (35,0)	4 (20,0)	1 (5,0)	6 (30,0)	1 (5,0)	1 (5,0)	20 (100)	33,9 %
Total	19 (32,2)	16 (27,1)	2 (3,4)	9 (15,2)	7 (11,9)	6 (10,2)	59 (100)	100 %

Table 8. Distribution of students graduating from faculties of art. Numbers in parentheses denote percentage.

Region	Central		Southern		Northern		Total	
	M	F	M	F	M	F		
Faculty of Drama Art	6 (40,0)	2 (13,3)	1 (6,7)	1 (6,7)	3 (20)	2 (13,3)	15 (100)	34,1 %
Faculty of Fine Arts	5 (31,2)	5 (31,2)	0 (0,0)	2 (12,5)	2 (12,5)	2 (12,5)	16 (100)	36,4 %
Music Academy	4 (30,8)	3 (23,1)	0 (0,0)	4 (30,8)	1 (7,7)	1 (7,7)	13 (100)	29,5 %
Total	15 (34,1)	10 (22,7)	1 (2,3)	7 (15,9)	6 (13,6)	5 (11,4)	44 (100)	100 %

field of art have the appropriate qualification exams, and the teaching is mostly individual or in very small groups of students. In addition, this is the field of study in which the talent has a clear role, and only those individuals with the confirmed talent decide to study these faculties. Figure 3 shows the ratio of enrolled and graduated students.

The relationship between the enrolled and the graduated in this group is generally very good, but somewhat less favorable at the Academy of Music. The third auxiliary hypothesis is accepted. For this group, we have also calculated the educational trajectory of the enrolled students, which is shown in Table 9.

These faculties are dominantly enrolled by candidates who have previously completed vocational high schools – Music Academy 100 %, and Academy of Fine Arts 75 %. The exception is the Faculty of Drama Arts, which is dominated by students who completed grammar school.

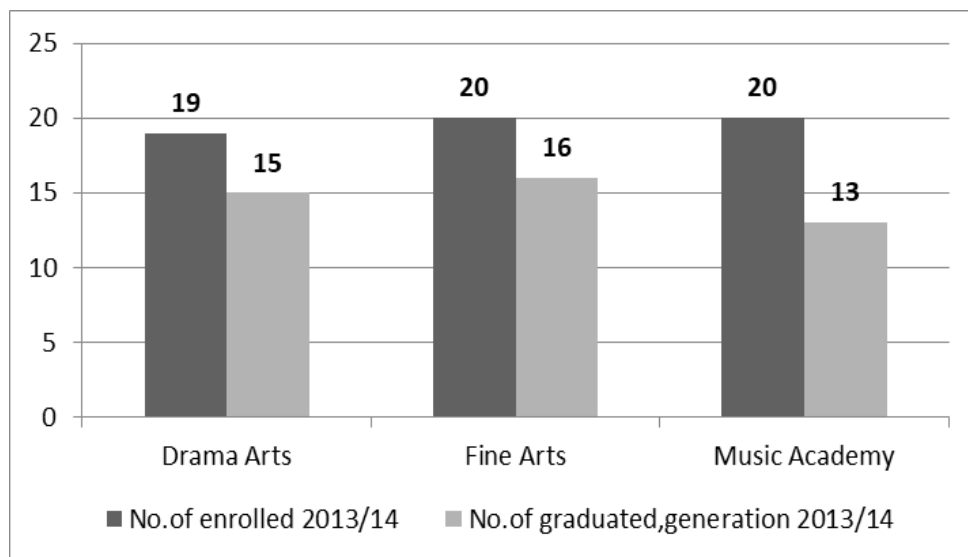


Figure 3. Relations between the enrolled and graduated students in the field of art.

Table 9. The educational trajectory of students enrolled at faculties of art. Numbers in parentheses denote percentage.

Type of School	Grammar School		High Occupational School		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Faculty of Drama Art	13	68,4 %	6	31,6 %	19 (100)	32,2 %
Faculty of Fine Arts	5	25,0 %	15	75,0 %	20 (100)	33,9 %
Music Academy	0	0,0 %	20	100,0 %	20 (100)	33,9 %
Total	18	30,5 %	41	69,5 %	59	100,0 %

CONCLUSIONS

Our research suggests that the hypothesis of high academic achievement (and hyper-production of diplomas) at the University of Montenegro should not be accepted because it turned out that the selected generation of students failed to complete the studies in a significant percentage. In doing so, we have identified that one area of study (art faculties) records successful studying, which we mostly interpreted by the fact that the qualification exam is applied for enrollment at these studies. Students of natural and technical, social, and humanistic studies are not sufficiently successful in terms of graduation. Approximately 30 % of the aforementioned students completed studies in the envisaged time. A total of 1382 students

graduated from enrolled 4 517, which makes 30,6 %. According to the gender category, 842 female students (60,9 %) and 540 male students (39,1 %) graduated. Enrollment and selection of studies by gender category follow world trends [6].

One of the reasons for the failure of the two groups of studies and the success of the art area is a big difference in the number of enrolled ones. This difference has caused the unequal quality of teaching and learning, so that students of arts have individual classes or classes in small groups, while at other faculties teaching is predominantly in large groups of students. It is clear that the number of students enrolled at faculties that are not art-related cannot aim towards too few enrollments, but it is also debatable that regarding the generation of 2013/14, e.g. 814 students enrolled at the Faculty of Economics and 400 students at the Law Faculty, for Montenegrin circumstances. Under the conditions of such a large number of students in one generation, it is difficult to talk about sufficient quality of teaching and learning. However, it is interesting here that the increased interest in these studies appears on a global scale [6].

In our sample, the highest share of students originates from the Central Region, and the smallest share is from the Southern Region. The factor of unequal gender inclusion of students in groups of natural and technical, i.e., social and humanistic sciences, could be improved. Some of the professions are completely feminized (for example, teaching and educating), which is not evident from the previous results because they are included in the broader population of students of the Faculty of Philosophy.

Although this research could not provide a more detailed insight into all predictors of study success, we believe that the following recommendations are based on the data:

- A qualification exam should be introduced as a condition for enrollment at all studies. This examination does not have to have a role in selecting candidates solely, but could, at the same time be an important source of information on studies. Students of faculties of arts are successful and, for example, students of the Faculty of Architecture, which would suggest the introduction of this exam.
- At faculties where such a test already exists, and students are still not sufficiently successful in completing the studies, the content and the way of taking the qualification exam should be re-examined.
- The enrollment policy must be more rational and more harmonized with the needs of the labor market, but also with the possibilities of realizing good teaching quality focused on the student and learning. In the year 2013/14, an extremely large number of candidates were enrolled at several faculties which had to create an unfavorable situation for teaching and learning. In the end, too many enrolled students must necessarily act in a demotivating way to students, since it is justified that they have less hope for employment.

It is clear that for the final claims about the (un)success of studying, it is also necessary to include all other factors, those that we mentioned in the theoretical part. We shall point out the importance of continuous innovations, especially in the area of teaching and learning, such as Google Classroom [30] and simulation games [31]. Results that we gained may be partly explained by the incompatibility of teaching according to students' needs, learning styles, and readiness. That is why teaching innovations are one of the key cornerstones of study success. However, given the complexity of the issues, this has to be done gradually and systematically, and this research gives an insight into several variables of influence, those that were available in an objective and reliable form.

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