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## HIGHER EDUCATION IN BULGARIAN CONTEXT: PECULIARITIES AND CHALLENGES

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### Abstract

The objective of this article is to illustrate the issues and challenges which the higher education system in Bulgaria faces, with a particular accent on the phenomenon “education per kilogram”. The latter describes, in a popular language, the up-scaling of the university

graduation, related to the mass proliferation of the higher education institutions (HEIs), the facilitated access to enrolment through paid tuitions, etc. The big quantity of HEIs in the country is in a mismatch with the low percentage of GDP which the government dedicates to education. The number of HEIs is also disproportionate against its population size – 54 HEIs in Bulgaria for population of 7.2 million.

The research methodology includes a desktop study based on national statistical data and data from the governmentally-supported university rating system. An empirical survey, conducted among 250 tertiary education students enrolled in four Bulgarian universities, is a valuable contribution towards disclosing the pros and cons of the teaching practices in the tertiary education in the country.

The first chapter describes at large the “education per kilogram” issue with regard to its possible origins, variations and consequences for the misbalance of labour market demand for certain qualifications and the universities supplies of qualified individuals.

The second chapter reveals a comparative analysis by professional fields possible through the Ministry of Education and Science’s university rating system, i.e. students’ preferences for disciplines, universities and professions; the graduates’ professional fulfilment and how the income of the recent diploma-holders is a function of attending a particular HEI.

The third chapter presents a sociological survey conducted among students in four Bulgarian universities which demonstrates learners’ attitudes towards various aspects of training, teaching methods and involvement in research assignments in the context of tertiary education.

The main conclusion of the article is that the “universities per kilogram” trend brought about other corresponding characteristics, such as “students per kilogram”, “academic titles per kilogram”, etc. Hence, the large number of HEIs in Bulgaria has not led to improving the quality and efficiency of education, and yet does not respond adequately to the changing labour market demands for qualified professionals.

**Keywords:** *education per kilogram, quality of tertiary education, rating system of higher education, state funding for higher education, evaluating teaching skills, research-centred education.*

## PROBLEM STATEMENT

In an era of globalization, knowledge-based economy, ageing workforce and international mobility, Bulgarian higher education attempts at modernization in compliance with the Bologna process and the “Europe 2020” strategy (interpreted into the National Development Program “Bulgaria 2020” which is to achieve higher education indicator among 36% of the population aged 30–34). The population with tertiary education in Bulgaria estimates of 22.2% of people aged 15–64 which is yet a low rate in comparison to the EU 28 average of 25.3%. Bulgarian tertiary educational structure is step-by-step adapting to the challenges of the European Higher Education area and there is positive evidence for that, e.g. endorsing of National qualification network, developing Registers for the higher education institutions and their ranking, etc. However, the real figures show that the country is still creeping towards

the set “Europe 2020” goal – the percentage of people aged 30–34 who have completed higher education is 26.9 against 32.3 the EU average.

Educational expansion guarantees attainment of two national objectives – provision of qualified labour force for the economy and improvement of equal opportunities for underprivileged groups and individuals, since it is seen as a resource for prosperity and income (Stoilova 2010: 32). Another statistical argument on behalf of obtaining higher education diploma is that income gaps between higher education degree holders are significantly smaller than the income disparities among people with different educational status. EUROSTAT shows that in 2012, 42.1% of people who have attained pre-primary, primary and lower secondary education were at risk of poverty against 5.5% of those Bulgarian citizens who have graduated tertiary education.

In Bulgaria the national higher education system comprises between 15 and 50% of the age cohort and therefore, it could be defined as large-scale higher education. Though it seems that the government puts efforts in meeting the criteria of the European Higher Education Area, a thorough analysis of the situation indicates serious drawbacks. These drawbacks can be discussed as linked to the “education per kilogram” phenomenon, which is the result of the wide-ranging, massive expansion of tertiary education in Bulgaria. The trend corresponds to the following traits:

- **HEIs per kilogram.** In Bulgaria there are too many universities and colleges per capita which leads to thinking that they are established mainly for collecting “the more students, the more fees, the bigger subsidy”.

- **Students per kilogram.** Keeping every student, including those with poor grades, has turned into a sole goal of the HEIs. Due to over-admission into the HEIs, the students are quite heterogenic in respect to their learning abilities. Also, candidate - students with lower scores tend to get enrolled in university from the state quota, as the chief goal of the managerial bodies is the bigger number of students, the bigger the state subsidy for the particular university. The provision of a quality educational service is left behind.
- **Academic disciplines per kilogram.** As an outcome from the exceeding state quota, later many graduates take jobs below their qualification due to surplus of specialists in same educational areas (e.g. Economy, Law, and Administration). Simultaneously, deficiency of specialists in other areas have occurred (e.g. Engineers, Biotechnology, IT, Medicine).
- **Learning competences vs. business skills.** The business needs for professionalized human resources differ from the competences which the tertiary education manufactures. According to the employers, there is a discrepancy between the declared degree of knowledge and the real skills manifested during working practice.
- **No objective criteria for HEIs' research achievements.** Subsidies for scientific work have been ensured to the HEIs without objective methodology for assessing the quality of the research production.

- **Professors per kilogram.** There is overproduction of academic promotions into professors and associate professors due to a law renewed in 2010.

## **NEXT**

In order to explain the prerequisites for the problem statement, basic data on higher education will be presented in this paragraph. The study compiles secondary data from EUROSTAT, National Statistical Institute (NSI), national strategies, theses of educational experts and opinions, published in Bulgarian mass media. After that, a description of the technical advances (online ranking system and a follow-up on graduates' employment) will illustrate the key changes in Bulgarian education, which led to non-sustainability and tensions between quantity and quality within the state of the tertiary system. Then, a survey conducted among 250 students enrolled in four different universities in Bulgaria, will throw empirical light on students' attitudes towards teaching practices in the higher education and how the students, as participants in the process, perceive the shortcomings of the system.

## **DATA SHOW THAT**

According to national data, there are 54 higher education institutions (HEIs) in the country in 2014/2015 academic year (table 1), as 51 of them are accredited by the Ministry of Education and Science (MES). Of the accredited ones, 37 are public, or supported by a governmental subsidy, whilst 14 HEIs are private –run (Register of the accredited higher school in Bulgaria, MES).

## HIGHER EDUCATION IN BULGARIAN CONTEXT: PECULIARITIES AND CHALLENGES

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Total <sup>1</sup>	45	50	51	51	53	53	53	53	53	53	53	53	53	53	54
Universities and equivalent higher schools	41	42	42	42	43	43	43	43	43	43	44	45	45	45	46
Colleges	47	48	49	50	50	50	46	41	38	33	31	29	28	27	27
Independent colleges	4	8	9	9	10	10	10	10	10	10	9	8	8	8	8
Colleges, at the universities and equivalent higher schools	43	40	40	41	40	40	36	31	28	23	22	21	20	19	19

*Table 1. Higher education institution 2000/01 to 2014/15. NSI*

The number of HEIs in Bulgaria far exceeds that of other European countries with comparable population size. This reality created “education per kilogram” phenomenon. The large number of HEIs in Bulgaria has not led to improving the quality and efficiency of education, and yet does not respond adequately to the changing labour market demands for qualified professionals. The “universities per kilogram” trend occurred and it brought about other corresponding symptoms, such as “students per kilogram”, “professors per kilogram” and the so-called “flying professors”.

### *HEIs per kilogram*

The big quantity of HEIs in the country is in a mismatch with the low percentage of GDP which the government dedicates to education. The number of HEIs is also disproportionate against its population size – 54 HEIs in Bulgaria for population of 7.2 million. Countries with comparable population size have the following balance: 40 HEIs in Sweden for population of 9.6 million, 47 HEIs in the Czech Republic for population of 10.5 million, Greece – 39 HEIs for population of 10.9 million, etc.

Two surveys have been conducted (respectively in 2007–2008 and in 2012–2013) by the Institute for Economic Studies of the Bulgarian Academy of Sciences in regard to whether the number of HEIs in the country should be decreased. The outcome is – over 63% of the academic teachers believe that the number of higher schools must be decreased in order to:

- Preference should be given to universities with the highest ratings;
- Qualified academic staff will be concentrated in high-rating universities;
- Selection of students will be improved according to fair competition and merits.

Another thorny concern is the excellence of scientific work in so many HEIs. Currently all Bulgarian universities receive funds for research production, regardless of its quality. The Bill amending the Law on Higher Education (as of 1 June 2015) attempts at differentiating the subsidies for those HEIs which perform better in scientific work from those who do not by introducing a methodology for assessment of scientific results. The Bill envisions segmentation of the HEIs into two types, depending on the quality of their research output – institutions for general education and research ones. According to rough estimates of the MES, there are about ten highly active research universities now.

Speaking about the quantity vs. quality of the HEIs, it is necessary to reflect on the dichotomy public vs. private tertiary education in Bulgarian conditions. 55.8% of the young people prefer to be enrolled in



a public university against 10.6% who would rather choose a private HEI, reports a representative survey of Alpha research (Boyadzhieva 2005: 33–60). A test on the dominated hypothesis that studying in a private university is easier, did not meet the expected acknowledgement among the respondents. However, half of the supporters of private HEIs argue that the latter are better oriented towards the labour market needs. An extra advantage of private higher schools is the provision of a developed technical and material environment. The biggest number of computers for learning purposes per 100 students can be found in private colleges – 54.7 items, which means that one computer could be shared by no more than two students (NSI 2013).

The privately accredited HEIs in Bulgaria have occurred during the first half of 1990s as an alternative to the state - run ones. From 1998/1999 until 2013/2014 the number of the private higher schools grew from 11 to 14. A key feature is that they do not receive a state subsidy for enrolling students. These are five universities, five colleges and four profiled schools for higher education. The private HEIs were experimental in paving the way of academic education towards innovations, i.e. they have introduced the system of credits and offered flexible and practically-oriented programmes. Also, the private HEIs have run an active information campaigns for attracting new students (Pushkina 2005:24).

Apart from the public vs. private tertiary education dilemma, there is yet another dichotomy, the rural–urban disparities, which further deepen the segmentation among various social groups in Bulgaria. Academic selectivity at the entry to schools negatively correlates to the size of

settlements, as the concentration of secondary schools with ambitious academic fulfilment prevails in the capital (Stoilova: 2010, 44). Also, the educational services in Bulgaria are concentrated in certain regions. EUROSTAT data on tertiary educational attainment by NUTS II regions (2013) exemplifies that within the age group 25–64, 35.1% of the people have received tertiary degree from HEIs, located in Yugozapaden (South–West) region. Sofia-capital and Blagoevgrad are cities from that region and most of the universities, colleges and higher schools (both private and public) are located in the two cities. Respectively, 80.8% of the population aged 20–24 in Yugozapaden region is involved in tertiary education against only 6.0% of the same age group living in the underprivileged Severozapaden (North–West) region. Correspondingly, Yugozapaden region has the lowest share of youth unemployment in the country (17.3%) in contrast to Severozapaden region (over 33%).

### *Academic fields per kilogram*

The “education per kilogram” phenomenon encompasses yet another trend, i.e. introducing too big a diversity of academic fields within a single HEI. The bigger the number of students – the bigger the subsidy” scheme stimulated HEIs’ management to launch new majors, most of them extrinsic and irrelevant to the mission of the respective institution, solely to attract more solid subsidy and to optimize the quantity of student tuition fees. Many universities initiated new faculties, off-campus branches and disciplines in innovative professional fields for the exclusive reason to collect more students. Nowadays Bulgarian students are taught in the abundant quantity of over 3, 000 specialties in a total of 52 professional fields. For example, 13 public universities offer studies

in Economics; in contrast, there is a sensitive scarcity of mathematicians – only 483 students are currently studying Mathematics in the country.

Another peculiarity, related to the tertiary studies is that the costs for education and maintenance of students in diverse professional fields differ, as higher costs for maintenance of a single student in a certain specialty suppose better accomplishment on the labour market. It is evident in the cases with Medicine, Pharmacy and Dentistry, where the cost for education per student is the highest – the share of full-time employed graduates reaches 80% (Boyadzhieva 2012).

There is a broad discussion on where is the balance between promoting disciplines, i.e. professions, satisfying the current market needs (IT, engineering, accountancy) or professions which do not contribute directly to the national GDP but are of a social value (teachers, social workers, health workers). Thus, a bill amending the Higher Education Act tackles the issue of prioritizing the state subsidies for academic disciplines which are, at one hand, most preferred on labour market and other, which cater to broader societal needs. For the purpose, the amendment seeks to introduce “priority professional fields”, i.e. fields that produce highly qualified specialists which the business sector declared shortage of (e.g. engineers and ICT specialists) and other, “protected disciplines” which might be of insufficient candidates’ interest, yet necessary for social development (e.g. teachers, translators).

### *Students per kilogram*

Another sign of “education per kilogram”: for the last 20 years in Bulgaria there is a constant tendency for growth in the number of students. (This was disconnected only in 2010, because the share of the population aged 20-29 decreased from 14.1% to 13% within 2008–2012.) The net enrolment rate for tertiary education has reached 41.6% of the population aged 19–23 (2014/15, NSI). In the academic year 2014/2015, the total number of students enrolled in higher education institutions for acquiring degrees, such as Professional Bachelor, Bachelor, Master and PhD, is 279, 000 persons:

### **Professional Bachelor / Colleges (ISCED 5B)**

Overall, 15,200 of the students are currently studying towards the Professional bachelor degree in colleges.

In 2014 Professional Bachelor was acquired by 3, 200 students of whom 58.1% were women. The most preferred fields were Business and Administration and Health.

### **Bachelor degree**

In 2014/15 year the number of students enrolled in Bachelor degree is 171, 500 people, of whom 52.6% were women. The newly enrolled students towards the Bachelor are 45, 000. The highest share of students chose Business and Administration (22.6%), Engineering and Engineering Trades (15.1%) and Social and Behavioural Science (12.3%). The lowest proportions of learners were admitted into Transport Services (1.2%), Life Sciences (0.7%), and Mathematics and Statistics (0.2%).

The recent BA graduates were profiled mostly in the fields of Business and Administration (28.5%), Social and Behavioural Sciences (17.9%) and Engineering and Engineering Trades (12.8%). Private HEIs produced 7.2% of all graduates in Bachelor qualification.

### **Master degree**

During the 2014/2015, the number of candidates enrolled towards Master degree is 85, 600 people, as 59 % of them are women.

In 2014, 26 500 students graduated with a Master diploma. The most preferred fields are Business and Administration (33.6%), Social and Behavioural Sciences (11.9%), and Engineering (9.1%).

The least preferred fields of education towards MA degree are Veterinary, Journalism and Life Sciences.

### **Doctoral degree**

By the end of 2014, there are 6,617 PhD students in Bulgaria, as female PhD candidates outnumber male ones by 1.4%. The number of PhD students increased with 562 persons in comparison to 2013.

According to the distribution by age, the share of PhD students aged 30 – 39 is highest - 38.4%, followed by those aged 20 – 29 (34.3%).

In 2014 doctoral degree was acquired by 1,363 persons, of whom 52.8% were women. Data shows that males were awarded PhD degrees predominantly in Engineering (17.4%), Health studies (11.3%) and Social and Behavioural Sciences and Humanities (10.2%). The recent female graduates chose Health (12.4%), Social and Behavioural

Sciences and Humanities (11.5%) and Teacher Training and Education Science (11.4%).

## **INTERIM CONCLUSION**

After recounting the enrolled students per degree studies, some legal facts will help towards recapitulating why nowadays educational authorities accept more individuals into tertiary studies. Some legal context is needed in order to rationalize the incentives for the HEI authorities to admit bigger numbers of students – behind the statistical figures, presented above, is the issue of the portion and restraints of the governmental financing for each of the educational institutions, i.e. financing of students enrolment per capita. It is seen as a major transformation, which landmarks the autonomy of higher education bodies from 1999 onwards (WB, 2012). This drift had direct implications on the expansion of the number of HEIs and the upward tendency for admission into public universities. According to the Higher Education Act, the Council of Ministers determines the amount of subsidies (or pre-set student quota) in each academic discipline, whereas the exact number of enrolled students is a subject to the annual internal rules for budget allocation and management of each institution.

In the European Union context, the increase in the cost for education is a steady upward trend in the recent decades (Dimitrova 2011). Nonetheless, there are discrepancies in funding for higher education among the member states: Bulgaria, Latvia, Lithuania, Poland and Slovakia are with the lowest GDP per capita, hence the costs for a single student are lower than the EU average (which is 3,670 EUR per student).

It evokes the necessity for a bigger co– financing share, which translates into students paying tuition fees. In some member states students do not pay any tariffs, while in Bulgaria the annual tuition fees are among the highest in the EU (Stoilova 2010: 46). According to the scheme, undergraduates/MA pay a fee which is a percentage of the per student expenditure norms as determined by the governmental grant for HEIs (initially at 30%, and revised to the current 70%).

Another change has been endorsed in 2010, as an aftermath of the government restriction on the state funding for the HEIs. The Higher Education Act was modified in such a manner as to permit state-funded HEIs to enrol students against a full cost recovery fee. The condition is that the share of the “paid entrants” does not exceed 10% of the capacity of the institution. In order to fill in their budgets, the HEIs are highly motivated to admit greater amount of students (both “state quota” students, who would pay tuition fees and “paid entrants”, who would tribute full cost recovery). Experts comment that an ultimate improvement of funding for tertiary education could happen through an increase in the national budget subsidy and a subsequent increase in the share of expenditures of the business companies for education (Zareva et al. 2014: 83). The experts’ recommendation is that the industry should benefit from collaborating with universities given that such interrelation would enhance the transfer and exchange of knowledge and bestow students with better job prospects.

## **ABOUT IMBALANCED INTERACTIONS**

Several negative externalities arose from the “education per kilogram” academic disciplines and number of tertiary graduates, namely, a misbalance among the current job opportunities, the labour market demand; an additional issue is the level of the acquired practical skills and the readiness of the graduates to merge into the authentic business environment. As visible from the data shown above, a large surplus of specialists in some areas and a lack of specialists in other areas occurred and plenty of graduates are currently unable to find a decent job in their sphere of competence. For instance, for the academic year 2015/2016 the government set a quota of 1 600 law students, while job market indicators show that almost 50 law graduates compete for a single jurist vacancy. Another negative outcome is that higher tuition fees limit the access to continuing education for young people from low-income social groups and widen the demand for majors with lower tuition fees (e.g. Pedagogy).

Yet, a tendency for improper utilization of human capital on the labour market takes place, adding to the growing irrelevance between qualification standards and real business needs (Zareva et al. 2014: 26–27). Bulgaria is lagging off in preparation of specialists in a number of contemporary spheres of knowledge. The graduates in Math, Natural and Technical Sciences aged 20–29 are 12.4 per 1000 population against 16.8 EU average (EUROSTAT 2011). The European statistical office also discloses discrepancies in the professional fulfilment of university graduates and the recruitment requirements of business employers. The coefficient of employment among the young specialists aged 20–34



(three years upon graduation) in Bulgaria is lower than the EU average. More alarming is the portion of economically non-active young people with tertiary degree – twice bigger than the EU average.

### *Professors per kilogram*

Not only the students enrolment has been done on a mass scale; not only the higher education institutions have multiplied and spill over. A rapid academic promotion in the hierarchy of the HEIs and research institutions, particularly the advancing towards habilitated positions, has been stimulated with the 2010 endorsement of the Law on Development of the Academic Staff in Bulgaria. The Law is reproached for allowing quicker and not always precise professional growth to some academic employees. In addition, the disputable legal text allows every HEI to take independent decisions and identify its own requirements on how to award scientific degree, readership and professorate. As a result, the country has 3, 022 new professors and associate professors/Readers. For the recent three years, solely Sofia University promoted 166 employees into professors and 188 – into associate professors. Endorsing nominal national criteria for academic growth is the remedy, as seen by the Ministry of Education; since the latter submitted a Bill aiming at amending the above-mentioned mismanagement.

Let us look at the national data again: the structure of the academic positions shows that after 2008 the share of professors is increasing while the share of associate professors and assistant-professors is slightly decreasing. The number of academic employees in 2014/2015 year is 23,743 persons. A noticeable tendency, typical for the EU states and contributing to the European Commission's recommendation for gender

equality in professional development, is that the share of women in academic jobs rose to 48% in 2014/15. The professor's degree holders amount to 3, 473 persons, whereas the readership holders (associate professors) are 6, 848 persons. The age composition has altered in the recent years: the number of university teachers and scholars aged 55 or above 64 is increasing at the expense of the younger ones.

Yet another attention-grabbing phenomenon on the Bulgarian tertiary education scene is the "flying academic staff" or the fashion of "teaching tourism". The "flying professors" are those, who have been employed simultaneously in two or more universities and participate in the accreditation of all of them. Media, academic community and students criticize this style of obtaining several wages, hopping from HEI to another one, at the expense of ignoring good quality teaching, tutorials and research. The response from the Ministry of Education for discontinuation of such practices came up as a part of the Bill for amendment of the Higher Education Act: the proposed measure is one teacher to be counted in the accreditation of only one university.

The next detectable trend worth discussion is that the HEIs' teaching resources have been reconfigured within public vs. private academic spaces. In 2014/15, 59.2% of the total academic staff holds fully-tenured positions. According to the national statistics, in 2014/2015 year 21, 025 persons (88.5%) teach in state-run universities whereas 2,718 persons – in private HEIs. The university teachers in the private HEI are increasing in number at the expense of the teachers in the public HEIs. As an adjunct, the quantity of teachers working on fully-tenured positions at the private HEIs has been gradually increasing (from 534 in 2000/01 to

1, 220 persons in 2014/15), whereas the number of teachers with similar contracts at the public HEIs is decreasing (from 15,075 in 200/01 to 12, 851 in 2014/15). This tendency is owed to the better remuneration of teachers in the private higher schools.

*RANKING SYSTEM OF HIGHER EDUCATION  
INSTITUTIONS. COMPARATIVE ANALYSIS BY  
PROFESSIONAL FIELDS*

Previously in this paper the authors spoke about the up-scaling (“mass”) higher education in Bulgaria and how this interacts with the state funding and the real business needs. This chapter displays the Ministry of Education and Science’s university rating system; the preferences for disciplines, universities and professions among students; whether the recent graduates have been employed five years upon graduation; what is their current income, etc.

Why the university rating system has been introduced by the Ministry of Education and Science? The expansion of higher education, the strengthening of competitiveness within national systems of higher education and on an international scale; commercialization of higher education, etc. presuppose more intensified demand for information on the diversity of the offered programs. The beneficiaries of the rating system are the candidates for enrolment in HEIs, their parents and the industry in order to make the best out of an informed choice. On the other hand, any HEI has the necessity to be compared and to compete with other HEIs in order to find its proper place on the market of educational services. The presentation of the ranking system offers supplementary

arguments on the “education per kilogram” issue, as it shows the ineffectiveness of students’ assessments in certain specialities and their future (lack of) fulfilment on the job market.

The web-portal “Rating system of the higher education institutions in Bulgaria” has been launched in 2010 under the project “Elaboration of a rating system of the higher education institutions in Bulgaria”, implemented by the MES. The rating system compares the performance of 51 HEIs in 52 professional fields based on over 70 indicators measuring various aspects of learning, research, learning environment, the prestige of universities and professional accomplishment of graduates on the labour market.

### *Employment opportunities*

In the newest edition of the rating system there is an option to choose a professional field and view the distribution of the three most commonly held occupations of its graduates in the past five years. For example, the graduates of Warfare and Military studies tend to become civil servants in 97.7% of the cases; ICT graduates tend to work as ICT specialists in 43% of the cases; graduates of social and cultural studies usually occupy administrative or managerial positions in 62.8% of the cases, etc. One can see which the most popular professions are among recent alumni of a particular university in a concrete discipline. For instance, 60% of the graduates of the National Art Academy work “something else” apart from art work, 9% are self-employed and 12% are shop consultants. Another instance – the graduates in Healthcare from Medical University in Sofia occupy professions such as applied specialists in healthcare in 36.2% of the cases and medical specialists in 35.5% of the cases. Half of

the Math graduates from Shumen University “Episkon Konstantin Preslavsky” seem to have found vocation in “something else rather than Mathematics” and in 27% of the cases they work as consultants in shops.

The distribution shows equal shares of workers in the following fields: civil servants (22.22%) and shop consultants (22.22%) among the graduates in Business administration from the Agricultural University in Plovdiv. The rest of the proportions of the same alumni by profession are also equalized: qualified workers in agriculture, producing for the market (11.1%); general administrative servants and operators of organizational equipment (11.1%), managerial and operational specialists (11.1%), specialists in life and technical sciences (11.1%) and administrative managers and company managers (11.1%).

The share of the registered unemployed among recent tertiary graduates is 3.77%. It is remarkable that the lowest unemployment rate (under 1%) and the highest degree of application of the acquired tertiary diploma (over 90%) in practice are observed among the graduates in Medicine, Pharmacy, Dentistry and Warfare. The least accomplished graduates seem to have completed Tourism, Fine Arts and Metallurgy.

Dependence on a particular institution of graduation can be detected in regard to unemployment figures – 1.4% is the unemployment rate among the graduates in Economics from the American University in Blagoevgrad, whereas this rate is double among the graduates from the University of National and World Economy in Sofia – 2.8 %.

*Income as a function of graduating a particular institution*

The university rating (2014) shows that 867 BGN (443 EUR) is the average insurable earning of higher education graduates in Bulgaria. The highest insurance income has been received by the graduates in ICT from Sofia University – 1,860 BGN (951 EUR). The second highest monthly salary is that of the Warfare graduates from the Military Academy “G.S. Rakovsky” – Sofia – 1,715 BGN (877 EUR), followed by the alumni in Management and administration from the American University in Bulgaria – 1,572 BGN (804 EUR).

Another noteworthy characteristic is that monthly payment of a graduate is dependent on the particular higher education institution s/he obtained diploma from: i.e. the IT specialists from Sofia University receive 1,860 BGN (954 EUR) average salary, as previously mentioned, whereas the IT specialists from the University of Library Studies and Information Technologies earn 1,156 BGN (591 EUR) at average a month.

In relation to salary, it is important to make observation to what extent the investment into studies (i.e. state subsidy for education and maintenance per student and the number of years, necessary to obtain a diploma for a professional) adequately responds to the subsequent remuneration. For instance, medical doctors study six years, their maintenance as students is the most expensive from all academic fields; yet, they receive 1,113 BGN monthly wage (570 EUR) at average. Hence, it is not surprising why graduates from medical fields tend to migrate to other countries for economic reasons.

According to statistics, the graduates in Electrical engineering, electronics and automation from the South–West University – Blagoevgrad earn the lowest average insurable income a month – 500 BGN (251 EUR). A curious fact is that the unemployment rate is the highest among the graduates in Livestock breeding from Agricultural universities – 7.12%, but even that rate is below the average for the country.

### **1. Preferred professional field of study**

Economics continues to be the discipline that attracts most of the students – there are nearly 60,000 students in that subject as of now; in addition, there are 27,000 more students in Management and administration. In contrast to the attractiveness of Economics, only 467 students are enrolled in Mathematics, 2,352 – in Social work, 4,000 – in Psychology. Foreign students predominantly choose Medicine and Pharmacy.

It is a remarkable observation that the most precise in attending lectures, seminars and self-learning activities are the students in Veterinary and Human Medicine, Architecture, Construction and Geodesy, Dentistry and Warfare. On the other hand, students in Math, Philosophy and Language studies are the ones who most often participate in international exchange programs.

### **2. Discrepancy between labour market needs and education**

The recent tertiary graduates are usually employed, but big part of them (46%) tends to undertake placements below their qualification. Huge portion of tertiary graduates occupy working positions which do not require higher education; for instance, only a third of the diploma holders

in Economics, management and administration embark on an appropriate vacancy, career or appointment. Other examples for tertiary diploma holders, who occupy position demanding lower than tertiary qualification, are the graduates in Sociology, History, Biology, Chemistry and Tourism (only 18.7% of the graduates in Tourism occupy positions, requiring tertiary certificate).

There is a shortage of educational programs which prepare students for competences required by the contemporary labour market. In the recent decade there is a mismatch between supply and demand of working force with certain qualifications, e.g. the Chamber of commerce (2013) revealed that 64% of employers demand engineering specialists against 27% supply of certificated engineers from higher education institutions. According to employers, there is a discrepancy between the declared degree of knowledge and the real skills manifested during working practice. Survey among employers demonstrated their belief that in the next five years the need for specialists in Biotechnology, Food and Chemical technologies will increase, as well as the need for experts in Psychology, Communication and Computer equipment and Medicine. However, there will be lesser demand for specialists in Education, History and Sports.

The effect of the rating is in its impact over higher educational management, i.e. funding for universities. It is a commonsense rule that part of the governmental subsidy for the universities depends on rating figures, which take into account quality of education and vocational fulfilment of former students. The analysis of data also serves as an incentive for the authorities at HEIs to prioritize and invest in the most



successful study areas and to close those that are not performing sufficiently.

### *Leading universities and specialties*

Which universities offer the best training in particular academic disciplines					
<i>Economics</i>		<i>Information Technologies</i>		<i>Law</i>	
1. Sofia University		1. Sofia University		1. Sofia University	
2. American University in Blagoevgrad		2. New Bulgarian University		2. University of National and World Economy	
3. University of National and World Economy		3. American University in Blagoevgrad			
<i>Engineering</i>		<i>Management and administration</i>			
1. Technical University- Sofia		1. American University in Blagoevgrad			
2. University in Chemical Technology and Metallurgy		2. Sofia university			
3. University in Mining and Geology		3. University of National and World Economy			

*Table 2. Universities offering the best training in particular academic disciplines*

The leaders among the universities in Bulgaria are Sofia University, American University in Bulgaria (AUBG), Medical University–Sofia and the Technical University–Sofia (table 2).

Sofia University is the leader in 21 of all 22 charts in professional training in Biology, Biotechnology, Economics, Computer science, History and Archaeology, Mathematics, Life sciences, Political science, Law, Psychology, Religion and Theology, Social work, Sociology, Tourism, Physical sciences, Philology, Philosophy and Chemical sciences.

Undisputed in its intrinsic professional fields of study is the Medical University in Sofia: Medicine, Dental medicine, Pharmacy, Health care and Public health.

Technical University – Sofia is leading in the fields of Energy, Communication and communication equipment, Mechanical engineering, Transportation, Shipping and Aviation and General engineering.

The University in Chemical Technology and Metallurgy is leading in the following professional fields: Chemical technologies, Materials and study of materials and Electrical engineering, electronics and automation.

The AUBG holds the highest-ranked majors in Management and Administration, Economics and Public Communications. Sofia University pioneers in Natural Sciences, Information Technology, Law, Language studies and Psychology.

### *EMPIRIC DIMENSIONS: THE FRAME OF STUDENTS' OPINIONS*

In the chapters above, the paper discussed the strategic objectives which the Bulgarian higher education is leaning upon, the national statistics and the stances of the educational experts and the Ministry of Education on the expansion of the higher education in the country. However, it is also necessary to touch upon students' opinion.

An independent survey carried out by Valentina Milenkova among 250 students enrolled in four universities in Bulgaria (i.e. Sofia University, the University for National and World Economy, the South–West University and the Technical University - Sofia), describes students' perceptions of the teaching practices and the research activities they have been offered at school. This empirical study does not directly tell the

preferences of real time students on disciplines, universities and professions and it does verifies or argues the data, explained and analysed previously in this paper. However, it is a worthy experiential supplement catering to a reality check of what the critical approach of the students nowadays towards the teaching and studying process at the HEIs is.

### *Evaluation of the study process and the quality of lecturing*

The evaluation in education is a two-way process between two sets of actors: 1) lecturers and students and 2) students and lecturers. Evaluation on students' achievements should be impartial, without involving sympathy or antipathy; it brings into focus the real students' abilities and personalities (Andreev 1996). The final mark is a result from accumulation and interpretation of gathered information; as a consequence, the evaluation reveals the degree of correspondence between achievements and established standards.

The evaluation is a complex method which gives information about: 1) the level of knowledge of the learning groups; 2) the progress of educational milieu – professionalism of lecturers, organization of classes; and 3) the set goals which need to be achieved. The object of evaluation is the whole system in the different aspects of its functioning – practices, experience, innovations, policies, and reforms.

An important part of the evaluation is the feedback. The lecturers assess student's knowledge, way of thinking, ideas and skills according to certain criteria. Students' evaluation on teacher performance is one of the most controversial techniques used to identify the effectiveness of

teachers (Marsh et al. 1979). Aleamoni (1981) offers the following arguments to support the use of students' ratings on teachers' performance:

- Students are the main source of information about the learning environment, including teachers' ability to motivate them for continuing learning, empathy or the degree of the two-sided communication between instructors and students.
- Students are the logical evaluators of quality, effectiveness and satisfaction from the course content, methods of instruction, textbooks, homework, and the degree of trainees' interest.
- Student ratings encourage communication between trainees and instructors.

The main idea of evaluation is rewarding and enhancing development of the evaluated professionals: to know how students react to their grades; whether students take the grades into account; to what extent students strive to widen their knowledge, etc.

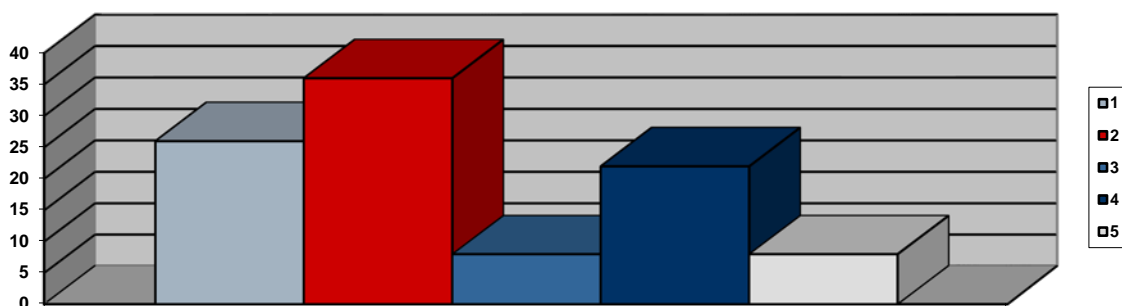
In the conducted survey in four Bulgarian universities the students were asked to assess diverse characteristics of teachers' professionalism and qualification, such as: the level of methodical organization of the study content; erudition; creativeness; the quality of handouts, readers and presentations; the dialogue with the audience; the degree of interactive teaching; fairness and neutrality in giving assessment marks, etc.

The mentioned aspects in measuring professionalism among university teachers' have been appraised by the students under a five-degree scale

(from “completely agree” to “completely disagree”). The students shared the following answers:

1. Completely agree (26%)
2. Agree (36%)
3. Indifferent (8%)
4. Disagree (22%)
5. Completely disagree (8%)

Most of the respondents (62%) highly evaluated the teaching skills and involvement of their university instructors (graph 1).



*Graph 1. Student evaluation of the level of professionalism of university lecturers*

By demonstrating a critical approach towards the teaching process, the Bulgarian students have overtly offered their stance and motivation to raise their personal demands towards teachers' performance and skills. Approximately 1/3 of the inquired students declared that lecturers are not unbiased in assessment and do not treat all students equally.

According to some of the respondents, the lecturers are not prone to interactive teaching and learning methods; also, the study revealed that teachers do not maintain open dialogue with the students.

Additionally, table 3 shows students' estimation on the quality of education at the Bulgarian HEIs. Apparently, tertiary trainees see the contemporary higher education system as not worthy of good appraisal. The question is “what is the state of our educational system?” and the respondents answered through a ten-degree scale from 0 – “very bad” to 10 – “very good”; as the responses were as follows:

	0	1	2	3	4	5	6	7	8	9	10	Don't know
General estimation (%)	7.6	8.8	9.6	12.4	10.4	19.6	7.6	5.6	2.4	1.6	1.2	10.4

*Table 3. Students' estimation on the quality of education*

As observed, higher education in Bulgaria has received a rather negative judgment, since the crucial answers were accumulated in the first (negative) half of the scale. The reasons for that perception have been rooted in the absence of an overall vision on educational reforms in the country; in the lack of continuity between sequent teams at the MES, which has led to disorganization and jobbing. The unclear standards have reflected both on institutional surrounding (on a macro-level) and on the accomplishment of young people (on a micro-level). Discrepancies between grades and real knowledge, as well as between knowledge, skills and vocational fulfilment are among the most serious gaps caused by the deficiencies within the higher education structure in the country.

### *Education and student's research activity*

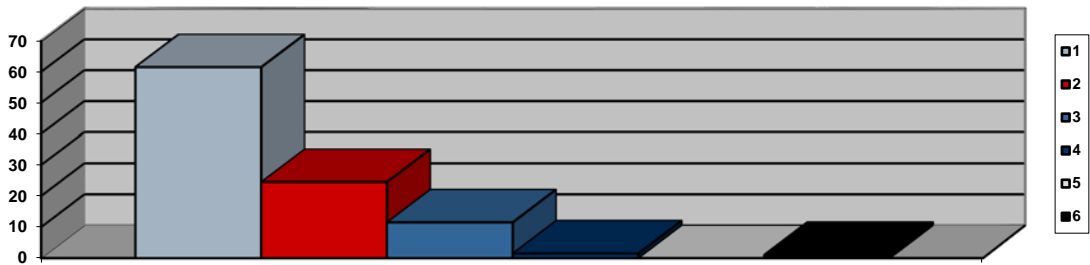
Another important issue is to what extent students have been included in research activities. Through participating in investigative projects students tend to increase the acquired qualification and skills. Having access to scientific laboratories, students approach and observe the

processes of constructing knowledge (“learning by doing”). The positive outcomes from taking part in research activities are that undergraduates apply the knowledge, acquired at lectures and via theoretical assignments, in real practice; provide the lecturers with relevant feedback; get motivated to continue studies towards higher educational degrees and adjust to new opportunities. The most important role for enhanced participation in research activities is the quality of education, the figure of teachers, the dimensions of involvements of the young trainees in scientific networks and the ability and readiness of both teachers and students to collaborate.

The survey gives an answer on what is it that attracts students to academic research. It appears that is the teamwork, or “the opportunity to discuss various topics with other young people in class”, “doing presentation/standing in front of other students” and “the fieldwork”. It is observed that the majority of students are fond of the socializing aspects of the research work, namely the chance to establish contacts through participation in exploratory activities.

Next, the study disclosed the opinion of young people on whether education is supposed to expand creative attitudes: 86.0% of the respondents expressed agreement with that statement (graph 2):

1. Fully agree (61.5%)
2. Agree (24.5%)
3. Neither agrees, nor disagrees (11.5%)
4. Disagree (1.5%)
5. Fully disagree (0%)
6. Don't know (1%)

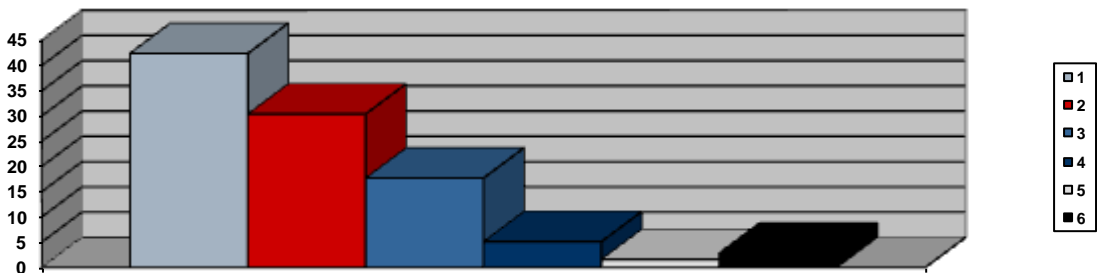


*Graph 2. Education must develop creative attitudes*

Another aspect of the study shows to what extent education is a determining factor for success in life, according to students (table 5 and graph 3):

Extremely important (1)	Very important (2)	Important (3)	Not quite important (4)	Absolutely non-important (5)	Don't know (6)
39.5%	31.5%	17.5%	7.5%	1.5%	2.5%

Table 4. How important is education for success in life nowadays



Graph 3. How important is education for success in life nowadays

Education is viewed by the Bulgarians as a value in itself; as well – a factor for upward mobility and reaching welfare. This statement has been proved by the respondents – 88.5% of them specified that education is a



vital requirement for individual mobility (the answers are as follows: “extremely important”, “very important”, and “important”).

As a matter of fact, students do not always express readiness for taking part in a creative work. Often they are inert, disinterested and passive attendees of lectures. On the other hand, students search for self-expression and that is why teaming-up, creativity and self-presentation in auditoria happen to attract them. It is generally agreed that inclusion of students in research work is a necessary element of personal development and vocational accomplishment, especially in the context of globalization. At one hand, it is a must for individual prosperity of the young people; on the other – it is an indicator for maturity of the functioning models of university education.

As active participants in the bi-centric educational process, learners' viewpoints on the drawbacks of the system of tertiary schooling should be considered an essential feedback. The analysis presented learners' evaluation (e.g. on received competences, assessment and expectations towards quality of teaching, degree of involvement in research assignments, degree of provided support, etc.). The study among the students from the four universities throws additional light on the studying and teaching methods by claiming that the teaching is not interactive enough. On the other hand, students assess creative assignments very high but they tend to be unwilling to spend too much time on them for various reasons (passive attitude, jobbing, etc.).

## CONCLUSION

The extensive expansion of the higher education in Bulgaria proved ineffective since the *quantity* of enrolled students has become *the* decisive factor for subsidizing universities. Keeping every student, including those with unsatisfactory performance, has turned into a sole goal of the HEIs. It created “education per kilogram” phenomenon, which entails the unsustainable practice of “McDonaldization” of certain academic disciplines, hence, it led to both ultimate fabrication of specialists with low competences, and to a heaped production of graduates with qualification in similar spheres, who oversupply the job market demand.

The ranking system of the higher education institutions clearly shows its deficiencies, particularly in regard to professions, which have been manufactured in an academic environment, yet they do not fit the contemporary job market. Nearly half of the recent graduates have been holding job positions which require less than the qualification they have, especially the ones holding tertiary degrees in Economics, Administration and Management. The size of the subsequent salary of the graduates, who “undersell” themselves, is not satisfactory too in most of the cases.

The good news is that through the Strategy for Development of Higher Education (2014 – 2020) and the bills amending essential acts, concerning higher education and the academic staff, the Ministry of Education plans to grant 50% of the total state subsidy to universities depending on quality criteria until 2018, as share of the grant is expected to rise to 60% by 2020. As an adjunct, the Bill amending the Higher

Education Act tackles the issue of prioritizing the state subsidies for academic disciplines which are, at one hand, most preferred on the labour market and others, which cater to broader societal needs.

Nevertheless Bulgaria is a bit far from the “Europe 2020” objective of having 36% of the people aged 30–34 to have completed higher education, gradual expanding of funding for education and science is envisaged in the new Strategy for Higher Education (2014–2020), as by the end of the period this resource is expected to reach up to 6% from the GDP (similar to the most EU countries).

To conclude, the huge number of HEIs in Bulgaria has not led to improving the quality and efficiency of education, and yet does not relevantly respond to the up-to-date labour market needs for professional human resources. Hence, the future of the Bulgarian higher education is recommended to respect the necessity for development of prioritized academic disciplines, good both for the business sector and the society at large.

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