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CHANGES TO THE CONCEPTION OF GEOGRAPHY CURRICULA WITHIN UNIVERSITY EDUCATION IN POLAND IN THE 21ST CENTURY IN THE FACE OF LABOUR MARKET CHALLENGES*

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Abstract:
In the nineties of the 20th century, there was a rapid growth in the number of applicants for Polish universities. Unfortunately, this favourable situation didn't cause any structural or curriculum changes. Traditional geography curriculum remained obsolete and not adapted to the challenging Polish labour market. Since the beginning of the 21st century, the situation has started to change mainly due to the baby boom, which has caused a general fall in the number of people who want to study. This fact compelled academic authorities to think over the concept of geographic education and to conduct reforms. Another factor that forced changes was the obligation to implement the Bologna Declaration after Poland entered the EU in 2004.

This paper presents the analysis of the evolution of the conception of geography in higher education in years 2002-2012, as well as it assesses both positive and negative aspects of the current geography academic education programmes in Poland, taking into consideration the improvement in the quality of education, fair measurement and assessment of this quality and analysis of labour market needs with reference to the future graduates of geography studies.

In order to achieve the objective of this study, the method of document analysis has been used. The analysis includes geography education standards and curricula from all universities that provide geography education. Moreover, the study includes diagnostic surveys conducted among students on the change of their level of satisfaction from the geography studies and specialities that they have chosen at the end of studies and approx. half a year after completion of studies, i.e. during their transition to the labour market.

Keywords: *curriculum, geographical studies, graduate's profile, labour market.*

1. GENERAL BACKGROUND TO TRANSFORMATION OF POLISH ACADEMIC EDUCATION

Nowadays, the Polish academic education system is subject to multifaceted changes which bring both positive and unwelcome effects. Since the nineties of the previous century, we all

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have been observing the dynamic development of the academic education system, including geography education. In the first place, growth manifests itself in the increasing number of students. In the academic year 1990/1991, there were 403 824 students in Poland, and in the 2010/2011, the number rose up to 1 841 251 (Szkolnictwo, 2010). Undoubtedly, this is a chance to increase the educational status of our society, and we can be truly proud of this. Until recently, the number of young people willing to enter geographical studies has exceeded the number of places available.

Increasing interest in higher education among Polish young people and, as a result, interest in geography studies has been caused by many factors. It has been affected by the transformation of our economy, lowering industry to GDP ratio and the increasing role of services. All these changes have revealed a surplus of low-qualified labour force and a lack of people who are well prepared for work in modern branches of economy. The change from a planned to a free market economy has raised the need for building new systems based on knowledge. (Zmarzłowski & Jałowiecki, 2008)

One of the factors that affected growing demand for a high-qualified labour force was increasing demand for knowledge and technology. Undertaking higher education studies is the easiest way to gain qualifications, comprehensive knowledge and appropriate skills. High demand for studying has also been caused by the massive influx of high-school graduates born in a period of population boom and by the fact that young people have aspired to enter the circles of intellectuals, and middle-aged workers have been forced by employers or the changing labour market situation to go through vocational training. At that time, many private universities were established in Poland, setting minimal entry requirements for candidates (only a secondary school diploma was required). Private universities became an entrance point to higher education for young people who failed to enter more demanding public universities. Some universities decided to establish their branches in small towns for students who cannot afford to study far away from home. (Furmanek, 2004)

Changes in the traditional family model have also taken place over the years. Originally, the model was based on non-working women. Women's attitude towards education has altered radically. In the years 1991-2011, the percentage of female students rose from 51.6% to 58.8%. (Rocznik, 1992, 2011)

Before performing the analysis of transformation of Polish academic education, it should be indicated that such an impressive growth in the number of Polish students has been an "*alternative for rapid growth of unemployment*". (Denek, 2004, p.19)

Fast growth in the number of candidates has been favourable for public universities, but still has not stimulated them to make any structural and educational changes. They have always been more prestigious than private schools and have offered tuition fees free for full-time studies. This has been the reason why the number of candidates has exceeded the number of places offered. This also explains why the offer of public universities has never become subject to marketing activities. Full-time courses have been 100% funded by the Ministry of National Education, thus there have been no incentive for any reforms.

Dynamic development of the academic education system in Poland has been one of the author's reasons for performing the analysis of the influence that these changes had on the concept of geographical academic education. The subject of study in this paper is the curriculum for geography in higher education in Poland.

The main goal of this study is to perform an analysis of the evolution of the concept of geography academic education in the years 2002-2012, as well as to assess both positive and negative aspects of the current geography academic education programmes in Poland, taking into consideration:

- improvement in the quality of education;
- fair measurement and assessment of this quality;
- the aspect of employability in the study concept;
- analysis of labour market needs with reference to future graduates of geography studies.

In order to achieve the objective of this study, the method of document analysis has been used. It includes geography education standards and curricula from all universities that provide geography education. Moreover, the study includes diagnostic surveys conducted among students on their level of satisfaction from geography studies and the specialities that they have chosen at the end of studies and approx. half a year after completion of studies, i.e. during their transition to the labour market.

2. THE QUALITY OF GEOGRAPHY ACADEMIC EDUCATION IN POLAND

In Poland, geography studies have a long tradition which dates back to 1849, when the first faculty of geography studies was launched at the Jagiellonian University in Cracow. The next educational centres were established in Lwów during the period of Partitions, as well as in Warsaw, Poznań and Wilno during the Interwar period. After the Second World War, Lwów and Wilno were removed from the map of Poland. Nevertheless, new centres were launched in Lublin, Łodz, Torun and Wroclaw. (Jackowski, Liszewski & Rychling, 2008)

There are currently 14 universities that provide geography academic education in Poland. It can be stated that geography has always had a strong position in the academic education system and has been chosen by students willingly. Despite the fact that geography is still very popular among candidates, currently, it has lost its academic prestige. The traditional curriculum of geography studies is often considered as obsolete and not adapted to the challenging Polish labour market. This has resulted in a fall in the number of people who want to study geography. In addition, the general fall of applicants has also been caused by a baby boom. This fact has compelled academic authorities to think over the conception of geographic education and to conduct reforms. What is more, Poland entered the EU in 2004, and therefore we were obliged to implement the Bologna Declaration. This has been a serious incentive for changes in geography academic education standards, which were finally made in 2007. (Osuch, Piróg & Tracz, 2008)

2.1 The Organisational Conception of Geography Studies in Poland

In the examined period, changes in the organisation of geography studies and a decrease in the mandatory amount of both field and small group classes are visible.

Up to 2007/08, geography academic education was based on 2002 standards (Dziennik Ustaw, 2002). It provided only 5-year (10 semesters) MA geography studies with approximately 3 000 class hours including 1 200 hours of standardised classes. Non-standardised classes were subject to the individual preference of the university. There was only one field – geography, and almost no faculties, and there were no ECTS standards. Due to regulations, universities were obliged to supplement courses with 480 hours of field classes (80 days).

Currently, geography academic education in Poland is based on 2007 standards. It includes an obligatory two-tier structure of degree courses. A bachelor's degree course lasts for at least 6 semesters. The amount of class hours should not be less than 1 800, and the number of ECTS points should account for at least 180. A master's degree course lasts for at least 4 semesters. The amount of class hours should account for at least 800, and the number of ECTS points should not be less than 120. The minimum amount of field classes is 3 weeks

for a bachelor's degree course. With reference to a master's degree course, the minimum amount of field classes is not fixed: "*curricula should embrace field classes*". (Rozporządzenie, 2007, p. 9)

2.2 Graduate's Profile

Changes in a graduate's profile reflect the changes in the conception of geography education in Poland. A description of a graduate's profile in 2002 standards was shortened, and it placed emphasis on the gain thorough knowledge provided by the curriculum. It did not describe any skills that should be gained during the course. This resulted in a lack of indication of potential employment position for geography graduates, which would comply with their skills and qualifications acquired in the course of studies, with the exception of teaching work. According to the ordinance, graduates should be acquainted with basic geographic disciplines and should gain "*...skills that are adequate for their faculty and that prepare them to commence regular or scientific work, as well as competences to teach in school (for those who have chosen a teaching course).*" (Dziennik Ustaw, 2002, p. 7519)

In Poland, legal emphasis on the need of ensuring multilateral intellectual development during tertiary studies, and also provision of graduates with competences desired on the labour market, took place in 2005, when the new *Law on Higher Education of 27 July 27 2005* entered into force (Dz. U. No. 164, item 1365 as amended). Art. 13.1.1. emphasises that at the stage of university education, it is necessary to conduct "*education of students for the purpose of their preparation for professional work*". This was a step towards noticing and strengthening the aspect of competitiveness of education acquired at a given university on the labour market. This provision resulted in the fact that the profile of geography graduates mandatory emphasised competences which they may acquire in the course of such studies, as well as a description of potential places of employment for graduates of this study major (Dziennik Ustaw, 2005).

Nowadays, the description of a graduate's profile is well developed and refers to a wide range of competences. According to this, graduates of a bachelor's degree course should acquire basic geographical knowledge, be acquainted with relations between nature and humans and understand basic processes occurring in nature, society and economy. Graduates should also be able to understand results of analysis as well as obtain information about natural and anthropogenic phenomenon and be able to use it for spatial management and development. During the MA degree course, graduates should acquire advanced knowledge (compared to the bachelor's degree course) of geography, enriched with general knowledge of pure, social, economic and natural sciences. Graduates should be able to analyse natural, economic and social phenomenon and processes on the global, regional and local levels. They should also be able to assess and describe the human environment and use the knowledge for creative work. The master's degree course should prepare students to hold executive positions, to work in the educational system or to enter doctoral studies.

In light of the teaching standards for geography as a study major, a graduate of Bachelor's degree studies should be prepared for: work in institutions dealing with the natural environment, development and protection of the environment, institutions dealing with spatial economy, conditions of people's work and organisation of social and economic activities, the educational system – after completion of the teaching specialisation. Master's degree studies should prepare a graduate for holding of managerial functions and, similarly to Bachelor's 1st degree studies, for work in education – after completion of the teaching specialisation (in the case of geography, at the 4th and higher level of teaching). (Rozporządzenie, 2007)

At many universities, characteristics of graduate profiles with respect to potential places of employment make close references to general provisions contained in the standards. There are also universities which specify potential places of employment for their graduates. At the Szczecin University, the description of a graduate profile emphasises the possibility of undertaking work in offices, institutions and companies whose operation is related to the use of natural resources, tourism, protection and development of the geographic environment and institutions related to maritime economy, coastal protection and management (www.us.szc.pl).

The professional destination of graduates is described (divided into specialisations) in most detail by the Nicolaus Copernicus University in Toruń, the Jagiellonian University in Cracow, the University of Silesia and the Pedagogical University of Cracow.

Completion of geography studies at the Nicolaus Copernicus University in Toruń is conducive to employment of graduates as experts and specialists in state and local government administration, research centres, statistical offices, as consultants for spatial management plans, advisors with respect to economy, environmental protection, employees of European centres dealing with environmental protection and economic geography (www.umk.pl).

Geography graduates at the University of Silesia may work in institutions involved in protection, development and monitoring of the geographic environment, in state services: meteorological, hydrological, geological, as well as in regional development agencies, statistical and cartographic offices, in institutions dealing with organisation and conduct of tourist services – tourist agencies and tourist chambers, offices of national and landscape parks, tourism and promotion departments of offices of territorial administration of all levels (www.wnoz.us.edu.pl/geografia.php).

The Jagiellonian University, when describing the profile of geography graduates, indicates such potential places of work as: units dealing with protection and development of the environment, hydro-meteorological protection, work in local and state administration dealing with physical geography and work in educational and scientific units. Geography graduates specialising in social and economic geography are prepared to commence work in institutions, offices and enterprises whose profile of operation is related to management and development of the environment, use of spatial information, promotion and market polls. Geography graduates specialising in spatial economy and regional development may potentially find employment in planning and management services of local and governmental administration units of all levels, agencies of regional development and enterprises dealing with spatial planning, administration, regional development, as well as procurement of structural funds from the European Union. In the case of graduates specialising in tourism, they are prepared for work in units servicing tourist traffic and governmental and local administration at positions responsible for development of tourism. Graduates specialising in geographic information systems (GIS) may look for employment in state institutions, local government institutions and in the sector of private companies where there is demand for servicing computer applications assigned for collection, processing and visualisation of geographic data (www.geo.uj.edu.pl)

Graduates of the Pedagogical University of Cracow with specialisation in geography with management of the geographic environment may look for work in institutions and companies operating in this area. Persons who complete studies specialising in geography with entrepreneurship and spatial economy are equipped with knowledge and skills allowing for setting up and operation of one's own company and work in institutions dealing with spatial economy. Graduates specialising in regional geography of Southern Asia, thanks to being

able to speak Hindi (basic level) and having followed some specialist subjects, have additional advantages on the labour market. In the course of a specialisation of geography and tourism, graduates are prepared for work in institutions and enterprises related to the servicing of tourist traffic (www.wsp.krakow.pl)

More emphasis on the pro-market orientation of studies in Poland is put by the provisions of the Act Amending the Act on Higher Education of 18 March 18 2011 (Dziennik Ustaw No. 84, item 455), the Act on Scientific Degrees and Scientific Title and Degrees and Title in Art and Amendment of Certain Other Acts. In October 2011, this document introduced an obligation of monitoring the professional career of graduates by individual universities (Art. 13a "*a university monitors professional careers of its graduates for the purpose of adjusting study majors to the needs of labour markets, in particular after three and five years from the date of graduation"*).

The foregoing comparison of a particular graduate's profiles is proof that contemporary curricula for geography studies are evolving into diversification of the educational offer as well as the expansion of the labour market. The introduction of different subject courses and a wide range of faculties for students provide opportunity for them to become professionals in diversified branches of the economy. Teaching foreign languages is aimed at enabling them to work in an international environment in Poland or abroad. The significance of teaching foreign languages is emphasised by the increased amount of mandatory language class hours. Students are also obliged to pass the final language exams and are encouraged to participate in technical language courses (like at the Nicolaus Copernicus University in Torun).

2.3 Curriculum Concepts

Both curriculum concepts of geography studies reveal similarities as well as differences. Up to 2007/08, curricula had to provide general education subjects (210 hours), as well as basic (165 hours) and core subjects (825 hours) in a 5-year cycle.

Currently, the new standards provide only for these two last groups of subjects. However, every university supplements its offer with general education subjects. Bachelor's degree studies should provide two groups of subjects: basic subjects (min. 210 hours, 28 ECTS points) as well as core subjects (450 hours, 61 ECTS points). Master's degree studies should provide at least 180 class hours (24 ECTS points). However, new standards state that the curriculum should also provide physical education classes (60 hours, 5 ECTS points) and information technology classes (30 hours, 2 ECTS points). Moreover, curricula should also provide aspects of the humanities or other general education content amounting to at least 60 hours and minimum 3 ECTS points. The curriculum should also be supplemented with such classes as intellectual property protection and industrial safety.

The structure of the curriculum is presented in Table 1. It can be noticed that, according to the new standards, the amount of hours assigned for basic courses is defined as opposed to core courses. This means that every single university is obliged to provide core courses amounting to the defined number of hours or even higher. The content of core courses is set by a university in accordance with their educational vision, scientific achievements and philosophy of geography as a science.

The interpretations of topics, number of hours assigned to particular core subjects, class-to-lecture hours ratio are all subject to the regulations of an individual university.

Table.1. Mandatory courses during geography studies

2002 standards		**2007 standards**		
Courses	Hours	Courses	Hours	ECTS
MASTER'S DEGREE COURSE		**BACHELOR'S DEGREE STUDIES**		
		Other Requirements:		
		The Humanities	60	3
		Foreign Language	120	5
		Physical Education	60	2
		Information Technology	30	2
A: General Education Courses	**210**	**A: Basic Courses**	**210**	**28**
1. The Humanities	30	1. Fundamentals Of Geography	30	28
2. Foreign Language	120	2. Fundamentals Of Astronomical Geography	30	
3. Physical Education	60	3. Geographic Information Systems	30	
B: Basic Courses	**165**	4. Maths And Statistics	30	
1. Maths	60	5. Physics And Chemistry Of The Earth	30	
2. Physics	30	6. Economics	30	
3. Fundamentals Of Astronomical Geography	30	7. Sociology	30	
4. Geographic Information Systems	45	**B: Core Subjects**	**450**	**61**
C: Core Subjects	**825**	1. Geomorphology		
1. Geomorphology	60	2. Hydrology And Oceanography		
2. Hydrology And Oceanography	60	3. Meteorology And Climatology		
3. Meteorology And Climatology	60	4. Economic Geography		
4. Economic Geography	75	5. Social Geography		
5. Social Geography	60	6. Settlement Geography		
6. Settlement Geography	45	7. Political Geography		
7. Poland Regional Geography	90	8. Poland Regional Geography		
8. World Regional Geography	90	9. World Regional Geography		
9. Geology	75	10. Geology		
10. Cartography And Topography	90	11. Cartography And Topography		
11. Fundamentals Of Environmental Development And Protection	30	12. Environmental Development And Protection		
12. Pedology And Soil Geography	45	13. Spatial Development		
13. Teledetection	45	14. Spatial Planning		
TOTAL	**1200**	15. Pedology And Soil Geography		
		16. Teledetection		
		SUBTOTAL	**660**	**89**
		SUPPLEMENTARY MA STUDIES		
		A: Basic Courses	**60**	**8**
		1. Geographic Research Methodology	30	
		2. Philosophy	30	
		B: Core Courses	**120**	**16**
		1. Global Problems Of Social-Economic Geography		
		2. Global Problems Of Physical Geography		
		SUBTOTAL	**180**	**24**
		TOTAL	**840**	**113**

2.3.1. Basic courses

In the examined period, the group of basic courses was enriched with the additional number of classes and extended curriculum. The most interesting item is *Fundamentals of Geography*, which is an introduction to the origins of geographical thought, its creators, relations between geography and other branches of science and the multi-functionality of geography. It also shows the most important Polish geographical centres, their tasks and achievements and presents selected Polish and foreign scientific magazines. The subject should introduce students to the history and achievements of geography in Poland and indicate reliable sources of geographic information.

The new standards provide *Sociology* and *Economics*. The latter course describes phases of modern global economy development, individual factors affecting the economic situation and the influence that global processes have on the economic situation. The sociology course should introduce students to fundamental sociological concepts, research methods, concepts of social structure, social identity theory, social institutions and interactions, social inequalities, deviations and disorders, as well as territorial aspects of collective identity. These classes should help students understand basic social and economic processes and their influence on the environment. Those subjects should become a foundation for conscious and thorough studying of other geographic disciplines.

Other courses have been changed through upgrading or extending their curricula. The previous standards only provided a *Mathematics* course covering such topics as matrix calculus, matrix appliance, coordinate systems and their transformations, differential and integral calculus, as well as fundamentals of statistics. Currently, the course is named *Mathematics and Statistics* and has been enriched with additional elements of statistics and statistical analysis. The course should provide students with skills which are essential for conducting further analyses.

The course *Geographic Information Systems* has been subject to the biggest changes due to the rapid growth in information technology and the increasing role of GIS tools in scientific geography. According to 2002 standards, the GIS course was aimed at showing how to handle computers, indicating the importance of GIS and presenting information databases as well as interpreters (e.g. ARC/INFO). It has also been an introduction to layer theory and computer aided design systems like AUTO CAD. According to the new standards, the course has been extended with such content as: spatial data attributes, features, models of data: vector – raster, solids – topology, types of databases, database processing, entering data and visualising database content. The course should prepare students to use GIS tools for making databases and to use them for spatial analyses.

The *Physics* course has obliged students to become acquainted with precession, mutation, gyroscopic effect, gravitation field, oscillating waves, theory of flexibility, Earth structure, earthquakes, elements of thermodynamics, principles of electromagnetic and geomagnetic field and the magnetic properties of minerals and rocks. Currently, the course is enriched with selected environmental chemistry topics. Participants should become acquainted with the evolution of matter in the universe, electromagnetic and geomagnetic field, phenomenon connected with the solar/lunar system, theory of flexibility, phenomenon of radioactivity, energy and mass conservation laws, water processes and the migration of elements in water and the atmosphere.

Fundamentals of Astronomical Geography is a course that has not been changed considerably. Participants can gain knowledge about elementary phenomena that occur in the atmosphere, the influence that the atmosphere has on observation of celestial bodies and relations between the solar system and the Earth. The course should teach students to use

physical and chemical laws for explaining phenomena and forecasting their effects and understand relations between the Earth and the atmosphere, hydrosphere and lithosphere.

Supplementary MA studies provide students with basic subjects such as *Philosophy* and *Geographic Research Methodology*. During the *Geographic Research Methodology* course, students should become acquainted with the objectives of geographic methodology and models of geographic research along with research assumptions. The main goal is to prepare students to identify and analyse spatial phenomena and processes and to draw conclusions about them. The *Philosophy* course should give students the opportunity to learn about the main philosophic ideas and should teach them how to use general knowledge and philosophic methodology for the better understanding of the philosophic problems of geography.

2.3.2 Core courses

Both 2002 and 2007 standards offer extended curriculum physical geography. This is connected with a strong Polish tradition and experience in this discipline of geography. The distinctive feature of the new concept is that all courses connected with physical geography have a similar introduction – the presentation of research methods. This is the key element to prepare students for conducting their own para-scientific researches.

Other names or key points in core course curricula have remained unchanged. We can notice small changes in the mandatory elements of every course, which are connected with essential cuts in individual class hours.

For example, the current *Geomorphology* course gives students the opportunity to become acquainted with exogenous and endogenous factors that affect forming and development of soil, denudative processes and forms, the shaping activities of rivers, glaciers and inland ices, as well as karst, aeolian, biogenic and anthropogenic processes and forms. Previously, the curriculum of this course also included suffosive processes and forms, as well as relief shaping in different climate zones.

Hydrology gives students the opportunity to acquire knowledge about circulation of water and water supplies, elements of ground and underground water network balance and water management. Formerly, the curriculum of this course also included physical and chemical properties of water, mineralisation of seas and oceans and water dynamics.

The *Meteorology and Climatology* course provides such topics as air-pressure, air-currents, water steam, precipitations and the spatial layout of temperature, air-pressure or climatic factors. Participants can also get to know climate classification or the fundamentals of biometeorology. There are also elements of geology included, such as: age of the Earth, stratigraphy, Earth's structure, diastrophism, volcanism, plutoism, metamorphism, sediment transport and accumulation, sedimentary environments, types of rocks and minerals and historical geology.

The *Cartography and Topography* course enables students to gain knowledge about the shape and size of the Earth, cartographic imaging, map types, cartographic generalisation, visual presentation of statistical data, cartographic map classification, topical maps and atlases, topography and its objectives, geodesic instruments and mapping. Before this, the curriculum of the course also included analogue or numeric mapping, regional or national geographic atlases, topographic maps of Poland and grids used for large-scale mapping.

The *Pedology and Soil Geography* course provides such elements as: processes of soil formation, soil profiles, soil taxonomy units, Polish soil systematics, as well as international taxonomies. During this course, students become acquainted with geographic conditionings of soils in continents, Polish soils and their valorisation, soil maps, natural and anthropogenic

threats to the Earth's soil and soil protection strategies. The history of pedology and soil cartography was introduced according to the 2002 standards.

The content of courses that are taught within the subject of economic geography was and, in fact, still is poorer than the content of courses offered within the subject of physical geography. This seems to be just a conceptual imperfection in geography education. Differences in course curricula are almost imperceptible, too. However, the content, which economic geography is short of, is available within selected faculties in the field of geography which are discussed below in this paper.

The *Economic Geography* course provides such topics as: the role of natural environment in human production activities, development of agricultural and animal husbandry, problems with keeping people nourished, development of industry and factors that are taken into account while making decision about the location of industry. Social geography is, in turn, focused on topics such as location, migration and structure of population and social-spatial connections and structures. The *Settlement Geography* course is focused on factors which affect settlements, forming and development of urban areas and settlement systems.

The *Regional Geography* course follows both previous and new standards, and its content is similar to the content of the physical geography course. The *Poland Regional Geography* course provides topics such as: Polish structural-tectonic units, paleogeography, climate, surface and ground waters, water balance, mineral resources, floral communities, types of landscapes and their changes, regions, physical and geographical characteristics of regions, economy structure, diversity of demographic structures, administrative division, industrial structures and international trade and cooperation. The *World Regional Geography* course is focused on relief of the world's continents, climate conditions, features of surface waters, the world's fauna and flora, global population, global economy characteristics and geological catastrophes in the past and contemporary times.

The *Fundamentals of Environmental Protection and Development* is a course which gives students the opportunity to become acquainted with numerous issues that are also presented by other subjects, e.g. physics, chemistry or hydrology. This course begins with discussing natural environment structure, atmospheric pollution, problems with atmosphere protection, natural functions of soil, soil recultivation, rehabilitation and devastation and degradation. It also provides the chance to gain knowledge about the pollution of inland and sea waters, hydrological effects of the urbanisation process, legal basis of water protection and the concept of geocomplex potential and selected element migration against anthropogenic factors. The course ends with discussing environment valorisation in the aspect of human needs, development of the idea of environment protection, deforestation problems and the main direction for sustainable growth.

There are substantial changes in the *Teledetection* course. According to the 2002 standards, the course discusses topics such as: teledetection development, bands of electromagnetic radiation used for remote sensing of the Earth, photogrammetric basis of aerial pictures, computer science for teledetection and interpretation of satellite photographs and images. The course's aim is to prepare students to use satellite photographs for conducting environment analysis, planning human activity, indicating zones which are endangered with anthropopression and using both digital and analytical techniques.

There are new courses within this group: *Spatial Planning*, *Spatial Development* and *Political Geography*.

Spatial Planning provides the following content: study of spatial development, planning tools, functions of regional planning, legal and organisational aspects of spatial development

and social tolerance for spatial development. The *Spatial Development* course focuses on the principles of location of socio-economic activity and spatial equilibrium.

During the *Political Geography* course, students learn about the former and contemporary political map of the world, hydrographic division and warfare. The course also discusses electoral geography, economic and political international organisations, as well as selected globalisation issues.

In relation to supplementary MA studies, the core subjects are extensive, and the relation between physical and economic geographic issues has been balanced. The content of these subjects should be problem- and complex-oriented, because students have fundamental knowledge and skills at this level of education. For this reason, they are prepared for advanced discussion. The *Global Problems of Socio-Economic Geography* course provides content such as: origins of social and economic civilization, people-economy-natural environment relations, the idea and determinants of globalisation, international integration processes, people's mobility versus global changes, contemporary socio-economic processes – their spatial expression, urbanisation, worldwide nourishment problems and prospects of the world's socio-economic growth.

Courses connected with physical geography should discuss problems of global environmental changes, ocean-atmosphere-continent interactions, global changes in atmosphere and their effects on the hydrosphere, biosphere, Earth's relief, human activity, dynamics of rainforest ecosystems, desertification and landscape stepping, depletion and degradation of global resources, natural disasters and the forecast of global changes in the natural environment.

3. LABOUR MARKET NEEDS VERSUS GEOGRAPHY GRADUATES

Together with the evolving disciplines of science and the labour market, students' interests and educational needs have changed considerably. Universities have decided to reach out to them by forming new curricula. They have given to applicants and students new educational and professional opportunities and the ability to choose fields and faculties freely.

3.1 Specialisation Offer

As was mentioned before, in past years in Poland, geography students could not enter any specialisations. Geography studies were literally limited to studying geography. In recent years, Polish universities have introduced many specialisations, so currently, students have a great number of options. In the academic year 2008/09, full- and part-time studies provided 71 specialisations in total. Currently, even though the number of geography students is definitely decreasing, it is possible to notice an increase in the number of offered specialisations. In the upcoming academic year 2012/13, students throughout the entire country will be able to choose from 116 specialisations. This is dictated by the care of the institutes' authorities with respect to the future of geography graduates on the labour market and (possibly primarily) an attempt at increasing the attractiveness of geographic studies in the face of a worrying drop of interest in this study major among young people (Piróg, 2011a).

All of the specialisations offered by public universities in Poland can be divided into three groups: specialisations in physical geography, socio-economic geography and other specialisations (which embrace specialisations in teaching geography and those which are the combination of both physical and economic geography).

Universities primarily propose specialisations in the area of socio-economic geography, e.g. tourism, spatial development and spatial economy. Physical geography specialisations

are focused on environmental protection, geomorphology and quaternary paleography, hydrology and waters protection. The rest of the specialisations constitute a combination of these two disciplines, and most of them are teaching faculties, e.g. teaching geography and biology, geography and civics, geography and the nature.

For instance, the Jagiellonian Univeristy offers ten specialisations, at 1st degree studies (physical geography, socio-economic geography, tourism, spatial economy and regional development) and six at M.A. studies (meteorology, climatology, hydrology; functioning and development of natural environment, socio-economic geography, tourism, systems of geographical information, spatial economy and regional development) (www.geo.uj.edu.pl). The Pedagogical University in Cracow has a rich offer of specialisations (13), and among them are teaching specialisations (geography, geography and nature, geography and the fundamentals of enterprise, geography and civics), as well as non-teaching specialisations, e.g.: geography and geo-tourism, geography and entrepreneurship and spatial economy, regional geography of Latin America, regional geography of Southern Asia, regional geography of the Far East, geography and tourism, geography and management of the geographic environment.

The most popular specialisation among students of all universities is tourism. This fact is connected with geography students' natural passion for discovering the world and travelling. It is also a result of the increasing demand for touristic services in Poland, which gives students a better chance to find attractive job offers quickly. Second place in popularity is held by socio-economic geography. Lower positions are held by specialisations connected with enterprise, spatial development and GIS. At the bottom of the ranking, there are such specialisations as: economy and politics within local government, natural environment development, geomorphology and environmental development and protection and cartography.

A vast range of faculties that constitutes one big opportunity for students to find a place for themselves within the labour market has many merits. We can observe that most universities adapt to free market demands by reducing general education and aiming at candidates' needs and expectations. Unfortunately, the truth is that new developing offers are not based on analyses of labour market demands or on a university profile, but more often they are the results of adapting the names of faculties to the latest and most attractive trends.

The geography faculties offered by Polish universities are not based on analyses of current labour market demands. There is only one analysis of employer requirements concerning graduates of teaching geography. The analysis examines the labour market in Cracow and its suburban areas (Piróg & Piróg, 2007) and has been used for forming the curricula of new geography faculties at the Pedagogical University in Cracow.

There are still people in Poland who support the opinion that the academic education system should be adapted to the interests of the youth rather than the needs of the labour market. A situation in which young people can study in their field of interest seems to be perfect. According to Paśko J. 2008, if the current number of Polish students is taken into account, that statement is no longer correct. Paśko states that many applicants make their choices in accordance with the latest trends rather than their passion or interests. What is more, so-called mass education involves a lot of funding. According to the author's ideas, the academic education system should not be adapted only to labour market demands. The academic character of education should be kept – studies should provide students with general knowledge and preparation for scientific work (Piróg, 2010).

3.2. Changes In Satisfaction With Geography Studies - Diagnostic Studies Results

The author of this paper found that it was important to ask students about their opinions on their choice of geographical studies and specialisation at the end of studies and approx. half a year after graduation. With this aim, in June 2011, diagnostic studies were performed at twelve universities teaching geographers in Poland, i.e.: Pomeranian University in Słupsk, Adam Mickiewicz University in Poznań, Jagiellonian University, Łódź University, Warsaw University, Wrocław University, Jan Kochanowski University in Kielce, Nicolaus Copernicus University in Toruń, Maria Curie Skłodowska University in Lublin, Gdańsk University, Pedagogical University and the University of Silesia. The respondents were full-time students, completing 1st and 2nd degree studies or uniform M.A. studies in the academic year 2010/11. The study method was a diagnostics poll with the use of the questionnaire technique. In this manner, 1 120 reliably completed questionnaires were received. Another stage of the study took place approx. half a year from the moment of graduation of the respondents, i.e. January/February 2012, and at that moment, 375 reliably completed questionnaires were received.

Upon completion of geography studies, over half the young people were satisfied with their selection of geography and would decide to choose geography once again, mainly at their alma mater and the same specialisation, or at their alma mater, but a different specialisation. A slight percentage of graduates would also choose geography, yet at a different university. A significant number of geography graduates, if they had another chance of making their choice, would choose higher education at a different study major (39.8%). These students most frequently listed such study majors as: geodesy, spatial economy, environmental engineering, construction, geology and pedagogy. Selection of a different study major was justified not by lack of satisfaction with respect to the quality of teaching of geography, but specification of own interests and a conviction that graduating from a different study major would greatly increase their competitiveness on the labour market. After several months from graduation, the degree of satisfaction decreased, and only approx. one-third of respondents would choose geography at the same university with the same specialisation once again. A small percentage of graduates would choose a different specialisation at the same university or would pursue geographic studies at a different university. The group of people who would choose a different study major grew by 6.9%; the group of people who would not study at all also grew more than twice (from 2.5% to 6.4%) (cf. Fig. 1).

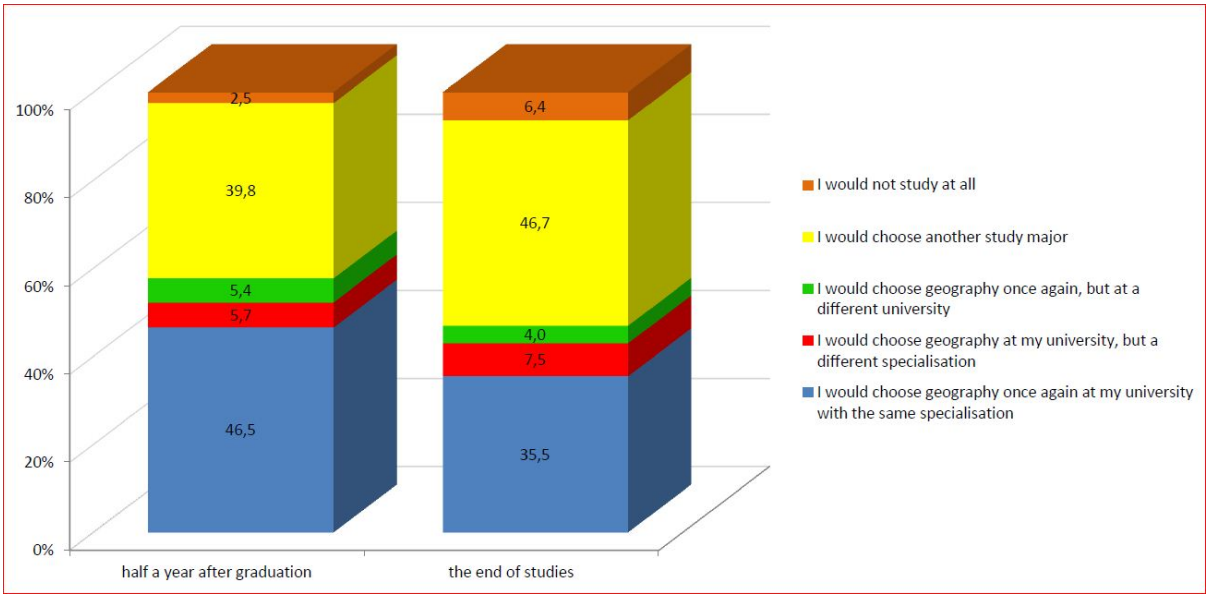

Figure. 1. Changes in satisfaction of geography graduates with respect to selection of study major and specialisation

They were also asked to write a short reflection on their level of satisfaction from the specialisations that they chose and express their opinions on how much this specialisation will help them to find a job.

Here are some examples of students' statements, which are representative for all answers. The largest segment of students found some advantages and disadvantages to their choice. Most students feel that they are not offered enough practical courses, and for this reason, their specialisation may increase their competitiveness on the labour market with other graduates of geography, but not with graduates of more prestigious faculties such as economy, law or geodesy: 'I am studying *Geography and Enterprise as well as Spatial Development*. When I chose my specialisation, I was mostly guided by my interests in socio-economic geography and hoped that it could give me a better chance to find an attractive job in the future. Economy alone seemed to me too boring and 'serious', and this is the reason why I couldn't enter studies in a field like that, but when combined with topics connected with society and human beings, their position in the world and economy, relations between humans and geographic environment, it becomes a very challenging and interesting discipline. I also chose enterprise and spatial development because this faculty seemed to me to be a possibility to acquire practical knowledge about using the theoretical fundamentals of socio-economic geography and other disciplines. After almost two years of study, I have to admit that most of the faculty classes still have not fulfilled my primary expectations. They only provide students with theoretical knowledge, and, in addition, lots of content is repeated within different classes constantly. I'm afraid that my knowledge is too narrow and my competences are too weak to compete with graduates of economy, but I have more opportunities with this specialisation than graduates of pure geography.' - Agata

Quite often, even the segment of students who like a specialisation still feel it isn't enough to become a good employee. They decided to take the specialisation 'just in case', but they are not sure if the idea of a specialisation is accurate: 'I chose my specialisation – *Geography and Environmental Protection* – at random, and I am really pleased about this. Paradoxically, the biggest advantage of the specialisation for me is the small amount of core subject courses. During two years, there were only four of them, and I think this is enough for

students of the geography faculty. If anybody wants to be an expert in environmental protection, they should choose the environmental protection faculty rather than a combination of geography and environmental protection as a specialisation. If I had been able to choose once again, I would rather have decided to study regional geography or to do without any faculty at all. This is because I am against specialisations. Sometimes when people probe into one particular discipline, they just neglect the fundamentals of geography education and various geography disciplines. The result of developing more and more new faculties could be that the identity of academic education will be blurred and underestimated. Somebody said that studying geography makes you know nothing about everything, so I think this is how it should be. Is my specialisation useful on the Polish labour market? I don't think so. Employers usually don't value a diploma but your skills. In my opinion, we don't develop enough practical skills during our studies.' - Anna

The segment of completely disappointed students doesn't see any real opportunities for finding a job connected with the profile of their studies: 'I chose my faculty – *Tourism* – because I was dreaming about discovering the world and showing it to others – this is the essence of tourism, I think. Unfortunately, my vision turned out to be totally unreal. The first course is *Fundamentals of Tourism*, which consists of general information and enables a student to become acquainted with basic terms, worldwide tourism and its centres, touristic products, tourism industry, etc. In fact, I had mixed feelings about the specialisation from the start. The course is based on worldwide regional geography and partly on the business aspects of tourism. I learnt that in 5-star hotels, bedclothes are changed every day, and the kitchen is run non-stop. Maybe it sounds interesting, but when I was choosing this specialisation, I expected a real discovering of our planet. I have only come to the conclusion that the main objective of tourism is to attract as many people as possible to a place and to benefit from the catering and hotel facilities or selling trashy souvenirs. The faculty defines tourism as leisure time spent at resorts, and this is different from my vision. I would not have chosen tourism if I had had a chance to choose once again, because despite several interesting lectures and history of art & culture classes, it is just a waste of time. Talking about the labour market – in Cracow there are too many well-educated people in this area. I'm thinking about looking for a job abroad.' - Tomasz

4. MEASUREMENT AND ASSESSMENT OF THE QUALITY OF ACADEMIC EDUCATION IN POLAND

Assessment of the quality and effectiveness of the current educational conception must come with its fair measurement. Until now, the most popular Polish methods of measuring the quality of geography studies have been endogenous methods, such as: students' surveys, unit self-assessment, class inspection. Over time, the role of exogenous methods has risen significantly. These methods include university and field rankings prepared by prestigious magazines. In order to increase the objectivity of these kinds of research, the idea of launching a special unit that could be involved in measuring the quality of academic education has arisen. In 2001, Państwowa Komisja Akredytacyjna (Polish Accreditation Commission) was established. It is an independent institution which operates within the academic educational system in Poland. Its main objective is to participate actively in the development of the quality of Polish education.

The Polish Accreditation Commission conduct activities that help universities formulate educational standards in accordance with EU and worldwide high-class standards of education. All this results in educating valued graduates and increasing the attractiveness and competitiveness of Polish universities in relation to Europe and the rest of the world. On 23

January 2009, PKA became a full member of the European Association for Quality Assurance in Higher Education (ENQA) (5-year membership). PKA activities embrace all universities that function in accordance with Academic Education Act of 27 July 2005. PKA is also subject to the Act.

All universities are subject to PKA assessment. Its negative opinion is an incentive for revocation or suspension of authorisation to provide education in a particular field.

The commission uses the following measurement parameters: number of scientific publications, personal-student quantitative ratio, amount of students in classes, achievements of student associations, unit learning facilities, quality of bachelor's and master's theses, course curricula, inspections and class assessment. (www.pka.edu.pl)

The commission has a great impact on increasing the quality level of academic education. As was mentioned before, its negative opinion can result in suspending (fully or partly) the authorisation to offer academic education. This is serious incentive for all universities to fulfil the requirements.

5. CONCLUSION:

To sum up the study, it should be stated that geography education standards concerning the academic level have been subject to radical structural and programmatic changes. Currently, programme concepts that are implemented are clearly focused around the effects of teaching. However, it is necessary to remember that the designed, detailed teaching results should also be influenced by such aspects as the vision and the mission of a given university and, which seems to be particularly important, the opinions of employers and other stakeholders. The effects of teaching, discussed and resulting from a detailed analysis of the needs and requirements of teaching standards and the specific character of a study major and labour markets, should bear fruit in a flexible set of subjects (courses), which may be modified according to needs within the scope of their programme offers, enriched by courses from new areas and eliminated from the curriculum.

The result of a study curriculum constructed in this manner is creation of a concept of geographic teaching focused on practical skills instead of on a narrow theoretical specialisation, limitation of the possibility of designing a programme dominated by interests of the teaching personnel and facilitation of involvement of external stakeholders – mainly employers, which may bear fruit in qualifications of graduates which will make them competitive on the difficult Polish labour market. It is worth emphasising that without the participation of employers in the design and conduct of study programmes, the chances of graduates to cope with the requirements of the labour market after completion of studies will be greatly impaired. Employability of graduates of a given study major and from a given university and the competitiveness and success of graduates on the national and international labour market is, in many countries, a measure of the quality of teaching (Kraśniewski, 2008; Piróg, 2011b).

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