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Didactic aspects of geography and economy training in modul "Modern economic development"

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Abstract: *The article presents didactic aspects of geography and economics training in the compulsory module "Modern Economic Development". It is made a content analysis and situational analysis of the profiled preparation in the second secondary school of secondary education was made according to the normative framework – law for pre-school and school education, state educational standard, curricula for profiled preparation. The place and didactic benchmarks for the Geography and Economics profiling subject and one of its compulsory modules in the three normatively determined profiles - Social Sciences, Economic Development and Entrepreneurial – are revealed. One of the compulsory modules of profiled geography preparation – "Modern Economic Development" – was explored in the semantic context of the fact that the module is a separate part of the relevant school subject.*

Keywords: *state educational standard, curricula, Modern economic development, didactic aspects*

"... the picture of the world is a unique image of the complex and immense reality that is unknowingly "born" and "branching" in our minds ... the pictures of the world are so identical to every individual outlook, this means that they are a product of the personal worldview. "

Atanas Dermendzhiev [1]

Geography and economics training from 2016 has been placed in new educational configurations and is normatively based on new laws, regulations and other by-laws documents. A total of 19 state education standards (DOS) have been introduced in the system of pre-school and school education as "a set of mandatory requirements for the results in the system ... and the conditions and processes for achieving them" [2].

The fifth of these total of 19 DOS is for profiled preparation.

The school education **regarding preparation** is *general, profiled and professional*, with "profiled education being carried out on a middle degree through general education and advanced preparation – in the first high school stage, and through general education and **profiled preparation** – in the second high school stage, where it can also be provided through advanced training." [2].

The school education **regarding contents** "is general, extend, **profiled**, professional and additional." [2].

The Law on Pre-school and School education (ZPUO) regulates the scope of profiled preparation – "in-depth competencies in a profile, defined by the state educational standard for profiled preparation", with the profile "being a complex of profiling school subjects, two of which are defined with the state educational standard..., and the rest are determined by the school with the school's curricula and are the same for grades XI and XII" [2, 3].

School education **profiles** are generally 11: 1) foreign languages; 2) humanities sciences; 3) social sciences; 4) economic development; 5) software and hardware sciences; 6) entrepreneurial; 7) mathematical; 8) natural sciences; 9) fine arts; 10) music; 11) physical education and sports.

The profiling school subjects that are determined by the DOS to study for a given profile are a total of 15, as a serial number seven is written the profile **geography and economics**: 1) Bulgarian language and literature; 2) foreign language; 3) mathematics; 4) computer science; 5) information technology; 6) history and civilizations; 7) **geography and economics**; 8) philosophy; 9) biology and health education; 10) physics and astronomy; 11) chemistry and environmental protection; 12) music; 13) fine arts; 14) entrepreneurship; 15) physical education and sports [3].

Procedurally profiled preparation is localized for the acquisition of the second high stage of middle degree education by studying profiling school subjects in the given profile.

Since 2016, a DOS has been introduced in Bulgaria for the profiled preparation, as well as for the structure of the curricula, which are in response to the state educational policy and the consequence of the educational reform, which regulate the training including geography and economics, as a profiling school object (Fig. 1).

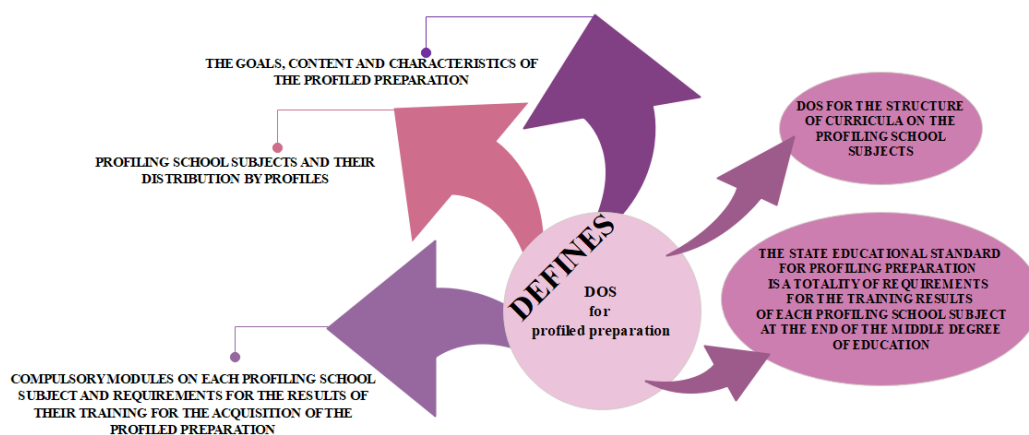


Figure 1. General scheme of DOS for the profiling preparation

The school subject *Geography and economics* is profiled for the classes in the second high school stage and consists of **compulsory and optional modules**, but the compulsory modules are determined by the DOS. Based on the DOS for the profiled geographical preparation, curricula for the compulsory modules of the Minister of Education and Science have been approved. The optional modules provide for the acquisition of competencies defined in the curriculum, which are developed and validated at the level – from the Headmaster.

In this article, for the purpose of the study, we examine only the profiled geography and economics preparation for the compulsory modules, focusing on one module in the semantic context of the fact that "the module is a self-contained part of the relevant profiling school subject" [2].

The profiled school subjects are related to the profiles and cover "in-depth profiling subject and complex competencies for a particular profile" to Section B of the learning plan. There is also a specificity regarding the number of hours in the profiled preparation for the total number of hours – "at least 18 hours and a maximum of 20 hours per week during the whole training stage" [3, 4].

An important moment in the situational analysis is to identify the place of the profiling *geography and economics* school subject to which profiles are determined for studying at the national level, not through the school learning plans. The procedural characteristics and specifics of the profiling school subject are the following:

- it is studied in the second high school stage of the middle degree of education;
- the profiling school subjects in a given profile are the same for grades XI and XII;
- each profiling subject is studied with a minimum of 4 hours of study and no more than 8 hours per week;
- it is compulsory for two profiled school subjects to be defined at national level [3, 4].

The normative specificity of the profiled preparation, which is the development of the educational policy for continuing education, is the possibility the results of the training in specific compulsory modules for the acquisition of profiled preparation as accumulated credits in the higher education (by decision of the higher education institution).

The line of continuity, upgrading and professional development of school knowledge to the academic ones is clear in integrating the school process and the transition to the next educational degree of students with an interest in the geographical science.

The school subject *Geography and economics* is part of three profiles (out of a total 11 profiles) in which one of the two compulsory profiling school subjects is imperative (Fig. 2).

It is undisputed the fact that the profiling subject - geography and economics is defined at national level, together and in totality with other profiling school subjects that are part of one profile, because "the profile is a totality of three or four profiling school subjects, two of which are defined at the national level and the rest – by school learning plans" [3].

The presence of the school subject *Geography and economics* in the compulsory module of a particular profile does not close it within only these three profiles, but in fact the DOS gives the opportunity to one profiling school subject to be part of the optional modules in each of the profiles of the school learning plan. This variability is for the benefit of every profiling school subject, but it is influenced by many and varied factors in its election at the institution level – school, and the choice is influenced by subjective reasons and not so much by objective ones.

The profiles in which geography present as one of the two required profiling subjects are three in total (Fig. 2):

- Social sciences;
- Economic development;
- Entrepreneurial [3].

The only profile that guarantees the unconditional presence and constancy of the profiling school subject *Geography and economics* for the profiled preparation is profile 4 – "Economic development". The other two profiles of *Social sciences* and *Entrepreneurial* offer electiveness and variability, in which one of the two options does not offer the profiled school subject geography and economics. Or, if you choose one of these two profiles, there is no guarantee of studying both profiling subjects that contains geography and economics.

The school subject *Geography and economics* as a compulsory general education and profiling builds the foundations of the social and civic competences in integrative synthesis with other school subjects of the social cycle – *Environment, Man and society, History and civilizations, Philosophy, Civic education*. This fact explains the presence of geography in the "Social sciences" profile, but also contradicts the determination of electiveness to philosophy, such as the variability of *History and civilizations*.

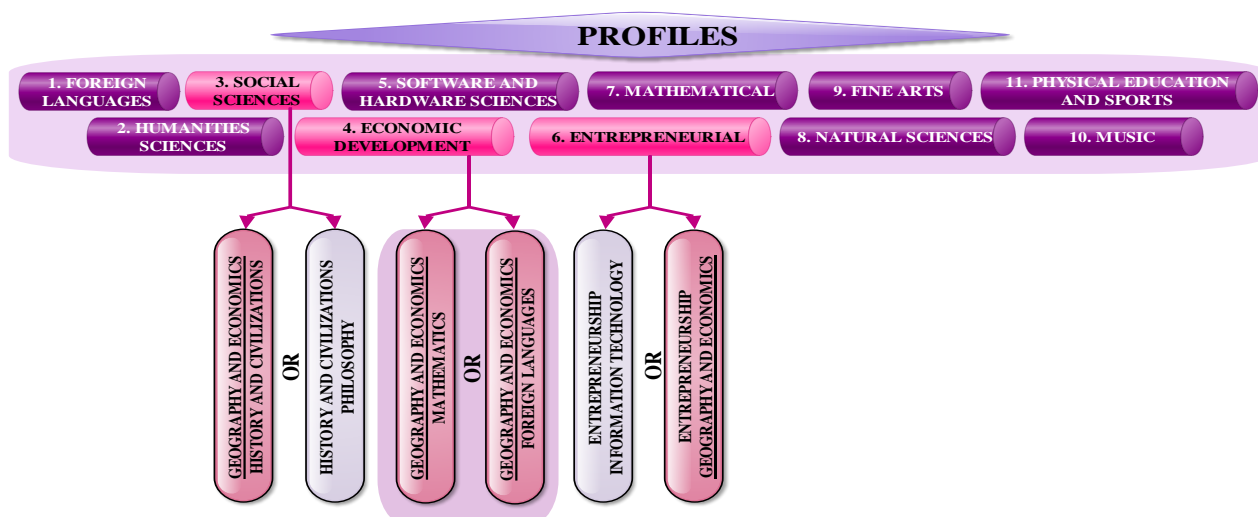


Figure 2. Place of the profile school subject Geography and economics by profiles

The normative opportunity for the study of geography and economics is extended and additional educational preparation, composed in school learning plans. Conditionally, schools, through their school learning plans, provide a specific vision for the study of geography, which suggests regional specificities as a result of the type of the school institution.

The educational policies at the regional level in relation to extended and additional preparation in geography and economics have a great convention of conditionality and uncertainty in the introduction and for specific schools. The possibility of applying the two types of preparation is framed by many determinants of different dimensions – educational, social, economic, transport, infrastructure, cultural, scientific, etc.:

- ↳ the opportunities and initiative of the school management to offer an educational product with a new vision and content;
- ↳ the existence of lobbies in pedagogical teams regarding to given profiles;
- ↳ the qualification and the educational qualification of the teachers;
- ↳ the professional opportunity of educators to create and develop innovative, integrative and school-specific learning plans and programs;
- ↳ good knowledge of the normative base for drawing up school learning plans – characteristics, content, structure, etc. procedural requisites;
- ↳ discussion and acceptance by the Pedagogical council;
- ↳ the educational traditions of the particular school and the importance of the institution to the region;
- ↳ the capabilities of the school in terms of material and technical facilities, location, authority, etc.;
- ↳ the desire and interest of students, parents, guardians and the public need for such type of training as relevant to the public needs and the labor market;
- ↳ the personal motivation of teachers, students and the management of the school institution, comprehension and awareness of the benefits of this type of training;
- ↳ coordination with the Public council to the school under the terms and conditions of the ZPUO, etc.

For the full disclosure of didactic aspects in geography and economics training in profiling preparation, the normative constructed structure of the DOS for **specific purposes, compulsory modules and areas of competence and expected training results** is relevant (Fig. 3). The didactic model of education in geography and economics by educational degrees and stages "opens a logically and systematically linked line in the area of competence, with a clear and open continuity and a deepening of the structural-content and methodological-didactic level" [5].

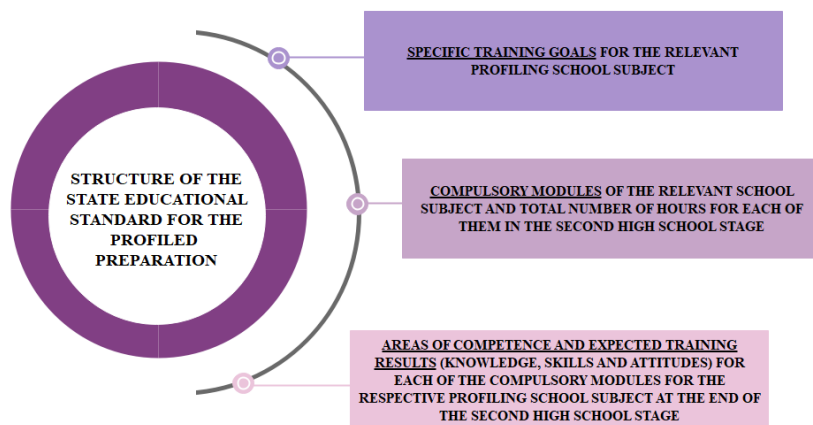


Figure 3. Structural DOS model for each profiling school subject, including geography and economics

The requirements for the results of the training in geography and economics for the acquisition of profiled preparation are presented in the DOS with specific goals, didactically modeled for the improvement of *knowledge and skills, for the development of the geographical culture and the formation of behavior models* (Fig. 4).

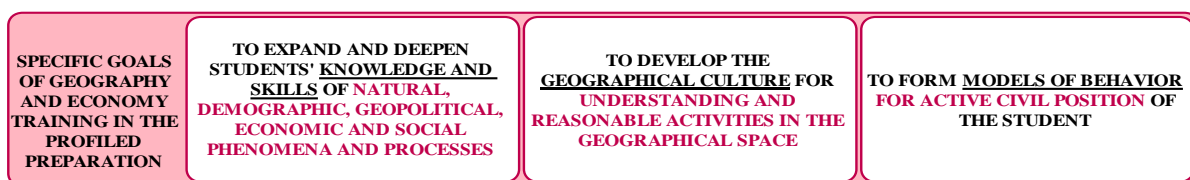


Figure 4. Specific goals of geography and economics training – profiled preparation

The compulsory DOS modules are a **total of 6**:

- ⊙ Module 1 – Natural resource potential. Sustainable development (36 hours);
- ⊙ Module 2 – Geopolitical and social culture (36 hours);
- ⊙ **Module 3 – Modern economic development (36 hours);**
- ⊙ Module 4 – Europe, Asia and Bulgaria (36 hours);
- ⊙ Module 5 – Bulgaria and regional policy (62 hours);
- ⊙ Module 6 – Geographic and economic information (62 hours).

The imperative normative framework requires the compulsory modules to be studied in the XI class with 144 school hours per year and in the XII class – with 124 school hours per year. The fixed annual hours of classes for the two classes in the second high school stage are a reflection and a necessity to cover the requirements of the modules, as *"a self-contained part of the profiled preparation in the respective profiling school subject, aimed at upgrading the competences acquired in the general preparation, and to in-depth competencies in specific scientific and/or applied fields"* [3].

This article explores only module 3 and presents the didactical aspects of Geography and economics training by area of competence *Geography of the society*. Module 3 meaningfully covers – the models and processes (globalization, regionalization, integration) of the modern economic development, the development of energy in the world and major energy projects, the influence of high technologies, international economic integration and the development of transnational corporations (Fig. 5).

A total of 6 expected results are listed in the DOS, introduced through five active verbs on B. Bloom's Taxonomy – *differentiate, compare, predict, assess and comment* (Fig. 5). The frequency of verb repeat is with model 1-1-2-1-1, requiring educators to promote and use, apply and analyze forecasts for the development of energy in the world, for large energy projects, for the impact of high technology on world economic development. In terms of assimilation, the active verbs are relevant to understanding, analyzing, synthesizing and assessing, encompassing groups of conceptual, procedural and meta-cognitive knowledge.

The didactic design and logical presence of the productive construction in the required expected results for the students are explained, because there is a higher degree of complexity of the educational

content, development of intellectual, practical and creative skills, critical thinking, originality and activity of thinking, the self and independent thinking assessing of specific economic problems and situations, commenting on contemporary economic processes and phenomena.

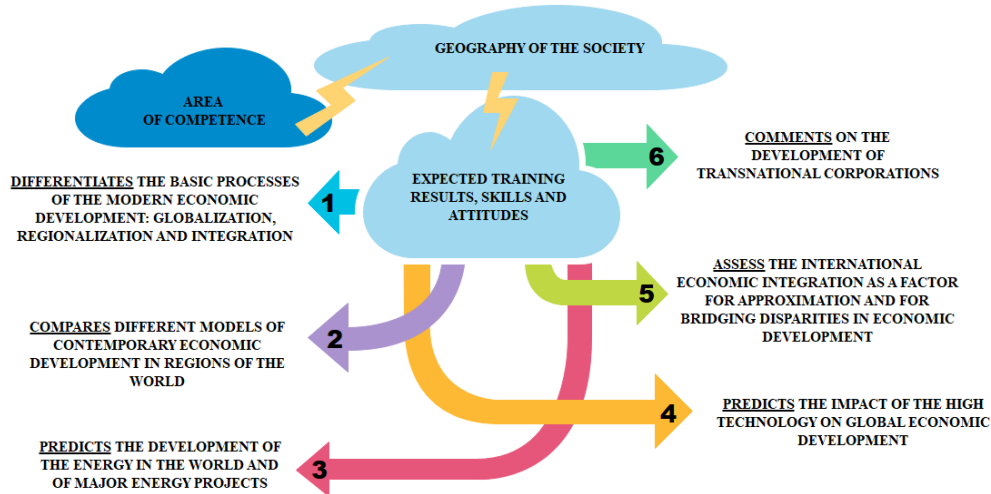


Figure 5. Systematic – summarized macroframe of expected results for knowledge, skills and attitudes in Geography and economics training on module 3

The didactic aspect of contemporary sound and actuality, systematicity and development orientation is the question of trends in world geographic education and, in particular, *regionalization*, as an important step in knowing, understanding and realizing comparisons between regions in the world on the basis of models for contemporary economic development. As a result of international economic integration, students have to assess the differences in economic development and the consequences for individual regions.

Specificity of the DOS for module 3, as well as for the other compulsory modules, is only the fixation of the area of competence and the expected results for knowledge, skills and relations of training in geography and economics. Compared to the DOS for general education preparation, the DOS for profiled preparation lacks correlation, commitment and links to the 9 key competency groups [3, 6].

The training for the acquisition of profiled preparation in all compulsory modules of the profiling school subject *Geography and economics* is carried out according to curricula approved by the Minister of Education and Science. The DOS procedurally sets out the requirements for the curricula for the relevant compulsory module to specify the competencies as expected results of student training at the end of the class [3].

Requirement of the DOS for the curricula for profiled preparation as a structure has a three-module vision that defines the sequence, structure and content of the subject:

- ☞ short presentation of the curricula;
- ☞ school content (topics, competences such as expected training results, new concepts);
- ☞ specific methods and forms for assessing students achievements [3].

The didactic aspect of the training in teacher-related profiled preparation is the freedom to self-plan "didactic work for the practical implementation of the set training results and to achieve the expected results in the relevant curricula for acquiring profiled preparation in accordance with the planned school curricula hours" [3].

The didactic planning and decisions of the teacher depend on his/her professional preparation and personal motivation, and he/she has a significant role to play in the rhythmic assimilation of the school content and "to carry out the relevant learning activities related to the teaching of new teaching material, exercises, negotiation, as well as and to ensure the implementation of the entire curricula" [3].

Each teacher teaches the school content in the profiled preparation according to the requirements of the DOS and the curricula, having the opportunity to make author's interpretations and interpretations in the specific school environment, the type of school, the interests of the students, the professional breadth of cognitive knowledge and skills, as well as the assessment competence in different everyday situations.

The curricula for the XI class of profiled geography and economics preparation in the compulsory module "Modern economic development" has a **meaningful range** - the development of the world economy, overcoming the energy problem and assessing international economic integration. **The training contributes to:**

- ▣ development of geographically and economically key competences of the student and his/her ability to independently argument, discuss, comment and assess different ideas and concepts;
- ▣ expression of critical thinking, use of reference literature and self-development of a scientific thesis;
- ▣ formation of models of behavior for active civic position of the student [7].

The school content in the curricula is composed in **9 topics and 17 sub-topics** (Table 1). The structural-content framework and the sequence of topics follow the requirements and content range of the DOS for the profiled Geography and economics preparation for Module 3.

Table 1. Structural-content and conceptual framework of the training on module 3 in Geography and Economics [7]

№	THEME	SUBTHEME	NUMBER OF NEW CONCEPTS
1.	Modern processes of the economic development	Globalization and regionalization as major processes of the modern economic development	1
		Integration – the main form of organized cooperation	-
2.	Models of the modern economy	Organization of the economic activity in the different models	7
		Market economy – development and future	-
3.	International economic integration	International economic organizations – a factor to overcome the economic disparities	13
4.	Foreign economic relations	Structure of the foreign economic relations	5
		Emerging markets – a major engine of the future economic development	-
		Training teachers – a modern form of the foreign economic relations	2
5.	Dynamic development of the international tourism	International tourism – a modern form of the economic development	-
6.	Current condition and development of the energy	World Energy System – Electricity and Heat	5
		Nuclear energy – a factor in the global geopolitics	-
7.	Major energy projects in the world	Electricity production from renewable sources and prospects for development of energy projects	10
8.	The high technologies and the world economy	Modern applications of the high technologies in the economy development	10
		Territorial distribution of the high technology production in the world	-
		Prospects for the development of the high technologies as a major factor for the modern economic development	-
9.	Transnational corporations	Transnational corporations – a product of the globalization process	6
		Problems and future of TNCs	-
TOTAL	9	17	59

A total of **59 new concepts** from compound and single concepts are included in the curricula. The system of school geographical education has already laid the cognitive conceptual foundations and the system of geographical terminology (grades V to X) as a result of vertical intra-disciplinary integration. The profiled focus of the XI class training students is free to apply the geographical concept system and to

upgrade and extend it. Most new concepts are localized for topics 3, 7 and 8 – a total of 33 new concepts. We identify only one topic where no new concept is introduced – topic 5.

The curricula contain **the recommended percentage distribution of compulsory school hours** in descending order of lessons for new knowledge, for practical activities and discussions for lessons for control and evaluation, for negotiation and summary (Fig. 6). Didactic specificity is the name of the types of lessons that differ in name from those in general compulsory preparation, but are also explained in response to the age characteristics of the students, profiled preparation, in-depth and comprehensive study of the educational content. A peculiarity of the percentage recommended ratio is the conditionality with which they are defined by "up to" the respective percentage ratio - up to 60%, up to 22%, up to 12%, up to 6%.

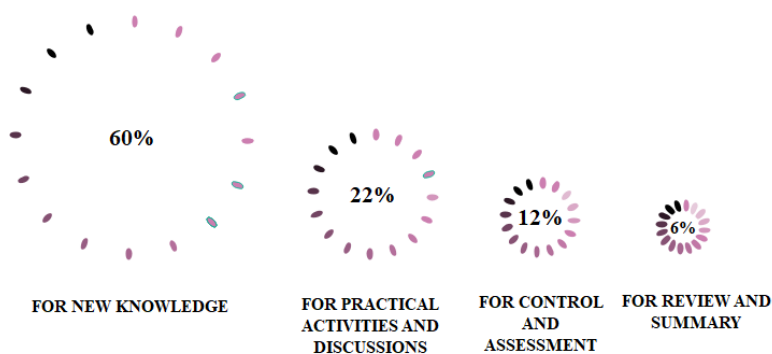


Figure 6. Recommended percentage distribution of compulsory geography and economics school hours in the profiled preparation

The ratio in the formation of the term assessment of students in geography and economics training in profiled preparation is a specific didactic aspect in favor of assessments from control works and to a lesser stage of current assessments from class work, participation in group considerations and discussions, as well as from practical assignments in class. 10% share the estimation of homework and project work (Fig. 7).

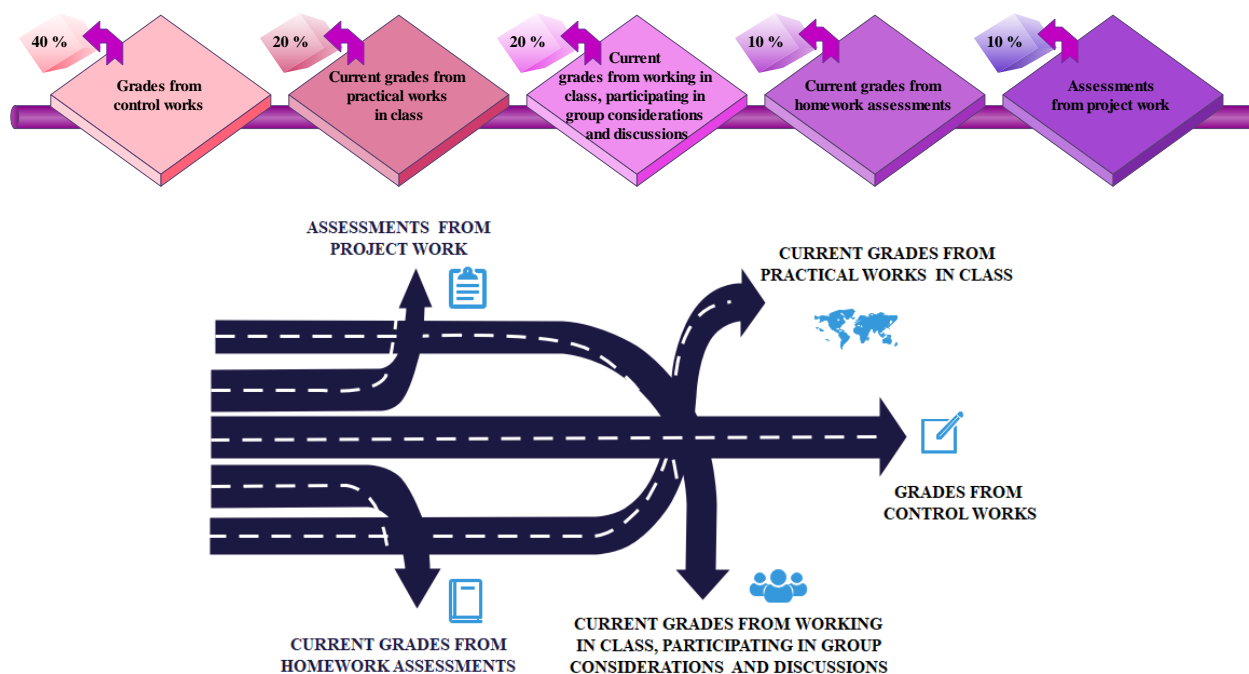


Figure 7. Ratio in the formation of students' term assessment

An innovative and important didactic moment in the curricula, which is normatively enshrined in the curricula, is the possibility for students to be assessed by their homework and projects, which has a cumulative ratio of 20% in the formation of the term assessment. Extremely high is the percentage ratio in the formation of the term assessment, which is assigned to the assessments from control works.

There is no objective methodico-didactic and pedagogical explanation for this large percentage of control work with exaggerated importance for feedback. The only argument for the presence of this large percentage of control work is explained by the choice of the school subject *Geography and economics* as a profiling subject and the presumption of its election by the students of the upcoming state matriculation exams.

An important didactic aspect of the profiled geography and economics preparation in module 3 are the activities that teachers need to direct students' work in the educational process for contemporary economic development in the world:

- interpretation of geographical and economic knowledge for the development of the world economy;
- formation of active citizenship on major economic problems of humanity;
- placing students in specific practical situations;
- involving students in discussions;
- creating conditions for team work;
- creating conditions for the expression of the personal qualities of each student by developing geographical and economic paper-abstracts and projects;
- developing the student's creative pursuits [7].

In the curricula are determined the activities for the acquisition of key competences and cross-curricular links.

The activities are composed of a total of 7 out of 9 key competency groups. The lack of the other two groups of key competences is not justified. The lack of a group of *foreign language skills* de facto and de jure directly serves most of the new concepts. Proof of the necessity of being present in the curriculum of this group is written in a foreign language "*average quotation of the Brent variety*". [7] The expected results include foreign-language regulations for the „Softbank“ Desert Solar Project and sand extraction for the "Kearl" Project.

Another proof is the content of the module, which is entirely relevant to the contemporary economic development of the world, covers topics for which there is not a large amount of information in the information space in Bulgarian, which implies the use of foreign languages. The argument for the direct need to apply foreign language skills is part of the geographical terminology – shale gas, green energy, currencies and foreign exchange earnings, international organizations, duty-free imports, patent trading, regional integration, mega-corporations and more. A significant argument for the presence of the second group of key competences is the cumulative ratio (20%) for assessing students from homework and project work, adding to the relevance and mass of project work in most Bulgarian schools under European programs that are being implemented. in high school education, as well as the implemented training practices under the Erasmus + program in professional education and more projects.

Participation in national and international projects and programs, homework and classroom assignments, mapping of leading countries and high technology and research producing regions, as well as mapping of modern tourist flows and world tourist destinations are directly linked with the application of skills from the other missing group of key competences – 8 *cultural competence and skills for expression through creativity*.

The cross-curricular links are related to a total of 4 groups of key competences (1, 2, 3 and 4 groups) and their relevant school subjects: *Bulgarian language and literature, foreign language, mathematics, history and civilizations, technology and entrepreneurship, information technology*.

The expected training results for knowledge, skills and attitudes have been approved and implemented through active verbs – 47 in all, with active verbs predominant with the productive character of the required results.

The theme of didactic aspects of the training on the compulsory module 3 in geography and economics is the subject of a further and ongoing study, which implies an intra-disciplinary reading of the study and other compulsory modules of the profiled preparation.

References

- [1]. Dermendzhiev, A. *Sotsialna i kulturna geografīya – anali(za), kontekst(i), (s)misli*. V. T., Iz “IVIS”, **2018**.
- [2]. Zakon za preduchilishното i uchilishното obrazovanie, *DV*, **2015**.
- [3]. Naredba № 7 ot 11.08.2016 g. za profiliranata podgotovka, **2016**.
- [4]. Naredba № 4 ot 30.11.2015 g. za uchebniya plan, **2015**.
- [5]. Dermendzhieva, S., T. Draganova., Conceptual analysis of the geography training of the countries in the Bulgarian school, *KNOWLEDGE International Journal, Vol. 34.2. Scientific Papers – EDUCATION, Institute of Knowledge Management*, **2019**, p. 555 – 561.
- [6]. Naredba № 5 ot 30.11.2015 za obshtoobrazovatelната podgotovka, **2015**.
- [7]. Uchebna programa po geografīya i ikonomika (profilirana podgotovka), **2018**.