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### **Key competences in geography and economics training in junior high school stage**

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**Abstract:** *In geography and economics training, the key competences are present in the curricula, but teachers still do not feel confident and do not have enough practical experience to discover and implement the diverse aspects of their application in the training process. The purpose of this article is related to deriving theoretical statements regarding the competence approach and analysis of the presence of key competences in the curriculum of geography and economics in junior high school by applying comparative analysis and content analysis.*

**Keywords:** *competency approach, key competences, geography and economics training*

#### **Introduction**

The competency approach and related key competencies have been a current educational topic since the end of the 20th and the beginning of the 21st century. Some authors trace their roots to the teachings of Confucius in ancient China and Socrates in ancient Athens. Despite the large time period, similar ideas can be found especially in the broad scope of Confucianism, the Socratic method and the competence approach. The first two consider the school as the foundation on which society and the state rest and seek toward implementation of comprehensive approach in education, management, politics and other areas of life [1].

In the same way, by applying the competence approach, the aim is to unify educational ideas around leading principles for the application of key competences, the mastery of which is expected to lead to the formation of complex individuals who can easily adapt to modern conditions, be competitive and actively to participate in the life of society.

The first step towards implementing this approach is related to realizing its importance for the modern educational process and knowing the normative documents that regulate its implementation. All other steps concern the learning process and are related to the prediction of activities to ensure the design of the normative documents, the implementation of these activities and the evaluation of the degree of their effectiveness in relation to the specific educational environment and cognitive capabilities of the students.

#### **Materials and Methods**

The purpose of the present study is related to the derivation of theoretical statements regarding the competence approach and key competences and analysis of the presence of key competences in the geography and economics curricula in junior high school. To achieve the goal, a comparative analysis and content analysis of the curricula is applied by studying the frequency of use indicator in order to highlight the place of the key competences.

## Results and Discussion

### *Competency approach and key competences*

In Europe, the process of developing competence profiles dates back to 1996, when in Bern the Council of Europe proposed a program on the role of key competences in educational reform. A year later, the ideas were further developed in the report of the International Commission on Education in the 21st Century, entitled „Education: The Hidden Treasure“. The competences discussed are based on the paradigm proposed by Jacques Delors, containing four visions: knowledge, understanding, competences for life and competences for activity [3]. The trend of projecting ideas continues in the educational policies embedded in the so-called The 1999 Bologna Process, the 2000 Lisbon Strategy for Lifelong Learning, Education for Sustainable Development (2005-2014), the 17 United Nations Global Sustainable Development of society Goals and the program of their Development (2020 -2030).

A document that serves as a basis and sets the initial parameters of the key competences is the European Reference Framework. According to it, the key competences are:

- Knowledge of the concepts, theories, representations of a certain field;
- Skills to use existing knowledge to achieve results;
- Attitudes that predispose to a way of thinking and acting or reacting to ideas, persons or situations [2].

They are quickly perceived as a necessary innovation and attempts are made to link them to the normative educational base of the EU countries. In Bulgaria, the overall vision for key competences is being designed in its three main dimensions: knowledge, skills and attitudes.

In 2002, Bulgarian standards for professional competence in the field of human resources management were developed in our country. In the Strategic Framework for the Development of Education, Training and Learning in the Republic of Bulgaria (2021-2030), it is noted that the complex of skills necessary for life in the XXI century is constantly expanding and dynamically changing. The need for social and emotional intelligence is becoming more and more tangible. Over the next ten years, basic and functional literacy in reading, mathematics, science and technology and digital skills must be further developed. Along with this, there will be an emphasis on bridging skills such as critical thinking, expressing an informed opinion, initiative, problem solving and teamwork skills. The demand for personality qualities such as ethical behavior, curiosity, adaptability, leadership, social responsibility and acceptance of differences will increase [4].

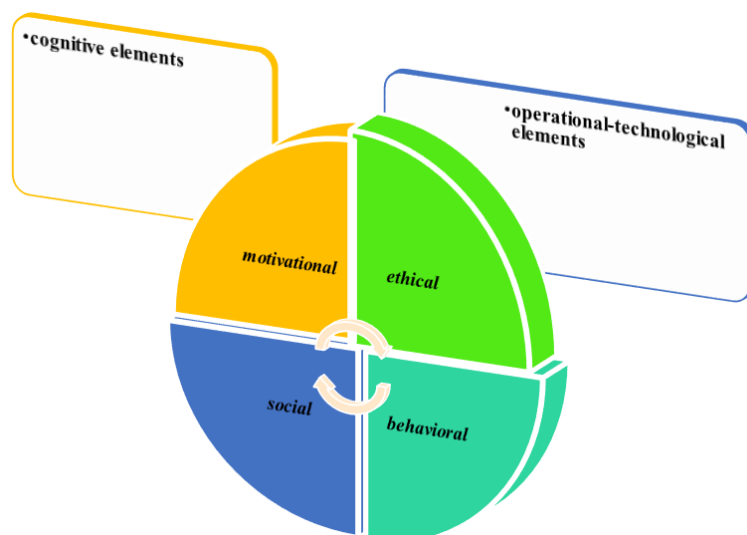
A brief historical review shows that key competences need constant updating to meet the challenges of the times. In parallel with this, the need for understanding and insight into the essence of the key competences on the part of society, those working in the educational sphere, students and their parents is outlined. At the same time, their important meaning for the future successful civic and professional realization of the students is realized and the aspiration for their formation and development among adolescents is motivated. Like any dynamic element, the key competences do not have constant characteristics and their number and content will undergo changes that will be imposed by modern processes and their influence on society's requirements for the educational system.

But let's go back to the essence of competences. In the learning process, they are used to describe the final result of a certain training - geographical competence, mathematical competence, etc., which requires mastery of the acquired knowledge, skills and value relationships by students and their application to solve the problems arising from a given content area. In this way, the concept of competence is not opposed to the familiar concepts of knowledge, skills and habits. Competence binds these concepts, emphasizes the connections between them and aims at the formation of a lasting educational product, taking into account the personal characteristics of adolescents.

Thus, by applying the competence approach, a new conceptual system is formed, which consists of cognitive and operational-technological elements, which can be motivational, ethical, social and behavioral (Fig. 1). The conceptual system is applied in the form of value orientations and attitudes towards actions, as well as abilities for their realization.

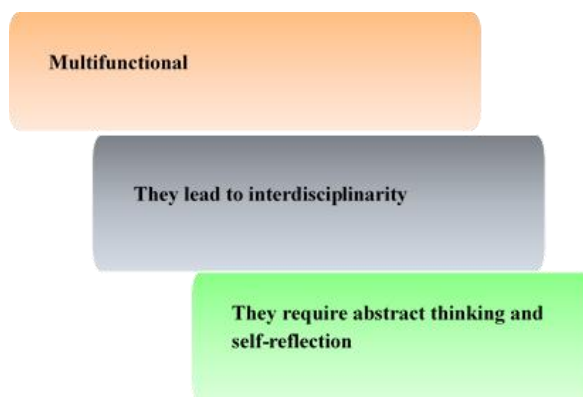
Competences are not only formed in a learning environment. They are influenced by the overall cultural and educational situation in which the student lives and develops. In the competence orientation of the geography educational process, the emphasis is on goals related to students' motivation, self-determination, socialization and personality development.

In this way, the main task of geographical education is directed towards the preparation of competent specialists with constructive knowledge about the different sides of life, with habits for creative handling of intellectual and professional toolkit, with abilities for social and interpersonal interaction.



**Figure 1.** Structure of the conceptual system of the competence approach

The key competences are specified in the normative documents, their essence is determined and they are classified into different types. All key competencies are distinguished by characteristics depicted in Figure 2.



**Figure 2.** Characteristics of key competences

The key competences in the geography and economics curricula in junior high school

When analyzing the curricula of geography and economics, special attention is paid to the key competences that are linked to the activities for their acquisition and to the inter-subject connections [5, 6, 7]. The main types of key competences are presented in Table 1.

The analysis shows that eight of the nine key competences are formed and developed at the junior high school stage during the geography and economics training. The only competence that missing is the competence of cultural awareness and skills of expression through creativity, which is not present in the curricula of geography and economics throughout the course of study.

In the primary 5<sup>th</sup> grade of studying geography and economics, the curriculum does not include the ability to communicate in foreign languages. Perhaps the heavy load of this propaedeutic course, its complex nature and the large number of new concepts for the students have been taken into account.

This is because there is no smooth cognitive and methodological connection between the introductory study subjects: Man and Nature and Man and Society from the primary educational stage, which should be designed in the curriculum and textbooks.

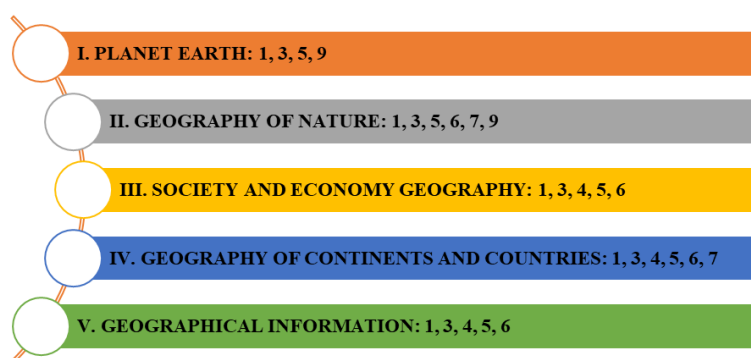
The comparative analysis of the key competences in the geography and economics curricula at the lower secondary level is structured by competence areas (Fig. 3, Fig. 4, Fig. 5).

Six areas of competence are present in the entire educational stage, and their number in individual classes is related to the specific nature of the educational content. The complex nature of the course in the 5<sup>th</sup> grade is proven by the presence of five, and the regional nature of the courses in the 6<sup>th</sup> and 7<sup>th</sup> grade – by two and three areas of competence, respectively. To each of the areas of competences, the key competences are assigned, which are formed at the level of the curriculum and correspond to the information in Table 1, using the same numerical codes of the types of key competences.

**Table 1.** Key competences in the curriculum of geography and economics grades 5-7

№	Types of key competences	V grade	VI grade	VII grade
1.	Communication in the mother tongue	✓	✓	✓
2.	Communication in foreign languages	-	✓	✓
3.	Mathematical competence and basic competences in science and technology	✓	✓	✓
4.	Digital competence	✓	✓	✓
5.	Learning to learn skill	✓	✓	✓
6.	Social and civic competences	✓	✓	✓
7.	Sense of initiative and entrepreneurship	✓	✓	✓
8.	Cultural awareness and expression	-	-	-
9.	Skills to support sustainable development and a healthy lifestyle	✓	✓	✓

The *fifth grade* analysis shows that in two competency areas six key competences are present in each. These are: Geography of nature and Geography of continents and countries. Also, in two areas of competences, the key competences are five in number – Geography of society and the economy and Geographical information, and in one, four competences in number are used. This is Planet Earth.

**Figure 3.** Key competences by areas of competences in the geography and economics curriculum 5<sup>th</sup> grade

According to the indicator of the frequency of use of the individual key competences, the data are as follows:

- mathematical competence and basic competences in science and technology – 27,13%;
- communication in the mother tongue – 25,42%;
- learning to learn skill – 16,95%;
- digital competence – 10,17%;
- social and civic competences – 8,47%;
- sense of initiative and entrepreneurship – 6,78%.
- skills to support sustainable development and a healthy lifestyle – 5,08%.

The activities for acquiring mathematical competence and basic competences in the field of natural sciences and technologies are related to the formation of the foundations of the students' cartographic culture in terms of reading and orientation on a geographical map, plotting routes, determining geographical coordinates, calculations on a map and etc.

The activities for the formation of competences in the field of the Bulgarian language contribute to the creation of the foundations of the students' geographical language by naming, defining, describing, explaining, characterizing objects, processes and phenomena; giving examples; making generalizations. It is important to compose a text as a short answer to a geographical question and a text of a thought journey, which contribute to the development of written geographical speech and the expression of opinion on geographical issues.

According to the curriculum, learning skills are developed by working with the elements of the textbook, using information from different sources, building one's own learning style, and self-monitoring and self-

control activities. They are important not only for studying geography and economics, but also for other subjects throughout the junior high school stage.

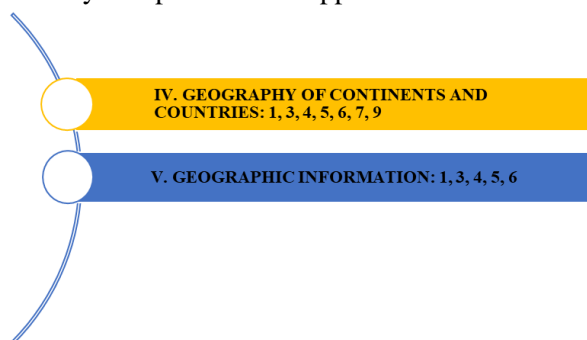
In the fifth grade, the formation of the digital key competence begins through activities for the use of digital technologies in searching, collecting, presenting and exchanging information to prepare answers to geographical questions, reports and messages.

In the complex of key competences in this class, the participation of social and civic competences is important, which are developed through activities of expressing opinions on geographical issues, knowing the rules of reasonable behavior in various life situations and during a natural disaster, giving examples for tolerance and mutual respect between people. They are built on the basis of interdisciplinary connections with literature, history and civilizations.

At the level of the geography and economics curriculum in the 5<sup>th</sup> grade, work is being done to form initiative and entrepreneurship through activities to build an attitude towards initiative, activity, independence and innovation in personal and public life.

Also important are the skills to support sustainable development and a healthy lifestyle, which will be built on throughout the course of geography and economics training. In the fifth grade, the activities are aimed at understanding the diversity and uniqueness of the natural environment and realizing the need for its protection.

In the *sixth grade*, the learning content is structured around two competence areas (Fig. 4). All the key competences in this class are concentrated in the core area of competences Geography of continents and countries – seven in number. In the other field of competences, which is present in the entire training course – Geographic Information, five key competences are applied.



**Figure 4.** Key competences by areas of competences in the geography and economics curriculum 6<sup>th</sup> grade

According to the indicator of the frequency of use of the individual key competences, the data are as follows:

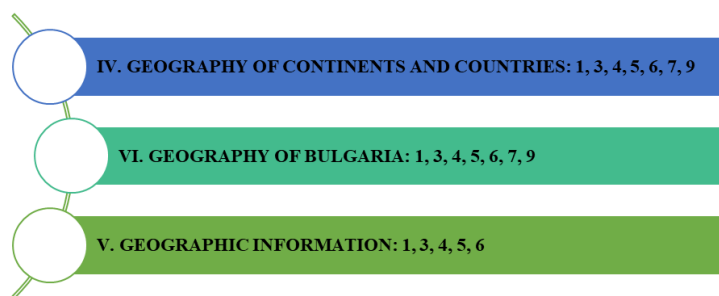
- communication in the mother tongue – 23,69%;
- mathematical competence and basic competences in science and technology – 21,05%;
- digital competence – 18,42%;
- social and civic competences – 18,42%;
- learning to learn skill – 13,16%;
- sense of initiative and entrepreneurship – 2,63%;
- skills to support sustainable development and a healthy lifestyle – 2,63%.

The recommended activities for developing competences in the field of the Bulgarian language from the curriculum are the same as those in the fifth grade. Activities related to mathematical competence and basic competences in the field of natural sciences and technologies continue to focus on developing students' cartographic culture and building on those from the fifth-grade curriculum by comparing and analyzing a hyrogram, bar and pie chart, making diagrams, maps, work with numerical scale, etc.

Digital competence is related to the same activities as in fifth grade for working, presenting and exchanging information using informational technology. The same claim of overlapping activities in the fifth and sixth grade curriculum also applies to social and civic competences, learning skills and skills to support sustainable development and healthy living. To the activities for developing initiative and entrepreneurship, in addition to those specified in the curriculum for the fifth grade, activities for understanding the consequences of using nature for the development of economic activity have been added.

In the *seventh grade*, there are three areas of competence. Opportunities for the formation of the greatest number of competences are provided by the field related to the geography of continents and countries. They match in type and number with those in the sixth-grade competency area of the same name. In the new area

of competences - Geography of Bulgaria, seven key competences can be formed, and the one related to geographical information is the same in number and type as the curricula in the fifth and sixth grades (Fig. 5).



**Figure 5.** Key competences by areas of competences in the geography and economics curriculum 7<sup>th</sup> grade

Regarding the frequency of use of the key competences, the data are as follows:

- mathematical competence and basic competences in science and technology – 21,73%;
- communication in the mother tongue – 19,57%;
- digital competence – 19,57%;
- learning to learn skill – 17,39%;
- social and civic competences – 13,04%;
- sense of initiative and entrepreneurship – 4,35%;
- skills to support sustainable development and a healthy lifestyle – 4,35%.

Similar to the curriculum in the fifth grade with the highest relative share of frequency of use are mathematical competence and basic competences in the field of natural sciences and technologies. To the activities for their application, in addition to those listed in the curriculum for the sixth grade, those for the systematic collection, organization and description of data and their presentation in different ways have been added.

The activities for the development of competences in the field of the Bulgarian language compared to those in the curriculum for the sixth grade have been extended by comparing and grouping geographical objects, processes and phenomena. Digital competency is linked to the same activities as in fifth and sixth grade.

To the activities for developing learning skills in the curriculum for the sixth grade, those for collecting, selecting, extracting information from various sources have been added; observing and researching the native region and the native village.

The same is observed with the key social and civic competences. Activities to understand the content of the concept of economic integration and to compare representative countries in Europe have been upgraded.

To the activities for developing initiative and entrepreneurship, the performance of marketing research and the creation of advertising materials for the presentation of companies have been added. An upgrade is accounted for the activities for developing skills to support sustainable development and for a healthy lifestyle with the addition of activities for indicating main environmental problems and describing protected areas in Bulgaria.

When summarizing the data of the indicator frequency of use of the key competences in the geography and economics curricula at the *junior high school stage*, the following data are taken into account:

- mathematical competence and basic competences in science and technology – 23,77%;
- communication in the mother tongue – 23,08%;
- learning to learn skill – 16,08%;
- digital competence – 15,38%;
- social and civic competences – 12,59%;
- sense of initiative and entrepreneurship – 4,90%;
- skills to support sustainable development and a healthy lifestyle – 4,20%.

The first three key competences form a sum of 62.93% relative share according to the frequency of use in the curricula and are the most widely represented. Therefore, the cognitive activity in the process of geography and economics training should be mainly aimed at them, and it should be linked to the possible inter-subject connections. For the remaining key competences, variants of activities for their formation and development should also be planned, because only the aspiration to use the largest possible number of the

complex of interrelated key competences would be the correct basis for the formation of complex personalities which can easily adapt to modern conditions and be competitive.

The choice of variants of technological solutions for the formation of the key competences in geography and economics training in junior high school stage is relevant to the specifics of the particular key competence, the peculiarities of the educational content, the requirements of the curriculum, the level of cognitive activity of the students, the specifics of the material base and the creative preferences and pursuits of teachers.

### Conclusions

- The competency approach responds to the modern requirements of the education for the formation of young individuals with opportunities for successful realization based on an acquired complex of key competences.

- The presentation of the key competences in the geography and economics curricula at the junior high school stage is comprehensive and is oriented towards the applied essence of the learning process.

- In terms of activities for the formation of key competences, an almost complete overlap is reported in the sixth grade geography and economics curriculum compared to the fifth grade curriculum. This proves the systematic character of the activities, but some upgrading is necessary in each subsequent class due to the spiral nature of geographical knowledge.

- Such an upgrade and a certain expansion of the activities for the formation and development of individual types of key competences is established in the curriculum of geography and economics in the seventh grade, compared to the curriculum of the sixth grade.

- Due to the high relative share of frequency of use in the curriculum of geography and economics at the junior high school stage of the mathematical competence and the basic competences in the field of natural sciences and technologies, the competences in the field of the Bulgarian language and learning skills can be defined as fundamental.

- The cognitive activity in the process of geography and economics training in junior high school stage should be directed to them as a priority, and variants of activities should be planned to include the largest possible number of the complex of interrelated key competences.

- In order to apply the competence approach in geography and economics training at the junior high school stage, one should know the possibilities of inter-subject synthesis to realize the recommended inter-subject connections from the curricula.

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