

Textbook: Focus on Students' National Identity

## “Geography of Human Perspectives” Program as an Educational and Methodological Complex for Spatial Self-determination

Alexander A. Popov\* (a), Pavel P. Glukhov (b), Mikhail S. Averkov (c)

(a) *Russian Presidential Academy of National Economy and Public Administration, 119571, Moscow (Russia), 84, bldg 2, Prospect Vernadskogo; Moscow City University, 129226, Moscow (Russia), 4-1, 2<sup>nd</sup> Selskokhoziastvenny Proezd,*

(b) *Russian Presidential Academy of National Economy and Public Administration, 119571, Moscow (Russia), 84, bldg 2, Prospect Vernadskogo; Moscow City University, 129226, Moscow (Russia), 4-1, 2<sup>nd</sup> Selskokhoziastvenny Proezd,*

(c) *Novosibirsk State Technical University, 630073, Novosibirsk (Russia), 20, Prospekt Karla Marksa, Aktor@mail.ru*

---

### Abstract

The relevance of the issue. Today, special attention is paid to new literacy and skills of the 21st century as those define individual and activity-based acquisition of knowledge. Within the framework of new types of outcomes it is necessary to change not only the techniques and methods of teaching, but also to update the content, forms of learners' work, to change the types and nature of tasks that are stated in the syllabus of educational disciplines. The example of implementation of the program "Geography of Human Perspectives" as an elective course demonstrates the experience of a comprehensive revision of approaches to teaching economic geography. This paper presents some results of approbation of this program, which highlight the pros and cons of this kind of modernization of the educational process. The purpose of the study: to identify the structural and content elements of the elective educational program "Geography of Human Perspectives", which can be used to support the self-determination and development of high school students' interests. The dominant methodology / approach: ascertaining experiment accompanied by specially organized diagnostic procedures.

Results: identification of successful methods of organizing educational activities, which are based on the individual interests of students; establishment of a mechanism for presenting the subject "geography" as a means of self-determination for high school students. Practical significance: this paper will serve as basis for elaboration of recommendations for the development of elective courses and programs of supplementary education for children.

*Keywords:* competence-based approach; economic geography; open education; self-determination.

© 2021 Alexander A. Popov, Pavel P. Glukhov, Mikhail S. Averkov

---

\* Corresponding author. E-mail: Aktor@mail.ru

This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Published by Moscow City University and peer-reviewed under responsibility of TSNI-2021 (Textbook: Focus on Students' National Identity)

## **Introduction**

### *The relevance of the research*

One of the important tasks of competence-based education is the organization of the work of students with their own future, both with the construction of strategies for growing up and professionalization, inclusion in social ties and cultural systems, the formation of the abilities necessary for the implementation of these strategies. However, practice shows that such tasks are often solved deliberately outside the core, subject-oriented educational process, determined by the curriculum. Specially pedagogically organized formation of personal vision of the future and strategies for the implementation of these images occurs mainly within the framework of elective courses or programs of supplementary education, since the student chooses them based on his own interest.

At the same time, an adult person can get an effective toolkit for working with personal goals and strategies only on the basis of mastering specific subject areas. Of course, the subjects should be taught not in the mode of broadcasting "intrinsic" knowledge, but in the mode of reconstruction by the student of its main provisions as resources and means for his own successful activity.

The article describes the experience of approbation and teaching of the academic discipline "Geography", which allows students to master the basics of spatial thinking and, on this basis, reconstruct those socio-economic and sociocultural dimensions in which human self-determination can occur.

### *The problem statement.*

The ideas of high school students about the reality in which they will soon be involved are mythological, abstract, and lack of a constructive approach. As an example can be given a choice of a profession based on the current market environment, rather than on a rational analysis of the labor market. In general, the students' statements regarding their life plans and the ways of their implementation often look extremely abstract, without connection with the specific environment in which their further activities will be realized, with the opportunities and constraints of that space, with the current trends of its development. One of the important

reasons for this phenomenon, in our opinion, is the fact that the material of social science disciplines taught in a comprehensive school (including the subject "Economic Geography") is positioned for students as "dogmatic" knowledge that requires only memorization and reproduction, and not as a way to connect and coordinate their own interests and self-determination with the conditions of their implementation in a particular situation. At the same time, it is obvious that in order to ensure the processes of self-determination, special work is needed to build the contexts of self-determination, which, in turn, can be built only on the basis of exact subject knowledge.

The content of the discipline "Economic Geography" can serve as a good basis and a means for self-determination of students, as it allows building ideas about geoeconomic, geopolitical, geocultural processes as important types of contexts in which further professional activities and student life will take place. In this regard, it is important to learn how to identify such contexts, to be able to explore and predict their changes. Using the example of geography, we would like to demonstrate the possibility of building a connection between the taught subject and the personal interests of students. On the one hand, this allows to develop an additional factor of cognitive interest in relation to the subject. On the other hand, it makes possible the transformation of the subject into a means of building of the student's future.

Taking into account the personal interests of students when teaching certain subjects entails an important and traditional contradiction regarding the status of primacy of one to the other. If the content of the subject is primary, then didactics builds clear stages and sections of mastering this content. In this case, the pedagogical task is to ensure the learning of the stages and sections in the prescribed time. If the interests of students are primary, then the content of the discipline should be adapted or even based on topics that the student in one way or another defines as important for himself. In such cases, the educational process can hardly be technologized, especially in the situation of large groups of students. This research is dedicated to finding a balance between these extremes. It is obvious that it is extremely difficult to fully take into account all interests, but our basic hypothesis is that it is possible to create reproducible conditions in which a significant part of students will have the opportunity to develop and deepen their own self-determination by means of the subject.

### **Purpose and objectives of the study**

The purpose of the study: to identify the structural and content elements of the elective educational program "Geography of Human Perspectives", which can be used to support the self-determination and development of the interests of high school students.

The objectives of the study:

- a) to conduct an ascertaining experiment aimed at establishing the appropriateness of the didactic structure of the program "Geography of Human Perspectives" and the effects on the process of students' self-determination;
- b) to highlight the main methods, technologies, methods of activity implemented within this program that ensure the acquisition of the subject material as a resource or basis for the spatial self-determination of students;
- c) to define the types of students' activities that can be assessed from the point of view of the competence-based approach in the process of realization of the "Geography of Human Perspectives" program.

### **Literature review**

Today, one of the key trends in education, with which Geography can be correlated, is the international research program PISA that assumes natural science literacy as a component of functional literacy. According to PISA, literacy is considered not just as an amount of knowledge, but as the ability to apply knowledge as well as the means by which this knowledge is acquired. This kind of application must necessarily take into account both the global context and the context of the immediate benefit to life and work of the student. In this respect, Geography is an important subject, as it builds a spatial global picture of the world for students. When studying Geography, the students get knowledge about other countries, peoples, and their locations. Modern studies also prove that high school students highly appreciate the role of Geography as it contributes to comprehension of global problems and processes (Sanina, 2019).

Many studies confirm the influence of Geography on spatial thinking and the corresponding perception of the world (M. Jadallah et al, 2017; T. Ishikawa, 2017; A. Likouri, A. Klonari, G. Flouris, 2017; S. Metoyer, R. Bednarz, 2016). In this regard, Geography activates different means of developing spatial thinking: from the use of specific practical tools for mapping territories, to multilayer modeling of the world. In the first case, practice-oriented teaching methods, which are actually fieldworks, demonstrate greater efficiency (Sanina, 2019). Such methods involve mastering the principles of spatial thinking through gaining empirical experience. In this sense, if while teaching Geography productive methods are used with active and creative participation of students, then good learning results are demonstrated (Mackie, Kazmierczak, 2017) However, despite this, the methods of translating and questioning (as a minimal form of interactivity) are the most common among Geography teachers (Kocalar, Demirkaya, 2017). We assume that this is due both to the organizational contexts of educational activities at school, which does not allow the implementation of large-scale cartographic exercises in the classroom, and to the methodological aspects of theoretical work in Geography. We can also find evidence that a large amount of factual information that needs to be memorized is bad for the mastery of a Geography course (Yazıcı, 2018). With the increasing complexity of the information that is taught at

Geography lessons, the available scientific tools are gradually turning from instruments for comprehension of the world and global processes into a tool-hint, which contains most of the necessary factual information and allows to navigate in this bulk of information (for example, maps). In this regard, recommendations and general significance of the use of active and interactive teaching methods, the use by a teacher of various teaching techniques, as a rule, are aimed at increasing motivation, attracting attention and overcoming academic failure (Larsen, Harrington, 2018; Raath, Golightly, 2017). This tendency may indicate an increase in the interactivity of reproductive methods, which are designed to make classes more interesting. But it can be assumed that the problem lies in the teaching approach and the principles of positioning of the educational content.

Researchers emphasize the importance of Geography teaching not only as a set of structured information, but as content that should be used outside the classroom and contribute to students' lives (Kocalar, Demirkaya 2017). This may indicate the need to change or expand the content of the subject in such a way that it relates to life and self-determination of the students. Today we can discuss the adaptation of new, more complex theories in Geography for high school students. One example is the new Economic Geography, which gives a more procedural view of the world, the reasons for the development of market relations, the formation of cities and urban agglomerations, and allows working with the "Geography of skills" (Storper, 2013). Such content allows to develop a direct connection with the student's self-determination: by studying the Geography of skills and markets, in fact, the student can not only comprehend the types of skills in demand, but also establish where such demand is required. Issues of Regional Development and Geography, devoted to cluster policy or the objective establishment of any geopolitical concepts, allow the student to recognize space in new, meaningful qualities (Streletsky, Glezer, 2016; Levintov, 2016; Suslov, Pyatachkova, 2019). Such contexts not only make it possible to study Geography as a discipline, but can also turn it into a means of spatial and regional reflection for a high school student. But the use of such content should imply a change in the approach to the teaching and acquisition of the subject.

At higher stages of education, it is difficult to organize the empirical experience of mastering the means of geographical cognition. The methods are becoming more theoretical and generalized, complex models are more robust. This may lead to the need to develop the ideas of the theory of developmental education in senior forms at schools (Davydov, 1996). It allows not only studying the concepts and categories inherent in the school subject, but rediscovering or reinventing them through specially organized educational activities. In fact, we are talking about changing the type of tasks that should be posed to students and specific pedagogical practice, which is focused on this type of tasks (Lvovskiy, Sanina, 2018). These are problems and cases of a problematic and open nature, which do not have a definite answer and solution. Tasks of this kind actualize productive action (Elkonin, 2019), and also require a special approach to assessment, which is known as formative assessment (Vorontsov, 2018).

## **Methodology**

The basic research method is the ascertaining experiment, which was mainly aimed at testing the comprehensive program "Geography of Human Perspectives" implemented as an elective course.

The program was taught in different formats: as a full-fledged elective course of 72 academic hours (4 modules of 18 hours each) and as an intensive course for 24 academic hours, which were taught as one module. In both cases, the structure of the program sections (main topics) was the same.

The main sections of the program were represented by the following topics: "Geography of technological structures", "Geography of cultural landscapes", "Geography of mental models", "Geography of modern anthropoflows". Each section (in the first case, a module) included various educational formats: expert lectures, design and analytical seminars, teamwork, discussion clubs, presentation of analytical projects and their expertise.

The key research question that we posed as part of the testing was whether students will be able to use Geography as a means of analyzing their own life prospects and capitalizing of individual capabilities. Based on this issue, the above-mentioned sections of the program were formed, as being more consistent with the life situation of students and potentially interesting for them. Obviously, an expanded version of the program will provide better results, but we were also interested in the "minimum performance outcome" of the program, which may indicate the most reproducible results.

When preparing the ascertaining experiment, we decided to set the emphasis on the most fundamental elements of the program, depending on which educational effects were monitored:

- 1) students formed working teams, which remained unchanged throughout the entire program; groups were formed according to the interests of students in accordance with the sphere / area of activity that attracted them as promising for their own professional future (for example, "medicine", "business", "industry", "ecology", etc.);
- 2) open problem tasks were set for the groups, which created a situation of a research gap with a lack of information, thereby forcing them to look for information, to identify the ways of its usage and interpretation;
- 3) we asked students to carry out self-assessment within groups according to pre-developed criteria; from time to time we suggested revising the criteria, redefining their content (such a need was due to the fact that students independently developed their own methodologies for rating territories, got acquainted with rating as a tool for geographical analysis, and then we wanted to check whether students could apply the rating tool to a situation

of personal assessment).

A specific feature of the Course program is the modeling of that contemporary social and management work, which requires knowledge of geography and the ability to spatial thinking, involves the analysis and design of the spatial location of economic and cultural objects and processes. This allows the program not to duplicate the content of the basic Geography Course, as well as to exclude simple (extensive) expansion in the study of the discipline. In this regard, we also paid special attention to interdisciplinary ties.

Game format - Committee on Spatial Development. The work of the committee is based on the method of modeling and development of scenarios of cases with a high degree of uncertainty of the future. The imitation of the work of real committees sets the "contour of application" for economic, geographical, sociological knowledge.

Each section consisted of four blocks, identified according to the principle of the main types of work performed by students:

1. Construction of the basic concepts of the module.
2. Identification of objects of analysis and study of the current situation of development of the Russian Federation in accordance with the basic concept and through the development of methodologies for rating territories.
3. Mapping of the main trends in the development of various territories of the Russian Federation in the future ten to fifteen years.
4. Comparative analysis of the prospects of spatial development for the territory where the student lives, as well as the spatial aspects of his own life goals, plans, aspirations (intentions).

Experts-observers were also involved in the ascertaining experiment, who made it possible to ensure triangulation. This is important, since we assessed the qualitative effects that were recorded when assessing the results of students' work and when conducting detailed interviews.

The experimental base was educational organizations from two different regions of the Russian Federation: Ugra State University (Khanty-Mansiysk), Gymnasium No. 5 (Cheboksary).

520 pupils of 9-11 forms took part in the ascertaining experiment.

## **Results**

Based on the results of approbation, it was possible to establish that the method of forming teams on the basis of students' interests can be recognized as effective. 46% of students indicated that team work corresponded to their idea and interest. Among the students who said that there was no obvious correspondence with their interests, there were mainly those students who had to join some other teams and they realized their interest only partially. As a result, 21% of students switched to a passive mode of work and stopped taking an active part in the process of solving open problems. In the overwhelming majority, these are those children who did not at all see the opportunity to realize their interest in the process of work. During the implementation of the long-term elective course program (72 a.h.) 15% left the educational process - this is less than within the intensive format of studying. It is worth noting that the intensive form keeps the contingent of students unchanged until the completion of the program. This can be important when using such content when developing procedures for assessing developed competencies.

Regardless of the availability of the statement of such a factor as "satisfaction of interest in the course of work", more than 60% were able to substantiate the benefits of the program for planning and designing of their life and professional future. During the interview, the students pointed to the connection between working with information (statistical data and scientific sources describing the situation in a particular region) and deepening / expanding their own understanding of the situation in a particular area of activity. Quotation from an interview with a participant in an intensive session: "Reading different statistics and survey results, it becomes clear what the level of culture of the population in different territories may depend on and vice versa".

We can say that working with real data in the context of developing methodologies for rating of territories allows students to master new analytical tools. They are assigned by students as instruments for general analysis, which can be used for solving problems in the course of their own self-determination. Extract from an interview with a participant in an intensive session: "I thought that it might be worthwhile to go after my studies to work as a journalist in the region that received bad points from us, as it will be clearer there what to do. In the regions with high scores, everything has already been done".

However, the very fact that students gained experience in making up rating models that require the use of statistical data has led to two problems. In only 5% of cases, the groups developed more constructive criteria for self-assessment. This suggests that such a tool as a rating methodology does not transfer well to other spheres of life. In most cases, the criteria for rating of participants within the teams remained the same or underwent minor changes. The need to search for real data, which often turns out to be insufficient to satisfy the rating models that were made up by the teams, leads to the fact that the groups begin to "adjust" their ratings to the data found. In a full-fledged program, which is implemented in the amount of 72 academic hours this problem can be overcome through working with additional tasks aimed at independent formation of data



(when students in the sample mode create their own questionnaires and conduct surveys in social networks). In some cases, this led to misinterpretations of the data, whereby students reached conclusions that were consistent with their developed rating methodologies, even though this was erroneous.

The most common type of activity in the course of solving the assigned tasks was search work (information search, its structuring, processing and interpretation). In those cases when students were not given any data sources, their final results of mastering the program were mostly negative, partially successful. For those teams of students who were given specific datasets as an example, the task was limited to only the datasets presented. Only 17% went beyond the limits of use of the provided datasets and used other sources. The best option was a review of resources that can act as a tool for finding the necessary information (various libraries, portals, specialized search engines). This suggests that when implementing such educational programs and when setting open problems of a problematic nature, it is necessary to provide tools for solving the problem, but not to limit students with adapted and compressed materials.

In the context of working with data when making up maps, we managed to identify the following basic techniques that can be transposed into programs of other content:

- Reconstruction of "maps" (spaces) of upcoming activities. This may include various tasks of working with data on the space of possible future activities of students: both the reconstruction and assessment of potential labor markets and their possible dynamics due to the most obvious factors, as well as the general assessment of relevant structure of human activity with its principles and mechanisms of capitalization of each "cluster", the corresponding characteristics of a successful specialist. It is obvious that if in the first case working with data can be limited by the analysis of statistical tables illustrating the dynamics of labor markets, then in the second case, a complex content analysis of various materials about popular practices in different countries will be required (and the assessment of the degree of their necessity can become the result of joint activity of a student and a teacher).

- Reconstruction of the map of the chosen area of interest: scientific (cognitive) discipline, professional sphere, practice. By analyzing and structuring the maximum amount of information related to the initial interest of the student, including his cultural and activity connotations, the student at least acquires an idea of basic approaches, representations and interpretations of the issue, problem, plot that is important for him. As a maximum, he independently identifies the main problems of this area, the main types and categories of situations and phenomena that will have to be encountered in the course of his activity.

## **Discussions**

From the point of view of the authors of the article, one of the main factors that ensures the educational efficiency of such a model of education as “Geography of Human Perspectives”, is the described above core format of game modeling of real innovative management structures. It makes possible to overcome the speculative, science-centered orientation of the students' geographic education. As the Committee on Spatial Development are called to solve practical problems on the effective spatial organization of territories, a playful imitation of this work sets a "contour of application" for the practical knowledge of economic geography that schoolchildren must acquire.

It should be noted that the majority of other activity-based educational materials in Economic Geography, which ensure a high-quality acquisition of a specific material, do not form in students even a basic skill for practical application of the knowledge gained. This knowledge remains a "general cultural baggage" or, at best, turn into individual vision or settings that organize the activity. However, these educational systems claim that the knowledge acquired should become a resource either for the formation of a student's picture of the world, or for solving activity problems. It can be assumed that the transformation of knowledge into a resource for the formation of one's own personality and for organizing activities is provided not so much due to the activity-based nature of the methods that organize the very activity, but due to specially organized pedagogical forms that set the context for this activity. In the case of the “Geography of Human Perspectives”, such a form that sets the context for the activity is the game modeling of real innovative forms of intellectual activity, described above. However, this is probably not the only version of the pedagogical form that sets the context for educational activities, and further research will make it possible to define other options.

## **Conclusion**

1. Key students' competencies are successfully developed within the framework of subject learning - and the stability of these competencies turns out to be much higher than in those cases when their development is ensured without linking with a specific potential problem or with a specific task, for the solution of which, these competencies would be required.
2. At the same time, the development of the basic competencies of maturing people on the basis of the study of specific subjects is possible and effective only under the following conditions:
  - reconstruction, including purposeful game modeling of situations of real ("adult") practices that are attractive to students, with using as a resource of specific acquired subject knowledge;
  - task organization of students' activities within the educational program, moreover, ensuring not the acquisition of the obviously necessary volume of subject knowledge by solving problem, but the formation of a

method of activity that is fundamentally significant for students by means of solving the problem and acquisition the relevant knowledge and methods of activity;

- structural and semantic rethinking of the basic academic subject: its representation as a subject of human activity or conditions for organizing this activity;

- carrying out preliminary work for the design of the basic personal intentions and intentions of students, which can become the basis for mastering educational subjects as spaces for their own activities and / or as activity tools.

3. Geography (especially Economic Geography) provides special opportunities for competence development, since, on its basis, a special type of competence can be formed – a "spatial" one. This competence is related to the ability to organize activity on definite territories, which are characterized by intrinsic connections, constraints, obvious and hidden resources. At the same time, in order to organize the comprehension of Economic Geography on a competency-based basis, it is obviously necessary for the student to simultaneously reconstruct the system of geoeconomic, geopolitical, geocultural processes as opportunities and limitations for the implementation of their own intentions; the design of these intentions and the formation of personally significant goals on their basis.

### **Acknowledgements**

The authors would like to express gratitude to Irina Proskurovskaya and Anna Sultanova for their invaluable contribution to the design of the educational and methodological complex "Geography of Human Perspectives".

### **References**

- Busygina I.M., Filippov M.G. (2016). Klasternya politika I globalizatsiya: posledstviya dlya prostranstvennogo pazvitiya Rossii [Cluster politics and globalization: implications for the spatial development of Russia.]. *Voprosy geografii*, 141, 33-51.
- Vorontsov A.B. (2018). Formiruyushchee otsenivanie: podhody, sodержanie, evolutsiya [Formative assessment: approaches, content, evolution]. Moskva, Rossiya: Nekommercheskoe partnerstvo sodeistviya nauchnoi i tvorcheskoi intelligentsii v mirovoi kulture "Avtorski Klub".
- Davidov V.V. (1996). Teoriya razvivayushchego obucheniya [Theory of developing education]. Moskva, Rossiya: INTOR.

- Levintov A.E. (2016). Raionirovanie ili regionalizatsiya? (refleksiya sovetskogo perioda otechestvennoi ekonomicheskoi geografii) [Raioning or regionalization? (Reflexing of the Soviet period of domestic Economic Geography)]. *Voprosy geografii*, 141, 72–90.
- Lvovsky V.A., Sanina S.P. (2018). Problemno-zadachny podhod k obucheniyu v shkole I vuze [ Problem-task approach to school and university education]. In *Sovremennoye obrazovanie v megapolise: vektory razvitiya*, 75-88.
- Sanina S.P. (2019). Problemy obucheniya geografii: obzor zarubezhnyh issledovaniy [The problems of teaching Geography: review of foreign researches]. *Sovremennaya zarubezhnaya psihologiya*, 8(1), 17-27
- Streletsky V.N., Glezer O.B. (2016). Regiony, regionalism, regionalizatsiya i regionalnoye razvitie v otechestvennom obshchestvenno-geogracheskome diskurse [Regions, regionalism, regionalization in domestic social-geographic discourse]. *Voprosy geografii*, 141, 13-22.
- Suslov D.V., Piatachkova A.S. (2019). Bolshaya Evrasia: kontseptualizatsiya poniatiya I mesto vo vneshnei politike Rossii [Big Eurasia: conceptualization of the notion and place in foreign policy of Russia]. *Voprosy geografii*, 48, 16-53.
- Elkonin B.D. (2019). Produktivnoye deistvie [Productive activity] *Kulturno-istoricheskaya psihologiya*, 15(1), 116–122.
- Ishikawa, T. (2016) Spatial Thinking in Geographic Information Science: Students' Geospatial Conceptions, Map-Based Reasoning, and Spatial Visualization Ability. *Annals of the American Association of Geographers*. 4 (101),76—95.
- Jadallah, M. et al. (2017) Integrating Geospatial Technologies in Fifth-Grade Curriculum: Impact on Spatial Ability and Map-Analysis Skills. *Journal of Geography*, 4 (116), 139—151.
- Kocalar, A.O. & Demirkaya, H. (2017) Geography Teachers' Views on Effective Geography Teaching. *Review of International Geographical Education Online (RIGEO)*. Retrieved from <http://dergipark.gov.tr/download/article-file/590221>
- Larsen, T. & Harrington, Jr. (2018) Developing a Learning Progression for Place. *Journal of Geography*, 3 (117), 100—118.

- Likouri, A., Klonari, A. & Flouris, G. (2017) Relationship of Pupils' Spatial Perception and Ability with Their Performance in Geography. *Review of International Geographical Education Online*. Retrieved from <http://dergipark.gov.tr/rigeo/issue/40887/493149>
- Mackie, P. & Kazmierczak, A. (2017) Bridging the Divide: The Potential Role of Contemporary Geographical Research in Schools. *Journal of Geography*, 5 (116), 187—196. doi:10.1080/00221341.2016.1267787
- Metoyer, S. & Bednarz, R. (2016) Spatial Thinking Assists Geographic Thinking: Evidence from a Study Exploring the Effects of Geospatial Technology. *Journal of Geography*, 1 (116), 20—33.
- Raath, S. & Golightly, A. (2017) Geography Education Students' Experiences with a Problem-Based Learning Fieldwork Activity. *Journal of Geography*, 5 (116), 217—225.
- Storper, M. (2013). *Keys to the city: How economics, institutions, social interaction, and politics shape development*. Princeton University Press.
- Yazıcı, Ö. (2018) Obstacles and ways of overcoming geography. *Journal of National Academy of Education. Review of International Geographical Education Online*. Retrieved from <http://dergipark.gov.tr/uead/issue/36657/393094>