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LIFEdu

COMPARATIVE ANALYSIS OF CURRENT INCORPORATION OF FIELD EDUCATION INTO SCHOOL CURRICULA

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Introduction

Similarly to our lives which do not only take place within enclosed rooms and buildings without the slightest direct interaction with the surrounding environment, teaching in schools should not underestimate the importance of working with the realistic and existing environment. Jan Amos Comenius, the teacher of nations, was already well aware of it (Komenský, 1948). The need for creative and inquisitive work of a student, the emphasis on his or her own experience and practice is gradually accented by a number of other authors and pedagogical movements. In the interwar period, it was mainly the so-called pragmatic pedagogy and its representative John Dewey. After World War II, it was the pedagogical constructivism of the Swiss Jean Piaget.

"*People should learn, as much as possible, not to acquire reason from books, but from heaven, earth, oaks and beeches, to know it and to examine things by themselves and not only by other people's observations and evidence of things.*" (Komenský, 1948)

For a long time, field education has been considered an important educational strategy as well as a mean towards the comprehensive understanding of the phenomena and processes around us and which we, as humans, are a part of. As reported, for example, by Rickinson et al. (2004), a well-thought-out, well-arranged and implemented field education provides pupils with new opportunities to expand their knowledge and skills and to tack on greater added value to their daily teaching experiences. This issue is perceived similarly by Řezníčková (2008) or Hofman et al. (2003). However, the terrain cannot only be conceived as a space where a student verifies or tests what he or she had learnt at school, or even as a certain setting in which a teacher or a third party provides them with ready-made information, but above all as a certain laboratory (e.g. geographical laboratory, see Wilczyńska-Wołoszyn, 2003), where the pupil deepens his existing competencies and discovers new ones, in the broad contexts and connections that real environment naturally contains. Quite logically, field education should be closely connected with classroom teaching (Řezníčková, 2008) and the pupils' work in both areas should follow up and complement each other.

According to Hofmann et al. (2003), field education is a complex teaching form which comprises of different teaching methods which include for example experiment, laboratory activities, observation, the project method, cooperative methods and methods of experiential pedagogy. It also includes various organizational forms of teaching such as walking, field practicum, excursions, thematic school trips and expeditions, whereas the focus stays on field work, especially outside school. Such a very broad understanding of field education naturally gives the possibility of finding it in the curricula of a number of educational subjects or in a simple implementation into them. On the other hand, it also brings a number of risks and misconceptions. There are different types of field education. For example, completely different educational goals can be met by a walk around the pupil's school, within which the pupils will read information on the signs of a specific nature trail or gradually listen to the teacher describing the character and the specifics of the visited sites,

in comparison to the pupils carrying out a set of measurements and observations at each locality, which will be recorded and later evaluated and compared at school or at the end of the field exercise.

At Czech schools, however, out of all forms of field education, it is walks, excursions and school trips, which are most commonly realised and which serve as illustrations for the topic under discussion (Marada, 2006; Svobodová et al., 2019a). Nevertheless, within these forms of field education, most often pupils only serve as passive recipients of information provided by guides, and the learning potential of the visited places is therefore not fully exploited (Marada, 2006). Such concept of field education from the perspective of current pedagogy which promotes an active approach of students to the construction of their knowledge, respectively to changing the role of the teacher to the position of a teaching facilitator (Job, 1999; Ost et al., 2001), can be perceived as considerably obsolete. It is precisely the ratio of the teacher's activity to pupils that the individual forms of field education differ significantly from each other (Oost et al., 2001) – see Fig. 1. Research into their actual implementation into teaching is rather difficult (Marada, 2006) as it largely focuses on the analysis and comparison of school education programs of selected schools of certain levels of education (e.g. Svobodová et al., 2016, or Svobodová et al., 2019b). Only a small part of the works analyses the specific educational goals, educational strategies and the usage of didactic resources used in teaching of specific subjects and topics by individual teachers at schools, which declare the use of some form of field education in their school educational programs. It is necessary to mention especially the work of Svobodová et al. (2019a) using also the methods of semi-structured interviews conducted with a total of 19 primary school teachers in her research.

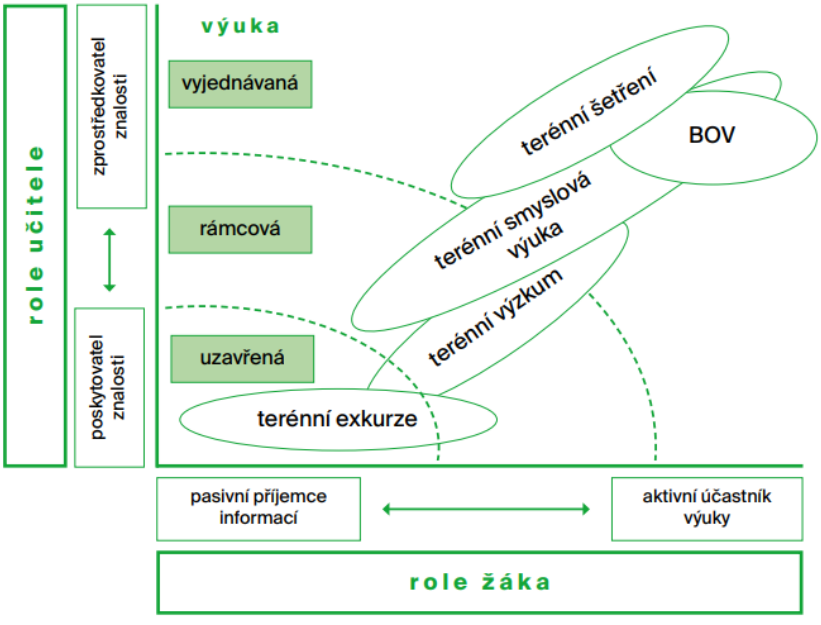


Fig. 1: The role of the teacher and the pupil depending on different forms of field education (Oost et al., 2011) – taken from Svobodová et al. (2019a).

The Czech Educational Curriculum

The educational curriculum in the Czech Republic can be divided into two basic levels. The first level is the national one, i.e. a conceptual form of curricula which contains the general state's educational policy and the so-called framework educational programs resulting from it. These are divided according to the level of education and, in case of upper secondary education, according to the school in question. Based on the framework educational programs, each school is obliged to create its own educational program (see Fig. 2). Due to the newly-formed educational policy of the Czech Republic, which was presented in the so-called strategy 2030+, revisions of the framework and school educational programs subsequently have been gradually beginning to take place.

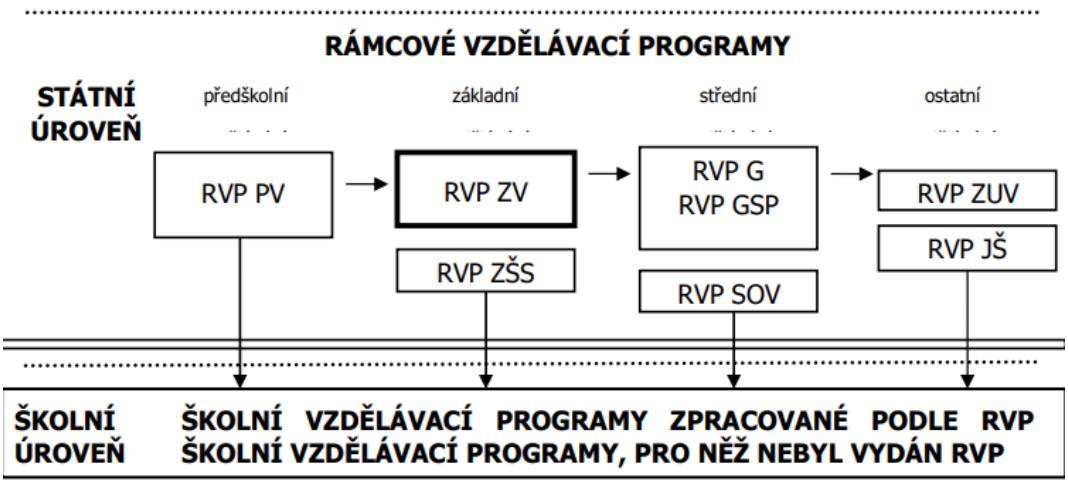


Fig. 2: System of curricular documents (NÚV[1], 2021; modified)

The framework educational programs are based on the current educational strategy of the Czech Republic and they emphasize and formulate the following:

1. Key competences, their connection with the educational content and the application of acquired knowledge and skills in practical life;
2. The principles of common education and lifelong learning;
3. The level of education set for all graduates of the individual stages of education through expected outcomes;
4. Pedagogical autonomy of schools and teachers' professional responsibility for educational results (NÚV, 2021).

While the framework educational programs are very general and on the surface, the educational programs of individual schools are much more specific through a more precise

[1] The National Institute for Education

formulation of the so-called school outputs and specification of educational content (curriculum) and their elaboration for individual subjects and classes. However, it is still but a project form of the curriculum (Maňák et al., 2008) which only tells us little about the very form and concept of teaching by individual teachers in individual subjects and topics. It is necessary to look into the so-called implemented curriculum for these purposes, which is in the form of methodological instructions, guidelines or, ideally, preparations for teaching; or, alternatively, to subject the lesson itself to a didactic case study (for more see Slavík et al., 2017).

Field education in the framework educational programs for primary education and grammar schools

For the purpose of this insight, the currently valid framework educational programs were used. For grammar schools, therefore, it is a program which has been valid since 2007, as subsequently amended. As for primary education, it is a program which has been valid since 2005, respectively 2017 (according to them, the analysed school educational programs have been prepared) and the program valid since 2021.

Speaking of the Framework Educational Program for Primary Education, some form of field education, explicitly mentioned, can only be found within two educational fields, namely in Physical Educational at the 1st (pupils aged 6–11), and 2nd (pupils aged 11–15) level and in Geography (at the 2nd level). As shown in Table 1, in the context of Physical Education, it is often only a question of introducing field education in the curriculum and not in the expected outcomes (i.e. in the binding part of the curriculum). Astonishingly, we cannot find a mention of field education within the educational area "Man and his world" (1st level) where pupils focus on themes such as "The Place We Live In", "People and Time" or "Diversity of Nature" or in the educational fields of Chemistry and Natural History at the 2nd level.

Subject	*Level*	*Output*	*Curriculum*
Physical Education	1.	The pupil adapts to the aquatic environment, observes swimming hygiene, manages swimming skills in accordance with individual assumptions.	swimming
	1.	In accordance with individual assumptions, the pupil masters selected swimming technique, elements of self-rescue and safety.	
	1.	---	hiking and stay in nature
	1.	---	swimming*, skating*
	2.	---	athletics (endurance running on the track and in the field)
	2.	---	hiking and stay in the nature
	2.	---	skiing*, snowboarding*, skating*
	2.	---	swimming*
Geography	2.	The pupil masters the basics of practical topography and orientation in the field.	exercising and observations in the field of the local landscape, geographical excursion
	2.	The pupil applies practical procedures in the field for observing, displaying and evaluating the landscape.	

*Tab. 1: Field education in the Framework Educational Program for Primary Education (source The Ministry of Education, Youth and Sports, 2021; modified); (explanations: * included according the school's conditions)*

Due to the spiral nature of the classification of the curriculum of most educational subjects (fields), a similar classification of teaching in the field can be found in the Framework Educational Program for Grammar Schools (i.e. for the level of upper secondary education). Biology is added to Physical Education and Geography. Nonetheless, both within

Physical Education and within Biology, these are only topics in the curriculum without being anchored directly in any expected output.

Subject	***Output***	***Curriculum***
Physical Education	---	hiking and stay in the nature
	---	athletics (running on the track and in the field)
	---	hiking and stay in the nature
	---	swimming*
	---	skiing
Biology	---	field work and geological excursion
Geography	The pupil is able to orientate himself with the help of maps in the landscape.	field geographical teaching, practice and application (e.g. geographical excursions and field exercises)

*Tab. 2: Field education in the Framework Educational Program for Primary Education (source The Ministry of Education, Youth and Sports, 2021; modified); (explanations: * included according to the school's conditions)*

The methodological and, for the most part, also content freedom given to individual schools and teachers by the framework educational programs can be perceived twofold from the point of view of the actual implementation of teaching and the use of individual didactic resources. Some schools remain in their designed and implemented curriculum only at the level of prescribed expected outcomes, or curriculum and field education, which are, according to research, one of the most demanding didactic tools. These schools then do not include more in their portfolio. Other schools may approach their school curriculum completely differently, taking the content of framework educational programs only as a basis and look for the most suitable means for its fulfilment. (The selection of expected outputs of the Framework Educational Program for Primary Education leading to the development of historical and geographical competencies, within which it is appropriate to use field education, is shown in Table 3). This discrepancy is also shown by the results of research carried out so far (e.g. Svobodová et al., 2016), as well as the presented analysis.

Subject (area of education)	***Expected output of the***	***Proposal for the integration of***

	Framework Educational Program	*field education*
1st grade of Primary School (pupils aged 6–11)		
Man and his world	The pupil marks the place of his or her residence and school on a simple map, as well as the journey to the designated place and distinguishes possible dangers in the immediate vicinity.	**Walk, field observation** – work with the city plan (part of the city), drawing of the school building, description of its surroundings, comparison with the representation in the plan, gradual drawing of the walking path, identification of dangerous places in the field (busy roads, dark places etc.) and drawing these to the map.
	The pupil is able to determine the sides of the world in nature and according to the map, to orient himself or herself according to them and to follow the principles of safe movement and stay in nature.	**Work with compass and map, field observation** – determining the location of selected dominant elements around the school (e.g. playground, main entrance, garden pavilion etc.) using the sides of the world; description of the mutual position of dominant elements around the school, drawing of these elements in the map.
	The pupil is names some natives, cultural or historical monuments, important events that have happened in the region.	**Walk, field observation, field sensory teaching** – historical monuments of my village, description of their function, form and their position within the village (possible addition of their drawing – interdisciplinary link to Art Education)
	The pupil applies basic knowledge about himself or herself, about one's family and activities, about human society, coexistence, habits and people's work, comparing the past and the present using examples.	**Walk, field observation** – based on historical photographs, identification of changes in selected localities of the village.
	The pupil uses libraries, museum collections and galleries as sources of information to help him understand the past.	**Excursion** – educational program in the local museum and library.
	The pupil observes, describes and compares visible changes in nature in different seasons of the year.	**Field observation, field sensory teaching** – changes in selected localities near the school in different seasons of the year.

	The pupil classifies some products of nature according to conspicuous determining features, gives examples of occurrence of organisms in a known locality.	**Field observation, research-oriented teaching** – observation of the occurrence of different species of plants and animals in different localities (by the water, in the square, in the forest, in the park, etc.), their determination and mutual comparison of these localities.
2nd level of Primary School (pupils aged 11–15)		
History	The pupil will explain the situation of the Great Moravian Empire and the internal development of the Czech state and the position of these state departments in the European context.	**Excursion** – educational program in an open-air museum or museum
	The pupil illustrates the position of individual layers of medieval society, gives examples of Romanesque and Gothic culture. The pupil recognizes basic features of individual cultural styles and introduces their representatives and examples of important cultural monuments.	**Walking, field observation, field sensory teaching** – historical monuments of my village, description of their function, form and their position inside, addition of their drawing (interdisciplinary connection to Art Education), comparison of individual architectural styles and types of buildings.
Geography	The pupil organizes and adequately evaluates geographical information and data sources from available cartographic products and reports, graphs, diagrams, statistical and other information sources. The pupil uses basic geographic, topographic and cartographic terminology, understanding these terms. The pupil distinguishes and compares and elements of the natural sphere, their contexture and conditionality, recognizes, names and classifies the shapes of Earth's surface. The pupil compares the effects of internal and external	**Field research, research-oriented teaching** – e. continuous meteorological measurements and observations, representation and evaluation of results, identification, description and classification of selected shapes of Earth's surface in the local landscape; implementation of soil probes and monitoring of soil composition and soil edaphon in connection with the use of land and its fertility

	processes in the natural sphere and their impact on nature and human society	
	The pupil assesses how natural conditions are related to the function of a human settlement, and names the general basic geographical features of settlements.	**Field research, observation, research-oriented teaching** – e.g. identification of the development parts of the city within the city space, respectively their specifics, identification and description of functions in the city and their mutual relationship, identification of the differences among particular parts of the city, respectively among the city, its hinterland and the countryside in relation to the nature of the settlement, the life in it and the quality of life
	The pupil compares different landscapes as part of the mainland part of the landscape, distinguishes specific features and functions of landscapes on specific examples. The pupil gives particular examples of natural and cultural landscape components and elements, the spatial distribution of the main ecosystems (biomes). The pupil presents the serious consequences and risks of natural and social influences on the environment on selected examples.	**Field research, observation, research-oriented teaching** – e.g. to identify and evaluate the impact of man to nature on examples of local landscape; identification of selected landscape elements in the field, description and evaluation of their significance

Tab. 3: Proposals for the integration of field education into educational subjects (fields) developing the geographical and historical competencies of Primary School pupils.

Research methodology of integrating field education of geography and history into school curricula of primary schools

Due to the large number of primary schools, the probe method was chosen for some of the school educational programs which are accessible freely in their complete form on the schools' website. The analysis was performed on a sample consisting of 146 primary schools across the Czech Republic, respecting the regional structure. The selection of schools was made with regard to the size of the region, respectively the number of schools in given region, as well as schools from regional towns, district towns and schools in central

municipalities or village schools. In order to specify the given findings and enable a better insight into the implemented curriculum, the method of a questionnaire was subsequently chosen for the subject of Geography. The questionnaire was later distributed to selected primary schools. The research was carried out during the school years 2018/2019 and 2019/2020.

Box 1: Structure of the research sample (data source: the Czech Statistical Office's own survey, 2020)

There were 2778 primary schools teaching pupils in the 2nd level registered in the Czech Republic in the school year 2019/2018, with an average of 198 of them in each region, with the exception of the Karlovarský kraj region, which has, due to its size, significantly fewer of them (82). On the contrary, the Středočeský kraj region and the Moravskoslezský kraj region have significantly more (300 and more). This corresponds to the numerical representation.

A total of 56 Geography teachers from 47 primary schools in 8 regions of the Czech Republic took part in the questionnaire part of the survey focused exclusively on the Geography curriculum. The average age of the teachers in the sample was 44.5 years, which roughly corresponds to the national average.

Field education of geography in the school curricula of primary schools

Due to the fact that field education has been anchored directly in the Framework Educational Program for Primary Education, at least one of the forms of field education had been identified in each of the monitored school educational programs. Apart from the educational content itself, certain forms of field education are most often mentioned in the introductory description of the subject where they are included among other organizational forms. Field education is frequently mentioned in connection with the development of key competencies (especially work competencies). Similarly, the majority of the surveyed Geography teachers answered that they include field education into their lessons (69 %). However, more than 70 % from that also stated that they only use this form of teaching marginally. The average age of teachers who have declared clearly that they use field education was 46.5 years which roughly corresponds to the average age of primary school teachers. The median value was half a year higher, with only 3 % of teachers answering they do not use or want to teach fieldwork. In all cases, the teachers were over 60 years old. In the monitored sample, no correlation has yet been demonstrated between the second approbation subject and the use of field education. A large part of teachers (45 %) rely on the provision of field education by a third party – mostly in the form of a regional environmental education centre, a zoo, a science centre or a museum or an observatory.

Field education is mainly used in cartographic topics in the 6th grade (pupils aged 11–12). It mainly comprises of working with a map or a compass, respectively it consists of activities aimed at developing the pupils' ability to orientate themselves in a field. Such field lessons are usually one to two hours long. Only in exceptional cases there are all-day teaching activities. The length of these activities is related directly to the space where they are carried out. Most schools realize activities within their premises or nearby. An interesting finding is that only in two of the examined schools some forms of field education were used in the teaching of general physical geography which belongs to the traditional components of the 6th grade curriculum. A total of 19% of the addressed schools use field education for teaching environmentally and physically-geographically oriented topics across all grades. Largely it is a local landscape theme. Although most of the addressed schools declare the use of some the forms of field education, it is not a systematic classification, i.e. within all thematic units suitable for the implementation of field education. On the other hand, for example only 28 % of schools use field education to develop the local region competencies of the pupils and only 11% use it to teach at least one of the humane-geographical topics. With one exception, however, these are exclusively excursions with a minimum requirement for the pupils' activity. Just a fraction of schools include the excursion in the teaching of regional geography in Europe or the Czech Republic.

History and field education in the school curricula of primary schools

A total of 67 schools from the monitored sample, which is less than a half (46 %), explicitly include field education in History in their school curriculum. As for the remaining 54 %, according to these schools' curricula field education is not counted with in connection with the subject of History, see Fig. 3.

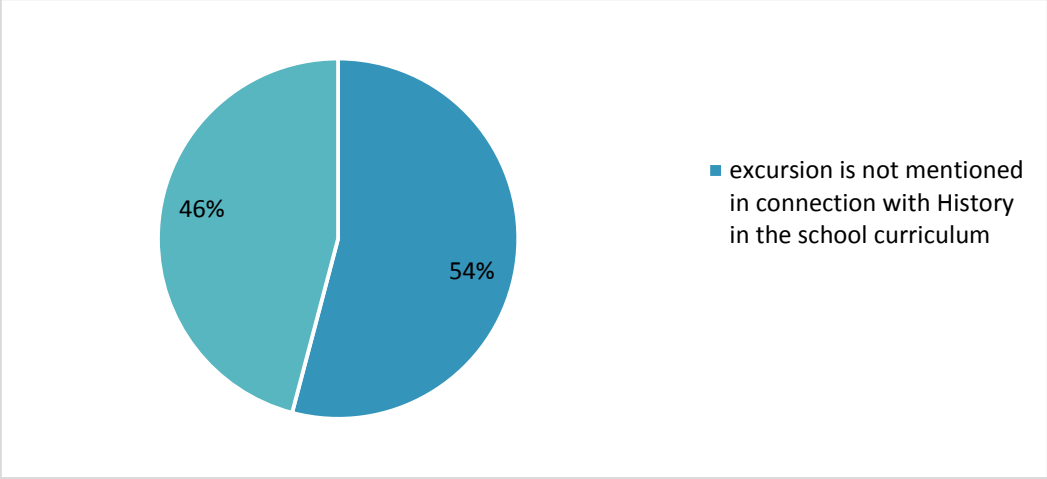
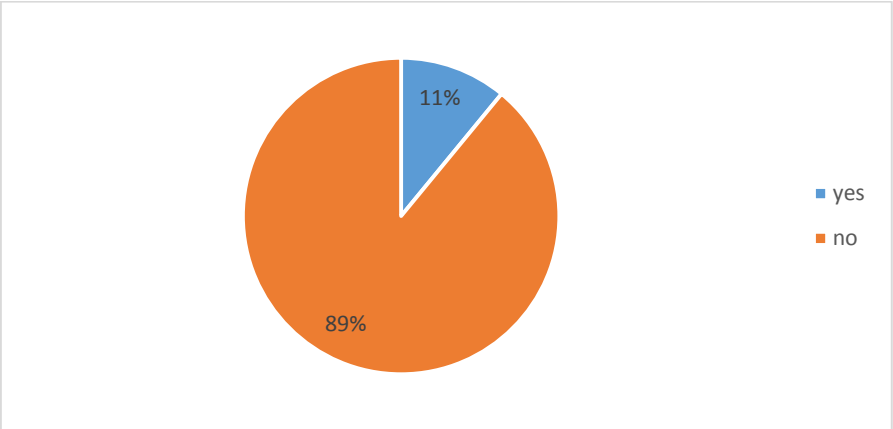


Fig. 3: Occurrence of an excursion in the school curriculum in the subject of History

As in the case of Geography, there seems to be a very typical general listing of various organizational forms of teaching within the organizational definition of the subject, among

which excursions figure. Another option which has been used is to introduce the organization of excursions under the item “development of key competencies in the field of work competence”. Descriptions of field education are often highly selective and only refer to one form of teaching outside the school premises, for example they mention only the possibility of visiting an exhibition or only the possibility of teaching outside the classroom in a museum or in an archive. It is typical to mention field education as a voluntary option with reference to the current needs and opportunities of teachers and students. Teaching outside the main classroom[2] or computer room, respectively outside the school building is often defined as occasional, complementary, additional, or alternative. An excursion is exceptionally defined in the school curriculum as an integral part of teaching History, or even as a preferred and popular form of teaching for students. A specific way of recording field experience which is often shown is standardized wording which refers to the fact that History uses information obtained by pupils elsewhere. Therefore, it is assumed that pupils visit memory institutions individually and that it is possible to work with their experience in the framework of teaching.

A much more specific idea of the use of field education in History can be found by taking a deeper look into the educational content of the subject in individual school curricula. Within the monitored sample, specifically planned excursions with a defined destination appeared in only 16 school curricula (less than 11 % of the schools), see Fig. 4. This category also included schools in whose school curricula excursions did not appear systematically for all grades in which History is taught, but more or less randomly. Likewise, schools with specific goals of excursions and institutions outside the school building, but in whose school curricula these were not connected chronologically with the curriculum, but rather with a description of the characteristics of the subject or with a description of the strategy for developing key competencies, were included in this category. The number of examples of systematic and continuous inclusion of excursions into the History curriculum is only minimal. Those are schools where an excursion is planned in each year for a specific curriculum, sometimes also with a specific destination. Much like in Geography, the insufficient usage of the specifics of local environment in the teaching of selected historical topics is striking.



[2] a classroom which is assigned to each grade and in which most of the lessons for that grade take place

Fig. 4: Occurrence of field education in the form of excursions in the educational content of the subject of History.

Schools where history excursions are not included in History, but in a separate subject History Seminar, create a specific group. The History Seminar is a compulsory elective subject. Therefore it is a capacitive limited subject which is not taught within the whole grade. The subject usually focuses on deepening the curriculum and deeper knowledge of the region and it is a subject in which excursions can be represented in a much larger number and more systematically. A large number of forms of field education can be found in history seminars. In addition to the common excursion, walks and especially practical exercises can be found more often.

As for the school curriculum for primary schools, there is only a limited involvement of outdoor teaching in History. If the school curriculum already permits this possibility, then it is only as an occasional supplement to the teaching that takes place in the main classroom or other classrooms of the school otherwise. The school curriculum explicitly states that it is a supplement to teaching, depending on the current possibilities and will. Only 11 % of school curricula link the teaching of History in the field in connection with a specific subject or even with a specific location.

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THE POSITION OF FIELD EDUCATION IN THE CURRICULUM OF PRIMARY, SECONDARY AND TERTIARY EDUCATION IN SLOVENIA

Introduction

Fieldwork is a form of direct contact with the landscape, the subject of geographical study. As such, it is very important in research and teaching, i.e. in geographical research work and in the study of geography, as well as in learning geography at different educational levels.

In this paper, we want to present aspects of fieldwork as an educational process in primary, secondary and tertiary geographical education in Slovenia. To this end, we have set the following goals:

- explain the concept and purpose of fieldwork;
- evaluate the importance of fieldwork in the educational process;
- define the educational contexts of geographical fieldwork;
- present the representation of fieldwork at the level of primary, secondary and tertiary geographical education in Slovenia;
- on the basis of the research of the actual curriculum, describe the aspects of the preparation, organization and implementation of geographical fieldwork at the primary and secondary educational level in Slovenia and the views of the surveyed teachers on fieldwork.

The concept and purpose of fieldwork as an educational process

The Slovenian primary school syllabus for geography (2011) and the grammar school syllabus for geography (2008) present fieldwork as a set of learning activities that pupils or students perform outside of the classroom or schools. These are often excursions, observation of the landscape, research and discovering (for students) new knowledge. In Slovenian geographical literature, fieldwork appears as an antithesis to laboratory and cabinet work, “as a syntagm that we understand, use and that is not semantically questionable.” (Lipovšek, 2016, p. 7). Fieldwork is understood as a "didactic process in which students learn not only the laws of the landscape, but also develop the skills for direct research of the landscape, not only geographical, for the needs of geography, but general, interdisciplinary, for life" (Ibidem, p. 9). The Slovenian syllabi for history and biology (Kunaver, 2008; Vilhar, 2008) attach similar importance to fieldwork—it is “a component of teaching based on observation, research and recording of the landscape; a didactic procedure that may take place during normal lessons, on an excursion, on a school learning path, an educational walk, a science day, during so called school in nature weeks or another activity related to the prescribed school program” (Lipovšek, 2016, p. 9).

The importance of fieldwork

Starting from the definition of geographical science, fieldwork is a fundamental research method, as it enables direct contact with the landscape, which is the subject of study of this science. It is logical that this approach is consequently also important in geographical education. Field education is direct learning in a complex space, in which natural and social elements are systematically intertwined. Thus, it is the form of

learning/teaching work that is most experiential and holistic in the teaching of geography. It enables a multi-sensory perception of the entire space. In the time of individualization and digitalization, and thus a kind of distance of students from nature and the community, it is often necessary to re-teach them to contact the living environment at the basic level in order to understand it, live in it and work sustainably. Fieldwork thus gains further importance in its mission.

Educational context of fieldwork

The idea of field education coincides with key modern educational philosophies. One of the fundamental ones is the philosophy of experiential learning. According to Kolb (1984), experiential learning is any learning in direct contact with reality, a direct confrontation with phenomena, in which knowledge is created through the transformation of experience. Thus, according to Kolb, knowledge is the result of a transaction between social knowledge (objective knowledge) and personal knowledge (subjective experience) in the learning process. According to Kolb, learning is a cyclical process that comprises four stages: (1) concrete experience, which includes a holistic perception of the phenomenon / process, including the emotional dimensions, (2) thoughtful observation in terms of careful observation and impartial description, where is important how things / phenomena matter / processes work; (3) abstract conceptualization, which means the opposite of intuition, logical reasoning, systematization, generalization based on acquired experience; (4) active testing or experimentation, which means practical applicability and operation on the basis of acquired experience or checking concepts in new situations by obtaining feedback.

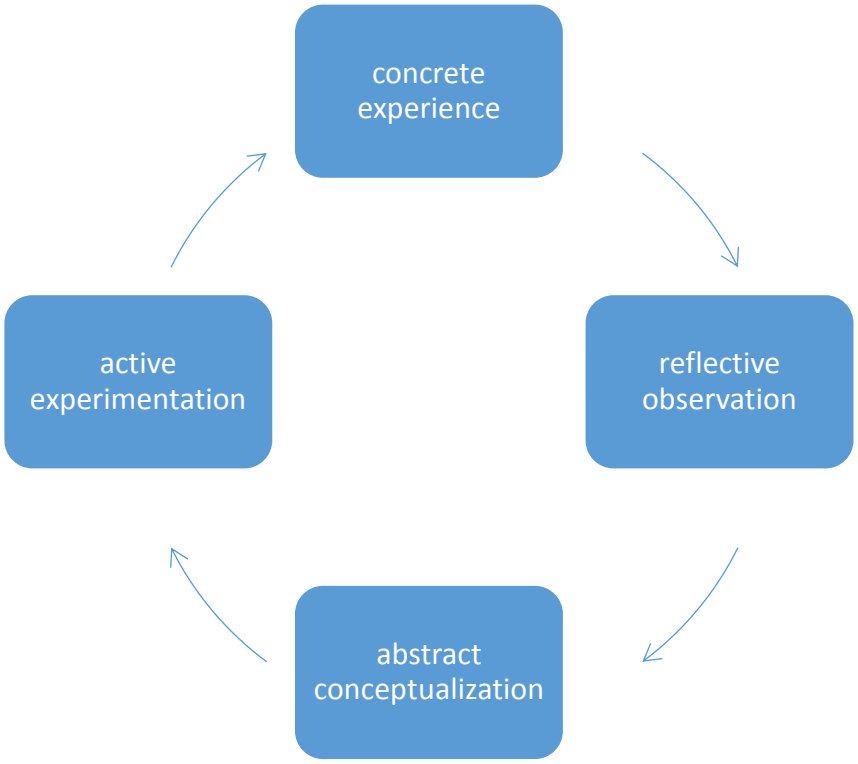

Figure 1: Kolb's learning cycle.

Fieldwork also coincides with the educational philosophy of research learning, which introduces individual elements of scientific work into the educational process (Ivanuš Grmek and Javornik Krečič, 2011, as cited in Kačič, 2013), as students through independent field research acquire (subjectively or even objectively) new knowledge, while also learning self-organization, managing their own learning and work, skills and abilities of lifelong learning. The philosophy of independent individual or collaborative research of students is close to the philosophy of project learning, the essence of which is a goal-oriented active solution of real (authentic) challenges / problems / thematic issues, where students participate in all phases of the process—from the preparatory phase to project work planning, the implementation of this and interpretation of the results, their dissemination and finally evaluation and reflection (Bezgovšek, 2019). Last but not least, the basic idea of fieldwork is also related to the philosophy of problem-based teaching, aimed at solving realistic problems that do not necessarily have an unambiguous answer. Problem-based teaching includes phases of problem perception, problem definition and formulation, problem solving planning and hypothesis setting, realization and verification of the problem plan or hypotheses and the phase of formulation and generalization of the solution of the problem (Bognar et al., 1993; as cited in Kokalj b.d.). Within this, special emphasis should be placed on the advantages that are manifested in higher thought processes, and especially in the development of creativity.

These educational philosophies are partly overlapping and interconnected (research learning can be organized according to the principle of project-based learning and includes a realistic problem question) and partly include certain specific characteristics or they can exclude individual elements from each other. In any case, the mosaic of the aforementioned

educational philosophies can be the source of creative ideas for the didactic organization and meaningfulness of geographical fieldwork. Furthermore, the active involvement of the student in geographical fieldwork supports the student's holistic (personal, educational) presence in a given moment and space, so it is also related to the philosophy of mindful learning (Shapiro et.al., 2006). It is essential to pay close attention to what is happening in the present moment (in oneself, in one's own learning process, within a specific geographical space) and the resulting self-regulation and potential change (oneself, one's own learning process, dealing with or in a geographical space).

If we look at fieldwork from the perspective of general modern educational guidelines, which emphasize the active involvement of the student to achieve quality educational outcomes, we can highlight the classification of fieldwork methods by Kent, Gilbertson and Hunt (1997), which distinguish between:

- observational fieldwork (requires mostly the presence of students, but not active participation; it is a relatively fast movement from one location to another, e.g., an excursion, where we see a large number of spatial elements and phenomena, but viewing them is superficial; work in this way is useful, for example, for introductory fieldwork; the effectiveness of observational fieldwork increases if students are more involved; in the case of observational fieldwork it is common to supplement students' activities with a worksheet or map where they respond to pre-set tasks with their own observations and knowledge);
- collaborative fieldwork (this is work in small groups; compared to observational fieldwork, the collaborative form should include the student's activity to a greater extent; the teacher often determines the activities and carefully controls the final analysis of the work, but can only help design a project and offer help and methodological orientation in the phases that follow; in the student-led project work, the teacher only encourages the group and advises on safety);
- observation with participation (it is a method of fieldwork in which the observer is part of a certain social life, thereby directly obtaining data on processes in a particular social environment; it is a "system of data collection in a specific period / time based on observation, listening and questioning people as they follow their daily activities, during which the researcher takes a role from their context and partially becomes a member of the group" (Lavrič & Naterer, 2010, p. 11); participatory observation is a method where students intensively participate in the activities of an organization, gaining a deeper insight into their reality (e.g., humanitarian, commercial, governmental organizations, local and national environmental agencies) (as cited in Simonič, 2020).

The position of fieldwork in the Slovenian geographical curriculum

Until the curricular renovation in 1998, fieldwork in Slovenia was not included in curricular documents as a compulsory component of lessons. If it was carried out, it was in the context of excursions, science days, outdoor camps, outdoor schools and the like. Nevertheless, Slovenian geographers devoted themselves to this form of work in schools even before it was included in curricular documents, and as a result, various manuals and publications were created to support the implementation of fieldwork. Among them were the first, e.g., Kert 1981, *Geography 3: Geographical Features and Contemporary Problems of Slovenia and Yugoslavia 1, Getting to Know and Studying the Home Region*; Geographical Review 1989: a special issue of the *Journal for Geographical Education*, dedicated to the research tasks of students or field students; Kunaver et al. 1989, Home Province. Fieldwork as a supplement to geography lessons before its introduction into curricular documents is mentioned by several other authors in Slovenia, e.g., Zgonik (1995), who refers to it as field research work and places it among additional pedagogical-didactic work, sees it as a source of developing creative thinking (Lipovšek, 2016). As Brinovec (2004) writes, in the 1970s, Medved also emphasized the importance of fieldwork for gaining knowledge through observation from the home environment, which is a source of geographical knowledge for him. With the curricular renovation in 1998, fieldwork was officially included in the curriculum of primary and secondary schools in Slovenia. In the years after the renovation, it also became mandatory for national tests in primary school and at the gymnasium matura. Students who choose geography as an elective subject obtain 20% of the grade of the subject from the completed fieldwork. When the 'national tests' were renamed into the 'national examination' in 2005, the external examination of fieldwork in primary school was abolished. In Slovenia, fieldwork is thus explicitly defined in the curricula of primary and secondary schools as a compulsory component of lessons based on the opinion that students develop knowledge in fieldwork that they do not acquire with other educational methods (Polšak, 2008; Kolnik, 2011; as cited in Lipovšek, 2016).

Expert bases for the support of the introduction of the aforementioned curricula by the National Education Institute of the Republic of Slovenia also emphasized the importance of including active learning methods in geography lessons, which include methods and forms of fieldwork. In the period of introducing the curricula, efforts were made in the first Slovenian written reflections on the problem of fieldwork assessment and in the formation of the assessment pattern, which was especially related to the formation of matura grades (Lipovšek, 2016).

In the book *Slovenska šolska geografija s pogledom v prihodnost*, which is one of the key works in the field of school geography less than ten years after the aforementioned curricular renewal, Kunaver emphasized the importance of fieldwork (2005), relied on the International Charter on Geographical Education and specifically mentioned Haubrich, who saw the disadvantages of teaching geography in the lack of fieldwork and experimentation (2005, p. 90 in Lipovšek, 2016). Kolnik (2006, as cited in Lipovšek, 2016) expanded her professional reflection on the didactic value of learning geography outdoors by emphasizing the importance of thinking about the meaning, purpose and value of fieldwork, as well as

the key criteria for its preparation, evaluation, and on the elements for didactic analysis of the components of educational work outdoors.

Representation of the topic of (educational) fieldwork in Slovenian research

In the period from the publication of the aforementioned papers to the present day, several final student research works at various educational levels (from diplomas to master's degrees) in Slovenia were dedicated to fieldwork. Thus, a review of Slovenian research works (Simonič, 2020) which include the key phrase 'fieldwork' between 2008 and 2020, shows that twenty-one final works dedicated to this topic were written during this time. Most authors support fieldwork and note positive results in doing so. At the same time, they point out some possible negative aspects, which, in the opinion of most authors, can be eliminated, especially with good preparation. The final works related to fieldwork mostly deal with the first and second triad of primary school and occasionally fieldwork in gymnasiums, as well as with the general aspects and attitudes of teachers towards fieldwork in geography lessons. The number of final works undoubtedly testifies to the understanding of fieldwork as an important element of geography lessons.

In the continuation, we will highlight the approaches of two Slovenian authors to the methodological classification of geographical fieldwork. In the 1990s, Brinovec (1997) developed a set of methods for fieldwork in geography lessons. He has already understood fieldwork as a basic form of geographical teaching and mentioned several of its advantages, such as greater work efficiency, motivating and activating students and the possibility of differentiating between students. He classified the fieldwork methods according to the prevailing work process and distinguished between direct observation methods, drawing methods, measurement methods, sample collection methods, interview and survey methods, and data collection and mapping methods. He understood the method of observation as a fundamental geographical method that needed to be learned gradually. According to Brinovec, students learn inductively, so they come to general conclusions from an individual case. This method is performed independently or combined with other methods (drawing, collecting samples, surveys, etc.) and learning forms (working in pairs, groups, etc.). He understood drawing methods as drawing a sketch or panoramic drawing, emphasizing the importance of the systematic introduction of students. Brinovec's measurement methods represent a bridge between theory and practice, which could be understood as a bridge between (merely) describing and exploring space. In this framework, students learn to handle instruments for measuring and to interpret results. In the method of collecting samples, Brinovec emphasizes the collection of rocks, but in geography it is also useful to collect samples of other natural elements, and last but not least, social elements (newspaper clippings, postcards, etc.). The collections of these enable easier contact with reality already at school or an easier transfer and use of knowledge in a real environment. Interview and survey methods are particularly important in the context of social geography, but they can also be linked to physical-geographical or complex environmental topics. As a

method of data collection, Brinovec understood in particular the independent acquisition of data (without measuring instruments), e.g., counting certain elements (number of visitors, cars, etc.). Brinovec understood the mapping method as recording and spatial representation of geographical phenomena on maps (Brinovec et al., 1997; as cited in Simonič, 2020).

On the basis of Brinovec's classification, a collection of concrete work procedures was gradually formed, especially for physical-geographical educational fieldwork, which appear in several Slovenian research works as examples of work with pupils, students, other visitors on learning paths or in classrooms in nature (as Radinovič, 2020; Jus, 2019). In the period from 2005 to 2020, Vovk Korže worked intensively in the field of collecting, developing and describing methods (educational and research) of fieldwork with her colleagues (e.g.,Vovk Korže, 2007).

Along with Brinovec, Lipovšek (2016) also considered the methodology of fieldwork for educational purposes. He looks at fieldwork from the teacher's practical point of view, when he concludes that fieldwork in geography lessons can be used as:

- means (in this case, students, according to the teacher's instructions in the field, only perform the assigned tasks, for example collect samples, count certain elements of the landscape, record information or remember them, followed by an analysis of what they acquired, including a final report, poster, role play, etc.; in such a case there may be a lack of understanding of the bigger picture or more complex geographical learning objectives may not be achieved);
- the form of teaching (in this case the teacher transfers comprehensive learning activities from the classroom to the landscape, with special preparation of students, as this also lays the foundation for their future outdoor work (for example how to prepare, what tools to take with themselves, what unpredictability can await them, how much time they spend on such an activity, etc.);
- cognitive method (includes a comprehensive research process by students: identification and definition of the problem, formation of assumptions and possible solutions, elimination of irrelevant information, collection of information, storage and archiving of materials, data analysis, reflection on results, confirmation or rejection of assumptions and creation of new assumptions and a new research circle).

Lipovšek (2016) proposes field assignments according to their purpose, current pedagogical philosophy, leading aids or methods in fieldwork, based on general educational guidelines and the needs of geography as a science and a school subject. Highlights include:

- regionally oriented field tasks (field related to the study of the integrated regional environment);
- mapping and surveying (emphasizes geographical skills that are prescribed in the curriculum for primary and secondary schools and can be conducted in a hands-free or computer form);

- computer-assisted field tasks (related to the use of, for example, a computer interface that allows the connection of various sensors (e.g., GPS, thermometer, etc.) and measures and stores measurements in the form of graphs and tables at intervals);
- virtual fieldwork (motivational tool, source of information for lessons and means for acquiring new knowledge, where the student uses information technologies to achieve goals);
- self-assessment-oriented fieldwork (responsibility for results is assumed by the student).

Fieldwork in primary and secondary geographical education in Slovenia

The current syllabus for geography in primary school (Kolnik et al., 2011) already defines the subject in the introduction in such a way that it answers current environmental questions and thus develops the student's interest in the domestic landscape. The syllabus for grammar schools (Polšak et al., 2008) also defines geography as a subject that helps students acquire knowledge, abilities and skills to understand the immediate and wider environment. The authors of both syllabuses attach great importance to outdoor lessons, as they believe that such a form of teaching enables students to learn more effectively. They also believe that fieldwork is a good example "for the development of procedural and transferable lifelong knowledge, which is common to all school subjects and with which students acquire new knowledge, improve and disseminate it, and use it to gain an important place in their knowledge of the homeland" (Kolnik et al., 2011, p. 5).

The syllabus for geography in primary school (Kolnik et al., 2011) includes three levels of learning objectives: *general learning objectives* define the guiding orientations of the entire subject in primary school, *stage learning objectives* define broadly defined objectives of the entire individual class, and *operational learning objectives* are concretized goals within each of the contents. Already in the general objectives of the subject, the syllabus highlights the collection and use of resources that students acquire through field methods (drawing a panoramic picture, mapping, etc.). Fieldwork is also directly recognized in the general objectives that define the study and research of the home region and Slovenia. If we look at the syllabus for primary school by grades, we can see in the sixth grade that one of the first stage learning objectives defines a student's ability to use different ways of collecting and displaying geographic information. The objective is generally defined, but as such it also includes fieldwork methods. According to the stage objectives, the students in the sixth grade should orient themselves on the map and, with the help of this, move healthily in the landscape during fieldwork and excursions. The stage learning objectives also define the use of geographical research methods, including observation, measurement, interview, mapping, etc. on the field. The operational objectives for the sixth grade, which are directly related to fieldwork, are:

- orient themselves and move with a compass and a map;

- as part of an interdisciplinary excursion, visit at least one natural geographical unit in Slovenia;
- acquire a spatial perception of the home place, province and country (Kolnik et al., 2011).

In the seventh grade, less fieldwork is explicitly covered in the objectives compared to the sixth grade, as the content is the regional geography of Europe and Asia. Thus, we can find only one stage objective which partly refers to fieldwork, more precisely to an excursion—its focus is on the interdisciplinary use of the acquired knowledge, which the student deepens and upgrades with an excursion to be carried out in a selected geographical unit of Slovenia. Among the stage objectives in the eighth grade, we find the goal "uses basic methods for collecting geographical information", which can be linked to fieldwork, and among the operational goals, we do not find any that would be directly related to fieldwork. In the ninth grade, the syllabus determines the subject goals related to Slovenia. It anticipates the training of simple methods for fieldwork on the example of the home region. Students should deepen their knowledge in an interdisciplinary excursion in one of the Slovenian geographical units. Among the operational goals in the ninth grade, one operational goal in the field of rocks is concretized—students should use the findings from the fieldwork to evaluate the importance of the surface and rocks for humans (Kolnik et al., 2011).

The standards of knowledge in the syllabus for primary school also include fieldwork, e.g., orientation in nature with various tools and independent geographical research. In addition, the standards substantiate the norm of an annual excursion to one of the Slovenian regions (Alpine, pre-Alpine, Dinaric, Subpanonian and Submediterranean regions), where students use their acquired knowledge on an example in the region (Kolnik et al., 2011). Content organization of excursions or their itinerary depends on the annual plan of an individual school, but the usual organizational trend is that students in each class should visit a different region in Slovenia. Often the geography teacher is the one who prepares the implementation plan of school excursions, the latter being mostly interdisciplinary, and the lessons for them are drawn from the school fund hours and not from the hours of an individual subject according to the official curriculum. *The didactic recommendations* of the syllabus for primary school define various teaching methods and work procedures, including fieldwork and excursions. First of all, the development of students' ability to use geographical research methods, such as observation, measurement, survey, interview, is emphasized. The importance of experiential learning is also defined, which enables students to develop skills for the above methods with the help of research devices and aids. The recommendation suggests that fieldwork should be organized several times in regular classes, the implementation may be defined differently in time, the same applies to the distance of the learning location outside of the classroom. The key criteria for the suitability of learning locations for outdoor geography lessons are given: “reachability (economy, safety), methodological diversity and accessibility of teaching materials” (Kolnik et.al., 2011, p. 31). From the *chapter of recommended activities* in the syllabus, we extracted those that are directly related to fieldwork (Kolnik et al., 2011, p. 33-34):

- visiting the observatory and observing the sky with a telescope or binoculars;

- drawing a general or thematic map;
- visit to a surveying company;
- orientation in nature with map and compass, clock, shadow, etc. (hidden treasure hunt);
- measuring temperature, precipitation, clouds, wind, river, traffic, etc.;
- guiding an excursion;
- surveying, traffic counting;
- visiting a museum, exhibition or show and writing a report.

In primary school, in addition to the compulsory subject of geography, there is also the *optional subject of Life on Earth (eighth grade) and Exploring the Homeland and Protecting its Environment (ninth grade)* (Kunaver et al., 2004). While in the eighth grade the emphasis is on learning about the way of life of people in different environments around the world, such as tropical, desert, monsoon, earthquake, volcanic, mountain, polar and Mediterranean areas, in the ninth grade the emphasis is on field research of natural geographic features (geological structure, relief, climate, soils, vegetation, waters), socio-geographical characteristics of the home place (population, settlements, economy, supply, transport), environmental protection (study of landfills and environmental protection measures, study of changes in the landscape created under human influence) and the protection of the natural and cultural heritage of the homeland. Elective contents of this course are also related to the preparation for the *geographical competition*. The latter takes place under the auspices of the Institute of Education of the Republic of Slovenia and includes both theoretical and fieldwork. Preparation for a geographic school competition is thus an important motivation for organizing field exercises in primary school.

Similarly to the syllabus of geography for primary schools, *the syllabus for geography for grammar schools* (Polšak et al., 2008) in its *general objectives* defines the orientation in nature with the help of various aids as one of the first objectives. Students should learn the correct use of geographical methods and work techniques and related aids in geography lessons. Students should also gain the ability to directly and indirectly observe factors, processes and phenomena in the landscape. A specific general objective defines excursions at the end of which students are expected to write a report. Among the key competencies that should be developed in the teaching of geography, a special set of competencies is defined—related to fieldwork, i.e. research and understanding of geographical processes and relationships and their spatial dimensions. In the syllabus for teaching geography in grammar schools (Polšak et al, 2008), *the operational objectives* are divided into thematic sections. They are listed as mandatory or as recommended activities. Within the framework of general geography, we can find the most operational goals that are directly related to fieldwork. Thus, for instance, the planned use of a geological map as an aid in the fieldwork. Students are also expected to collect rock samples and make basic experiments with them to determine the type of rocks. When examining the soil, students should dig out the profile of the soil, determine its properties and observe the horizons. Students are expected to observe weather, cloud cover, wind, measure temperature, rainfall, etc. in the climate section. It is also planned to photograph surface forms in their environment or on an

excursion, photographing a watercourse from the upper to the lower stream. In the chapter on waters, the planned field activities are related to measuring the properties of a watercourse or the water itself. In the field of socio-geographical topics, the field activity of traffic counting and the analysis of the obtained data are defined. The thematic sections of the geography of the world and Europe do not envisage any operational objective that would be directly related to fieldwork. In the thematic section of Slovenia, some operational objectives from general geography are repeated, but within the specific Slovenian regional environment (e.g., students use fieldwork to determine the properties of rocks and present the findings). Within the socio-geographical chapters of Slovenia, selected groups of the population are to be surveyed or traffic counted and an analysis conducted along with a report (Polšak et al., 2008).

There is also a *special chapter in the syllabus for geography in grammar schools (ibid.) that defines the objectives and recommended activities for fieldwork*. Thus, not all recommended fieldwork is defined by individual years and content sets. Let us highlight some examples of recommendations for the implementation of fieldwork, which we did not find among the operational or general objectives of the syllabus, but are covered in this chapter (Polšak et al., 2008):

- students plan and carry out fieldwork related to a geographical problem;
- students carry out an exercise to determine the level of air pollution (detection of air pollution by lichens, with devices for determining the content of particulate matter in the air);
- students research the problems of people in rural areas by means of a survey;
- students map the function of buildings in a certain settlement.

Didactic recommendations for geography in the gymnasium syllabus attach special importance to the use of information and communication technology, also for fieldwork, where various technical aids and digital cameras come into play. The recommendations also suggest the mandatory organization of at least one full-day excursion, where students use different teaching methods of direct observation. Didactic recommendations envisage the implementation of even shorter field exercises, as they supplement the goals that cannot be achieved in the classroom. They also emphasize the positive effects of fieldwork on the development of social goals and goals connected to values. The record in the syllabus states that students who do not take the matura exam in geography have relatively fewer field exercises, but the scope of fieldwork and laboratory exercises in geography lessons should depend on the teacher's professional autonomy and school location.

For the purposes of conducting the grammar school matura, there is the *Subject examination catalogue for geography* (Gaál et al., 2019), which pays special attention to fieldwork, as it represents 20% of the examination grade. It thus defines the individual objectives of field exercises in three sets: natural-geographical, socio-geographical contents of the exercises and exercises with the contents of sustainable development. Among the natural geographical contents we find basic goals, such as orientation and movement in nature with the help of a map and compass, and more demanding ones, such as measuring

climatic elements and their analysis and measuring the physical and chemical properties of water. Among the socio-geographical contents of the exercises, various forms of field data collection (mapping, sketching, surveying), analysis, synthesis and design of the final product (e.g., tourist brochure, proposal of possible traffic improvements) are suggested. The contents of sustainable development are defined through two main goals. The first concerns the collection and analysis of data on drinking water supply, municipal infrastructure, type of heating, etc. and connects the obtained data to the attitude of the population towards the environment. The second concerns the mapping of illegal dumpsites, the inventory and assessment of the size and type of waste. The content of excursions within geography as a matura subject is carried out according to the objectives defined in the Subject examination catalogue for geography (Gaál et al, 2019) in the chapter on the geography of Slovenia.

The Catalogue of knowledge for secondary professional education (1998) in the chapter on *guiding objectives* of the course includes the objective related to the skills and abilities to handle simple tools for fieldwork (e.g. inclinometer, thermometer), collecting geographical information, orientation and movement in the landscape with the help of a compass and a map. Special mention is also made of field exercises and excursions, in which students are supposed to identify geographical processes and phenomena through direct contact with the landscape. The *operational objectives* of the course are divided into thematic sections. In the section Man and landscape, we find a goal that envisages the use of simple methods of fieldwork as a way of obtaining geographical information and orientation in the landscape with the help of a map and the sun.

The Catalogue of knowledge for Secondary professional education (1998) states in *didactic-methodological recommendations* that the choice of methods and forms is left to be determined by the teacher, but the forms and methods for students should be active, simple, convincing and interesting in a way that brings students closer to the geographical content. As a special feature, we can find a recommendation for direct observation and lessons in a real environment (excursions and fieldwork). Within these, students should learn about research methods such as: observation, orientation, mapping, measurement, reporting, etc. Excursions are organized according to the guidelines of the Catalogue of knowledge (1998) in Slovenian regions, where the main goal is to connect students' knowledge in theory with practice. This should make it easier to understand and recognize cause-and-effect processes and phenomena. Excursions are interdisciplinary with an emphasis on the fields of geography, history, sociology, mother tongue, art, etc.

As in secondary professional education, the *Catalogue of knowledge for vocational education* (1998) leaves the choice of teaching methods and forms to the teacher. Fieldwork and excursions are mentioned as an opportunity to conduct lessons in a real environment. In this way, we enable students to increase the experiential effectiveness of lessons. At locations in the near or far vicinity of the school, students should become acquainted with the use of simple research methods, thus most easily connecting theory with practice and identifying cause-and-effect relationships between processes and phenomena. Excursions are supposed to be organized in Slovenian regions and to be interdisciplinary.

The analysis of syllabuses for primary schools and different directions of secondary schools show that operational goals directly related to fieldwork are rare and mostly focused on physical geography, but it should be added that the design of general and stage or guidance objectives is so broad that it allows for the integration of substantively and methodologically diverse fieldwork. The latter is clearly defined in all syllabuses, which is an important basis for teachers to carry out lessons outside of school. Also, all syllabuses anticipate full-day excursions to Slovenian regions. However, since these are definitions at the general level, which are only rarely reflected in the operational goals with which teachers work most directly, it can be shown in reality that the frequency of fieldwork depends mainly on teacher motivation (with the exception of mandatory fieldwork within the matura exam), which can lead to a low realization of it.

In addition to direct geography lessons and excursions, there is also space for the realization of fieldwork in schools in Slovenia during the *days of activities*. Thus, four cultural days, three science, three technical days and five sports days are included in the primary school curriculum annually (Primary school curriculum, 2020). Consequently, e.g., orienteering hikes are often carried out as part of sports days, physical-geographical fieldwork as part of natural science days, aids are made for field exercises as part of technical days, and on cultural days there is also space for socio-geographical field exercises. In addition, or as a realization of school days of activities, schools also carry out *weeks of schools in nature* in the public institution Center for School and Extracurricular Activities (CŠOD), the basic purpose of which is the promotion of learning in nature or fieldwork. Thus, there are 26 CŠOD homes in Slovenia, which implement various programs within which geography has an important place (CŠOD, 2020).

Fieldwork in tertiary education

In the Republic of Slovenia, the study of geography at the tertiary education stage takes place at three universities: the University of Ljubljana (Faculty of Arts, Department of Geography), the University of Primorska (Faculty of Humanities, Department of Geography) and the University of Maribor (Faculty of Arts, Department of Geography). In all three departments, there is a study program at two levels: the first level, which lasts three years and which represents a general program of geography, followed by the second level, which lasts two years and in which students are divided into pedagogical and non-pedagogical programs. In our case, we analyzed the entire vertical of the pedagogical study programs, which are two-subject in all three departments.

It follows from the concept of geography that the subject of its study is the landscape. The most primary and direct way of studying the landscape is through direct fieldwork (Rhoads, Wilson, 2010, pp. 27-28), so the inclusion of these forms in the study process is one of the key factors of the students' success in perceiving the landscape.

Data on the representation of fieldwork were summarized according to the curricula published on the websites of all three departments (Study program of the Department of Geography Ljubljana, 2020; Study program of the Department of Geography Primorska, 2020; Study program of the Department of Geography Maribor, 2020). At the departments of geography in Koper and Maribor, the number of field hours in individual subjects is explicitly indicated, while at the Ljubljana department this cannot be deduced from the syllabus, as only lectures, seminars and exercises are listed as a form of activity. As a result, we obtained data on fieldwork hours from the department administration. In our analysis, we state the structure of the representation of fieldwork as a whole, by levels and by years.

At the Department of Geography of the Faculty of Arts, University of Ljubljana, the first and second levels of study are carried out within 79 study units: 46 at the first level and 33 at the second level. Of these, 11 elective learning units are at the first level and 10 elective learning units at the second level. Fieldwork is carried out in 18 learning units at the first level and in 12 learning units at the second level (pedagogical program). At the first level, fieldwork totals 190 hours, which is 7.7% of all hours. 40 hours fall in the first year (in this year fieldwork represents 6.2% of all hours), 125 hours in the second year (17.4%) and 25 hours in the third year (3.9%). Fieldwork in subjects mostly comprises between 5 and 15 hours, only in the subject Geographic fieldwork the number of hours is 75 (100%). At the second level - pedagogical program, fieldwork takes place in a total of 30 hours. All hours of fieldwork at the second level are carried out in the framework of the subject Organization and implementation of excursions and fieldwork in the first year. In the entire vertical, fieldwork for pedagogical students amounts to 220 hours or 5.8% of all hours.

At the Department of Geography of the Faculty of Humanities at the University of Primorska, the first and second levels of study are carried out within 40 study units (24 at the first and 16 at the second level). Of these, there are a total of 13 elective study units (10 at the first level and 13 at the second level). It can be deduced from the syllabus that at the first level fieldwork is carried out only in elective subjects (Biogeography, Field Seminar Istria, Field Seminar Western and Central Europe, Field Seminar Southeast Europe, Field Seminar Slovenia Abroad) for 30 hours in each subject. At the second level, the amount of fieldwork is not explicitly evident from the syllabus. In the entire vertical, the study units have a total of 150 hours of fieldwork, which represents 6.3% of all pedagogical obligations (if the share is recalculated only to the first level, this share is 10.4%). In all four field seminars, fieldwork represents 67% of all pedagogical obligations within these study units, and in the subject Biogeography 40%.

At the Department of Geography of the Faculty of Arts, University of Maribor, studies are conducted in a two-subject program at the first level within 19 compulsory study units and nine elective study units, from which students choose five study units. At the second level, there is a two-subject pedagogical study within 16 compulsory study units and 20 optional study units, of which students choose three. A total of 74 learning units (28 at the first level and 46 at the second level) were included in the analysis. At the first level, fieldwork is present in 13 compulsory and 9 optional study units, i.e. a total of 22 study units (79% of all study units). At the first level, out of a total of 1065 hours, fieldwork is present in the

amount of 135 hours (12.7%), while at the second level, out of a total of 1167 hours, fieldwork is represented by 177 hours (15.2%). In the subjects of both levels, fieldwork is represented by 14.0%. In the first year of the first level, 8.2% of fieldwork hours are among the compulsory subjects, in the second year 5.7%, and in the third year 14.0%. Among the elective subjects of all three years, this share is 22.2%. The contents of fieldwork in individual subjects at the first level are most often related to the adoption of research methodology in the region at physical and social geography. Students conduct research in Slovenia in the framework of individual subjects, and the results are often presented in the form of posters or articles. Students are introduced to work in groups. At the second level, fieldwork is carried out in 4 compulsory study units and in 8 optional study units, i.e. a total of 12 study units (26% of all study units). This share is expected to be lower at the second level due to the nature of the study orientation: in the curriculum there are not only learning units that are substantively related to geography, but also those that are related to pedagogy, didactics and psychology. In the first year of the second level, the share of fieldwork is 14.3%, and in the second year 8.2%, while in elective subjects this share is 17.9%. Among the subjects at the first level, the highest number of hours of fieldwork is in the compulsory subject Regional Geography of Europe (15) and in the optional subject Tourist Regions in Europe (15), while in most other subjects there are only 5 hours of fieldwork. At the second level, Interdisciplinary Observational Practice (30 hours), Pedagogical Practicum Geography 1 and 2 (16 hours each) and the optional subjects School in Nature (15 hours), Fieldwork in geography lessons - physical geography (10 hours) and Fieldwork in geography lessons - social geography (10 hours) are compulsory among the subjects that stand out in terms of the number of hours of fieldwork. In the entire vertical, there are a total of 312 hours of fieldwork in the study units, which represents 14.0% of all pedagogical obligations (12.7% at the first level, 15.2% at the second level). Students at both levels also participate optionally in *geographical youth research camps*, which take place in the area of north-eastern Slovenia. During the week, they research selected geographical processes and get acquainted more in depth with individual field techniques of geographical research. The obtained results or knowledge of methodological approaches are also used by students in the preparation of master's theses. Another optional way of introducing students to fieldwork is also *research projects financed by the Scholarship Fund of the Republic of Slovenia*.

After a formal review of the representation of fieldwork in the syllabus, we cannot help but to get the impression that there is not enough practical fieldwork in which geography students would come into contact with their subject (landscape) in the most basic way. On the other hand, less fieldwork also means poorer opportunities for direct acquaintance and adoption of field research methods.

Realization of fieldwork in Slovenian primary and secondary schools

Despite the fact that the documentary bases of geography teaching in Slovenia support and encourage fieldwork at school, and geography students also have fieldwork in study curricula, we wanted to gain insight into the actual curriculum of primary and secondary schools, i.e. how much fieldwork is actually implemented in schools and what opinions geography teachers have about it.

To this end, we conducted an open survey among ten geography teachers in primary and ten geography teachers in secondary school. The open nature of data acquisition was conditioned by a smaller sample of teachers, as they had to answer several questions independently and extensively. The questionnaire contained general demographic questions and seven open-ended or semi-open-ended questions to test teachers' thoughts on fieldwork, how familiar they were with fieldwork, how often they did it, what the advantages, disadvantages and obstacles they see in the realization of it, to what extent they realize it in cooperation with teachers of other subjects and in which contents, to what extent they realize it in cooperation with external institutions and in which contents. At the same time, we also wanted to gain insight into the actual contents, methods and time placements of fieldwork in the included sample of teachers.

The survey was conducted in the 2019/2020 school year. The average age of respondents teaching in primary school was 44.5 years, and the average length of work experience was 17.6 years. Among the surveyed primary school teachers, 20% completed post-secondary studies and 80% completed higher pedagogical studies. 60% were women and 40% were men. 20% of respondents teach only geography, while the rest combine geography with at least one other school subject (mostly history, followed by pedagogy, sociology, German and English). On average, they have 20 hours of classes per week. If they teach geography in all classes, they have one hour in the sixth, two hours in the seventh, an hour and a half in the eighth, and two hours of geography a week in the ninth grade. In addition to the compulsory geography lessons, 30% of respondents also carry out another geographical activity of interest, or additional hours of geography for the gifted, or a geographical elective subject Research of the home place and protection of its environment or elective course Tourism Education.

The average age of respondents teaching in secondary school was 53.1 years, and the average length of work experience was 23.3 years. All have completed higher education in geography, and two also have a master’s degree in science. 70% were women and 30% were men. 70% of the surveyed secondary school teachers teach only geography, and 30% combine the latter with another school subject (history, sociology or social sciences). 80% of them teach at a general grammar school and 20% at professional secondary school programs. On average, they have 20 hours of classes per week. If they teach in grammar school classes, they have two hours of geography in the first year, two hours in the second, two hours in the third, and in the fourth year the number of hours of geography varies from school to school, as it is the year of preparation for matura. Allocation of additional hours from the school’s fund of hours results in some schools having three and others even four hours of geography per week. In the included professional secondary school programs, geography is integrated into the subject of Social Sciences together with history and

sociology, which share 132 hours per year in one year. Only one of the participating secondary school teachers runs a geographical activity of interest of one hour per week.

Fieldwork in primary school

60% of the surveyed primary school teachers of geography stated that they were sufficiently acquainted with fieldwork during their geography studies. When evaluated with a score of 1 to 5, with five representing the highest level of familiarity, they chose a rating of 4 on average.

60% of them state that they were best acquainted with fieldwork in the study subjects of social or physical geography or in field excursions of regional geography, of which 30% also mention subjects related to the didactics of geography and 20% to pedagogical practice in schools or related activities (e.g., participation in a geographic school or international study competition).

One of the respondents never does fieldwork, but would like to do it, 60% of them do fieldwork only occasionally. In the implementation of fieldwork, they perceive various advantages—among the highest evaluated were the following:

- that fieldwork connects learning in the classroom with real life, that it is about developing practical useful skills;
- to enable genuine knowledge of the natural and cultural heritage, genuine contact with the landscape, work in the landscape or direct observation;
- to enable concrete physical and mental activity of students and the handling of various aids;
- that it is motivating for students and affects their relaxation, since the time they spend outside of school is not so restrictive.

In addition to the above, teachers mention the advantages of deepening existing knowledge through fieldwork, improving spatial perceptions, including various “measurement” perceptions, the orientation, strengthening environmental and national awareness, that fieldwork leads to better interdisciplinary connections as well, that it is possible to more successfully involve weaker learners and, last but not least, that the knowledge acquired in the field is more permanent.

Among the shortcomings of fieldwork, the surveyed primary school teachers most often state the number of students in the class or related administrative requirements—according to the current norm, groups of more than 15 students must have an additional accompanying teacher when leaving school. They see an important shortcoming in the fact that fieldwork requires more time (from preparation to implementation and analysis), but in their opinion the syllabus is already overloaded with content and it is necessary to "rush to deal with the material." They also mention the lack of appropriate aids, dependence on weather conditions, disinterest of (some) students, difficulties with including students with special needs. In only one case was the problem of the location of the school highlighted,

namely in the case of a typical city school, where a half-hour walk to the first water stream is required. Individuals (but with low ratings of importance) also mentioned as a shortcoming the problem of superiors' understanding for the organization of fieldwork and their own qualifications.

When we asked the respondents about the obstacles to the implementation of fieldwork, in several cases they again stated the already described shortcomings of the fieldwork. In their opinion, the highest rated and most frequently mentioned obstacle is of a bureaucratic nature (ensuring the protection of students, which requires the preparation of a safety plan and the provision of companions, followed by the substitution of participating teachers in their own classes, etc.). They see an obstacle in the financial constraints related to the purchase of equipment and the implementation of excursions.

90% of the surveyed primary school teachers carry out fieldwork in interdisciplinary cooperation with other teachers. They list a wide range of subjects: 50% biology or natural sciences (the most common contents of the connection are related to vegetation: fruit growing, hop growing, tree species, forest), 40% history (industries over time, architecture in the city, tourist attractions, important cultural heritage), 30% physics (energy sources, precipitation, slope, air pressure) and Slovenian language (cultural heritage, verses, proverbs, geographical names), 20% chemistry (rocks in Slovenia, water quality, use of chemical tools), technique and technology (drawing a floor plan and other plans, making fieldwork aids), mathematics (measurement, data processing), sports (movement in nature) and fine arts (drawing a panoramic drawing), as well as foreign languages (verses, proverbs) and computer science (data processing).

70% of participating primary school teachers also carry out fieldwork in cooperation with external institutions, citing the following examples: hydropower plants, the Agricultural Institute of Slovenia, tourist information centers, associations and tourist agencies, the Port of Koper, museums, e.g., Ecomuseum, museum of blacksmithing in Kropa, museum of Postojna Cave, centers of experiments in Maribor and Ljubljana, Environmental Agency of the Republic of Slovenia, libraries, statistical office, birthplaces of important Slovenians.

When we asked the participating primary school teachers to describe concrete examples of fieldwork, we found that in primary school, fieldwork is most represented in the sixth and ninth grades. In the sixth grade, the most frequently mentioned topics are: orientation with a compass, orientation with a map, measuring and calculating distances, describing the location of various points; observing the relief and determining the altitude, drawing terrain drawings and panoramic drawings. Mapping and identification of plant species were also mentioned individually. The aids for conducting field exercises are in accordance with the above and among them are the following: maps, compasses, inclinometers, keys for determining plant species and worksheets with instructions for students. Among the locations for fieldwork in the sixth grade the following were mentioned: school yard, urban surroundings of the school, nearby city parks and forests and excursions to different parts of Slovenia (the itinerary of school excursions depends on the annual plan of the school and varies from school to school). Fieldwork usually lasts from two to five school hours, in the latter case if it is the organization of fieldwork in the framework of excursions or days of

activities (science, sports, technical, cultural days). In the seventh grade, the contents of fieldwork are similar to that in the sixth, but they are also joined by observation and measurement of weather / climate elements, soil analysis and surveys. As a result, the keys to determining the soils, clouds, magnifying glasses, distilled water, shovels and so on are also mentioned among the tools. The time of individual fieldwork and its location are similar to those in the sixth grade. The situation in the eighth grade is similar to the seventh. The additionally mentioned content was waters. As the eighth grade follows the syllabus for the World's continents, the presentation of a short individual field exercise was interesting: students check the origin of products they buy in the household with an emphasis on determining whether they buy palm oil products, which relates to the problem of shrinking tropical forests, then look for alternative products that do not contain palm oil in nearby stores. In the ninth grade, the range of contents and goals of fieldwork is the most extensive. The contents, which also appear in the previous grades of primary school, are joined by searching, recognizing, comparing and analyzing rock samples; chemical and physical analysis of water, observation and sketching of river relief forms; traffic counting; mapping of the tourist offer, purpose of buildings and the like, to which the aids are adapted (various reagents, mapping legends, keys for determining rocks, etc.). The duration and location were defined similarly to previous classes.

Fieldwork in secondary school

Also in the case of secondary school teachers, 60% of them showed that they were sufficiently familiar with fieldwork during their studies, but the assessment of this satisfaction is lower than in the case of primary school (3.6). 50% of the respondents state that they were best acquainted with fieldwork in the study subjects of social or physical geography or in the field excursions of regional geography, 10% of them cite subjects related to the didactics of geography and 10% pedagogical practice in schools; we did not receive any data from the rest. 90% of respondents carry out fieldwork, and one respondent does not carry it out due to being relatively new at the job, but would like to carry it out.

The surveyed secondary school teachers state the various advantages of fieldwork, which they also mostly evaluate with the highest grade:

- fieldwork is the application of geographical theory in practice, it enables the development of the ability to observe the landscape and reinforce theoretical knowledge through experiential learning (e.g., we talk about climate elements, then students measure them themselves, compare values, analyze);
- only in the fieldwork do students largely learn the meaning of the learned knowledge; they get to better know and understand the processes in nature; they also find out for themselves what else they lack knowledge of, and they are also willing to search for what they are missing;
- motivation, greater activity and relaxation of students;
- developing spatial orientation;

- developing an understanding of the importance of preserving biodiversity, water purity or environmental protection;
- identifying adjustments of economic activities to sustainable principles.
- In addition to the above advantages, the respondents also mention the development of analytical thinking and various competencies (methodological, social, ICT), strengthening students' self-confidence through individual and team work, easier achievement of certain goals and linking content and subjects.

The disadvantages of fieldwork include:

- lack of time in terms of time-consuming overall implementation, the need to divide students into groups, to adjust the schedule and weekly workload of students (all this is problematic due to the amount of other content in the curriculum and the evaluation of work);
- frequent misunderstandings in the team, which is associated with the statutory accompaniment of students, which greatly hinders the implementation of fieldwork;
- lack of motivation of students in the field or more difficult discipline if someone is not interested in the task;
- the problem of lack of equipment or field aids.

Secondary school respondents also understood the shortcomings of fieldwork as obstacles to its implementation, but in addition to the above, they explicitly mentioned the problem of legislation and the feeling that fieldwork (objectively or from outside) is not considered equivalent to other work in the classroom, that it is considered less important (internal grades at the matura, obtained through fieldwork, are usually high due to the commitment of students, but this frequently leads to disapproval and misunderstanding from the other teaching staff). According to secondary school geography teachers, financial difficulties (purchasing aids, sharing hours, transportation) are also an obstacle.

60% of the respondents carry out fieldwork in combination with other subject areas (they mentioned natural sciences, especially biology and history and Slovenian language, as well as construction, tourism and ecology). 40% of the respondents do not have cross-curricular connections, which is more than was observed in the case of primary school, among them one respondent states that he would otherwise like to connect, but colleagues do not want to. With the exception of two respondents, secondary school teachers do not associate with external institutions in the implementation of fieldwork, which is significantly less than in primary school. Among the mentions of the participating institutions, the ones that offer accommodation were mentioned in particular—rural tourism, hotels, huts and centers of school and extracurricular activities (CŠOD). The mention of the Association for Technical Culture of Slovenia, which organizes research camps for students, was interesting.

One of the respondents was of the opinion that it would be great if Slovenia had the opportunity to arrange a geographical polygon, which would combine: the rock composition of the domestic environment, the wider environment related to Slovenia and specialties from around the world; pedological profiles of the domestic environment, the wider

environment related to Slovenia and specialties from the world; plant communities of the domestic environment, the wider environment related to Slovenia and specialties from the world, and a climate observatory. Such a training ground would greatly facilitate the implementation of fieldwork for schools. In Slovenia, there is a geographical training ground in Dole near Poljčane, where the emphasis is on the application of geographical knowledge for ecosystem land management in the scope of 1 ha for the purpose of plant self-sufficiency. The polygon accepts study groups of different ages, from the youngest to the elderly (Dole Learning Polygon, 2020).

When reviewing the descriptions of concrete examples of fieldwork, we found that fieldwork is most represented in the first, and especially in the fourth year, which is related to the matura examination and to obtaining a 20% share of the internal exam grade through fieldwork. In the first year, the most frequently mentioned topics were: digging and analysis of soil profile and determining their characteristics, where the set of methods and precision of implementation is higher than in the case of primary school (colour, structure, texture, reaction, moisture); measurement and analysis of physical (most often depth, width, velocity, flow, etc.) and chemical characteristics of water and measurement and comparison of climatic / weather elements. The necessary devices are various reagents and indicators, measuring devices such as hygrometers, barometers, air and water thermometers, anemometers, inclinometers, beakers, measuring tapes, maps. The most common locations are near the school or in the students' home environment. Individual fieldwork lasts from two to four hours. Similar topics were mentioned in the second year, but it can be seen that in some cases the content is more complex than in the first year (e.g., a comprehensive natural and socio-geographical study of the watercourse and its area, including identification of the flora and fauna, economic activities along the watercourse and their impact on the water status, determining the utilization of the watercourse and its potential, micro-relief forms along the watercourse, surveying the population about its relationship to the watercourse, determining geographical names related to the watercourse, etc.) Locations and duration of fieldwork are similar to those in the first year. In the third year, we noticed even more complex vegetation analysis, including inventory and determination of plant species in a small area of the forest or forest edge, determining the influence of soil, climate, relief, waters and humans on the distribution of vegetation, ecological characteristics of the area, making mini herbariums. It was also interesting to find out about the political-geographical field exercise related to civic education, which includes getting to know the Slovenian capital and state and the European institutions in it, as well as interactions with members of parliament. Again, in the third year we can find a similar duration of field exercises—from a few hours to a full day excursion and even several days within the so called research camp that can be conducted as part of secondary school electives. In the graduation year, the content density of fieldwork is the highest: orientation and calculation of distances, study of rock base and surface, drawing relief profile, determining soil properties, measuring climatic elements, studying waters, studying vegetation, counting traffic and making maps of intersections, tourism research, making tourist brochures, getting to know the city center with the help of an application, etc. Field suitcases, various measuring devices, compasses and maps, mobile phones and related applications are used.

Fieldwork is often carried out near the school, and occasionally as part of excursions and multi-day group camps, resulting in two school hours to a full day or even several days.

Conclusion

Fieldwork as a form of geographical education undoubtedly coincides with current educational contexts that support the authentic experience and active engagement of students, their multi-sensory and holistic learning. With this form of work, geography also has a high competitive value in the education system. Field methods and contents respond to the modern needs of the individual and the community and support sustainable activities in space. With all of the above, fieldwork is an increasingly important element of education.

Fieldwork has always been an important way of getting to know and exploring the landscape in Slovene geography, which was also reflected in the educational system. Nevertheless, it was not officially included in curricular documents until 1998 (Lipovšek, 2016). The analysis of the currently valid syllabuses for primary schools and different directions of secondary schools shows that the design of general and stage or guidance objectives are so broad that they allow the inclusion of substantively and methodologically diverse fieldwork and excursions. The latter is directly defined and suggested in all syllabuses, which is an important basis for teachers to realize lessons outside of school.

In addition to direct geography lessons and excursions, there is room for the realization of fieldwork in schools in Slovenia also within the so called days of activities. The curriculum of the primary school annually includes four cultural days, three science, three technical days and five sports days (Primary curriculum, 2020). In addition, or as a realization of the days of primary school activities, schools also carry out weeks of school in nature in the public institution Center for School and Extracurricular Activities (CŠOD), the basic purpose of which is the promotion of learning in nature (CŠOD, 2020).

Within secondary schools in Slovenia, especially grammar schools, the matura exam is an important incentive for fieldwork, as it includes 20% of the internal exam grade obtained through fieldwork. Geographical competitions for pupils and students, which consist of theoretical and fieldwork, also have an obvious influence on the implementation of geographical fieldwork. It should be added that only students who choose geography as a subject at the matura take part in the matura fieldwork, and geographical competitions reach only a minority of students or students who attend based on their interest and mentor engagement.

Tertiary education, the goals and contents of study programs that educate future geography teachers, play an extremely important role in creating the basis for fieldwork in schools. The latter and the implementation experience of fieldwork that teachers gain in the process of their own education are the basis for their later work in practice. Only 60% of Slovenian geography teachers are of the opinion that they were sufficiently acquainted with fieldwork in the framework of university education. Nevertheless, they undoubtedly perceive various

advantages and positive effects of fieldwork. Most often, they point out that fieldwork enables the connection of "theory with practice" through genuine contact with the landscape, which increases the perception of the useful value of knowledge, deepens it and makes it meaningful. It enables physical and mental activity and the development of several competencies (from spatial orientation to social competencies and handling various aids). At the same time, it has a positive effect on the motivation of pupils and students.

Unfortunately, geography teachers also face several obstacles in organizing and carrying out fieldwork, which means that there is less fieldwork in Slovenian schools than there could be. Podobnik (2011, as cited in Lipovšek, 2016) states why teachers avoid fieldwork:

- they feel insecure, thinking that they are insufficiently trained to prepare and carry out fieldwork;
- they doubt the effectiveness of fieldwork;
- they question the rationality of fieldwork, which requires a lot of time and material resources;
- they are in a dilemma which types of tasks in fieldwork are best supported or implement the syllabus;
- they feel that they are not able to relate sufficiently to the content and knowledge of other subjects;
- they ask how to develop general, sustainable, transferable lifelong knowledge through fieldwork;
- they do not have developed evaluation criteria;
- they do not have enough useful professional materials for the preparation of fieldwork.

In our research, at both levels of education, three key objective obstacles to the implementation of fieldwork were identified, namely:

- waste of time (which is related to the need for the implementation of a comprehensive syllabus, the nature of fieldwork, as well as the logistics of implementation, as it is necessary to organize the schedule, field attendants and find substitute teachers for their hours, etc.);
- administrative barriers (due to the norm of conducting classes outside the school, larger groups require additional accompaniment as well as the preparation of a safety plan, implementation adjustments in the team);
- financial barriers (transport, purchase of appropriate field equipment).

Regardless of this, geographical fieldwork is present in Slovenian schools. Shorter fieldwork is less common in primary schools than in grammar schools, where it is encouraged in particular by the matura exam. The reality is also the annual primary school interdisciplinary excursions to various Slovenian regions, which are usually fewer in secondary schools, but here are also organized outside the country. The content of field exercises as well as methodological approaches could be more diverse, so we believe that the Learning through Interdisciplinary Field Education project can be an important contribution in this area, which can also contribute to proposals that would facilitate the organization of fieldwork.

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THE POSITION OF FIELD EDUCATION IN THE CURRICULUM OF PRIMARY, SECONDARY AND TERTIARY EDUCATION IN SERBIA

Introduction

The teaching process has been increasingly shifting focus on the students' autonomy, training them in using different knowledge resources, connecting knowledge from different fields, practically applying knowledge in solving everyday problems and creating conditions for more diverse and creative student participation in the teaching process. Since one of the key goals of the educational process is to empower students for self-education, the preferred forms and methods of work are those that contribute to a more active approach of students towards the teaching content, establishing a closer connection between the knowledge acquired in classrooms and real life challenges and situations. In this way, students are given opportunities to get to know and study their natural and social environment in different settings.

The objective of the fieldwork experience is to connect the course content to a practical application in classroom teaching. The students will be able to identify and observe/use instructional best practices, lesson planning, lesson delivery, differentiation, assessment, and reflection. After the completion of the course work and the activities specified, the students will be able to identify best practices in teaching and characteristics of effective teachers (https://www.rmc.edu/departments/education/field-work-and-student-teaching).

Field education is characterized by a high degree of adoption of the scientific way of thinking and engaging students in the initial research procedures starting from the observation to the selection and collection of materials. The relevant subject of learning, analysis and deduction in this type of education is what the students themselves have noticed and singled out as valuable for research or as the focus of interest. If we leave the students without a contact with nature, not only will we deprive them of their natural way of learning, but we will also deny them the right to think that they belong to their natural environment.

The factors such as abundant and diverse content that lies in the natural and local environment, the length of stay, joint activities of students, and a chance to perform tasks in teams or independently, all provide ample opportunities for research work - activities inherent in heuristic, problem-based, experimental education, but also an opportunity to adapt the requirements to the characteristics of individual students. The focus of teaching outside the classroom and the research focus (Cvetković, 1992, 117) depend to some extent on the curriculum, environmental characteristics, students' interests, inclinations and abilities, as well as on the material and technical possibilities. The best results are achieved if children independently investigate and gain knowledge through experience.

Greater dynamics and intensity of the teaching process are achieved by students' direct contact with the sources and objects of knowledge in their authentic setting. Considering that learning is an active process in which an individual constructs new knowledge as a result and consequence of their personal efforts, research and endeavours (Golubović-Ilić, 2014), it can be observed that this type of teaching has its theoretical

foundation in the constructivist educational paradigm. Learning is 'not seen as a process of acquiring knowledge that exists independently of the learner, but as a process of constructing knowledge that takes place through interaction with others in a certain socio-cultural context' (Milutinović, 2014, 25).

Geographic content provides many opportunities for fieldwork. The program content generally follows the teaching content, even though it can even go beyond and thus provide a variety of forms and methods of work. Conducting classes outside the classroom depends, above all, on the teacher. In that process, their role is dominant and to what extent and how this type of work will be implemented depends on their personality, expertise and motivation.

The concept, aims and tasks of field education

In the Rulebook on the Organization and Realization of Teaching in Nature and Excursions in Primary Schools ("Official Gazette of RS", No. 30/2019), basic guidelines are provided for the primary and secondary schools in the Republic of Serbia. In both primary and secondary schools, the basic forms of field education are outdoor classes and excursions. In addition to this, teachers have the opportunity to organize their regular classes outside the classroom, in the field, in various facilities that could qualify as teaching facilities.

On the other hand, at the universities in the Republic of Serbia, fieldwork is organized in a somewhat different way.

Students in Serbia start primary school at the age of 6.5-7.5. This is certainly not the first time they have been introduced to fieldwork. In preschool institutions, children also have a chance to get acquainted with their immediate or more remote environment during excursions organized by the institution.

According to the mentioned Rulebook which prescribes closer conditions and regulates important issues for the organization and realization of teaching in nature and excursions in schools ("Official Gazette of RS", No. 30/2019), teaching in nature is a form of educational activities for the realization of compulsory school subjects, elective programs, project teaching and extracurricular activities which are part of the curriculum for the first cycle of primary education – which is organized in a place favourable for its climate, and for health-recreational and educational reasons, while the excursion is a form of education that is realized outside of school.

The goals of teaching in nature are:

- Preservation, encouragement and improvement of the overall health condition of students, their proper psychophysical and social development;

- Creating a basis for adopting an active, healthy and creative way of life and organizing and using free time;
- Expanding existing and gaining new knowledge and experiences about the immediate natural and social environment;
- Promoting environmental awareness and encouraging students to engage personally and collectively in nature protection;
- Socialization of students and gaining experiences in community life, while developing tolerance and responsible attitude towards oneself, others, the environment and cultural heritage;
- Fostering positive attitudes towards national, cultural and aesthetic values;
- Developing the ability to perceive the development of economic potential of the visited region.

The purpose of an excursion is to get to know directly the phenomena and relations in the natural and social environment, to get to know the cultural heritage and economic achievements, in order to perform the educational role of the school ("Official Gazette of RS", No. 30/2019).

Before considering the theoretical aspects of the role and the significance of organizing fieldwork, it should be pointed out that they existed, and even today there have been different approaches in understanding and defining concepts such as school in nature, teaching in nature, education through recreation and more. Whatever the name, based on the definition of these terms, many common characteristics of this diversely named forms of education in the immediate nature can be noticed. In pedagogical practice, the most common name was *education through recreation*, which some authors say is inadequate because it does not include all types of pedagogical work that are otherwise covered by the actual activity.

The most complete definition of the term *school in nature*, which is considered to be the most adequate and comprehensive, was given by B. Stanojlović and S. Simić (1984): this term implies a special type of all-day educational activities with provided accommodation, which are organized outside the place of residence in the natural environment, with a comprehensive pedagogical activity through leisure activities. Educational work is connected with psychophysical recreation in nature, and the realization of the teaching content, determined by the curriculum. Educational work is adjusted to specific conditions of the natural and local environment, and the teaching content are also suited to these conditions in which they can be most successfully realized. The entire educational process takes place under the expert guidance of teaching and extracurricular staff. In this way, the definition of the term school in nature includes all the above concepts which are integrated in the content. Fieldwork is a way of learning outside the classroom that is quite similar to a school in nature. Fieldwork in relation to other forms of work has broad and significant tasks with a high pedagogical level of life and work organization, rich and functional structure. Therefore,

the above-mentioned term is considered to be the most appropriate and comprehensive, as it includes all the content that is covered by the actual learning activities in the field.

The tasks of *teaching in nature* are realized on the basis of the curriculum of teaching and learning, educational work and school program and are an integral part of the annual work plan of the school. The tasks that are realized through the program of teaching in nature are:

- Improving the health and developing physical and motor skills of students;
- Satisfying the basic children's needs for movement and play;
- Preserving children's natural curiosity about natural phenomena and encouraging interests and abilities to get to know them through appropriate activities;
- Developing their ability to observe the basic properties of objects, phenomena and processes in their surroundings and to observe their connections with specific natural and social conditions;
- Encouraging independence in the process of acquiring knowledge through direct research tasks;
- Developing awareness of the need to protect, nurture, preserve and improve the nature and the environment and building up ecological habits;
- Getting to know the natural-geographical, cultural-historical sites and the beauty of the place and its surroundings;
- Getting acquainted with the way of life and work of the people in certain areas;
- Getting to know the diversity of flora and fauna in certain areas, noticing their correlations and variability;
- Getting acquainted with the characteristics of the seasons in nature and changing weather conditions;
- Developing coping skills, i.e. orienteering in space and time;
- Training students to be safe and behave properly in the natural surroundings;
- Developing proper hygienic and health habits and encouraging independence in performing personal hygiene and self-care;
- Encouraging and creating the habit of regular physical activity and staying in nature as often as possible;
- Forming the habit of regular and proper nutrition;
- Getting used to follow a schedule of work, rest and sleep;
- Understanding and respecting diversity among individuals;
- Encouraging group work, negotiation and cooperation with peers and adults through appropriate activities.

The tasks of the excursion are: studying objects and phenomena in nature; observation of cause-and-effect relations in specific natural and social conditions; developing interest in nature and ecological habits; getting to know how people live and work in certain areas;

developing a positive attitude towards: national, cultural and aesthetic values, sports needs and habits, as well as positive social relations ("Official Gazette of RS", No. 30/2019).

Fieldwork according to its tasks and goals possesses a large number of similarities with *school in nature* and excursions, so all these forms of learning can be considered as interchangeable.

The need and importance of field education

The need and importance of the organization of field education is reflected primarily in the health, pedagogical and social effects.

Health impact. Rapid and dynamic urbanization in our country, especially the development of industry and traffic in highly developed urban environments, in addition to a number of benefits for a better life and work of people, bring many disadvantages and challenges that have to be removed or alleviated.

Negative elements of urbanization and industrialization of cities are especially evident in the following: an increased air and environmental pollution, traffic noise, lack of open areas and greenery, reduced and insufficient options for mobility, insufficient recreational options, and so on. Because of all that, children spend most of their lives indoors.

Because of this, most children spend a large portion of the day indoors even at preschool age (in an apartment or preschool educational organizations), where their main activities are playing games while watching television, video games, computers and more. Certainly, it has a negative effect on the health as well as on the overall psychophysical development of children. In such unfavourable conditions, the child is exposed to more frequent conflicts with family members, which can have especially negative consequences on the psychological development of young people.

In the school environment, children spend most of their activities indoors. Regular classes and school assignments require the child to spend a large portion of the day indoors sitting at a desk, without enough movement. This problem is particularly evident in schools with all-day work schedule, because the school premises and furniture are not suited for this type of educational work, nor do they provide opportunities for more optimal organization of student free time activities.

Due to the lack of green areas, open spaces and playgrounds, children have to spend their free time indoors, in neglected yards or on the streets where they are exposed to other negative influences on their overall development. Therefore, an increasing number of children have deformities of the spine, chest, foot deformities and other physical disorders. It is important to say that almost 5,000 students in primary and secondary schools, more precisely 7.9 percent of them, have some of the visual or mobility impairments, especially younger students. In the past decade, allergic diseases have become more frequent among school children, all because of the fact that they spend less time outdoors in nature (https://www.bizlife.rs/lifestyle/afterhour/23103-sve-vise-dece-ima-deformitete-kicme/).

In addition, air pollution in some urban areas is extremely high. There is a high concentration of toxic gases such as: carbon monoxide and sulphur dioxide, nitrogen oxides and lead vapours generated by the use of motor vehicles.

In such living conditions, children are struggling constantly with harmful environmental factors that damage their health, reduce the body's general resistance and cause damage to the mucous membrane of the respiratory organs, so they often suffer from respiratory infections. That is why city children are pale, more or less tired, apathetic or irritable, often ill, so it is necessary to take measures to protect their health and improve living and working conditions.

However, in the conditions of increasing industrialization of cities and an increased number of vehicles, it is unreasonable to expect that certain technological processes will significantly reduce air and environmental pollution, and thus change the existing unfavourable living and working conditions of children and adults. Therefore, it is necessary to take various protective measures that would reduce the effect of the mentioned factors. One of the possible solutions is the construction of sports and recreation centres for children and youth in the vicinity of cities and the construction of appropriate facilities to meet the requirements for school in nature. This would create opportunities for schoolchildren to leave the cities occasionally and spend some time in nature, in the fresh air, without interrupting regular classes and schoolwork. All things considered, great opportunities lie in the implementation of the teaching content in the field.

Schools can and should organize recreational classes, not only for the purpose of conducting experiential classes in nature, but also for health reasons, in order to improve and refresh the psychophysical condition of the children, especially those from the city.

The climatic conditions in the area where field learning is organized should provide easier accommodation of children. When choosing a location, it is necessary to take into account the humidity, the number of rainy and sunny days and other meteorological conditions that are important for a pleasant stay and optimal organization of activities in the school in nature. When planning the fieldwork for children, it is necessary to consult a school doctor about the location and adequate time, given the epidemiological situation and the health condition of students, especially those whose health condition requires special treatment.

Pedagogical impact. According to its basic idea and concept, field education has broader pedagogical effects. Field education is organized and takes place in very favourable conditions of the natural environment, as a collective life and work of students and teachers, and thus creates favourable setting for wider pedagogical efforts to foster multitalented personality aspects of young people, especially the development of positive socio-moral aspects, which facilitates more efficient realization of the educational process as a whole. In addition, the conditions in which the life and work of field education are organized provide broader opportunities for more successful implementation of teaching content from a wider variety of educational topics, especially those that require processing in direct contact with the natural and social environment, events and phenomena.

Students learn and experience natural phenomena and laws directly in natural setting and thus enrich their experiences of living and non-living nature, natural phenomena, life and work of people, work results, interconnectedness and dependence of flora and fauna. In this way, they learn to believe that only united by their work and knowledge can they create for themselves a richer, better and more beautiful life.

All these direct observations and experiences contribute to the enrichment of children's experiences through work and activities, and therefore they better understand the phenomena in nature, the laws that govern it, which as a whole contributes to the formation of a correct dialectical-materialist view of the world.

With its diversity, the natural environment contains numerous resources and incentives for further learning, arouses curiosity and develops a spirit of research that contributes to the development of creative abilities and integral development of children as a whole.

Furthermore, field education setting provides a greater opportunity for students to revise and expand the acquired knowledge, and to develop new interests in the practical application of acquired theoretical knowledge in everyday life.

Since ancient Greece and Rome, numerous thinkers and scientists have emphasized the importance of nature in educating young people.

Certainly, this type of pedagogical activity implies changes in the role of the teacher, who becomes less of a teacher, and more of a guide and coordinator. Namely, by applying appropriate pedagogical techniques and properly guiding and directing students, the teacher should provide conditions for greater independence and self-activity of students, encourage desire to learn, and create circumstances for students to gain new knowledge based on direct observation of natural phenomena.

Having in mind the fact that in field education, students actively spend a significant part of their time in a community, the organized life and work in the community of students has a particularly significant pedagogical value. In such conditions, more opportunities arise for getting to know students' personalities in a better and more versatile way, for examining the wants, needs, desires and interests of young people, their problems and difficulties. Certainly, this can contribute to the application of more adequate pedagogical measures and procedures in working with students, and thus to a more efficient organization of the educational work of the school or higher education institution as a whole.

Pupils or students from different families and environments share accommodation, eat under the same conditions, share daily routine, so they live under the same circumstances. This way of life provides an opportunity for children to get to know each other and their teachers in a better way. In a pedagogically correctly directed and guided team, many characteristics of children are manifested, both positive and negative. The characteristics are evaluated and assessed by students and teachers; the positive ones are accepted and the negative ones are alleviated or reduced, which has a special impact on the development of positive socio-moral characteristics and personality traits of a child. Thus,

the behaviour and work of children in a community are submitted to the moral scrutiny of the community as a driver of student personality development. In addition, in the collective living and working conditions, children develop their needs and habits to help each other, to take care of each other, to harmonize personal interests with the interests of the community, which greatly contributes to the socialization of young people. Furthermore, common duties, joys, defeats, desires, experiences, bring students closer every day and develop the feelings of friendship and camaraderie, making them stronger as part of a tight and unique team.

Living and working together in a community, provides students with ample opportunities to get involved in self-governing relations, i.e. the concept of student self-governance. For example, students jointly agree on house rules, lifestyle and work, creating menus, determining who is on duty, organizing various actions, competitions, etc. Thus, students participate through practical and everyday activities and get acquainted with the self-governance.

Meeting with the children from the surrounding area, organizing joint events, both within the school in nature and for the local residents, then getting acquainted with the way of life and work of people in the area, their occupations, customs, creating exceptional circumstances for new friendships, a positive attitude can be developed towards working people and the homeland attractions.

The departure of children for field education, separation from the family, getting used to collective life in conditions that are different than their family conditions, contributes to the independence of children, getting used to and training for living and working in changed living conditions. Moreover, by creating opportunities for all students to participate in field education, regardless of their material conditions, the joint life of children from different family backgrounds in the new circumstances, which are the same for all students, contributes to reducing social differences and inequalities in education.

Everyday interconnections and relationships, as well as practical activities such as personal hygiene, tidying bedrooms, dining, maintaining the environment, participation in light manufacturing, nurturing flowers and greenery and humane treatment of animals, provide excellent opportunities for the development and strengthening of cultural, hygienic and work habits, proper attitude towards work, protection and preservation of the environment and love for nature (Nikolić, 1992; Nikolić, 1994).

Social impact. The implementation and the results of field education have justified its existence. Field education has its pedagogical and broader social justifications, since it contributes to the improvement of health and the overall psychophysical development of young people.

The joint collective life of students from different backgrounds and families in the same circumstances contributes to the socialization of young people and especially to the optimal development of the entire population of children, regardless of the socioeconomic conditions of their families, which reduces social inequality and emphasizes special social effects of this type of pedagogical work with students.

The health, pedagogical and social effects and the need to organize field education are clearly evident, and further efforts of the society should be focused on creating optimal conditions for the organization of this important type of pedagogical activity of schools and higher education institutions.

The content of teaching in nature and excursions

The Rulebook on the Organization and Realization of Teaching in Nature and Excursions in Primary School ("Official Gazette of RS", No. 30/2019) also defines the content of this type of teaching and educational work.

The content of teaching in nature is realized on the basis of the curriculum, selecting the most suitable content for achieving the goals and tasks of teaching in nature, which are also the most appropriate ones for the conditions in which teaching in nature is realized.

The contents of the excursion and field education in the first cycle of primary education in the Republic of Serbia are the following:

- Observation of the relief forms and surface waters in the environment and natural-geographical features of the Republic of Serbia;
- Observation of characteristic plants and animals (a tour of plant and animal habitats);
- Visits to protected natural areas (national parks, reserves, natural monuments, etc.);
- Getting to know the history and cultural heritage of the homeland (museum tours, visiting cultural and historical monuments, ethno-villages, memorial houses of famous people - scientists, writers, artists, military leaders, statesmen, etc.);
- Developing orientation skills in space and time;
- Visiting various types of agricultural land and livestock farms (getting familiar with the production of healthy food);
- Visiting companies and public utility companies (processing of natural raw materials, introduction to various human activities, environmental protection, etc.).

The contents of the excursion and field education in the second cycle of primary education in the Republic of Serbia are as follows:

- Visits that get the students acquainted with the natural beauties, natural-geographical and socio-geographical features of the Republic of Serbia (mountains,

rivers, lakes, spas, flora and fauna, protected natural objects and national parks, population, people and ethnic communities in the Republic of Serbia, etc.);

- Visits to prehistoric, antiquity, medieval, modern age and contemporary sites (Lepenski Vir, Vinča, Sirmijum, Viminacijum – military camp, Gamzigrad – Royal Palace, Medijana, Studenica, Đurđevi Stupovi, Žiča, Mileševa, Sopoćani, Gradac, Gračanica, Visoki Dečani, Ravanica, Lazarica, Ljubostinja, Manasija, Kalenić, Sremski Karlovci, Krušedol, Novo Hopovo, Vrdnik, the Smederevo Fortress, Golubac, the Niš Fortress, the Petrovaradin Fortress, Orašac, Topola, Ćele-kula, Takovo, Tršić, Brankovina, Vraćevšnica, Tekeriš, Struganik, Šumarice, etc.);
- Visits to Belgrade, the capital of the Republic of Serbia (House of the National Assembly, National Theater, National Museum, the Belgrade Fortress, Observatory, Military Museum, The Museum of the Serbian Orthodox Church, The Museum of the First Serbian Uprising - Konak Kneza Miloša (the Residence of Knez Miloš), Konak Kneginje Ljubice (the Residence of Kneginja Ljubica), National Library, Royal Court House in Dedinje, City Museum, Avala, Jajinci, Ethnographic Museum, Pedagogical Museum, The Museum of Vuk and Dositej, the Cathedral, the Church of St. Sava in Vračar, Natural History Museum, Botanical Garden "Jevremovac", the Zoo, The Museum of the Yugoslav Cinematheque, The Museum of Nikola Tesla, The Museum of Contemporary Art, etc.);
- Tours of cultural institutions in the Republic of Serbia (Matica Srpska Gallery in Novi Sad, Serbian National Theater in Novi Sad, Knjaževsko-srpski Teatar in Kragujevac, memorial and local museums, memorial houses, etc.);
- Tours of companies and public utility companies (companies dealing with food, chemical, mechanical and electrical industries, construction materials industry, energy, etc.);
- Encouraging the expression of positive emotional experiences ("Official Gazette of RS", No. 30/2019).

Preparations for organizing fieldwork / field education

The preparation of students, parents and teachers is a prerequisite for the realization of teaching in nature, excursions and fieldwork. The preparation of students implies that students get acquainted with the place they go to in advance, the living conditions where field education, excursion or fieldwork is organized, the forms and contents of work, the mode of transport and appropriate behaviour during the trip, necessary books, accessories, clothes, footwear, certain sports and recreational activities that will be realized there.

Students, divided into groups, with the help of teachers, prepare short papers on the areas and places they visit. Special attention is paid to the part of the preparation in which the teacher agrees with the students on the rules of conduct during teaching in nature, fieldwork and excursions.

Preparing parents of primary and secondary school students includes organizing parent-teacher meetings and providing information on the basic geographical characteristics and climatic conditions of the area where teaching in nature, fieldwork and excursions are organized, departure time, length of stay, price, which documentation to be prepared, accommodation facilities, nutrition, health care, living and working conditions of students, opportunities for communication with students, etc.

The obligation of the institution is to give parents detailed instructions on student preparation, with a list of necessary accessories for personal hygiene, writing, necessary clothing, to acquaint parents with the rules of student behaviour during teaching in nature, fieldwork and excursions, and to introduce parents to their legal responsibility regarding student behaviour during that time. In order to collect important information related to the health and psychophysical status of children, their characteristics, specific habits and interests, special parent-teacher interviews are organized.

Teacher preparation includes individual and group preparation. Group preparation takes place in short meetings at the school level, where important organizational issues related to the fieldwork are discussed. Individual preparation of teachers includes becoming well-informed about geographical and geological characteristics of the area, about flora and fauna, historical data, important cultural, economic and other facilities that can be visited, customs and ethnological characteristics of the area and the place where teaching in nature or an excursion will take place.

Based on the collected data and set goals and tasks of teaching in nature, field education or excursions, the teacher creates a program that will be implemented (in addition to the teaching content, the program also has sports-recreational and cultural activities, board games, typical evening programs, etc.), then selects methods and forms of work, determines the dynamics of activities and prepares everything that will ensure efficient and successful work.

The program of teaching in nature, field teaching and excursions should contain a clear structure that indicates the goals and outcomes to be achieved in accordance with the program of teaching and learning.

The school makes action plans which take into consideration the existence of unpredictable factors that can influence the realization of teaching in nature, field teaching and excursions, and possess flexibility and adaptability to the given circumstances, e.g. bad weather conditions, etc. ("Official Gazette of RS", No. 30/2019).

The realization of teaching in nature, field education and excursions

The teacher takes care of the organization and implementation of regular and planned teaching activities, as well as the safety of students during teaching in nature, field education, or excursions. In addition, the individual characteristics of students, differences in

their needs and abilities must be taken into account. Teachers should encourage cooperation and teamwork among students, independence and personal responsibility.

Teaching in nature is usually realized in the duration of 7 to 10 days. Field education is organized according to the needs of teaching and the teaching content and for a duration that is optimal for a good understanding and acquisition of the content provided by field education.

In accordance with the purpose and tasks of the excursion and field education, the travel routes, facilities, events, regions and landscapes are determined.

The excursion is performed exclusively on the territory of the Republic of Serbia. For the seventh and eighth grade of elementary school students, an excursion can be organized in the Republic of Srpska.

The study trip is an integral part of the school's annual work plan, which further regulates its organization, goals and tasks.

If the excursion or the study trip is organised during the workdays, make-up classes are organized for all students, in accordance with the school calendar and the annual work plan.

The duration of the excursion is prescribed by the curriculum.

For students of the same grade, the excursion is organized every year in another area of the Republic of Serbia:

1. The Autonomous Province of Vojvodina (Bačka, Banat, Srem);
2. Western Serbia with the Tara;
3. Southwestern Serbia (Zlatibor, Zlatar, Uvac);
4. Central Serbia: Šumadija and Pomoravlje;
5. Ibar-Kopaonik Region;
6. Southern Serbia (Niš-Vranje);
7. Eastern Serbia with the Djerdap;
8. Belgrade and the surroundings.

The director of the institution is responsible for the legal matters regarding the implementation of teaching in nature, excursions and study trips ("Official Gazette of RS", No. 30/2019).

Field education in Serbia

Field education in Serbia is an integral part of learning at all levels of education. Field education in Serbia is important for a large number of school subjects, both from the group of natural sciences and from the group of social sciences. As interdisciplinary elements in learning are increasingly sought after, learning outside the classroom is planned to be useful for more subjects and to cover more areas. By learning in the field, students get acquainted

with natural and social values, cultural and historical heritage and acquire broad and diverse knowledge.

Field education in the curriculum of primary education in Serbia

In the first cycle of primary education, teachers usually opt for the following facilities: Mitrovac on Tara, Stanišinci on Goč, Bukulja in Arandjelovac, Rudnik on Rudnik, "Stevan Filipović" on Divčibare, and others. All these facilities belong to the Centre of Children's Summer Resorts of Belgrade and are also used for teaching in nature, as well as for camps that are realized during summer and winter holidays. In addition to thematically equipped classrooms, entertainment halls, sports fields, swimming pools, ski slopes, all facilities have outpatient and twenty-four-hour health care. Educational excursions, walks, evening programs are organized in all these resorts (http://www.cdlbgd.rs/nastava-u-prirodi.html).

In senior grades, classes outside the classroom are more often organized in the local environment. In addition, places suitable for the realization of the excursions are: Tara, Zlatibor, Gornji Milanovac and others. The situation is similar in high schools, where destinations outside the borders of the Republic of Serbia used to be chosen more often until recently.

A research was conducted in the school years 2017/2018 and 2018/2019 among primary school teachers and it referred to the realization of teaching in nature on the territory of the Republic of Serbia. A total of 406 teachers participated in the research. The results analysis showed that teaching in nature is not implemented to a sufficient extent.

The research used the Likert scale of attitudes (from 1 to 5; with 1- Completely Disagree and 5- Completely Agree), where the attitudes of teachers regarding the organization and implementation of fieldwork can be seen very clearly. A total of 15 statements were presented to the teachers. Based on the mean values of the answers, one claim stands out - that in this type of teaching, professional staff should be involved to be in charge of numerous accompanying activities (primarily related to the organization). If more professional people are not included in this type of teaching, it is very difficult for one teacher to meet all the requirements that are expected of them.

The lowest grade was assigned to the claim that little is learned in the field, and that the realization of compulsory teaching activities is neglected in order to implement only the program of entertainment and recreation. This clearly indicates that teachers feel that they devote a large part of their time to the teaching content that is adequate in the given circumstances.

The results of the research by gender are interesting. Female teachers are more dissatisfied with the facilities used for the implementation of fieldwork, but unlike male teachers, they believe that in Serbia there is a vast choice of locations for the construction of the facilities for the school in nature. Female teachers see the lack of appropriate

professional literature as a bigger problem both in the organization and in the realization of this type of teaching. Regarding the claim that teachers are not sufficiently trained, the answers of both genders were almost identical, but it can certainly be concluded that they themselves are not sure whether they are fully ready to perform this type of fieldwork (mean score of this claim is 2.5). In most of the claims, teachers of both genders are fairly consistent, so that, in addition to the above, there is no major difference in attitudes regarding the organization and implementation of fieldwork.

If we look at the results in relation to where the school is located - city / village, we also see a fairly uniform attitude in most claims. However, it must be noted that teachers working in rural areas rated more highly the claim that there are major problems with the organization of fieldwork. This clearly indicates that the requirements regarding the organization, from the school itself to agencies and other actors, are far more accessible to teachers working in urban areas.

Teachers who do not teach outside the classroom are more in agreement with the statement that the success of fieldwork largely depends on the legal norms. This may be one of the reasons why they do not implement such type of teaching, because based on experience it is evident that this type of teaching requires the flexibility of teachers and all other actors in each stage of achieving the goals and tasks of teaching in nature. This is corroborated by the attitude of teachers who do not take students to school in nature that there are big problems in organizing it. Those who organize it, however, do not think that there are major problems in the organization. Teachers who do not implement fieldwork have strong attitudes towards the following:

- Accommodation facilities for students are most often intended for tourism and do not meet other standards;
- Improvisation is ubiquitous;
- The organization requires more efforts from teachers;
- Program contents must deviate significantly from the regular curriculum;
- Teachers are not sufficiently trained;
- Lack of appropriate literature;
- Fieldwork poses a significant burden on the student’s family budget...

The t-test of independent samples was applied in order to compare the arithmetic means of two population groups. A statistically significant difference between the respondents' answers by gender, as well as by workplace was not observed in any of the given statements (at the level of significance $r < 0.05$). This clearly shows that the differences between teachers' responses by gender and the impact of different workplaces (urban and rural areas) have not been confirmed.

However, if we compare the answers between the teachers with the experience in taking students to schools in nature and those who do not practice this type of teaching, we can see some differences. Teachers who do not implement fieldwork have a much more flexible attitude towards the claim that fieldwork should have an exclusively teaching-

educational character. Moreover, they believe that they as teachers are not sufficient for the realization of this type of teaching and that they need additional help of professional staff.

Teachers do not think that there is little learning in nature, but there is certainly a noticeable difference between their answers and the answers of those who realize the school in nature and who have expressed a much higher degree of disagreement with the aforementioned statement.

Teachers who do not have experience in fieldwork believe that the curriculum has to deviate from the curriculum in regular classes. It seems that teachers with experience are quite good with the realization of the planned teaching content, and they have expressed a greater disagreement with the mentioned statement.

The application of one-factor analysis of variance, ANOVA, was used to examine statistically significant differences between dependent variables (items related to respondents' attitudes) and independent variables (respondents' social characteristics). In this case, it was examined whether there are statistically significant differences among respondents with different length of work experience.

As only three of the fifteen statements have a statistically significant difference, it is considered that the length of work experience does not affect the attitude of teachers regarding the organization and implementation of fieldwork. However, teachers with more work experience (over 16 years) expressed greater disagreement with the claims that they are not sufficiently trained for school in nature, that there is no appropriate literature, and that little is taught in school in nature.

In order to more fully investigate the attitudes of teachers towards learning outside the classroom, a survey was conducted with open-ended questions, where teachers had the opportunity to enter longer answers and to more elaborately explain how they teach outside the classroom. Due to the fact that the survey was open and for easier and clearer interpretation of the results, there were 10 teachers in the sample group. The research was conducted in the school year 2019/2020. The average age of the respondents is 42.9 and the average length of work experience is 15.5 years. Among the respondents, 60% have completed bachelor and 40% master studies. All respondents are employed full time (20 classes per week) in the subject of geography. On average, they have 3 classes of additional school activities per week.

A total of 80% of respondents became well-acquainted with the importance of field education during their studies and the same portion of respondents applies the methods of fieldwork in teaching geography. Most teachers agree that the main advantage of learning outside the classroom is the immediate evidence of phenomena which can be observed directly in nature, which facilitates knowledge acquisition, and thus the knowledge becomes more solid and interdisciplinary correlations can be established. Among the biggest shortcomings of field education, teachers mentioned numerous financial and organizational constraints as well as weather conditions, but also the lack of interest in this way of learning among both teachers and students. When teachers are asked about the barriers to the implementation of field education, they most often mention financial issues, lack of teaching

aids and the distance of the facilities important for field education. Most teachers confirmed that they conduct learning outside the classroom in correlation with other school subjects and that they do so in a variety of places such as museums, observatories, fairs, exhibitions, planetariums, national parks…

The teachers stated that, with the students of the 5th grade, the teaching content that they mostly cover outside the classroom is related to the universe, atmosphere, climatic elements and the Earth's sphere. They use a telescope, instruments for measuring climate, mini meteorological stations and maps as teaching aids and often dedicate several classes to this kind of work. Field education in the 6th grade is related to the geographical map, population and settlements. Teachers use a compass, a geographical map and objects from nature as teaching aids and often dedicate several classes to this kind of work. In the 7th grade, teachers teach outside the classrooms regional geography topics, where geographical maps, textbooks and encyclopaedias are most often used as teaching aids, and it takes several teaching hours to process the material in this way. Teachers have stated that in the 8th grade, students are introduced to the geography of the local environment, and that is when learning outside the classroom is most frequent. Teachers then take students to facilities that are easily accessible to them, and they carry out this type of work several times during the school year. In the 8th grade, due to the diversity of places throughout Serbia, students can get acquainted with a variety content outside the classroom. When learning outside the classroom in all grades of primary school, teachers believe that students are much more active and that this type of work requires teachers to prepare more thoroughly.

Field education in the curriculum of secondary education in Serbia

In the high schools of the Republic of Serbia, the goal of an excursion is to get to know the phenomena and relations in the natural and social environment, to get to know the cultural heritage and economic achievements, with the purpose of fulfilling the educational role of the school. The tasks of an excursion are realized on the basis of the curriculum and the educational plan, and are part of the school program and the annual work plan. The excursion program should contain a clear structure that indicates the goals and outcomes in accordance with the program of teaching and learning to be achieved. The school makes operational plans which take into consideration the existence of unpredictable factors that influence the realization of an excursion, have flexibility and adaptability to the given circumstances, e.g. bad weather conditions and the like.

As a rule, the excursion is carried out on the territory of the Republic of Serbia, and once during the schooling it can be organized in the Republic of Srpska. Exceptionally, for the final grade students, an excursion can be organized abroad.

The school can also plan a study trip for a group of students in order to learn the language and learn about culture, within the cooperation projects and other forms of

educational work, which is carried out with the prior consent of the relevant school administration. The study trip is an integral part of the annual work plan of the school, which regulates in more detail its organization, goals and tasks ("Official Gazette of RS", No. 30/2019).

After the trip, the tour leader and the representative of the travel agency make a note on the trip, after which the professional tour leader makes a report within three days, which is then submitted to the director, with an assessment of the performance and quality of provided services. Therefore, the teacher who accompanied the students will talk about the realized excursion with the students together with them in one of the following classes. During that class, they discuss the completed tasks and check the fulfilment of the outcomes.

The research, which was conducted with primary school teachers, was also done with the teachers who are employed in secondary schools. There were also 10 teachers in this sample group. The research was conducted in the school year 2019/2020. The average age of the respondents is 40, and the average length of work experience is 12.4 years. Among the respondents, 50% have completed bachelor studies, 40% of them master studies and 10% doctoral studies. All respondents have 20 geography classes per week, and 40% of them spend up to two classes in additional teaching activities.

All respondents stated that they were well acquainted during their studies with the importance of learning in the field, and half of them apply the methods of field work in teaching geography. Most teachers agreed that learning outside the classroom has the main advantage of the immediate evidence and the possibility to observe phenomena directly in nature, which makes it easier to acquire knowledge, establish a cross-curricular correlation, students are more open and communicate more directly with teachers. Among the biggest shortcomings of field education, teachers mentioned the lack of resources and difficulties in maintaining students' attention. When asked about the barriers to the implementation of field education, the most common answers given by the teachers were financial problems, lack of teaching aids, a large number of extracurricular activities for high school students and student workload. The majority of teachers (60%) gave a negative answer to the question whether they conduct learning outside the classroom in correlation with other subjects. Places such as museums and observatories are used for learning outside the classroom.

For teachers who teach in the first grade of high school, most of the teaching content outside the classroom is related to the Earth in space, relief, man and climate. For this, they use various teaching aids, visit observatories and natural history museums and often dedicate several classes to this kind of work. As part of the field teaching in the second grade of high school, teachers conduct lessons related to geographical maps and digital cartography. For that, the teachers use a compass, a geographical map, GPS devices and objects from nature as teaching aids and often dedicate several courses to this kind of work.

In the third grade of high school, due to the diversity of areas throughout Serbia, students can get acquainted with a variety of content outside the classroom. The lessons about population are especially suitable. When learning outside the classroom in all grades

of high school, teachers believe that students are much more active and involved in teaching and that this way of working requires detailed teacher preparation.

Field education in the curriculum of tertiary education in Serbia

There are three faculties in the Republic of Serbia where future geographers are educated and they are based in Novi Sad (Department of Geography, Tourism and Hotel Management at the Faculty of Sciences), Belgrade (Faculty of Geography) and Niš (Department of Geography at the Faculty of Natural Sciences and Mathematics). Within their accredited study programs, the realization of field education is also planned.

The task of fieldwork is that students observe geographical objects and phenomena, their interconnections, industrial facilities, settlements and landscapes directly in the authentic setting and thus gain clear perceptions, long-lasting observations and real-life factual knowledge that will help them better understand theoretical content. Different methods are used in field education: direct observation of geographical reality, research conversation, educational conversation, presentation, explanation, description, etc.

The fieldwork route is such that it facilitates the acquisition of basic concepts from a number of courses that students will encounter during their studies. Thus, through expert analysis of mountains, loess plateaus, river terraces, alluvial river plains and other elements, they acquire basic knowledge of geology and geomorphology. Through observing and analyzing watercourses, lakes, ponds, swamps, applicable knowledge of hydrology is acquired. Through studying the flora and fauna in the field, more practical aspects in biogeography teaching are promoted together with its connection with land and other elements and factors of the natural environment. Within the framework of social geography, the knowledge of the population, settlements, economy and other elements is directly acquired. In addition to the fact that field classes have a thematic character, which means that they include the content from a specific branch of science, this content also has a regional geographical character because it provides a complex observation of certain regions. This aspect of field education contributes to learning thoroughly about the space with all its constituent elements and their interdependence.

At the **Department of Geography, Tourism and Hotel Management in Novi Sad**, fieldwork is implemented during the entire studies in the curriculum of the study programs BSc in Teaching Geography, BSc Geography and Master of Science in Teaching Geography.

Fieldwork for Master of Science in Teaching Biology and Geography is conducted partly within the curriculum of the Department of Geography, Tourism and Hotel Management, and partly within the Department of Biology and Ecology where it is included as an elective course in the curriculum.

In the first year of study, fieldwork for all study programs is organized in Vojvodina, in the second semester, and lasts 3 to 5 days.

In the second year of study, field education for the study programs BSc Teaching Geography and BSc Geography is organized in the area of Western Serbia (in the fourth semester, lasting 4 to 6 days).

In the third year of study, for the study programs BSc Teaching Geography and BSc Geography, field education is organized in the area of Eastern Serbia (in the sixth semester, lasting 4 to 6 days).

In the fourth year of study, field education for the study programs BSc Teaching Geography and BSc Geography is organized in Central Serbia, Montenegro and Bosnia and Herzegovina.

Knowledge assessment acquired in field classes is done through the courses Fieldwork 1-4, in the form of oral and / or in written knowledge tests, students receive grades and achieve 3 ECTS in each course.

For the study programs of all master's academic studies, field education is also organized in the summer semester, lasting from 5 to 7 days in the territory of the Republic of Slovenia.

The knowledge test is performed within the course Field Teaching 5, where they also achieve 3 ECTS.

At the **Faculty of Geography in Belgrade**, fieldwork is related to certain courses, as follows:

In the first and second year, the focus of field classes is on the physical-geographical characteristics of the area, so they are organized twice in the duration of one day in the first year (through the courses of Paleogeography and Dynamic Geomorphology) and once in the second year in the duration of one day through the course of Speleology).

In the third year, field classes are organized in the area of Stara Planina for 3 days. In these field classes, in addition to visiting some natural attractions, the emphasis and special attention is given to the elements of social geography. Also in the third year, field classes in the duration of 3 days are organized in the area of South-western Serbia (Stari Vlah and Raska), where the emphasis is on regional-geographical content. In the third year, students have the opportunity to experience field classes in Western Serbia, where the emphasis is on socio-geographical content.

In the fourth year, field classes are organized in the continental part of Montenegro for 5 days, with an emphasis on regional-geographical content.

Through the courses Field teaching 1-3 (summer semester in the second, third, and fourth year), students achieve 2 ECTS.

Field education is not organized at the master level of academic studies.

At the **Department of Geography in Niš**, field education is carried out according to the established curriculum in basic academic studies and master's academic studies. At the end of each year of study, under the guidance of teachers and teaching associates of the faculty,

during the month of May, field classes with students' practical work (practical classes) are planned.

In the first year, field classes are organized in the area of Šumadija for 2 days.

In the second year, field classes are organized in the area of Eastern Serbia for a period of 3 days.

In the third year, field classes are organized in the area of Western Serbia for a period of 3 days. By attending field classes, students have the opportunity to get acquainted with some physical-geographical objects and phenomena in nature about which they have previously acquired theoretical knowledge.

For students of master's academic studies, field classes are organized in the area of Vojvodina for a period of 3 days.

Conclusion

Traditional education and the concept of school as an institution whose sole purpose is education or teaching cannot fully meet the modern needs and the requirements of modern society in the 21st century. Changes in the school system in Serbia, improving its quality and preparing students for the roles and relationships that await them in life, are of interest not only to experts and theorists working in this field, but also to people who are aware of the importance of this segment of life and who want a better future for their children. Because of the importance of schooling, which provides not only knowledge, upbringing and habits, but a whole open system that functions in harmony with the society, it is very important that the current evolution of the school takes place in the greatest possible alertness and dedication of all those responsible for school development.

One of the basic starting points in the education reform is the study and application of facilities where the teaching takes place. From the Middle Ages until today, teaching facilities have been the subject of criticism by many reformers of the school and the school system. As the school itself and school systems change and evolve, so the approach to the facilities in which classes are held becomes a fertile ground for proving various theories in education and their practical application.

Through fieldwork students in Serbia can learn to independently construct knowledge, to learn in their own way and thus become active in the educational process, and not just mere observers. By acquiring knowledge in appropriate facilities outside the classroom, children become independent, gain self-confidence and plan the process of acquiring knowledge on their own.

Research in Serbia shows that teaching content that is closely related to the natural and social environment is still not sufficiently organized in appropriate facilities and moved

from the classic classroom to real life or more purposeful facilities within the school, but that the classroom occupies a central place in content processing, in the function of getting to know the world around us. There is a clear need for greater functional connection between the content of teaching and teaching facilities (outside the classroom). It goes without saying that a large number of teaching topics, both in geography and in other school subjects, can be processed in a completely acceptable and good quality way in the classroom, using various models, audio and visual aids, but this type of teaching requires much more preparation and engagement on behalf of teachers, and the achieved results will be the same or worse than if the classes were organized in a more adequate facility.

It is possible that some teachers do not have the access to using other teaching facilities at a given time, but there is also their unwillingness and inertia to organize teaching more actively and move it to other teaching facilities. It can be concluded that learning outside the classroom is significantly more present in primary education than in secondary education. Teachers believe that one of the main reasons for that is a large number of high school subjects, but also extracurricular activities of high school students and a lack of time due to the students' workload.

Fieldwork requires significantly greater teacher preparation, but this fact should not be used as an excuse for not applying teaching outside the classroom. This type of teaching should be thoroughly planned at all levels of education - primary, secondary and higher.

The Republic of Serbia is rich in diverse places for field education and in the following period it is necessary to make a more thorough classification of them at several levels – by type of education, by specific course content and by specific geographic regions.

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POSTAVENÍ TERÉNNÍ VÝUKY V KURIKULU PRIMÁRNÍHO, SEKUNDÁRNÍHO A TERCIÁRNÍHO ŠKOLSTVÍ V ČESKÉ REPUBLICE

Úvod

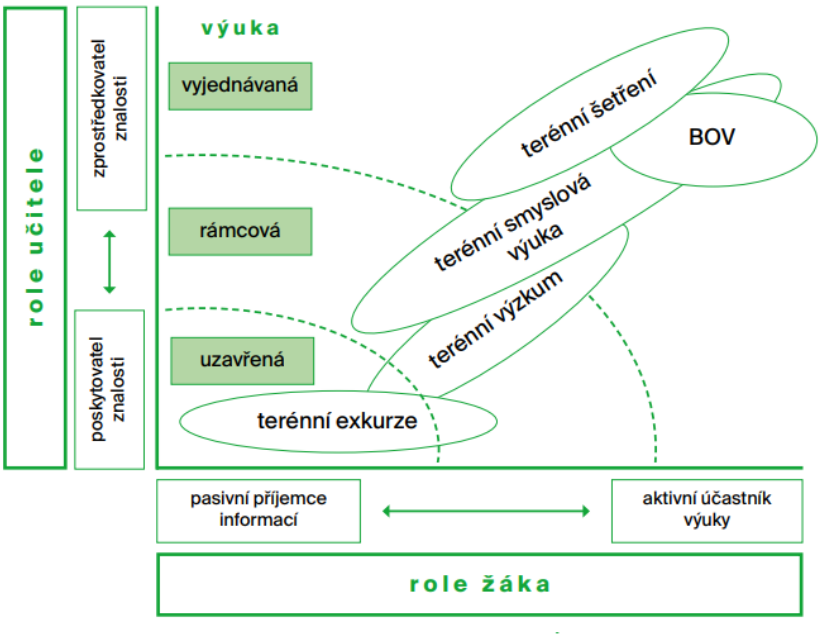
Stejně jako náš život se neodehrává pouze v uzavřených místnostech a budovách bez sebemenší přímo interakce s okolním prostředím, tak ani výuka ve školách by neměla práci s reálným a v reálném prostředí podceňovat. Tohoto si byl vědom již učitel národů Jan Amos Komenský (Komenský 1948). Nutnost tvořivé a zkoumavé práce žáka, důraz na jeho vlastní zkušenost a praxi zdůrazňuje postupně i řada dalších autorů a pedagogických směrů. V meziválečném období to byla především tzv. pragmatická pedagogika a její představitel John Dewey a po 2. světové válce pedagogický konstruktivismus Švýcara Jeana Piageta.

> *„Lidé mají se učiti, pokud nejvíce možno, ne nabývati rozumu z knih, nýbrž z nebe, země, dubů a buků, to ještě znáti a zkoumati věci samy a neb pouze cizí pozorování a doklady o věcech.“ (Komenský 1948)*

Již dlouhou dobu je tak výuka v terénu považována za významnou vzdělávací strategii a prostředek směřující ke komplexnímu pochopení jevů a procesů odehrávajících se kolem nás, a kterých jsme my lidé součástí. Jak uvádějí např. Rickinson et al. (2004), promyšlená, správně zařazená a zrealizovaná terénní výuka poskytuje žákům nové příležitosti k rozvíjení znalostí a dovedností a dodává jejich každodenním zkušenostem z vyučování vyšší přidanou hodnotu. Podobně vidí význam terénní výuky pro rozvoj geografických kompetencí žáků i Řezníčková (2008) či Hofmann et al. (2003). Terén ale nelze chápat pouze jako prostor, kde si žák ověří či vyzkouší to, co se naučil ve škole či dokonce jako určitou kulisu, v rámci které mu učitel či jiná třetí osoba předkládají hotové informace, ale především jako určitou laboratoř (o např. geografické laboratoři Wilczyńska-Wołoszyn (2003), kde žák objevuje nové a prohlubuje stávající kompetence, a to v širokých souvislostech a vazbách, které reálný prostor přirozeně obsahuje. Zcela logicky by tak terénní výuka měla být úzce propojena s výukou ve třídě (Řezníčková 2008) a práce žáka v obou prostorech by na sebe měla navazovat a doplňovat se.

Terénní výuka je dle Hofmanna et al. (2003) komplexní výukovou formou, která v sobě zahrnuje různé výukové metody, mezi které patří např. pokus, laboratorní činnosti, pozorování, projektová metoda, kooperativní metody a metody zážitkové pedagogiky. Také k ní patří různé organizační formy výuky, např. vycházka, terénní cvičení, exkurze, tematické školní výlety a expedice, přičemž těžiště spočívá v práci v terénu, tedy především mimo školu. Takto velmi široké chápání terénní výuky dává samozřejmě možnost jejího nalezení v kurikulech řady vzdělávacích předmětů či jednoduché implementace do nich, na druhou stranu přináší i celou řadu rizik a chybných představ. Není totiž terénní výuka jako terénní výuka. Zcela odlišné výchovně vzdělávací cíle lze naplnit např. na jedné straně v rámci procházky po okolí své školy, v rámci které si budou žáci číst informace na cedulích naučné stezky či postupně poslouchat výklad učitele popisujícího charakter a specifika navštívených lokalit a na straně druhé, když budou žáci na každé lokalitě sami či ve skupinkách provádět

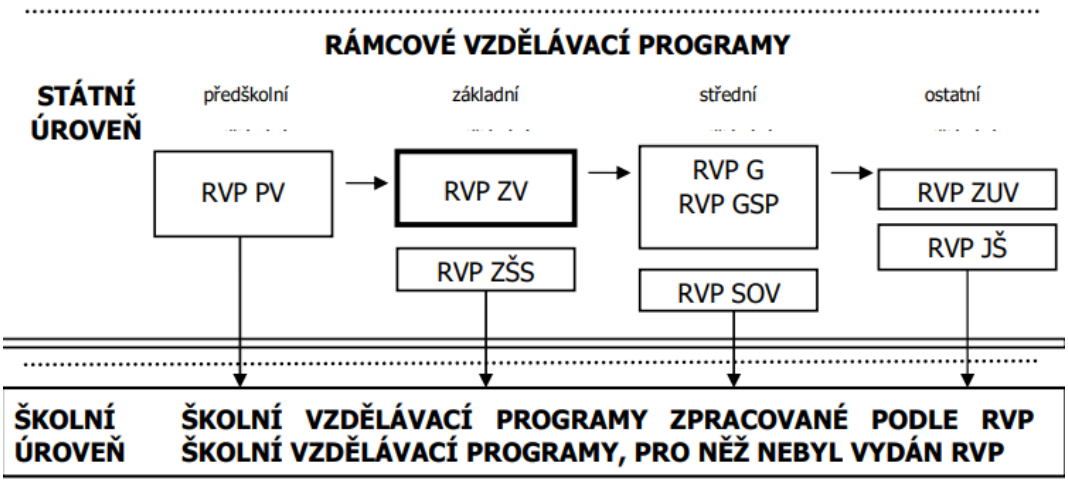
soubor měření a pozorování, které si budou zaznamenávat a ve škole či na konci terénního cvičení následně vyhodnocovat a porovnávat. Na českých školách jsou však z různých forem terénní výuky doposud nejčastěji realizovány vycházky, exkurze a školní výlety, které slouží jako ilustrace k právě probíranému tématu (Marada, 2006; Svobodová et al. 2019a). V jejich rámci však jsou žáci většinou jen pasivními příjemci informací podávaných průvodci, a výukový potenciál navštívených míst tedy není plně využit (Marada, 2006). Takovýto koncept terénní výuky však lze považovat z pohledu současné pedagogiky, která prosazuje aktivní přístup žáků ke konstrukci svého poznání, resp. přesun role učitele do pozice facilitátora výuky, za značně zastaralý (Job, 1999; Ost et al., 2011). Právě poměrem aktivity učitele a žáky se jednotlivé formy terénní výuky od sebe výrazně odlišují (Oost et al., 2011) – viz obr. 1. Výzkum jejich reálné implementace do výuky je však velmi obtížný (Marada, 2006). Z velké části se zaměřuje na analýzu a komparaci školního vzdělávacích programů vybraných škol určitých stupňů vzdělávání (např. Svobodová et al., 2016 či Svobodová et al., 2019b). Jen malá část prací pak jde do analýzy konkrétních vzdělávacích cílů, vzdělávacích strategií a využitých didaktických prostředků v rámci výuky konkrétních předmětů a témat, konkrétními učiteli na školách, které ve svých školních vzdělávacích programech využití některých z forem terénní výuky deklarují. Zde je nutné zmínit především práci Svobodové et al. (2019a) využívající ve svém výzkumu i metody polostrukturovaných rozhovorů realizovaných s celkem 19 učiteli základních škol.



Obr. 1: Role učitele a žáka v závislosti na různých formách terénní výuky. (Oost et al., 2011) - převzato ze Svobodová et al. (2019a)

České vzdělávací kurikulum

V České republice lze systémy vzdělávacího kurikula rozdělit do dvou základních úrovní. První je úroveň národní, tedy jakási koncepční forma kurikul, obsahující obecnou vzdělávací politiku státu a z ní následně vycházející tzv. rámcové vzdělávací programy. Ty se děli dle stupně vzdělávání a v případě vyššího sekundárního vzdělávání ještě dle zaměřené dané školy. Na základě rámcových vzdělávacích programů pak má každá škola povinnost vytvořit svůj školní vzdělávací program (viz obr. 2). Vzhledem k nové vzdělávací politice ČR formulované tzv. Strategií 2030+ začíná postupně docházet k revizím rámcových a následně pak i školních vzdělávacích programů.



Obr. 2: Systém kurikulárních dokumentů (NÚV, 2021; upraveno)

Rámcové vzdělávací programy vychází z aktuální vzdělávací strategie České republiky zdůrazňující a formulující:

1. klíčové kompetence, jejich provázanost se vzdělávacím obsahem a uplatnění získaných vědomostí a dovedností v praktickém životě;
2. principy společného vzdělávání a celoživotního učení;
3. prostřednictvím očekávaných výstupů úroveň vzdělávaní stanovenou pro všechny absolventy jednotlivých etap vzdělávání;
4. pedagogickou autonomii škol a profesní odpovědnost učitelů za výsledky vzdělávání. (NÚV, 2021)

Zatímco rámcové vzdělávací programy jsou velmi obecné a povšechné, školní vzdělávací programy jednotlivých škol už jsou, prostřednictvím přesnější formulace tzv. školních výstupů a specifikace vzdělávacího obsahu (učiva) a jejich rozpracování pro jednotlivé předměty a ročníky, mnohem konkrétnější. Stále se však jedná pouze o projektovou formu kurikula (Maňák et al., 2008), která nám o samotné podobě a pojetí výuky jednotlivými učiteli, v jednotlivých předmětech a tématech řekne jen velmi málo. Pro tyto účely je nutné nahlédnout do tzv. realizovaného kurikula, v podobě metodických

pokynů, směrnic či ideálně příprav na výuku. Popřípadě podrobit samotnou vyučovací hodinu didaktické kazuistice (více viz Slavík et al. 2017).

Terénní výuka v rámcových vzdělávacích programech pro základní vzdělávání a gymnázia

Pro tento úvodní vhled byly využity aktuálně platné rámcové vzdělávací programy. Pro gymnázia se tedy jedná o program platný od roku 2007 ve znění pozdějších změn a pro základní vzdělávání pak o program platný od roku 2005, resp. 2017 (dle nich byly zpracovány analyzované školní vzdělávací programy) a program platný od roku 2021.

V Rámcovém vzdělávacím programu pro základní vzdělávání lze některou z forem terénní výuky nalézt explicitně zmíněnou pouze v rámci dvou vzdělávacích oborů, a to v tělesné výchově na 1. i 2. stupni a zeměpise (na 2. stupni). Jak ukazuje tabulka 1, v rámci tělesné výchovy jde často pouze o uvedení terénní výuky v učivu a nikterak v očekávaných výstupech (tedy v závazné části kurikula). Je až s podivem, že alespoň zmínku o terénní výuce nenajdeme v rámci vzdělávací oblasti Člověk a jeho svět (1. stupeň), kde se žáci věnují tematickým okruhům „Místo, kde žijeme“, „Lidé a čas“ či „Rozmanitost přírody“ nebo ve vzdělávacích oborech chemie a přírodopis na 2. stupni.

Předmět	*Stupeň*	*Výstup*	*Učivo*
Tělesná výchova	1.	Žák se adaptuje na vodní prostředí, dodržuje hygienu plavání, zvládá v souladu s individuálními předpoklady plavecké dovednosti.	plavání
	1.	Žák zvládá v souladu s individuálními předpoklady vybranou plaveckou techniku, prvky sebezáchrany a bezpečnosti.	
	1.	---	turistika a pobyt v přírodě
	1.	---	lyžování*, bruslení*
	2.	---	atletika (vytrvalý běh na dráze a v terénu)
	2.	---	turistika a pobyt v přírodě
	2.	---	lyžování*, snowboarding*, bruslení*
	2.	---	plavání*
Zeměpis (Geografie)	2.	Žák ovládá základy praktické topografe a orientace v terénu.	cvičení a pozorování v terénu místní krajiny, geografická exkurze
	2.	Žák aplikuje v terénu praktické postupy při pozorování, zobrazování a hodnocení krajiny.	

Tab. 1: Terénní výuka v Rámcovém vzdělávacím programu pro základní vzdělávání (zdroj MŠMT, 2021; vlastní úprava); (vysvětlivky: * zařazeny podle podmínek školy)

Vzhledem ke spirálovému charakteru řazení učiva většiny vzdělávacích předmětů (oborů) se lze s podobným zařazením výuky v terénu setkat i v Rámcovém vzdělávacím programu pro gymnázia (tedy pro úroveň vyššího sekundárního vzdělávání). K tělesné výchově a geografii zde přibývá biologie. Jak v rámci tělesné výchovy, tak v rámci biologie se však jedná pouze o témata v učivu, bez přímého ukotvení v některém očekávaném výstupu.

Předmět	*Výstup*	*Učivo*
Tělesná výchova	---	turistika a pobyt v přírodě
	---	atletika (běh na dráze a v terénu)
	---	turistika a pobyt v přírodě
	---	plavání*
	---	lyžování
Biologie	---	práce v terénu a geologická exkurze
Geografie	Žák orientuje se s pomocí map v krajině.	terénní geografická výuka, praxe a aplikace (např. geografická exkurze a terénní cvičení)

Tab. 2: Terénní výuka v Rámcovém vzdělávacím programu pro základní vzdělávání (zdroj MŠMT, 2021; vlastní úprava); (vysvětlivky: * zařazeny podle podmínek školy)

Metodická a z velké části i obsahová volnost, kterou jednotlivým školám a učitelům rámcové vzdělávací programy dávají, může být z pohledu samotné realizace výuky a využití jednotlivých didaktických prostředků dvousečná. Některé školy zůstávají ve svém projektovaném i realizovaném kurikulu pouze na úrovni předepsaných očekávaných výstupů, případně učiva a terénní výuku, která patří, dle výzkumů mezi velmi náročné didaktické prostředky, do svého portfolia více nezařadí, jiné školy mohou ke svému školnímu kurikulu přistoupit zcela odlišně, obsah rámcových vzdělávacích programů brát pouze jako základ a pro jeho naplnění hledat ty nejvhodnější prostředky. (Výběr očekávaných výstupů RVP ZV vedoucích k rozvoji historických a geografických kompetencí, v rámci nichž je vhodné využít terénní výuky, ukazuje tabulka 3). Tento rozpor ukazují i výsledky doposud realizovaných výzkumů (např. Svobodová et al, 2016), stejně jako předkládaná analýza.

Předmět (vzdělávací oblast)	*Očekávaný výstup RVP*	*Návrh na začlenění terénní výuky*
<u>1.stupeň ZŠ</u>		
Člověk a jeho svět	Žák vyznačí v jednoduchém plánu místo svého bydliště a školy, cestu na určené místo a rozliší možná nebezpečí v nejbližším okolí.	**Vycházka, terénní pozorování** – práce s plánem města (části města), zakreslení budovy školy, popis jejího okolí, porovnání se znázorněním v plánu, postupné zakreslování cesty vycházky, v terénu identifikování nebezpečných míst (frekventované komunikace, tmavá místa atd.) a jejich zakreslení do mapy

	Žák určí světové strany v přírodě i podle mapy, orientuje se podle nich a řídí se podle zásad bezpečného pohybu a pobytu v přírodě.	**Práce s buzolou a mapou, terénní pozorování** – určení umístění vybraných dominantních prvků v okolí školy (např. hřiště, hlavní vchod, zahradní altán atd.) pomocí světových stran; popis vzájemné polohy dominantních prvků v okolí školy, jejich zakreslení do plánku
	Žák pojmenuje některé rodáky, kulturní či historické památky, významné události regionu.	**Vycházka, terénní pozorování, terénní smyslová výuka** – historické památky mé obce, popis funkce, podoby a jejich polohy uvnitř obce (možné doplnění o jejich nákres – mezipředmětová vazba do výtvarné výchovy)
	Žák uplatňuje elementární poznatky o sobě, o rodině a činnostech člověka, o lidské společnosti, soužití, zvycích a o práci lidí; na příkladech porovnává minulost a současnost.	**Vycházka, terénní pozorování** – na základě historických fotografií identifikace proměn vybraných lokalit v obci
	Žák využívá knihoven, sbírek muzeí a galerií jako informačních zdrojů pro pochopení minulosti.	**Exkurze** – edukační program v místním muzeu a knihovně
	Žák pozoruje, popíše a porovná viditelné proměny v přírodě v jednotlivých ročních obdobích.	**Terénní pozorování, terénní smyslová výuka** – proměny vybraných lokalit v blízkosti školy v jednotlivých ročních obdobích
	Žák roztřídí některé přírodniny podle nápadných určujících znaků, uvede příklady výskytu organismů ve známé lokalitě.	**Terénní pozorování, badatelsky orientovaná výuka** – pozorování výskytu různých druhů rostlin a živočichů v odlišných lokalitách (u vody, na náměstí, v lese, v parku atd.), jejich určování a porovnávání těchto lokalit
2. stupeň ZŠ		
Dějepis	Žák objasní situaci Velkomoravské říše a vnitřní vývoj českého státu a postavení těchto státních útvarů v evropských souvislostech.	**Exkurze** – edukační program ve skanzenu či muzeu
	Žák ilustruje postavení jednotlivých vrstev středověké společnosti, uvede příklady románské a gotické kultury. Žák rozpozná základní znaky jednotlivých kulturních stylů a uvede	**Vycházka, terénní pozorování, terénní smyslová výuka** – historické památky mé obce, popis funkce, podoby a jejich polohy uvnitř, doplnění o jejich nákres (mezipředmětová vazba

	jejich představitele a příklady významných kulturních památek.	do výtvarné výchovy), porovnávání jednotlivých architektonických slohů a typů budov
Zeměpis	Žák organizuje a přiměřeně hodnotí geografické informace a zdroje dat z dostupných kartografických produktů a elaborátů, z grafů, diagramů, statistických a dalších informačních zdrojů. Žák používá s porozuměním základní geografickou, topografickou a kartografickou terminologii. Žák rozlišuje a porovnává složky a prvky přírodní sféry, jejich vzájemnou souvislost a podmíněnost, rozeznává, pojmenuje a klasifikuje tvary zemského povrchu. Žák porovná působení vnitřních a vnějších procesů v přírodní sféře a jejich vliv na přírodu a na lidskou společnost	**Terénní výzkum, badatelsky orientovaná výuka** – např. kontinuální meteorologická měření a pozorování, znázornění a vyhodnocení výsledků; identifikace, popis a klasifikace vybraných tvarů zemského povrchu v místní krajině; realizace půdních sond a sledování složení půdy a půdního edafonu v návaznosti na využívání půdy a její úrodnost
	Žák posoudí, jak přírodní podmínky souvisejí s funkcí lidského sídla, pojmenuje obecné základní geografické znaky sídel.	**Terénní výzkum, pozorování, badatelsky orientovaný výuka** – např. v prostoru města identifikace jeho vývojových částí, resp. jejich specifik, identifikace a popis funkcí ve městě a jejich vzájemného vztahu, identifikace rozdílů mezi jednotlivými částmi města, resp. městem, jeho zázemím a venkovem ve vztahu k charakteru sídla, života v něm a ke kvalitě života
	Žák porovnává různé krajiny jako součást pevninské části krajinné sféry, rozlišuje na konkrétních příkladech specifické znaky a funkce krajin. Žák uvádí konkrétní příklady přírodních a kulturních krajinných složek a prvků, prostorové rozmístění hlavních ekosystémů (biomů). Žák uvádí na vybraných příkladech závažné důsledky a rizika přírodních a společenských vlivů na životní prostředí.	**Terénní výzkum, pozorování, badatelsky orientovaný výuka** – např. na příkladech místní krajiny identifikovat a zhodnotit vliv člověka na přírodu; v terénu identifikace vybraných krajinných prvků, popis a zhodnocení jejich významu

Tab. 3: Návrhy začlenění terénní výuky do vzdělávacích předmětů (oborů) rozvíjejících geografické a historické kompetence žáků základních škol.

Metodika výzkumu začlenění terénní výuky zeměpisu a dějepisu do školních kurikul základních škol

Vzhledem k značnému množství ZŠ byla zvolena metoda sondy do části těch ŠVP, které jsou volně přístupné, a to v kompletní podobě na webových stránkách škol. Analýza byla provedena na vzorku 146 základních škol napříč celou ČR, a to podle krajského členění. Výběr škol byl proveden s ohledem na velikost kraje, resp. počet škol v daném kraji, dále tak, aby zde byly vždy zastoupeny školy z krajského města, okresních měst i školy ve střediskových obcích, případně vesnické školy. Pro upřesnění daných zjištění a umožnění lepšího vhledu do realizovaného kurikula byla pro předmět zeměpis následně volena metoda dotazníku, který byl distribuován na vybrané základních. Výzkum byl realizován v průběhu školních roků 2018/19 a 2019/2020.

V ČR bylo ve školním roce 2019/2020 evidováno 2778 ZŠ s 2. stupni, přičemž v každém kraji se jich nachází průměrně 198, pouze Karlovarský má vzhledem ke své velikosti škol výrazně méně (82) a naopak Středočeský a Moravskoslezský výrazně více (300 a více). Tomu odpovídá početní zastoupení škol.

Dotazníkového části šetření zaměřeného výhradně na kurikulum zeměpisu se zúčastnilo celkem 56 učitelů zeměpisu ze 47 základních škol z 8 krajů České republiky. Průměrný věk učitelů ve vzorku byl 44,5 let, což přibližně odpovídá celostátnímu průměru.

Rámeček 1: Struktura výzkumného vzorku (zdroj dat: vlastní šetření ČSÚ, 2020)

Terénní výuka zeměpisu ve školním kurikulu základních škol

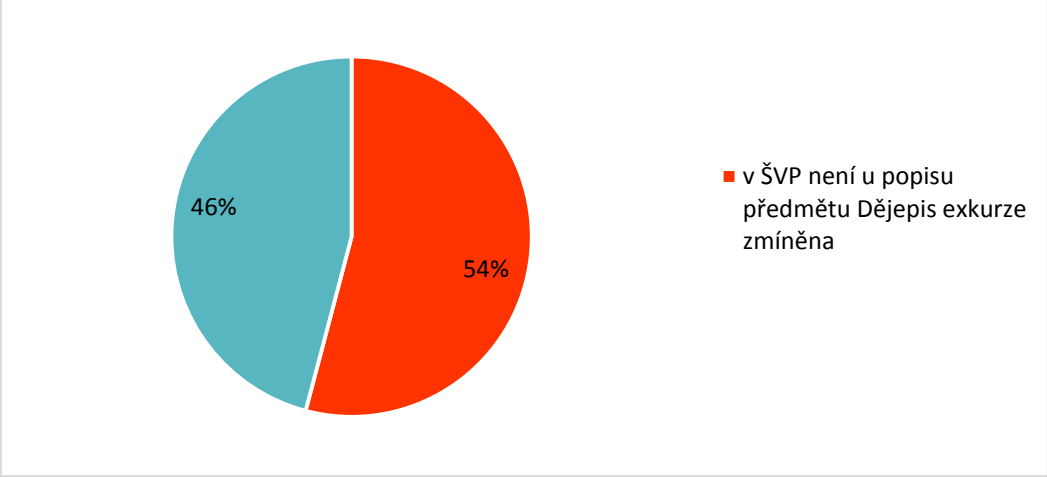
Vzhledem k přímému ukotvení terénní výuky v Rámcovém vzdělávacím programu pro základní vzdělávání, došlo k identifikaci alespoň jedné z forem terénní výuky v každém ze sledovaných školních vzdělávacích programů. Kromě samotného vzdělávacího obsahu jsou určité formy terénní výuky nejčastěji zmiňovány v úvodním popisu předmětu, kdy jsou řazeny mezi ostatní organizační formy. Velmi často je terénní výuka zmiňována v souvislosti s rozvoje klíčových kompetencí (především kompetence pracovní). Stejně tak i většina z oslovených učitelů zeměpisu (odpověděla, že terénní výuky do hodin zařazuje (69 %). Z toho ale více jak 70 % dále odpovědělo, že tuto vyučovací formu využívá jen okrajově. Průměrný věk učitelů, kteří jednoznačně deklarovali využívání terénní výuky, byl 46,5 roku, což přibližně odpovídá průměrnému věku učitelů na ZŠ. O půl roku vyšší pak byla hodnota mediánu. Pouze 3 % učitelů odpovědělo, že terénní výuku nepoužívají a ani nechtějí. Ve

všech případech se jednalo o učitele starší 60 let. Ve sledovaném vzorku se zatím neprokázala korelace mezi druhým aprobačním předmětem a využíváním terénní výuky. Velká část učitelů (45 %) se při realizaci terénní výuky spoléhá na její zajištění třetí osobou – většinou v podobě regionálního centra environmentálního vzdělávání, zoologickou zahradou, science centrem či muzeem nebo hvězdárnou.

Terénní výuka je převážně využívána v rámci kartografických témat v 6. ročníku. Jedná se především o práci s mapou či kompasem, resp. o aktivity směřující k rozvoji schopnosti orientace žáků v terénu. Takováto terénní výuka nejčastěji jedno až dvou hodinová. Pouze výjimečně se zde vyskytují celodenní výukové aktivity. Délka těchto aktivit přímo souvisí i s prostorem, kde jsou realizovány. Zatímco většina škol aktivity realizuje v areálu či blízkosti školy. Zajímavým zjištěním je, že pouze ve dvou ze zkoumaných škol byla některá z forem terénní výuky využita při výuce obecného fyzického zeměpisu, který patří mezi tradiční součásti učiva 6. ročníku. Pro výuku environmentálně a fyzicko-geograficky orientovaných téma napříč všemi ročníky využívá terénní výuky 19 % oslovených škol. Z velké části se jedná o téma místní krajiny. Ačkoliv většina oslovených škol využití některé z forem terénní výuky deklaruje, nejedná se o zařazování systematické, tedy v rámci všech tematických celků vhodných pro implementaci terénní výuky. Na příklad jen 28 % škol využívá terénní výuky pro rozvoj žákových kompetencí o místním regionu a pouze 11 % pro výuku alespoň některého z témat humánně geografických. Až na jednu výjimku se však jedná výhradně o exkurze s minimálním požadavkem na žákovu aktivitu. Pouze zlomek škol zařazuje exkurzi i do výuky regionálního zeměpisu Evropy či České republiky.

Terénní výuka dějepisu ve školním kurikulu základních škol

S výukou mimo prostor školy počítá výslovně v ŠVP při popisu předmětu Dějepis celkem 67 škol ze sledovaného vzorku, tedy necelá polovina (46 %). Ve zbylých 54 % ŠVP není v rámci charakteristiky vyučovacího předmětu Dějepis vůbec uvedena možnost uskutečnit výuku v exteriéru, viz obr. 3.

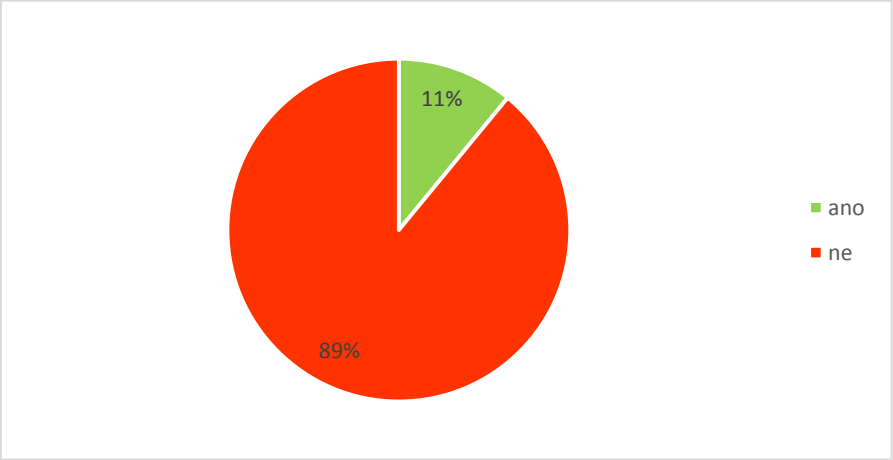


Obr. 3: Výskyt exkurze ve ŠVP u předmětu dějepis

Stejně jako v případě zeměpisu je i zde velmi typické obecné vyjmenování různých organizačních forem výuky v rámci organizačního vymezení předmětu, mezi nimiž figurují exkurze. Další využívanou možností je uvedení organizace exkurzí v rámci položky rozvoj klíčových kompetencí u kompetence pracovní.

Často jsou popisy terénní výuky vysoce selektivní a označují jen jednu podobu výuky mimo prostor školy, například uvádějí jen možnost návštěvy výstavy nebo jen možnost realizovat výuku mimo třídu v muzeu nebo archivu. Typické je uvádění terénní výuky jako dobrovolné možnosti, a to s odkazem na aktuální potřebnost a možnosti učitele a žáků. Výuka mimo kmenovou či počítačovou učebnu, resp. mimo školní budovu je často definována jako příležitostná, doplňková, možná či alternativní. Spíše výjimečně je exkurze v ŠVP definována jako nedílná součást výuky dějepisu, nebo dokonce jako preferovaná a žáky oblíbená forma výuky. Specifickým způsobem evidence terénní zkušenosti je často se objevující standardizovaná formulace, která odkazuje na to, že v dějepise se využívají informace získané žáky jinde; počítá se tedy s tím, že žáci navštěvují individuálně paměťové instituce a že je možné s jejich zkušeností při výuce pracovat.

Mnohem konkrétnější představu o využívání terénní výuky v dějepise lze nalézt při hlubším pohledu do vzdělávacího obsahu předmětu v jednotlivých ŠVP. V rámci sledovaného vzorku se konkrétně naplánované exkurze se stanovenou destinací objevily jen v šestnácti ŠVP (necelých 11 % škol), viz obr. 4. Do této kategorie byly zahrnuty i školy, v jejichž ŠVP se exkurze neobjevily systematicky ve všech ročnících dějepisu, ale víceméně nahodile. Začleněny sem byly i školy, kde se sice objevily konkrétní cíle exkurzí a instituce mimo školní budovu, ale v ŠVP nebyly propojeny chronologicky s učivem, ale s popisem charakteristik předmětu nebo s popisem strategie rozvoje klíčových kompetencí. Příkladů systematického a průběžného zařazení exkurzí do učiva dějepisu na ZŠ je ve sledovaném vzorku minimum. Jedná se o školy, kde je v každém ročníku plánována u konkrétního učiva exkurze, někdy i s cílovou destinací. Stejně jako v případě zeměpisu je i zde zarážející nedostatečné využívání místních specifik při výuce vybraných dějepisných témat.



Obr. 4: Výskyt terénní výuky v podobě exkurze ve vzdělávacím obsahu předmětu dějepis

Specifickou skupinou jsou školy, kde se s dějepisnými exkurzemi nepočítá v dějepisu, ale jsou zařazeny do samostatného předmětu Dějepisný seminář, a to proto, že se jedná o povinně volitelný, a tedy kapacitně omezený předmět, který nezasahuje celý ročník. Předmět je zpravidla zacílen na prohlubování učiva a hlubší poznávání regionu a exkurze v něm mohou být zastoupeny v daleko větším počtu a systematičtěji. U dějepisných seminářů lze nalézt již větší plejádu forem terénní výuky. Vedle klasické exkurze zde lze častěji nalézt i vycházky a především praktická cvičení.

V ŠVP ZŠ se v Dějepise počítá jen s omezeným zapojením výuky v exteriéru. Pokud již ŠVP připouští tuto možnost, pak jen jako příležitostné doplnění výuky, která jinak probíhá v kmenové třídě nebo jiných učebnách školy. V ŠVP se výslovně uvádí, že se jedná o doplnění výuky, a to v závislosti na aktuálních možnostech a vůli. Jen 11% ŠVP propojuje výuku dějepisu v terénu v souvislosti s konkrétním učivem nebo dokonce s konkrétní lokalitou.

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TERENSKO DELO PRI POUKU GEOGRAFIJE V SLOVENIJI

Uvod

Terensko delo je oblika neposrednega stika s pokrajino, predmetom geografskega preučevanja. Kot tako je zelo pomembno v raziskovalnem in v učnem smislu, torej tako pri geografskem raziskovalnem delu in pri študiju geografije, kot tudi pri učenju geografije na različnih izobraževalnih nivojih.

V pričujočem sestavku želimo predstaviti vidike terenskega dela kot izobraževalnega postopka v primarnem, sekundarnem in terciarnem geografskem izobraževanju v Sloveniji. S tem namenom smo si zastavili sledeče cilje:

- pojasniti pojem in namen terenskega dela,
- ovrednotiti pomen terenskega dela v procesu izobraževanja,
- opredeliti izobraževalne kontekste geografskega terenskega dela,
- predstaviti zastopanost terenskega dela na nivoju primarnega, sekundarnega in terciarnega geografskega izobraževanja v Sloveniji in
- na podlagi raziskave realnega kurikuluma opisati vidike priprave, organizacije in izpeljave geografskega terenskega dela na primarnem in sekundarnem izobraževalnem nivoju v Sloveniji ter poglede anketiranih učiteljev na terensko delo.

Pojem in namen terenskega dela kot izobraževalnega postopka

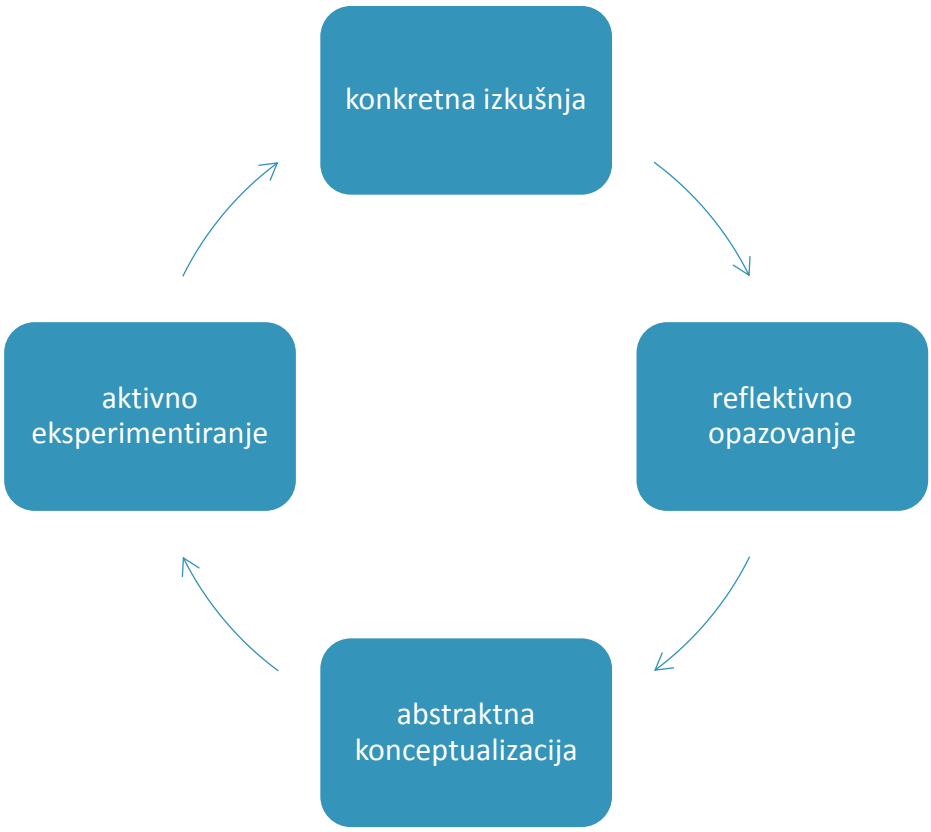
Slovenski osnovnošolski učni načrt za geografijo (2011) in gimnazijski učni načrt za geografijo (2008) predstavljata terensko delo kot skupek učnih dejavnosti, ki jih učenci ali dijaki opravljajo izven učilnice oz. šole. Pri tem gre pogosto za ekskurzije, opazovanje pokrajine oz. za didaktično raziskovanje – odkrivanje (za učence) novih spoznanj. V slovenski geografski literaturi se terensko delo pojavlja kot protipomenka laboratorijskemu in kabinetnemu delu oz. »kot sintagma, ki jo razumemo, uporabljamo in ni pomensko vprašljiva.« (Lipovšek, 2016, 7). Terensko delo se razume kot »didaktični postopek, ob katerem učenci spoznavajo ne le zakonitosti v pokrajini, ampak se naučijo tudi veščin neposrednega raziskovanja pokrajine, ne le geografskega, za potrebe geografije, ampak splošnega, medpredmetnega, življenjskega.« (ibidem, 9). Podoben pomen pripisujeta terenskemu delu tudi slovenska učna načrta za zgodovino in biologijo (Kunaver, 2008; Vilhar, 2008) – torej gre za »sestavino pouka, ki temelji na opazovanju, preiskovanju, raziskovanju in beleženju pokrajine; didaktični postopek, ki lahko poteka med običajnim poukom, na ekskurziji, šolski učni poti, poučnem sprehodu, naravoslovnem dnevu, šoli v naravi ali drugi dejavnosti, ki je vezana na predpisani šolski program«. (Lipovšek, 2016, 9)

Pomen terenskega dela

Terensko izobraževanje je neposredno učenje v kompleksnem prostoru, v katerem se sistemsko prepletajo naravne in družbene prvine. Tako je oblika učnega dela, ki je pri pouku geografije najbolj izkustvena in holistična. Omogoča veččutno zanavanje celovitega prostora. V času individualizacije in digitalizacije ter s tem svojevrstnega odmika učencev od narave in skupnosti, jih je pogosto potrebno že na osnovnem nivoju ponovno učiti stika z življenjskim okoljem, da bi ga lahko razumeli, v njem kakovostno živeli ter delovali trajnostno. Terensko delo tako dodatno pridobiva na svojem poslanstvu.

Izobraževalni kontekst terenskega dela

Ideja terenskega izobraževanja sovpada s ključnimi sodobnimi izobraževalnimi filozofijami. Ena od temeljnih je filozofija izkustvenega učenja. Po Kolbu (1984) je izkustveno učenje vsako učenje v neposrednem stiku z realnostjo, neposredno soočanje s pojavi, pri čemer je soočanje proces, v katerem se ustvarja znanje s pretvorbo izkušnje. Tako je znanje po Kolbovem mnenju rezultat transakcije med družbenim znanjem (objektivna spoznanja) in osebnim znanjem (subjektivne izkušnje) v procesu učenja. Po Kolbu je učenje cikličen proces, ki zajema štiri stopnje: (1) konkretna izkušnja, ki vključuje celostno dojemanje pojava/procesa, tudi čustvene dimenzije, (2) razmišljujoče opazovanje v smislu skrbnega opazovanja in nepristranskega opisovanja, kjer je pomembno kako stvari/pojavi/procesi delujejo; (3) abstraktna konceptualizacija, ki pomeni nasprotje intuitivnosti, logično sklepanje, sistematiziranje, posploševanje na podlagi pridobljene izkušnje; (4) aktivno preizkušanje ali eksperimentiranje, kar pomeni praktično uporabnost in delovanje na podlagi pridobljene izkušnje oz. preverjanje pojmov v novih situacijah s pridobivanjem povratnih informacij.



Slika 1: Kolbov učni cikel

Terensko delo sovpada tudi z izobraževalno filozofijo raziskovalnega učenja, ki v vzgojno izobraževalni proces vnaša posamezne elemente znanstvenega dela (Ivanuš Grmek

in Javornik Krečič, 2011, v Kačič, 2013), saj lahko učenci v okviru terenskega dela preko samostojnega raziskovanja v konkretni pokrajini pridejo do (subjektivno ali celo objektivno) novih znanj, pri čemer se učijo tudi samoorganizacije, vodenja lastnega učenja in dela, torej spretnosti in sposobnosti vseživljenjskega učenja. Filozofija samostojnega individualnega ali sodelovalnega raziskovanja učencev je blizu filozofiji projektnega učnega dela, katere bistvo je ciljno usmerjeno aktivno reševanje realnih (avtentičnih) izzivov/problemov/tematskih vprašanj, pri čemer so učenci udeleženi v vseh fazah procesa – od pripravljalne faze do načrtovanja projektnega dela, izvajanja le tega in interpretacije rezultatov, njihove diseminacije in nazadnje evalvacije in reflektiranja (Bezgovšek, 2019). Nenazadnje je temeljni ideji terenskega dela sorodna tudi filozofija problemskega pouka, usmerjenega v reševanje realističnih problemov, ki nimajo nujno enoznačnega odgovora. Problemski pouk vključuje faze evidentiranje oz. zaznavanje problema, opredelitev in formuliranje problema, načrtovanje reševanja problema in postavljanje hipotez, uresničevanje in preverjanje problemskega načrta oz. hipotez ter fazo formulacije in posplošitve rešitve problema (Bognar et. al., 1993; v Kokalj b.d.) . Znotraj tega velja posebej poudariti prednosti, ki se kažejo v višjih miselnih procesih, še zlasti pa v razvijanju ustvarjalnosti.

Navedene izobraževalne filozofije so deloma medsebojno prekrivne in povezljive (npr. raziskovalno učenje je lahko organizirano po principu projektnega učnega dela ter vključuje realistično problemsko vprašanje) deloma pa vključujejo določene specifične karakteristike oz. lahko izključujejo posamezne elemente druga druge. Kakorkoli že - mozaik navedenih izobraževalnih filozofij je lahko izvor ustvarjalnih idej za didaktično organizacijo in osmišljenje geografskega terenskega dela. Naj dodamo še, da aktivna vključenost učenca v geografsko terensko delo podpira učenčevo celostno (osebnostno, izobraževalno) prisotnost v danem trenutku in prostoru, torej je povezana tudi s filozofijo čuječnega učenja (Shapiro et.al., 2006). Pri tej je bistveno nepresojajoče pozorno zavedanje tega, kar se dogaja v sedanjem trenutku (v sebi, v lastnem procesu učenja, s konkretnim geografskim prostorom) ter iz tega izhajajoča samoregulacija in potencialno spreminjanje (sebe, lastnega procesa učenja, ravnanja z oz. v geografskem prostoru).

Če pogledamo na terensko delo z vidika splošnih sodobnih izobraževalnih smernic, ki za doseganje kakovostnih izobraževalnih rezultatov poudarjajo aktivno vključenost učenca, lahko izpostavimo klasifikacijo metod terenskega dela po Kentu, Gilbertsonu in Huntu (1997), ki ločijo:

- opazovalno terensko delo (zahteva pretežno prisotnost učencev, ne pa aktivno sodelovanje; gre za relativno hitro premikanje iz ene na drugo lokacijo – npr. ekskurzija, kjer vidimo veliko število prostorskih elementov in pojavov, vendar je ogled teh površen; delo na takšen način je uporabno npr. za uvodno spoznavanje terena; učinkovitost opazovalnega terenskega dela se povečuje, če so učenci v večji meri vključeni; v primeru opazovalnega terenskega dela je pogosta dopolnitev aktivnosti učencev z delovnim listom ali karto, kjer odgovarjajo na vnaprej postavljene naloge z lastnim opazovanjem in znanjem);

- sodelovalno terensko delo (gre za delo v manjših skupinah; v primerjavi z opazovalnim terenskim delom naj bi sodelovalna oblika v večji meri vključevala učenčevo aktivnost; učitelj pogosto določi aktivnosti in skrbno nadzoruje tudi končno analizo dela, lahko pa le pomaga oblikovati projekt in nudi pomoč ter metodološko usmeritev v naslednjih fazah; v projektnem delu, ki ga vodijo učenci, učitelj le spodbuja skupino in svetuje glede varnosti);
- opazovanje z udeležbo (gre za metodo terenskega dela, pri kateri je opazovalec del določenega družbenega življenja, s čimer neposredno pridobi podatke o dogajanju v določeni družbeni sredini; gre za »sistem zbiranja podatkov v specifičnem obdobju/času, ki temelji na opazovanju, poslušanju in spraševanju ljudi, medtem ko ti sledijo svojim vsakodnevnim aktivnostim, raziskovalec pa v tem času privzema vlogo iz njihovega konteksta in delno postane član skupine« (Lavrič&Naterer, 2010, 11); opazovanje z udeležbo je metoda, kjer učenci v določenem obdobju intenzivno sodelujejo v aktivnosti neke organizacije, pri čemer pridobijo globlji uvid v njihovo realnost (npr. humanitarne, komercialne, vladne organizacije, lokalne in nacionalne okoljske agencije). (Simonič, 2020)

Položaj terenskega dela v slovenskem geografskem kurikulumu

Lipovšek (2016) ugotavlja, da do kurikularne prenove leta 1998 terensko delo v Sloveniji ni bilo umeščeno v kurikularne dokumente kot obvezna sestavina pouka. Če je bilo izpeljano, je bilo v okviru ekskurzij, naravoslovnih dni, taborjenj v naravi, šole v naravi in podobno. Kljub temu so se slovenski geografi že pred umestitvijo v kurikularne dokumente tudi v šolah posvečali tej obliki dela, posledično pa so nastajali različni priročniki in publikacije za podporo izvajanju terenskega dela. Med njimi so bili prvi npr. Kert 1981, Geografija 3: geografske značilnosti in sodobni problemi Slovenije in Jugoslavije 1, Spoznavanje in proučevanje domače regije; Geografski obzornik 1989 – posebna številka revije za geografsko izobraževanje, posvečena raziskovalnim nalogam učencev oz. dijakov na terenu; Kunaver idr. 1989, Domača pokrajina. Terensko delo kot dopolnitev pouku geografije pred uvedbo le tega v kurikularne dokumente, omenja še več drugih avtorjev v Sloveniji, npr. Zgonik (1995), ki ga poimenuje terensko raziskovalno delo in ga umešča med dodatno pedagoško-didaktično delo, vidi ga kot vir razvijanja ustvarjalnega mišljenja. Kot piše Brinovec (2004) je tudi Medved že v sedemdesetih letih poudarjal pomen terenskega dela za pridobivanje spoznanj z opazovanjem iz domačega okolja, ki je zanj vir geografskih spoznanj.

S kurikularno prenovo leta 1998 je bilo terensko delo v Sloveniji uradno umeščeno v kurikulum osnovne šole in srednjih šol. V letih po prenovi je postalo tudi obvezno pri nacionalnih preizkusih znanja v osnovni šoli (*Pravilnik o preverjanju in ocenjevanju znanja z nacionalnimi preizkusi znanja ob koncu obdobij v devetletni osnovni šoli, 2001, člen 31*) in na gimnazijski maturi (*Predmetni izpitni katalog za splošno maturo, 2012, 8*). Iz opravljenega terenskega dela dijaki, ki izberejo na gimnazijski maturi geografijo kot izbirni predmet,

pridobijo 20% ocene predmeta. Ob preimenovanju nacionalnih preizkusov v nacionalno preverjanje znanja je bilo leta 2005 v osnovni šoli zunanje preverjanje terenskega dela odpravljeno (*Pravilnik o nacionalnem preverjanju znanja v osnovni šoli, 2005, člen 11*). V Sloveniji je terensko delo torej eksplicitno opredeljeno v učnih načrtih osnovnih in srednjih šol kot obvezni sestavni del pouka na podlagi mnenja, da učenci pri terenskem delu razvijajo znanje, ki ga z drugimi izobraževalnimi metodami ne pridobijo (Polšak, 2008; Kolnik, 2011; v Lipovšek, 2016).

Tudi strokovne podlage za podporo uvajanju navedenih učnih načrtov s strani Zavoda RS za šolstvo (Bevc, 1997) so v aktualnem obdobju poudarjale pomembnost vključevanja aktivnih metod učenja v pouk geografije, med katere štejejo metode in oblike terenskega dela. V obdobju uvajanja učnih načrtov je bil trud vložen v prve slovenske zapisane razmisleke o problemu ocenjevanja terenskega dela in v oblikovanje ocenjevalnega vzorca (Cunder, 2002), kar je bilo vezano zlasti na oblikovanja maturitetnih ocen (Lipovšek, 2016).

V zborniku Slovenska šolska geografija s pogledom v prihodnost, ki je eno ključnih del na področju t.i. šolske geografije, je slabih deset let po opisani kurikularni prenovi izpostavljal pomen terenskega dela Kunaver (2005), ki se je pri tem upiral na mednarodno listino o geografskem izobraževanju in posebej omenjal Haubricha, ki je slabosti pouka geografije videl v pomanjkanju terenskega dela in eksperimentiranja (2005, 90 v Lipovšek, 2016). Kolnikova (2006, v Lipovšek, 2016) je širila strokovni razmislek o didaktični vrednosti učenja geografije na prostem s tem, ko je poudarjala, da je pomembno razmišljati o smislu, namenu in vrednosti terenskega dela, pa tudi o ključnih merilih za njegovo pripravo in vrednotenje ter o elementih za didaktično analizo sestavin izobraževalno-vzgojnega dela na prostem.

Zastopanost tematike (izobraževalnega) terenskega dela v slovenski raziskovalni dejavnosti

V obdobju od omenjenih prispevkov do danes je nastalo v slovenskem prostoru več zaključnih študentskih raziskovalnih del različnih izobraževalnih nivojev (od diplom do magisterijev), ki se posvečajo terenskemu delu. Tako pregled slovenskih raziskovalnih del (Simonič, 2020), ki vključujejo ključno besedno zvezo terensko delo med leti 2008 in 2020 pokaže, da je bilo v tem času napisanih enaindvajset tej vsebini posvečenih zaključnih del. Večina avtorjev podpira terensko delo in pri izvedbi tega ugotavlja pozitivne rezultate. Ob tem hkrati opozarjajo na nekatere možne negativne vidike, ki pa so po mnenju večine avtorjev odpravljivi, zlasti z dobro predpripravo. Zaključna dela, vezana na terensko delo, v veliki večini obravnavajo prvo in drugo triado osnovne šole in izjemoma terensko delo v gimnazijah in splošne vidike in stališča učiteljev do terenskega dela pri pouku geografije. Količina del nedvomno priča o razumevanju terenskega dela kot pomembnega elementa pouka geografije.

V nadaljevanju bomo izpostavili pristope dveh slovenskih avtorjev k metodološkemu klasificiranju geografskega terenskega dela. Brinovec (1997) je v 90. letih razvil skupek metod za terensko delo pri pouku geografije. Terensko delo je že razumel kot osnovno obliko geografskega pouka ter omenjal več njegovih prednosti, kot so večja učinkovitost dela, motiviranje in aktiviranje učencev in možnost diferenciacije učencev. Metode terenskega dela je klasificiral glede na prevladujoči postopek dela ter ločil metode neposrednega opazovanja, metode risanja, metode merjenja, metode zbiranja vzorcev, metode intervjuvanja in anketiranja ter metode zbiranja podatkov in kartiranja. Metodo opazovanja je razumel kot temeljno geografsko metodo, ki jo je potrebno priučiti postopoma. Učenci se po mnenju Brinovca učijo induktivno, torej iz posameznega primera pridejo do splošnih sklepov. To metodo izvajamo samostojno ali povezujemo z drugimi metodami (npr. risanje, zbiranje vzorcev, anketiranje, itd.) ter učnimi oblikami (npr. delo v dvojicah, skupini, itd.). Metode risanja je razumel kot risanje krokija, skice ali panoramske risbe, pri čemer je poudarjal, da je pomembno sistematično uvajanje učencev. Metode merjenja po Brinovcu predstavljajo most med teorijo in prakso, kar bi lahko razumeli kot most med (zgolj) opisovanjem in raziskovanjem prostora. Učenci se v tej povezavi naučijo rokovanja z instrumenti za merjenje in interpretacije rezultatov. Pri metodi zbiranja vzorcev Brinovec sicer izpostavlja zbiranje kamnin, vendar je v geografiji koristno tudi zbiranje vzorcev drugih naravnih elementov, nenazadnje pa tudi družbenih prvin (časopisni izrezki, razglednice…). Zbirke le teh omogočajo lažji stik z realnostjo že v šoli oz. lažji prenos in uporabo znanja v realnem okolju. Metodi intervjuja in anketiranja sta pomembni zlasti v okviru družbene geografije, a ju lahko vežemo tudi na fizičnogeografske ali kompleksne okoljske tematike. Kot metodo zbiranja podatkov je Brinovec razumel zlasti samostojno pridobivanje podatkov (brez merilnih instrumentov), npr. štetje določenih elementov (npr. število obiskovalcev, avtomobilov, itd.). Metodo kartiranja je Brinovec razumel kot evidentiranje in prostorsko prikazovanje geografskih pojavov na zemljevidih. (Brinovec et. al., 1997; v Simonič, 2020).

Na podlagi Brinovčeve klasifikacije se je postopoma izoblikovala zbirka konkretnih delovnih postopkov oz. metod, zlasti fizičnogeografskega izobraževalnega terenskega dela, ki se v več slovenskih raziskovalnih delih pojavljajo kot primeri dela z učenci, dijaki, drugimi obiskovalci na učnih poteh ali v učilnicah v naravi (Radinovič, 2020; Jus, 2019). Intenzivno je v obdobju od 2005 do 2020 na področju zbiranja, razvijanja ter opisovanja metod (izobraževalnega in raziskovalnega) terenskega dela delala Vovk Korževa s sodelavci, ki je postopke terenskega dela vezala zlasti na prsti, vodovje in rastlinstvo ter ekoremediacije (npr. Vovk Korže, 2007).

Ob Brinovcu je o pristopanju k terenskemu delu za namene izobraževanja razmišljal tudi Lipovšek (2016). Le ta gleda na terensko delo iz učiteljskega praktičnega vidika, ko sklene, da lahko terensko delo pri pouku geografije uporabimo kot:

- sredstvo (v tem primeru učenci po navodilih učitelja na terenu zgolj izvršujejo zadane naloge, npr. zbirajo vzorce, preštevajo določene elemente pokrajine, si zabeležijo informacije ali si jih zapomnijo, ob povratku v razred pa sledi analiza pridobljenega, tudi zaključno poročilo, plakat, igra vlog, ipd. – v takem primeru

lahko pride do pomanjkanja razumevanja širše slike oz. lahko ostanejo kompleksnejši geografski učni cilji nedoseženi);

- obliko pouka (v tem primeru učitelj prenese celovite učne dejavnosti iz učilnice v pokrajino, pri čemer je posebej pomembna predpriprava učencev, saj s tem postavljamo osnovo tudi za njihovo prihodnje delo na prostem (npr. kako naj se pripravijo, kakšne pripomočke naj vzamejo s sabo, kakšne nepredvidljivosti jih lahko čakajo, koliko časa porabijo za takšno dejavnost, itd.));
- spoznavno metodo (vključuje celovit raziskovalni postopek učencev: ugotovitev in opredelitev problema, oblikovanje domnev in možne rešitve, izločitev relevantnih informacij, zbiranje informacij, shranjevanje in arhiviranje gradiv, analiza podatkov, razmislek o rezultatih, potrditev ali zavrnitev domnev in oblikovanje novih domnev in novega raziskovalnega kroga).

Lipovšek (2016) predlaga terenske naloge glede na njihov namen, aktualno pedagoško filozofijo, vodilne pripomočke ali metode pri terenskem delu, pri čemer izhaja iz splošnih izobraževalnih smernic ter iz potreb geografije kot znanosti oz. šolskega predmeta. Izpostavlja:

- regionalno usmerjene terenske naloge (teren, vezan na proučevanje celovitega regionalnega okolja),
- kartiranje in anketiranje (poudarja geografski veščini, ki sta predpisani v učnem načrtu za osnovne in srednje šole in lahko potekata v prostoročni ali računalniški obliki),
- računalniško podprte terenske naloge (vezane na uporabo npr. računalniškega vmesnika, ki omogoča priključitev različnih tipal (npr. GPS, termometer, itd.) in intervalno meri in shranjuje meritve v obliki grafov in preglednic),
- virtualno terensko delo (motivacijsko sredstvo, vir informacij za pouk in sredstvo za usvajanje novega znanja, pri čemer učenec za dosego ciljev uporablja informacijske tehnologije),
- samopreverjevalno usmerjene terenske naloge (odgovornost za rezultate prevzame učenec).

Terensko delo v primarnem in sekundarnem geografskem izobraževanju v Sloveniji

Sedaj veljavni **učni načrt za geografijo v osnovni šoli** (Kolnik et. al., 2011) že v uvodu opredeljuje predmet na način, da ta odgovarja na aktualna vprašanja okolja in tako pri učencu razvija zanimanje za domačo pokrajino. Tudi učni načrt za gimnazije (Polšak et. al., 2008) opredeljuje geografijo kot predmet, ki učencu pomaga pridobiti znanje, sposobnosti in veščine za razumevanje ožjega in širšega okolja. Avtorji obeh učnih načrtov pripisujejo velik pomen pouku na prostem, saj menijo, da takšna oblika pouka omogoča učencem doživljajsko učinkovitejši pouk. Prav tako menijo, da je terensko delo dober primer »*za razvijanje*

proceduralnega in prenosljivega vseživljenjskega znanja, ki je skupno vsem šolskim predmetom in s katerim učenci pridobivajo novo znanje, ga izpopolnjujejo in razširjajo, ter uporabljajo tako, da dobi pomembno mesto v njihovem poznavanju domovine« (Kolnik et. al., 2011, 5).

Učni načrt za geografijo v osnovni šoli (Kolnik et. al., 2011) vključuje tri nivoje učnih ciljev: splošni učni cilji opredeljujejo vodilne usmeritve celotnega predmeta v osnovni šoli, etapni učni cilji opredeljujejo široko zasnovane cilje celotnega posameznega razreda, operativni učni cilji pa so konkretizirani cilji znotraj posameznega razreda. Že v *splošnih ciljih* predmeta učni načrt izpostavlja zbiranje in uporabo virov, ki jih učenci pridobijo s terenskimi metodami (npr. risanjem panoramske slike, kartiranjem, itd.). Terensko delo neposredno prepoznamo tudi v splošnih ciljih, ki opredeljujejo proučevanje in raziskovanje domače pokrajine in Slovenije.

Če pogledamo učni načrt za osnovno šolo po razredih, lahko v 6. razredu opazimo, da eden izmed prvih *etapnih ciljev* opredeljuje učenčevo sposobnost uporabe različnih načinov zbiranja in prikazovanja geografskih informacij. Cilj je sicer splošno opredeljen, a kot tak zajema tudi metode terenskega dela. Učenci bi se naj v šestem razredu, sodeč po etapnih ciljih, orientirali na zemljevidu in s pomočjo tega zdravo gibali v pokrajini pri izvajanju terenskega dela in ekskurzijah. V etapnih ciljih je opredeljena tudi uporaba metod geografskega raziskovanja, med njimi opazovanje, merjenje, intervju, kartiranje, itd. na terenu.

Operativni cilji za šesti razred, ki se neposredno navezujejo na terensko delo so:

- spoznajo načine učnega dela (kamor sodi tudi terensko delo);
- se orientirajo in gibljejo s kompasom in zemljevidom;
- v okviru interdisciplinarne ekskurzije obiščejo vsaj eno naravnogeografsko enoto v Sloveniji;
- pridobivajo prostorske predstave o domačem kraju, pokrajini in državi. (Kolnik et. al., 2011)

V 7. razredu je v ciljih eksplicitno zajetega manj terenskega dela v primerjavi s 6. razredom, saj je vsebina regionalna geografije Evrope in Azije. Tako lahko najdemo le en etapni cilj, ki se deloma nanaša na terensko delo, natančneje na ekskurzijo – gre za usmeritev v medpredmetno uporabo pridobljenega znanja, ki ga učenec poglablja in nadgrajuje z ekskurzijo, ki se naj bi izvedla v izbrani geografski enoti Slovenije.

V 8. razredu med etapnimi cilji najdemo cilj »uporablja osnovne načine za zbiranje geografskih informacij«, ki ga lahko povežemo s terenskim delom, med operativnimi cilji pa ne najdemo niti enega, ki bi se neposredno povezoval s terenskim delom.

V 9. razredu učni načrt določa predmetne cilje, vezane na Slovenijo. Predvideva usposabljanje učencev na primeru domače regije preko preprostih metod raziskovalnega dela. Učenci naj bi svoje znanje medpredmetno poglobili na interdisciplinarni ekskurziji v eni izmed slovenskih geografskih enot. Med operativnimi cilji v 9. razredu je konkretiziran en

operativni cilj s področja kamnin - učenci naj bi s pomočjo spoznanj iz terenskega dela ovrednotili pomen površja in kamnin za človeka (Kolnik et. al., 2011).

Tudi *standardi znanja* v učnem načrtu za osnovno šolo vključujejo terensko delo, npr. orientacijo v naravi z različnimi pripomočki ter samostojno geografsko raziskovanje. Poleg tega standardi utemeljujejo normativ vsakoletne ekskurzije v eno izmed slovenskih pokrajin (alpske, predalpske, dinarske, obpanonske in obsredozemske pokrajine), kjer učenci uporabijo svoje pridobljeno znanje na primeru v pokrajini (Kolnik et. al., 2011). Vsebinska organizacija ekskurzij oz. njihov itinerarij je odvisna od letnega načrta posamezne šole, vendar je običajni organizacijski trend ta, da naj bi učenci v vsakem razredu obiskali drugo območje/pokrajino v Sloveniji. Pogosto je učitelj geografije tisti, ki pripravi izvedbeni načrt šolskih ekskurzij, pri čemer so slednje večinoma interdisciplinarne, ure zanje pa se črpajo iz t.i. šolskega fonda ur in ne iz ur posameznega predmeta po uradnem predmetniku.

Didaktična priporočila učnega načrta za osnovno šolo opredeljujejo različne učne metode in postopke dela, med njimi tudi terensko delo in ekskurzije. V prvi vrsti je poudarjen razvoj sposobnosti učencev za uporabo geografskih raziskovalnih metod, kot so opazovanje, merjenje, anketiranje, intervju. Opredeljen je tudi pomen izkustvenega učenja, ki učencem omogoča razvijanje spretnosti za zgoraj naštete metode s pomočjo raziskovalnih naprav in pripomočkov. Priporočilo sugerira naj se terensko delo večkrat organizira pri rednem pouku, izvajanje je lahko časovno različno opredeljeno, enako velja za oddaljenost učne lokacije izven učilnice. Podana so ključna merila ustreznosti učnih lokacij za pouk geografije na prostem: »prostorsko spoznavna oziroma sporočilna moč pokrajine, povezanost oziroma usmerjenost v doseganje ciljev učnega načrta, oddaljenosti oz. dosegljivost (ekonomičnost, varnost), metodična raznolikost in dostopnost učnega gradiva« (Kolnik et.al., 2011, 31).

Iz poglavja priporočenih dejavnosti v učnem načrtu smo izluščili tiste, ki se neposredno navezujejo na terensko delo (Kolnik et. al., 2011, 33-34):

- obisk zvezdarne in opazovanje neba s teleskopom ali daljnogledom;
- risanje splošnega ali tematskega zemljevida;
- obisk geodetskega podjetja;
- orientacija v naravi z zemljevidom in kompasom, uro, senco idr. (iskanje skritega zaklada);
- merjenje temperature, padavin, oblačnosti, vetra, reke, prometa idr.;
- vodenje ekskurzije;
- anketiranje, štetje prometa;
- obisk muzeja, razstave ali predstave in pisanje poročila.

V osnovni šoli obstaja poleg obveznega predmeta geografija tudi **izbirni geografski predmet** Življenje človeka na Zemlji (8. razred) ter **Raziskovanje domačega kraja in varstvo njegovega okolja** (9. razred) (Kunaver et. al., 2004). Medtem ko je v osmem razredu

poudarek na spoznavanju načina življenja ljudi v različnih okoljih po svetu, kot so tropska, puščavska, monsunska, potresna, vulkanska, gorska, polarna območja in sredozemska območja, je v devetem razredu poudarek prav na terenskem raziskovanju naravnogeografskih značilnosti domačega kraja (geološka zgradba, relief, podnebje, prsti, rastlinstvo, vodovje), družbenogeografskih značilnosti domačega kraja (prebivalstvo, naselja, gospodarstvo, oskrba, promet), varstvu okolja (npr. preučevanje odlagališč odpadkov in ukrepov za varovanje okolja, preučevanje sprememb v pokrajini, nastalih pod vplivom človeka) ter varovanju naravne in kulturne dediščine domačega kraja. Izbirne vsebine tega predmeta so vezane tudi na pripravo na geografsko tekmovanje. Slednje poteka pod okriljem Zavoda za šolstvo RS in vključuje tako teoretični del kot terensko delo. Priprava na geografsko šolsko tekmovanje je tako pomembna motivacija za organizacijo terenskih vaj v osnovni šoli.

Učni načrt za geografijo za gimnazije (Polšak et. al., 2008) v *splošnih ciljih*, podobno kot učni načrt za geografijo za osnovne šole, med prvimi opredeljuje orientacijo v naravi s pomočjo različnih pripomočkov. Dijaki bi se naj pri pouku geografije naučili pravilne uporabe geografskih metod in tehnik dela ter pripadajočih pripomočkov. Prav tako bi se naj dijaki naučili sposobnosti posrednega in neposrednega opazovanja dejavnikov, procesov in pojavov v pokrajini. Poseben splošni cilj opredeljuje ekskurzije, na koncu katerih naj bi dijaki napisali poročilo. Med ključnimi *kompetencami*, ki se naj razvijajo pri pouku geografije, je opredeljen poseben sklop kompetenc, vezan na terensko delo, to je na raziskovanje in razumevanje geografskih procesov in odnosov ter njihove prostorske razsežnosti.

Operativni cilji so v učnem načrtu za pouk geografije v gimnazijah (Polšak et. al, 2008) razdeljeni po vsebinskih tematskih sklopih. Zapisani so kot obvezne ali kot priporočene dejavnosti. V okviru obče geografije lahko zasledimo največ operativnih ciljev, ki so neposredno vezani na terensko delo. Tako je npr. predvidena uporaba geološke karte kot pripomočka na terenskem delu. Prav tako bi naj dijaki zbrali vzorce kamnin in na njih naredili potrebne poizkuse za določanje vrste kamnin. Pri obravnavi prsti bi naj dijaki izkopali profil prsti, ugotavljali njene lastnosti in opazovali horizonte. Dijaki naj bi pri poglavju o podnebju opazovali vreme, oblačnost, veter, merili temperaturo, količino padavin, itd. Predvideno je tudi fotografiranje površinskih oblik v svojem okolju ali na potovanju/ekskurziji, fotografiranje vodotoka vse od zgornjega do spodnjega toka. Pri poglavju o vodovju so predvidene terenske dejavnosti vezane na merjenje lastnosti vodotoka, vodne struge ali vode same. Na področju družbenogeografskih tem je opredeljena terenska dejavnost štetja prometa in analiza pridobljenih podatkov. V tematskih sklopih geografije sveta in Evrope ni predviden noben operativni cilj, ki bi se neposredno nanašal na terensko delo. V tematskem sklopu Slovenije se ponovijo nekateri operativni cilji iz obče geografije, tako je npr. predvideno, da dijaki s pomočjo terenskega dela ugotavljajo lastnosti kamnin in ugotovitve predstavijo. Na terenu v okviru družbenogeografskih poglavij Slovenije pa naj bi anketirali izbrane skupine prebivalstva ali šteli promet ter pripravili analizo s poročilom (Polšak et. al., 2008).

V učnem načrtu za geografijo v gimnazijah (prav tam) je tudi *posebno poglavje, ki opredeljuje cilje in priporočene dejavnosti za terensko delo*. Tako vsa priporočena terenska

dela niso opredeljena po posameznih letnikih in vsebinskih sklopih. Naj izpostavimo nekaj primerov priporočil za izvedbo terenskega dela, ki jih nismo zasledili med operativnimi ali splošnimi cilji učnega načrta, so pa zajeta v aktualnem poglavju (Polšak et. al., 2008):

- dijaki načrtujejo in izvedejo terensko delo, vezano na geografski problem;
- izvedejo vajo, s katero ugotavljajo stopnjo onesnaženosti zraka (npr. ugotavljanje onesnaženosti zraka s pomočjo lišajev, z pripomočki za ugotavljanje vsebnosti trdnih delcev v zraku);
- z anketo raziskujejo probleme ljudi na podeželju;
- v naselju kartirajo funkcijo stavb.

Didaktična priporočila za geografijo v gimnaziji poseben pomen pripisujejo uporabi informacijsko komunikacijske tehnologije, tudi za terensko delo, kjer pridejo v poštev različni tehnični pripomočki in digitalni fotoaparati. Prav tako je v okviru priporočil sugerirana obvezna organizacija vsaj ene celodnevne ekskurzije, kjer dijaki uporabljajo različne učne metode neposrednega opazovanja. Didaktična priporočila predvidevajo izvedbo še več krajših terenskih vaj, saj z njimi dopolnimo cilje, ki jih v učilnici ne moremo doseči. Prav tako poudarjajo pozitivne vplive terenskega dela na razvoj socialnih in vzgojnih ciljev. Zapis v učnem načrtu ugotavlja, da imajo dijaki, ki ne opravljajo mature iz predmeta geografija, sorazmerno manj terenskih vaj, a obseg terenskega dela in laboratorijskih vaj pri pouku geografije naj bi bil odvisen od učiteljeve strokovne avtonomije in lokacije šole.

Za namene izvajanja gimnazijske mature obstaja **Predmetni izpitni katalog za geografijo** (Gaál et. al., 2019), ki posebno pozornost posveča terenskemu delu, saj le to predstavlja 20% izpitne ocene. Tako opredeljuje posamezne cilje terenskih vaj v treh sklopih: naravnogeografske, družbenogeografske vsebine vaj in vaje z vsebinami trajnostnega razvoja. Med naravnogeografskimi vsebinami najdemo osnovne cilje, kot sta orientacija in gibanje v naravi s pomočjo zemljevida in kompasa, ter bolj zahtevne kot je merjenje podnebnih elementov in njihova analiza ter merjenje fizikalnih in kemičnih lastnosti voda. Med družbenogeografskimi vsebinami vaj so sugerirane različne oblike zbiranja podatkov na terenu (npr. kartiranje, skiciranje, anketiranje), analize, sinteze in oblikovanja končnega izdelka (npr. turistični prospekt, predlog možnih prometnih izboljšav). Vsebine trajnostnega razvoja so opredeljene skozi dva glavna cilja. Prvi se nanaša na zbiranje in analizo podatkov o oskrbi s pitno vodo, komunalno infrastrukturo, vrsto ogrevanja, itd. ter pridobljene podatke naveže na odnos prebivalcev do okolja. Drugi se nanaša na kartiranje divjih odlagališč, popis in njihovo oceno velikosti in vrste odpadkov. Vsebina ekskurzij v okviru geografije kot maturitetnega predmeta se izvede glede na cilje, opredeljene v predmetnem izpitnem katalogu za geografijo (Gaál et. al, 2019) v poglavju o geografiji Slovenije.

Katalog znanja za srednja strokovna izobraževanja (1998) v poglavju o *usmerjevalnih ciljih* predmeta vključuje cilj, vezan na spretnosti in sposobnosti ravnanja s preprostimi pripomočki za terensko delo (npr. naklonomer, termometer), na zbiranje geografskih informacij, na orientacijo in gibanje v pokrajini s pomočjo kompasa in zemljevida. Prav tako

so posebej omenjene terenske vaje in ekskurzije, na katerih naj bi dijaki skozi neposreden stik s pokrajino prepoznali geografske procese in pojave. *Operativni cilji* predmeta so razdeljeni v tematske sklope. V sklopu Človek in pokrajina zasledimo cilj, ki predvideva uporabo preprostih metod terenskega dela kot način pridobivanja geografskih informacij ter orientacijo v pokrajini s pomočjo zemljevida in Sonca.

Katalog znanja za srednje strokovno izobraževanje (1998) v *didaktično-metodičnih priporočilih* navaja, da je izbira metod in oblik prepuščena učitelju, vendar naj bodo oblike in metode za dijake aktivne, preproste, prepričljive in zanimive na način, da dijaku približajo geografske vsebine. Kot posebnost lahko zasledimo priporočilo o neposrednem opazovanju in pouku v realnem okolju (ekskurzije in terensko delo). V okviru teh naj bi dijaki spoznavali raziskovalne metode, kot so: opazovanje, orientacija, kartiranje, merjenje, poročanje itd. Ekskurzije se po smernicah kataloga znanja (1998) organizirajo v slovenskih pokrajinah, kjer je glavni cilj povezovanje dijakovega znanja v teoriji s prakso. Tako naj bi lažje razumeli in prepoznavali vzročno-posledične procese in pojave. Ekskurzije so interdisciplinarne narave s poudarkom na področjih geografije, zgodovine, sociologije, materinega jezika, umetnosti itd.

Enako kot v srednjem strokovnem izobraževanju, tudi **katalog znanj za poklicno-tehniško izobraževanje** izbiro učnih metod in oblik prepušča učitelju. Terensko delo in ekskurzije so omenjene kot možnost izvedbe pouka v realnem okolju. Dijakom tako omogočimo povečano doživljajsko učinkovitost pouka. Na lokacijah v bližnji ali daljni okolici šole naj bi se dijaki seznanili z uporabo preprostih raziskovalnih metod ter tako najlažje povezali teorijo s prakso in prepoznavali vzročno-posledične zveze med procesi in pojavi. Ekskurzije naj bi bile organizirane v slovenskih pokrajinah in interdisciplinarne.

Analiza učnih načrtov za osnovne šole in različne smeri srednjih šol pokaže, da so operativni cilji, neposredno vezani na terensko delo, sicer redki in pretežno usmerjeni v fizično geografijo, a ob tem je potrebno dodati, da je zasnova splošnih in etapnih oz. usmerjevalnih ciljev tako široka, da omogoča vključevanje vsebinsko in metodološko raznolikega terenskega dela. Slednje je jasno opredeljeno v vseh učnih načrtih, kar je učiteljem pomembna podlaga za realizacijo pouka izven šole. Prav tako vsi učni načrti predvidevajo celodnevne ekskurzije v slovenske pokrajine. Ker pa gre za opredelitve na splošnem nivoju, ne pa tudi za reflektiranje le teh v operativnih ciljih, s katerimi učitelji delajo najbolj neposredno, se lahko v realnosti pokaže, da je pogostnost terenskega dela odvisna predvsem od motiviranosti učitelja (izjema so obvezne naloge terenskega dela v okviru geografije kot maturitetnega predmeta), kar lahko vodi v nizko realizacijo le tega.

Ob neposrednem pouku geografije in ekskurzijah je prostor za realizacijo terenskega dela v šolah v Sloveniji tudi v okviru dni dejavnosti. Tako so v predmetnik osnovne šole letno vključeni štirje kulturni dnevi, trije naravoslovni in trije tehniški dnevi ter pet športnih dni (Predmetnik OŠ, 2020). Posledično se npr. orientacijski pohodi pogosto izvajajo v okviru športnih dni, fizičnogeografska terenska dela pa v okviru naravoslovnih dni, v okviru tehniških dni se izdelujejo pripomočki za izvedbo terenskih vaj, v kulturnih dneh pa je prostor tudi za družbenogeografske terenske vaje. Poleg tega oz. kot realizacijo dni dejavnosti šole izvajajo še tedne šole v naravi v javnem zavodu Center šolskih in obšolskih dejavnosti (CŠOD), katerega osnovni namen je promocija šole v naravi, to je učenja v naravi oz.

terenskega dela. Tako je v Sloveniji 26 domov CŠOD, ki izvajajo raznolike programe, znotraj katerih ima geografija pomembno mesto (CŠOD, 2020).

Terensko delo v terciarnem izobraževanju

V Republiki Sloveniji študij geografije v okviru terciarnega izobraževanja poteka na treh univerzah: Univerzi v Ljubljani (Filozofska fakulteta, Oddelek za geografijo), Univerzi na Primorskem (Fakulteta za humanistične študije, Oddelek za geografijo) in na Univerzi v Mariboru (Filozofska fakulteta, Oddelek za geografijo). Na vseh treh oddelkih poteka študijski program na dveh stopnjah: prvi stopnji, ki traja tri leta in ki predstavlja splošen program študija geografije sledi druga stopnja, ki traja dve leti in na kateri se študenti razdelijo na pedagoški in nepedagoški program. V našem primeru smo analizirali celotno vertikalo pedagoških študijskih programov, ki so na vseh treh oddelkih dvopredmetni.

Iz koncepta geografije izhaja, da je predmet njenega preučevanja pokrajina. Najbolj prvinski in neposredni način preučevanja pokrajine je s pomočjo neposrednega terenskega dela (Rhoads, Wilson, 2010, str. 27-28), zato je vključevaje teh oblik v študijski proces eden od ključnih dejavnikov uspešnosti študentov pri dojemanju pokrajine.

Podatke o zastopanosti terenskega dela smo povzeli po predmetnikih, ki so objavljeni na spletnih straneh vseh treh oddelkov (Študijski programi Oddelka za geografijo v Ljubljani, 2020; Študijski programi Oddelka za geografijo na Primorskem, 2020; Študijski programi Oddelka za geografijo v Mariboru, 2020). Na oddelkih za geografijo v Kopru in Mariboru je število terenskih ur pri posameznih predmetih eksplicitno označeno, medtem ko na ljubljanskem oddelku iz predmetnika tega ni mogoče razbrati, saj se kot oblika aktivnosti navajajo le predavaja, seminar in vaje. Zaradi razlik v strukturi zastopanosti predavanj, seminarja, seminarskih vaj in terenskih vaj pri izbirnih predmetih je praktično nemogoče razbrati količino ur terenskega dela, ki so ga absolvirali študenti. Zato v naši analizi navajamo strukturo zastopanosti terenskega dela v celoti, po stopnjah in po letnikih.

Na Oddelku za geografijo Filozofske fakultete Univerze v Ljubljani se na orvi id drugi stopnji študij izvaja v okviru 79 učnih enot: v 46 na 1. stopnji in v 33 na 2. stopnji. Od tega je 11 izbirnih učnih enot na 1. stopnji in 10 izbirnih učnih enot na 2. stopnji. Terensko delo se izvaja pri 18 učnih enotah na prvi stopnji in pri 12 učnih enotah na 2. stopnji (pedagoška smer). Na 1. stopnji terensko delo skupaj obsega 190 ur, kar znaša 7,7 % vseh ur. Pri tem 40 ur odpade na 1. letnik (v tem letniku terensko delo predstavlja 6,2 % vseh ur), 125 ur na 2. letnik (17,4 %) in 25 ur na 3. letnik (3,9 %). Terensko delo pri predmetih obsega večinoma med 5 in 15 ur, le pri predmetu Geografsko terensko delo je število ur 75 (100 %). Na 2. stopnji – pedagoška smer se terensko delo odvija v skupaj 30 urah. Vse ure terenskega dela na 2. stopnji se izvajajo pri predmetu Organizacija ter izvedba ekskurije in terenskega dela v 1. letniku. Terensko delo v celotni vertikali, ki ji sledijo študenti pedagoške smeri znaša 220 ur ali 5,8 % od vseh ur.

Na Oddelku za geografijo Fakultete za humanistične študije na Univerzi na Primorskem se na prvi in drugi stopnji študij izvaja v okviru 40 učnih enot (24 na prvi in 16 na drugi stopnji). Od tega je izbirnih učnih enot skupaj 13 (10 na prvi in 13 na drugi stopnji). Iz predmetnika je mogoče razbrati, da se na prvi stopnji terensko delo izvaja le pri izbirnih predmetih (Biogeografija, Terenski seminar Istra, Terenski seminar Zahodna in Srednja Evropa, Terenski seminar Jugovzhodna Evropa, Terenski seminar Slovenija z zamejstvom) in siceer 30 ur pri vsakem predmetu. Na drugi stopnji iz predmetnika ni eksplicitno razvidna količina terenskega dela. V celotni vertikali je v učnih enotah skupaj 150 ur terenskega dela, kar predstavlja 6,3 % vseh pedagoških obveznosti (če delež preračunamo le na 1. stopnjo, znaša ta delež 10,4 %). Pri vseh štirih terenskih seminarjih terensko delo predstavlja 67 % vseh pedagoških obveznosti znotraj teh učnih enot, pri predmeti Biogeografija pa 40 %.

Na Oddelku za geografijo Filozofske fakultete Univerze v Mariboru poteka študij na dvopredmetnem programu na prvi stopnji v okviru 19 obveznih učnih enot in devetih izbirnih učnih enot, izmed katerih študenti izberejo pet učnih enot. Na drugi stopnji poteka dvopredmetni pedagoški študij v okviru 16 obveznih učnih enot in 20 izbirnih učnih enot, izmed katerih študenti izberejo tri. V analizo smo tako zajeli skupaj 74 učnih enot (28 na 1. stopnji in 46 na 2. stopnji). Na 1. stopnji se terensko delo pojavlja pri 13 obveznih in 9 izbirnih učnih enotah, skupaj torej pri 22 učnih enotah (79 % vseh učnih enot). Na 1. stopnji se med skupaj 1065 urami terensko delo pojavlja v višini 135 ur (12,7 %), medtem ko je na 2. stopnji med skupaj 1167 urami terensko delo zastopano z 177 urami (15,2 %). Na predmetih obeh stopenj je terensko delo zastopno s 14,0 %. V 1. letniku 1. stopnje je med obveznimi predmeti 8,2 % terenskih ur, v 2. letniku 5,7 %, v 3. letniku pa 14,0 %. Med izbirnimi predmeti vseh treh letnikov je ta delež 22,2 %. Vsebine terenskega dela pri posameznih predmetih na 1. stopnji so najpogosteje povezane z usvajanjem metodologije raziskovanja v pokrajini na področju fizične in družbene geografije. Študenti raziskave v okviru posameznih predmetov izvajajo na območju Slovenije, rezultati pa so pogosto prikazani v obliki posterjev ali člankov. Pri tem študente navajamo na delo v skupinah. Na 2. stopnji se terensko delo izvaja pri 4 obveznih učnih enotah in pri 8 izbirnih učnih enotah, skupaj torej pri 12 učnih enotah (26 % vseh učnih enot). Ta delež je na 2. stopnji pričakovano nižji zaradi narave usmeritve študija: v predmetniku se namreč ne pojavljajo le učne enote, ki so vsebinsko vezane na geografijo, pač pa tudi tiste, ki so v povezavi s pedagogiko, didaktiko in psihologijo. V 1. letniku 2. stopnje znaša delež terenskega dela 14,3 %, v 2. letniku pa 8,2 %, medtem ko je pri izbirnih predmetih ta delež 17,9 %. Med predmeti na 1. stopnji je največje številu ur terenskega dela pri obveznem predmetu Regionalna geografija Evrope (15) in pri izbirnem predmetu Turistične regije v Evropi (15), medtem ko je pri večini ostalih predmetov le po 5 ur terenskega dela. Na 2. stopnji med so med predmeti, ki izstopajo po številu ur terenskega dela obvezni Interdisciplinarna opazovalna praksa (30 ur), Pedagoški praktikum Geografija 1 in 2 (vsak po 16 ur) ter izbirni predmeti Šola v naravi (15 ur), Terensko delo pri pouku geografije – fizična geografija (10 ur) in Terensko delo pri pouku geografije – družbena geografija (10 ur). V celotni vertikali je v učnih enotah skupaj 312 ur terenskega dela, kar predstavlja 14,0 % vseh pedagoških obveznosti (na 1. stopnji 12,7 %, na 2. stopnji 15,2 %). Študenti na obeh stopnjah fakultativno sodelujejo tudi na geografskih raziskovalnih taborih, ki se odvijajo na območju severovzhodne Slovenije. Pri tem v času tedna dni raziskujejo

izbrane geografske procese in se bolj poglobljeno seznanijo s posameznimi terenskimi tehnikami geografskega raziskovanja. Pridobljeni rezultati ali poznavanje metodoloških pristopov študenti izkoristijo tudi pri pripravi magitrskih del. Drug fakultatitvni način uvajanja študentov v terensko delo so tudi raziskovalni projekti, ki jih financira Štipendijski sklad RS.

Po formalnem pregledu zastopanosti terenskega dela v predmetniku se ne moremo znebiti vtisa, da je praktičnega terenskega dela, v okviru katerega bi študenti geografije na najbolj prvinski način prišli v stik s svojim predmetom proučevanja (pokrajino) premalo. Po drugi strani manj terenskega dela pomeni tudi slabše možnosti za neposredno seznanjanje in usvajanje metod terenskega raziskovanja.

Realizacija terenskega dela v Sloveniji

Kljub temu, da dokumentarne podlage pouka geografije v Sloveniji podpirajo in spodbujajo terensko delo v šoli, študenti geografije pa imajo terensko delo tudi v študijskih predmetnikih, smo želeli pridobiti vpogled še v realni kurikulum osnovnih in srednjih šol, torej v to, koliko se terensko delo v šolah dejansko izvaja ter kakšna stališča imajo učitelji geografije o njem.

V ta namen smo opravili odprto raziskavo med desetimi učitelji geografije v osnovni in desetimi učitelji geografije v srednji šoli. Odprti značaj pridobivanja podatkov je pogojeval manjši vzorec učiteljev, saj so le ti morali samostojno in obsežno odgovoriti na več vprašanj. Vprašalnik je vseboval splošna vprašanja demografskega značaja ter sedem vprašanj odprtega ali polodprtega tipa, s katerimi smo želeli preveriti razmišljanja učiteljev o terenskem delu in sicer o tem, koliko so bili s terenskim delom seznanjeni pri študiju, koliko ga realizirajo, kakšne prednosti, pomanjkljivosti in ovire vidijo pri realizaciji le tega, v koliki meri ga realizirajo v sodelovanju z učitelji drugih predmetov ter pri katerih vsebinah, v koliki meri ga realizirajo v sodelovanju z zunanjimi institucijami ter pri katerih vsebinah. Ob tem pa smo želeli pridobiti tudi vpogled v dejanske vsebine, metode in časovne umestitve terenskega dela pri vključenem vzorcu učiteljev.

Raziskava je bila izvedena v šolskem letu 2019/2020. Povprečna starost anketirancev, ki poučujejo v osnovni šoli je bila 44, 5 let, povprečna dolžina delovnih izkušenj pa 17, 6 let. Med anketiranimi osnovnošolskimi učitelji jih je 20% končalo višješolski študij, 80% pa visokošolski pedagoški študij. 60% je bilo žensk in 40% moških. 20% anketirancev poučuje zgolj geografijo, preostali pa geografijo kombinirajo še vsaj z enim šolskim predmetom (največkrat z zgodovino, sledijo pedagogika, sociologija, nemščina in angleščina). Povprečno imajo 20 ur pouka tedensko. Če poučujejo geografijo v vseh razredih, imajo v šestem eno uro, v sedmem dve uri, v osmem uro in pol ter v devetem razredu dve uri geografije tedensko. 30% anketiranih poleg obveznega pouka geografije izvaja še geografski krožek, ali dodatne ure geografije za nadarjene, ali geografski izbirni predmet Raziskovanje domačega kraja in varstvo njegovega okolja oz. izbirni predmet Turistična vzgoja.

Terensko delo v osnovni šoli

60% anketiranih osnovnošolskih učiteljev geografije je zatrdilo, da so bili v okviru študija geografije dovolj seznanjeni s terenskim delom. Ko so navedeno vrednotili z ocenami od 1 do 5, pri čemer je pet pomenila najvišjo stopnjo seznanjenosti, so v povprečju izbrali oceno 4.

60% jih navaja, da so se s terenskim delom najbolje seznanili pri študijskih predmetih družbene ali fizične geografije oz. pri terenskih ekskurzijah regionalne geografije, med temi jih 30% navaja tudi predmete, vezane na didaktiko geografije in 20% na pedagoško prakso v šolah oz. z obojim povezane dejavnosti (npr. sodelovanje pri geografskem šolskem ali mednarodnem tekmovanju v okviru študija).

Eden od anketiranih nikoli ne izvaja terenskega dela, a bi ga želel izvajati, 60% jih izvaja terensko delo zgolj občasno. Pri izvajanju terenskega dela zaznavajo različne prednosti in sicer so med najvišje ovrednotenimi:

- da terensko delo povezuje učenje v učilnici z dejanskim življenjem, da gre za razvijanje praktičnih uporabnih znanj;
- da omogoča pristno spoznavanje naravne in kulturne dediščine, pristen stik s pokrajino, delo v pokrajini oz. neposredno opazovanje;
- da omogoča konkretno fizično in miselno aktivnost učencev ter rokovanje z različnimi pripomočki;
- da je za učence motivirajoče in vpliva na njihovo sproščenost, saj ura izven šole ni toliko omejujoča.

Poleg navedenih omenjajo še prednosti, da se s terenskim delom dobro poglobijo obstoječa znanja, izboljšajo prostorske predstave, vključujoč različne “merske” predstave, in orientacija, da se krepi okoljska in narodna zavest, da prihaja pri terenskem delu do boljšega medpredmetnega povezaovanja pa tudi, da je možno uspešneje vključiti učno šibkejše učence in nenazadnje, da je na terenu pridobljeno znanje trajnejše.

Med pomanjkljivostmi terenskega dela anketirani osnovnošolski učitelji najpogosteje navajajo število učencev v razredu oz. s tem povezane administrativne zahteve – po veljavnem normativu morajo namreč imeti pri izhodu iz šole skupine, večje od 15 učencev, dodatnega učitelja spremljevalca. Pomembno pomanjkljivost vidijo v času, ki ga terensko delo zahteva več (od priprave do izvedbe in analize), pri čemer pa je po njihovem mnenju učni načrt že preobtežen z vsebino in je potrebno “hiteti z obravnavo snovi”. Ob tem navajajo še pomanjkanje ustreznih pripomočkov, odvisnost od vremenskih pogojev, nezainteresiranost (nekaterih) učencev, težavno vključevanje učencev s posebnimi potrebami. Zgolj v enem primeru je bil izpostavljen problem lokacije šole in sicer na primeru tipično mestne šole, kjer je potrebno pol ure hoje do prvega potoka. Posamezniki so (a z nizkimi ocenami pomembnosti) kot pomanjkljivost navedli še problematiko razumevanja nadrejenih za organizacijo terenskega dela ter lastno usposobljenost.

Ko smo anketirane vprašali o ovirah za izvajanje terenskega dela, so v več primerih ponovno navedli že opisane pomanjkljivosti terenskega dela. Najvišje ocenjena in

najpogosteje navedena ovira je po njihovem mnenju tako birokratske narave (zagotavljanje varstva oziroma varnosti učencev, kar terja pripravo varnostnega načrta in zagotavljanje spremljevalcev, čemur sledi nadomeščanje sodelujočih učiteljev pri njihovih lastnih urah ipd.). Oviro vidijo v finančnih omejitvah, ki so vezane na nabavo pripomočkov ter na izvedbo ekskurzij.

90% anketiranih osnovnošolskih učiteljev izvaja terensko delo v medpredmetnem sodelovanju z drugimi učitelji. Navajajo širok spekter predmetov: 50% biologijo oz. naravoslovje (najpogostejše vsebine povezovanja so vezane na rastlinstvo: sadjarstvo, hmeljarstvo, drevesne vrste, gozd) , 40% zgodovino (gospodarske panoge skozi čas, arhitektura v mestu, turistične znamenitosti, pomembna kulturna dediščina), 30% fiziko (viri energije, nastanek padavin, naklon, zračni tlak) in slovenščino (kulturna dediščina, verzi, pregovori, zemljepisna imena), 20% kemijo (kamnine v Sloveniji, vodovje: kvaliteta vode, uporaba kemijskih pripomočkov), tehniko in tehnologijo (risanje tlorisa in drugih načrtov, izdelava terenskih pripomočkov), matematiko (merjenje, obdelava podatkov), šport (gibanje v naravi) in likovno umetnost (risanje panoramske risbe), navedli pa so tudi tuje jezike (verzi, pregovori) in računalništvo (obdelava podatkov).

70% sodelujočih osnovnošolskih učiteljev izvaja terensko delo tudi v sodelovanju z zunanjimi institucijami, pri čemer so navedli sledeče primere: hidroelektrarne, Kmetijski inštitut Slovenije, turistično informacijski centri, društva in turistične agencije, Luka Koper, muzeji – npr. Ekomuzej, muzej kovaštva v Kropi, muzej Postojnske jame, centri eksperimentov v Mariboru in Ljubljani, Agencija RS za okolje, knjižnice, statistični urad, rojstne hiše pomembnih Slovencev.

Ko smo sodelujoče osnovnošolske učitelje zaprosili za to, da opišejo konkretne primere terenskih del, smo ugotovili, da je v osnovni šoli terensko delo najbolj zastopano v šestem in v devetem razredu. V šestem razredu so med najpogosteje omenjenimi vsebinami: orientacija s kompasom, orientacija z zemljevidom, merjenje in preračunavanje razdalj, opisovanje lege različnih točk; opazovanje reliefa in ugotavljanje nadmorske višine, risanje risb terena in panoramskih risb. Posamično je bilo navedeno še kartiranje in določanje rastlinskih vrst. Pripomočki za opravljanje terenskih vaj so skladni z navedenim in so: karte, kompasi, naklonomer, ključi za določanje rastlinskih vrst in delovni listi z navodili za učence. Med lokacijami terenskih del šestega razreda so bile omenjene: šolsko dvorišče, urbana okolica šole, bližnji mestni parki in gozdovi ter ekskurzije v različne dele Slovenije (itinerarij šolskih ekskurzij je vezan na letni načrt šole in variira od šole do šole). Terensko delo večinoma traja od dveh do petih šolskih ur, v zadjem primeru, če gre za organizacijo terenskega dela v okviru ekskurzij ali dni dejavnosti (naravoslovni, športni, tehniški, kulturni dnevi). V sedmem razredu se pri terenskem delu ohranjajo podobne vsebine kot v šestem, a se jim priključijo še opazovanje in merjenje vremenskih/podnebnih elementov, analiza prsti ter anketiranje. Posledično se med pripomočki omenjajo še ključi za določanje prsti, oblakov, lupe, destilirana voda, lopate in podobno. Čas izvajanja posamičnega terenskega dela in lokacije le tega so podobni kot v šestem razredu. Podobno kot za sedmi, velja tudi za osmi razred. Dodatno omenjena vsebina je bila vodovje. Ker gre v osmem razredu po učnem načrtu za obravnavo Sveta, je bila zanimiva predstavitev krajše individualne terenske vaje,

kjer učenci preverjajo izvor izdelkov, ki jih kupujejo v domačem gospodinjstvu s poudarkom na ugotavljanju, ali kupujejo izdelke s palmovim oljem, kar navežejo na problematiko krčenja tropskih gozdov, nakar v bližnjih trgovinah iščejo alternativne izdelke, ki ne vsebujeno palmovega olja. V devetem razredu je razpon vsebin in ciljev terenskega dela najobsežnejši. K vsebinam, ki se pojavljajo tudi v prejšnjih razredih osnovne šole, se tako pripojijo še iskanje, prepoznavanje, primerjanje, analiziranje vzorcev kamnin; kemijske in fizikalne analize vode, opazovanje in skiciranje rečnih reliefnih oblik; štetje prometa; kartiranje turistične ponudbe, namembnosti stavb in podobno, čemur se prilagodijo pripomočki (različni reagenti, legende za kartiranje, ključi za določanje kamnin…). Čas trajanja in lokacije so bile opredeljene podobno kot za prejšnje razrede

Terensko delo v srednji šoli

Tudi na primeru srednješolskih učiteljev se je pokazalo, da jih 60% meni, da so bili v času študija dovolj dobro seznanjeni s terenskim delom, vendar je ocena tega zadovoljstva nižja kot na primeru osnovne šole (3,6). 50% anketiranih navaja, da so se s terenskim delom najbolje seznanili pri študijskih predmetih družbene ali fizične geografije oz. pri terenskih ekskurzijah regionalne geografije, 10% jih navaja predmete, vezane na didaktiko geografije in 10% pedagoško prakso v šolah, od preostalih podatka nismo dobili. 90% anketiranih izvaja terensko delo, ena anketiranka pa ga ne izvaja zaradi nedavnega nastopa službe, a bi ga želela izvajati.

Anketirani srednješolski učitelji navajajo raznolike prednosti terenskega dela, ki jih tudi večinoma vrednotijo z najvišjo oceno:

- terensko delo je aplikacija geografske teorije v prakso, omogoča razvoj sposobnosti opazovanja pokrajine in podkrepitev teoretičnih znanj z izkustvenim učenjem (npr. govorimo o podnebnih elementih, potem pa jih dijaki sami izmerijo, vrednosti primerjajo, analizirajo);
- šele pri terenskem delu dijaki v veliki meri spoznajo smisel naučenega znanja; bolje poznajo in razumejo procese v naravi; prav tako sami spoznajo, v čem jim še znanja manjka, ter so si manjkajoče voljni sami tudi poiskati;
- motiviranost, večja aktivnost in sprostitev dijakov;
- razvijanje orientacije v prostoru;
- razvijanje doumevanja pomena ohranjanja biodiverzitete, čistosti voda oz. varstva okolja;
- prepoznavanje prilagoditev gospodarskih dejavnosti sonaravnim načelom.

Ob navedenih prednostih z najvišjim pomenom anketirani omenjajo še razvijanje analitičnega mišljenja in različnih komptetenc (metodoloških, socialnih, IKT), krepitev samozavesti dijakov skozi individualno in timsko delo, lažje doseganje nekaterih ciljev in povezovanje vsebin in predmetov.

Med pomanjkljivosti terenskega dela štejejo:

- pomanjkanje časa v smislu časovne potratnosti celovite izvedbe, potrebe po delitvi dijakov v skupine, po prilagajanju urnika in tedenskih obremenitev dijakov (vse

navedeno je problematično tudi zaradi količine siceršnje vsebine v učnem načrtu in zaradi vrednotenja dela);

- pogosto nerazumevanje v kolektivu, kar je povezano z zakonsko določenim spremstvom dijakov, kar zelo ovira izvedbo terenskega dela;
- pomanjkljiva motivacija dijakov na terenu oz. težje ohranjanje discipline, če koga delo ne zanima;
- problem pomanjkanja opreme oz. terenskih pripomočkov.

Tudi srednješolski anketiranci so pomanjkljivosti terenskega dela razumeli kot ovire za njegovo izvedbo, vendar so pri ovirah ob zgoraj naštetem eksplicitno omenili še problem zakonodaje ter občutek, da se terensko delo (objektivno oz. od zunaj) ne upošteva kot enakovredno ostalemu delu v učilnici oz. da se smatra kot manj pomembno (interne ocene na maturi, ki se pridobijo s terenskim delom, so namreč navadno visoke zaradi zavzetosti dijakov, kar naj bi vnašalo neodobravanje in nerazumevanje v kolektivu učiteljev). Po mnenju srednješolskih učiteljev geografije so ovira tudi finančne težave (nabava pripomočkov, delitev ur, prevoz).

60% anketiranih izvaja terensko delo v kombinaciji z drugimi predmetnimi področji (navedli so naravoslovna področja, zlasti biologijo ter zgodovino in slovenščino, pa tudi gradbeništvo, turizem in ekologijo). 40% anketiranih se ne medpredmetno povezuje, kar je več, kot je bilo zaznati na primeru osnovne šole, med njimi en anketiranec navaja, da bi sam sicer želel povezovanja, a kolegi nočejo. Z izjemo dveh anketirancev se srednješolski učitelji pri izvedbi terenskega dela ne povezujejo z zunanjimi institucijami, kar je bistveno manj kot v osnovni šoli. Med omembami sodelujočih institucij so bile omenjene zlasti te, ki ponujajo namestitev – kmečki tuizem, hoteli, koče ter centri šolskih in obšolskih dejavnosti (CŠOD). Zanimiva je bila navedba Zveze za tehnično kulturo Slovenije, ki prireja raziskovalne tabore za dijake.

Eden od anketirancev je bil mnenja, da bi bilo odlično, če bi imeli v Sloveniji možnost ureditve geografskega poligona, ki bi združeval: kamaninsko sestavo domačega okolja, širšega okolja vezanega na Slovenijo in posebnosti iz sveta; pedološke profile domačega okolja, širšega okolja, vezanega na Slovenijo in posebnosti iz sveta; rastlinske združbe domačega okolja, širšega okolja vezanega na Slovenijo in posebnosti iz sveta ter klimatsko opazovalnico. Tak poligon bi zelo olajšal izvedbe terenskega dela za šole. V Sloveniji sicer obstaja geografski učni poligon v kraju Dole pri Poljčanah, kjer je poudarek na aplikaciji geografskih znanj za ekosistemsko urejanje zemljišča v obsegu 1 ha z namenom rastlinske samooskrbe. Poligon sprejema učne skupine različnih starosti, od najmlajših do starostnikov (Učni poligon Dole, 2020).

Pri pregledu opisov konkretnih primerov terenskih del smo zaznali, da je terensko delo najbolj zastopano v prvem, še zlasti pa v četrtem letniku, ki je vezan na maturo ter na pridobitev 20% deleža interne izpitne ocene skozi terensko delo. V prvem letniku so bile najpogosteje omenjene vsebine: kopanje in analiza profila prsti ter določanje lastnosti le teh, pri čemer je nabor metod in preciznost izvedbe višja kot na primeru osnovne šole (npr.: barva, struktura, tekstura, reakcija, vlaga); merjenje in analiza fizikalnih (najpogosteje

globina, širina, hitrost, pretok…) in kemijskih lastnosti voda ter merjenje in primerjanje klimatskih/vremenskih elementov. Potrebni pripomočki so različni reagenti in indikatorji, merilne naprave kot higrometri, barometri, termometri za zrak in vodo, anemometri, naklonomeri, čaše, merilni trakovi, zemljevidi. Najpogostejše lokacije so v bližini šole ali v domačem okolju dijakov. Posamezno terensko delo traja od dveh do štirih ur. V drugem letniku so bile omenjene podobne vsebine, a je zaznati, da se v nekaterih primerih zaobjame vsebina kompleksneje kot v prvem letniku (npr. se izvede celovita naravnogeografska in družbenogeografska študija vodotoka in območja ob njem, vključujoč ugotavljanje rastlinskega in živalskega sveta, gospodarskih dejavnosti ob vodotoku ter njihovega vpliva na stanje vode, ugotavljanje izkoriščenosti vodotoka in njegovega potenciala, mikroreliefne oblike ob vodotoku, anketiranje prebivalstva o njegovem odnosu do vodotoka, ugotavljanje zemljepisnih imen, povezanih z vodotokom ipd.) Lokacije in trajanje terenskih del so podobne kot na primeru prvega letnika. V tretjem letniku smo zaznali poleg že navedenega še kompleksnejše analize vegetacije, vključujoč popisovanje in določanje rastlinskih vrst na manjšem območju gozda ali roba gozda, ugotovljanje vpliva prsti, podnebja, reliefa, vodovja ter človeka na razširjenost vegetacije, ekološke značilnosti območja, izdelovanje mini herbarija. Zanimiva je bil tudi opis politično-geografske terenske vaje, povezane z državljansko vzgojo, ki vključuje spoznavanje slovenske prestolnice ter državnih in evropskih institucij v njej ter pogovore s poslanci. Ponovno lahko tudi v tretjem letniku ugotovimo podobno trajanje terenskih vaj – od nekaj ur do celodnevne ekskurzije in celo več dni v okviru t.i. raziskovalnega tabora, ki se lahko izvede v okviru gimnazijskih izbirnih vsebin. V maturitetnem letniku je vsebinska gostota terenskih del največja: orientacija in preračunavanje razdalj, proučevanje kamninske podlage in površja, risanje reliefnega profila, ugotavljanje lastnosti prsti, merjenje klimatskih elementov, proučevanje vodovja, proučevanje rastlinstva, štetje prometa in izdelovanje kart obremenjenosti križišč, raziskovanje turizma, izdelovanje turističnih prospektov, spoznavanje mestnega jedra s pomočjo aplikacije... Uporabljajo se terenski kovčki, različne merilne naprave, kompasi in zemljevidi, mobilni telefoni in pripadajoče aplikacije. Terenska dela so pogosto izvedena v bližini šole, občasno pa tudi v okviru ekskurzij in večdnevnih skupinskih taborov, posledično trajajo od dveh šolskih ur do celotnega dne ali celo več dni.

Zaključek

Terensko delo kot oblika geografskega izobraževanja nedvomno sovpada z aktualnimi izobraževalnimi konteksti, ki podpirajo avtentično izkustvo in aktivno angažiranost učencev, njihovo veččutno in holistično učenje. S to obliko dela ima geografija tudi visoko konkurenčno vrednost v izobraževalnem sistemu. Terenske metode in vsebine odgovarjajo na sodobne potrebe posameznika in skupnosti ter podpirajo trajnostno delovanje v prostoru. Z vsem navedenim je terensko delo vse pomembnejši element izobraževanja.

Terensko delo je bilo v slovenski geografiji vedno pomemben način spoznavanja in raziskovanja pokrajine, kar se je odražalo tudi v izobraževalnem sistemu. Kljub temu je bilo

uradno umeščeno v kurikularne dokumente šele leta 1998 (Lipovšek, 2016). Analiza sedaj veljavnih učnih načrtov za osnovne šole in različne smeri srednjih šol pokaže, da je zasnova splošnih in etapnih oz. usmerjevalnih ciljev tako široka, da omogoča vključevanje vsebinsko in metodološko raznolikega terenskega dela in ekskurzij. Slednje je neposredno opredeljeno in sugerirano v vseh učnih načrtih, kar je učiteljem pomembna podlaga za realizacijo pouka izven šole.

Ob neposrednem pouku geografije in ekskurzijah je prostor za realizacijo terenskega dela v šolah v Sloveniji tudi v okviru dni dejavnosti, saj so npr. v predmetnik osnovne šole letno vključeni štirje kulturni dnevi, trije naravoslovni in trije tehniški dnevi ter pet športnih dni (Predmetnik OŠ, 2020). Poleg tega oz. kot realizacijo dni dejavnosti osnovne šole izvajajo še tedne šole v naravi v javnem zavodu Center šolskih in obšolskih dejavnosti (CŠOD), katerega osnovni namen je prav promocija učenja v naravi. (CŠOD, 2020)

V okviru srednjih šol v Sloveniji, zlasti gimnazije, je pomembna spodbuda terenskemu delu maturitetni izpit, saj vključuje 20% interne izpitne ocene, ki se pridobi s terenskimi vajami. Evidenten vpliv na izvajanje geografskega terenskega dela imajo tudi geografska tekmovanja za učence in dijake, ki so sestavljena iz teoretičnega in terenskega dela. Pri tem je potrebno dodati, da so maturitetnega terenskega dela deležni le dijaki, ki izberejo geografijo kot predmet na maturi, geografska tekmovanja pa dosežejo le manjšino učencev oz. dijakov, ki se jih udeležijo na podlagi svojega interesa in mentorjeve angažiranosti.

Izjemno pomembno vlogo pri ustvarjanju podlag za terensko delo v šolah ima terciarno izobraževanje, cilji in vsebine študijskih programov, ki izobražujejo bodoče učitelje geografije. Slednji ter izvedbene izkušnje terenskega dela, ki jih učitelji pridobijo v procesu lastnega izobraževanja, so osnova za njihovo kasnejše delo v praksi. Zgolj 60% slovenskih učiteljev geografije je mnenja, da so bili v okviru univerzitetnega izobraževanja dovolj seznanjeni s terenskim delom. Kljub temu nedvomno zaznavajo raznolike prednosti in pozitivne učinke terenskega dela. Najpogosteje izpostavijo, da terensko delo omogoča povezovanje »teorije s prakso« skozi pristen stik s pokrajino, da povečuje zaznavanje uporabne vrednosti znanj, jih poglablja in osmišlja. Omogoča fizično in umsko aktivnost ter razvoj več kompetenc (od orientacije v prostoru do socialnih kompetenc in ravnanja z različnimi pripomočki). Ob tem pozitivno deluje na motiviranost učencev in dijakov.

Žal se pri organizaciji in izpeljavi terenskega dela učitelji geografije srečujejo tudi z več ovirami, zaradi česar je v slovenskih šolah manj terenskega dela, kot bi ga lahko bilo. Podobnik (2011, v Lipovšek, 2016) navaja, zakaj se učitelji izogibajo terenskega dela:

- počutijo se negotovi, misleč, da so premalo usposobljeni za pripravo in izvedbo terenskega dela;
- dvomijo v učinkovitost terenskega dela;
- sprašujejo se o racionalnosti terenskega dela, za katerega se porabi veliko časa in materialnih sredstev;
- so v dilemi, katere vrste nalog pri terenskem delu najbolje podpirajo oz. uresničujejo učni načrt;

- imajo občutek, da se ne uspejo dovolj navezati na vsebino in znanje drugih predmetov;
- sprašujejo se kako s terenskim delom razvijati splošno, trajno, prenosljivo vseživljenjsko znanje;
- nimajo izdelanih ocenjevalnih meril;
- nimajo dovolj uporabnih strokovnih gradiv za pripravo terenskega dela.

V naši raziskavi so se na obeh nivojih izobraževanja pokazale tri ključne objektivne ovire za izvajanje terenskega dela in sicer:

- časovna potratnost (ki je povezana tako s potrebo po realizaciji obsežnega učnega načrta, s samo naravo terenskega dela, kot z logistiko izvedbe, saj je potrebna organizacija urnika, spremljevalcev na teren in nadomeščanja njihovih ur ipd.);
- administrativne ovire (zaradi normativa izvedbe pouka izven šole je pri večjih skupinah potrebno dodatno spremstvo pa tudi priprava varnostnega načrta, izvedbene prilagoditve v kolektivu);
- finančne ovire (prevozi, nabava ustreznih terenskih pripomočkov).

Ne glede na to je geografsko terensko delo v slovenskih šolah prisotno. Krajše terenske vaje so manj pogoste v osnovnih šolah kot v gimnazijah, kjer jih spodbuja zlasti maturitetni izpit. Realnost so tudi vsakoletne osnovnošolske interdisciplinarne ekskurzije v različne slovenske pokrajine, ki pa jih je praviloma v srednjih šolah manj, a se organizirajo tudi izven meja države. Vsebina terenskih vaj kot tudi metodološki pristopi bi lahko bili pestrejši, zato smo mnenja, da je lahko na tem področju projekt Learning Through Interdisciplinary Field Education pomemben doprinos, ki pa lahko prispeva tudi predloge, ki bi v sistemskem smislu olajšali organizacijo terenskega dela.

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POLOŽAJ OBRAZOVANJA NA TERENU U KURIKULUMIMA OSNOVNOG, SREDNJEG I VISOKOG OBRAZOVANJA U SRBIJI

Uvod

U nastavnom procesu sve se više insistira na osamostaljivanju učenika, njihovom osposobljavanju za korišćenje različitih izvora znanja, na povezivanju znanja iz različitih oblasti, na praktičnoj primeni znanja prilikom rešavanja problema u svakodnevnom životu i stvaranju uslova za što raznovrsnije i kreativnije učešće učenika u nastavnom procesu. Pošto je jedan od ključnih ciljeva vaspitno-obrazovnog procesa da se učenik osposobi za samoobrazovanje, prednost se daje onim oblicima i metodama rada koje doprinose aktivnijem odnosu učenika prema nastavnim sadržajima, uspostavljanju prisnije veze između znanja koja se stiču u učionicama i realnih životnih problema i situacija, učenicima se daju mogućnosti da svoje prirodno i društveno okruženje upoznaju i izučavaju u različitim okruženjima.

Cilj učenja na terenu je povezivanje sadržaja predmeta sa praktičnom primenom u nastavi i u učionici. Učenik će biti u stanju da identifikuje i posmatra/koristi najbolje primere iz prakse u nastavi, u planiranju učenja lekcije, razumevanju sadržaja, razlikovanju, ocenjivanju i razmišljanju. Nakon završetka kursa i navedenih aktivnosti, student će biti u stanju da prepozna najbolje prakse u nastavi i karakteristike efikasnih nastavnika (https://www.rmc.edu/departments/education/field-work-and-student-teaching).
Obrazovanje na terenu odlikuje se visokim stepenom usvajanja naučnog načina mišljenja i angažovanja učenika počevši od istraživačkih procedura uočavanja, do izdvajanja i prikupljanja materijala. U ovakvoj nastavi relevantan predmet učenja, analize i zaključivanja je ono što je učenik sam primetio i izdvojio kao vredno istraživanja ili zanimljivo. Ako učenike lišimo kontakta sa prirodom, ne samo da ćemo im uskratiti prirodan način učenja, nego ćemo im oduzeti pravo da misle da pripadaju svom prirodnom okruženju (Tranter, Pawson, 2001).

Raznovrsni sadržaji kojima obiluju prirodno okruženje i lokalna sredina, dužina boravka, zajednički rad učenika, prilika da se određeni zadaci obavljaju timski i samostalno, pružaju široke mogućnosti za istraživačke radove – aktivnosti svojstvene heurističkoj, problemskoj, eksperimentalnoj nastavi, ali i mogućnosti da se zahtevi prilagode individualnim karakteristikama učenika. Od nastavnog programa, karaktera sredine, delom od interesovanja, sklonosti i sposobnosti učenika, kao i od materijalno-tehničkih mogućnosti, zavisi šta će se istraživati (Cvetković, 1992, 117) i šta će biti u fokusu nastave van učionice. Najbolji rezultati postižu se ukoliko deca samostalno istražuju i iskustveno dolaze do saznanja.

Direktnim kontaktom učenika sa izvorima i predmetima saznanja koji se nalaze u autentičnom okruženju, ostvaruje se veća dinamika i intenzitet nastavnog procesa. S obzirom da je učenje aktivan proces u kome pojedinac konstruiše nova znanja tako da su ona rezultat i posledica njegovih ličnih napora, istraživanja i truda (Golubović-Ilić, 2014) uočava se da ovakva vrsta nastave svoje teorijsko utemeljenje nalazi u konstruktivističkoj obrazovnoj paradigmi. Učenje se „ne posmatra kao proces sticanja znanja koje postoji nezavisno od

učenika, već kao proces konstruisanja znanja koji se odvija kroz interakciju sa drugima u određenom društveno-kulturnom kontekstu" (Milutinović, 2014, 25).

Geografski sadržaji pružaju mnogobrojne mogućnosti za rad na terenu. Programski sadržaji uglavnom slede sadržaje nastave, ali oni mogu izaći iz njenih okvira i na taj način obezbediti raznovrsnost oblika i metoda rada. Sprovođenje nastave van učionice zavisi, pre svega, od samog nastavnika. U tom procesu njegova uloga je dominantna i od njegove ličnosti, stručnosti i zainteresovanosti zavisi da li će se, u kojoj meri i na koji način ovakav način rada sprovoditi.

Pojam, cilj i zadaci terenskog obrazovanja

U Pravilniku o organizaciji i ostvarivanju nastave u prirodi i ekskurzije u osnovnoj školi („Sl. glasnik RS", br 30/2019) date gu osnovne odrednice prema kojima se vode osnovne i srednje škole u Republici Srbiji. Kako u osnovnim, tako i u srednjim školama, osnovni vidovi učenja na terenu jesu nastava u prirodi i ekskurzije. Pored ovoga, nastavnici imaju mogućnost da svoju redovnu nastavu održe i van učionice, na terenu, u različitim objektima koji po svojoj funkciji zaslužuju da se nazovu nastavnim objektima.

Sa druge strane, na Univerzitetima u Republici Srbiji, organizovanje na terenu odvija se na nešto drugačiji način.

Učenici u RS polaze u osnovnu školu sa 6,5-7,5 godina. Može se slobodno reći da to i nije sam početak njihovog upoznavanja sa terenskim radom. U predškolskim ustanovama, deca takođe imaju priliku da se upoznaju sa svojim bližim ili daljim okruženjem u vidu izleta koje organizuje ustanova.

Prema pomenutom pravilniku kojim se propisuju bliži uslovi i uređuju pitanja od značaja za organizaciju i ostvarivanje nastave u prirodi i ekskurzija u školi („Sl. glasnik RS", br 30/2019), nastava u prirodi je oblik obrazovno-vaspitnog rada kojim se ostvaruju obavezni nastavni predmeti, izborni programi, projektna nastava i vannastavne aktivnosti iz plana i programa nastave i učenja za prvi ciklus osnovnog obrazovanja i vaspitanja - u klimatski pogodnom mestu iz zdravstveno-rekreativnih i obrazovno-vaspitnih razloga, dok je ekskurzija oblik obrazovno-vaspitnog rada koji se ostvaruje van škole.

Ciljevi nastave u prirodi su:

- Očuvanje, podsticanje i unapređivanje ukupnog zdravstvenog stanja učenika, njihovog pravilnog psihofizičkog i socijalnog razvoja;
- Stvaranje osnova za usvajanje aktivnog, zdravog i kreativnog načina života i organizovanja i korišćenja slobodnog vremena;
- Proširivanje postojećih i sticanje novih znanja i iskustava o neposrednom prirodnom i društvenom okruženju;
- Razvijanje ekološke svesti i podsticanje učenika na lični i kolektivni angažman u zaštiti prirode;

- Socijalizacija učenika i sticanje iskustava u kolektivnom životu, uz razvijanje tolerancije i odgovornog odnosa prema sebi, drugima, okruženju i kulturnom nasleđu;
- Razvijanje pozitivnih odnosa prema nacionalnim, kulturnim i estetskim vrednostima;
- Razvijanje sposobnosti sagledavanja razvoja privrednih mogućnosti kraja, odnosno regiona koji se obilazi.

Cilj ekskurzije je neposredno upoznavanje pojava i odnosa u prirodnoj i društvenoj sredini, upoznavanje kulturnog nasleđa i privrednih dostignuća, a u cilju ostvarivanja obrazovno-vaspitne uloge škole („Sl. glasnik RS“, br 30/2019).

Pre teorijskog razmatranja mesta i značaja organizovanja rada na terenu, treba istaći da su postojali, pa i danas postoje različiti pristupi u shvatanju i definisanju pojmova kao što su škola u prirodi, nastava u prirodi, rekreativna nastava i drugo. Kako god nosile naziv, na osnovu određenja ovih pojmova uočavaju se mnoge zajedničke karakteristike ovog različito imenovanog oblika vaspitno-obrazovnog rada u neposrednoj prirodi. U pedagoškoj praksi najrašireniji naziv bio je rekreativna nastava, za koji neki autori kažu da je neadekvatan jer ne obuhvata sve vidove pedagoškog rada koji su inače obuhvaćeni stvarnom aktivnošću.

Najpotpunije određenje pojma škola u prirodi za koji se smatra da je najadekvatniji i sveobuhvatan, dali su B. Stanojlović i S. Simić (1984): pod ovim pojmom podrazumeva se poseban vid celodnevne organizacije vaspitno-obrazovne delatnosti škole sa internatskim smeštajem, koji se ostvaruje van mesta stanovanja u uslovima prirodne sredine, uz prošireno pedagoško delovanje putem aktivnosti u slobodnom vremenu. Vaspitno-obrazovni rad povezuje se sa psihofizičkom rekreacijom u prirodi, a realizacija nastavnih sadržaja, utvrđenih nastavnim planom i programom, prilagođava se konkretnim uslovima prirodne i lokalne sredine, obrađuju se oni sadržaji kojima ti uslovi najviše odgovaraju i u kojima se oni mogu najuspešnije ostvariti. Celokupan vaspitno-obrazovni rad odvija se pod stručnim rukovodstvom nastavnog i vannastavnog kadra. Ovakvo određenje pojma škola u prirodi u sebe uključuje sve navedene pojmove i obuhvata ih sadržajem. Učenje na terenu je način učenja van učionice koji je dosta sličan školi u prirodi. Ono u odnosu na ostale oblike rada ima široke i značajne zadatke sa visokim pedagoškim nivoom organizacije života i rada, bogatom i funkcionalnom strukturom. Zbog toga se navedeni pojam smatra najpogodnijim i sveobuhvatnijim, obzirom da uključuje sve sadržaje koji su stvarnim aktivnostima učenja na terenu obuhvaćeni.

Zadaci nastave u prirodi ostvaruju se na osnovu plana i programa nastave i učenja, obrazovno-vaspitnog rada i školskog programa i sastavni su deo godišnjeg plana rada škole. Zadaci koji se ostvaruju realizacijom programa nastave u prirodi su:

- Poboljšanje zdravlja i razvijanje fizičkih i motoričkih sposobnosti učenika;
- Zadovoljavanje osnovnih dečijih potreba za kretanjem i igrom;
- Očuvanje prirodne dečije radoznalosti za pojave u prirodi i podsticanje interesovanja i sposobnosti za njihovo upoznavanje kroz odgovarajuće aktivnosti;

- Razvijanje sposobnosti zapažanja osnovnih svojstava objekata, pojava i procesa u okruženju i uočavanje njihove povezanosti u konkretnim prirodnim i društvenim uslovima;
- Podsticanje samostalnosti u procesu sticanja znanja kroz neposredne istraživačke zadatke;
- Razvijanje svesti o potrebi zaštite, negovanja, čuvanja i unapređivanja prirodne i životne sredine i izgrađivanje ekoloških navika;
- Upoznavanje prirodno-geografskih, kulturno-istorijskih znamenitosti i lepote mesta i okoline;
- Upoznavanje sa načinom života i rada ljudi pojedinih krajeva;
- Upoznavanje raznovrsnosti biljnog i životinjskog sveta pojedinih krajeva, uočavanje njihove povezanosti i promenljivosti;
- Upoznavanje sa karakteristikama godišnjih doba u prirodi i smenjivanje vremenskih prilika;
- Razvijanje sposobnosti snalaženja tj. Orijentisanja u prostoru i vremenu;
- Osposobljavanje učenika za bezbedan i pravilan boravak u prirodi;
- Razvijanje pravilnih higijensko-zdravstvenih navika i podsticanje samostalnosti u obavljanju lične higijene i brige o sebi;
- Podsticanje i stvaranje navike za negovanje redovne fizičke aktivnosti i za što češći boravak u prirodi;
- Formiranje navika redovne i pravilne ishrane;
- Navikavanje na pravilno smenjivanje rada, odmora i sna;
- Razumevanje i uvažavanje različitosti među pojedincima;
- Podsticanje grupnog rada, dogovaranja i saradnje sa vršnjacima i odraslima kroz odgovarajuće aktivnosti.

Zadaci ekskurzije su: proučavanje objekta i fenomena u prirodi; uočavanje uzročno-posledičnih odnosa u konkretnim prirodnim i društvenim uslovima; razvijanje interesovanja za prirodu i ekološke navike; upoznavanje načina života i rada ljudi pojedinih krajeva; razvijanje pozitivnog odnosa prema: nacionalnim, kulturnim i estetskim vrednostima, sportskim potrebama i navikama, kao i pozitivnim socijalnim odnosima („Sl. glasnik RS“, br 30/2019).

Rad na terenu prema svojim zadacima i ciljevima pokazuje velik broj sličnosti sa školom u prirodi i ekskurzijama pa se svi ovi oblici učenja mogu poistovetiti.

Značaj i potreba za učenjem na terenu

Značaj i potreba organizacije učenja na terenu ogleda se pre svega u zdravstvenom, pedagoškom i društvenom značaju.

Zdravstveni značaj. Brza i dinamična urbanizacija u našoj zemlji posebno razvoj industrije i saobraćaja u urbano-razvijenim sredinama, pored niza prednosti koje se na ovaj

način stvaraju za bolji život i rad ljudi, donose sobom i mnoge negativne pojave i teškoće koje se moraju otklanjati ili ublažavati.

Među negativnim pratiocima urbanizacije i industralizacije gradova posebno su izraženi kroz: povećanu zagađenost vazduha i životne sredine, saobraćajnu buku, nedostatak slobodnih površina i zelenila, umanjenu i otežanu mogućnost kretanja, nedovoljnu rekreacija i slično. Zbog svega toga veći deo života deca provedu u zatvorenom prostoru.

Sve to je uslovilo da većina dece već u predškolskom uzrastu veliki deo dana provede u zatvorenim prostorijama (u stanu ili predškolsko vaspitnim-obrazovnim organizacijama), gde su im glavne aktivnosti igre uz gledanje televizijskog programa, video igara, rad sa kompjuterom i drugo. Svakako da to negativno deluje kako na zdravlje tako i na celokupan psihofizički razvoj dece. U tako nepovoljnim uslovima dete je izloženo češćem sukobljavanju sa članovima porodice, što može da ima posebno negativne posledice na psihički razvoj mladih.

U uslovima školske sredine, deca veći deo aktivnosti provode u zatvorenom prostoru. Redovna nastava i školske obaveze zahtevaju da dete znatan deo dana provede u zatvorenim prostorijama za radnim stolom, bez dovoljno kretanja. Ovaj problem posebno je izražen u školama sa celodnevnom organizacijom rada, jer postojeći prostorni uslovi i školski nameštaj ne odgovaraju ovom vidu vaspitno-obrazovnog rada, niti pružaju mogućnosti za optimalniju organizaciju aktivnosti učenika u slobodnom vremenu.

Zbog nedostatka zelenih površina, slobodnog prostora i terena za igru deca su prinuđena da slobodno vreme provode u zatvorenim prostorijama, u zapuštenim dvorištima ili na ulicama gde su izložena i ostalim negativnim uticajima na njihov ukupni razvoj. Stoga je sve veći broj dece sa deformitetima kičmenog stuba, grudnog koša, deformacije stopala i drugih fizijatrijskih poremećaja. Značajan podatak je da skoro 5.000 učenika u osnovnim i srednjim školama, tačnije 7,9 odsto njih, ima neku od smetnji vida ili pokretljivosti oka, posebno kod mlađeg uzrasta učenika. U protekloj deceniji beleže se i sve učestalija alergijska oboljenja među školskom decom, a sve kao posledica manjeg boravka u prirodi (https://www.bizlife.rs/lifestyle/afterhour/23103-sve-vise-dece-ima-deformitete-kicme/).

Pored toga, aerozagađenje u pojedinim gradskim sredinama je izuzetno veliko. Takođe je izmerena i velika koncentracija otrovnih gasova kao što su: ugljenmonoksid i sumpordioksid, nitrozni gasovi i olovna para koji nastaju pri korišćenju motornoh vozila.

U ovakvim životnim uslovima organizam dece se nalazi u stanju stalne borbe sa štetnim činiocima spoljne sredine koji oštećuju njihovo zdravlje, smanjuju opštu otpornost organizma i izazivaju oštećenje sluzokože organa za disanje, pa često oboljevaju od infekcije disajnih organa. Zato su gradska deca bleda, više ili manje umorna, apatična ili razdražljiva, često bolesna, pa je neophodno preduzimati mere za zaštitu njihovog zdravlja i poboljšanja životnih i radnih uslova.

Međutim, u uslovima sve veće industrijalizacije gradova i povećanja broja saobraćajnih vozila, nije realno očekivati da će se određenim tehnološkim procesima znatnije smanjiti zagađenost vazduha i životne sredine, a time promeniti postojeći nepovoljni životni i

radni uslovi dece i odraslih. Stoga je potrebno preduzimati raznovrsne zaštitne mere koje bi smanjile dejstvo pomenutih faktora. Jedno od mogućih rešenja je izgradnja sportskih rekreativnih centara za decu i omladinu u okolini gradova i izgradnja odgovarajućih objekata za potrebe škole u prirodi. Ovim bi se stvorile mogućnosti da deca školskog uzrasta i u toku nastavnog dela školske godine, ne prekidajući redovnu nastavu i rad, povremeno napuste gradove i provedu izvesno vreme u prirodi, na čistom vazduhu. U svemu tome, odvijanje nastavnih sadržaja na terenu pruža velike mogućnosti.

Škole mogu i treba da organizuju rekreativnu nastavu, ne samo radi sprovođenja očigledne nastave u prirodi, već i iz zdravstvenih razloga, radi poboljšanja i osveženja psihofizičke kondicije, naročito dece iz grada.

Klimatski uslovi u kojima se organizuje učenje na terenu trebalo bi da obezbeđuju lakšu aklimatizaciju dece. Pri izboru lokacije potrebno je voditi računa o vlažnosti vazduha, broju kišnih i sunčanih dana i drugim meteorološkim uslovima koji su od značaja za prijatan boravak i optimalnu organizaciju aktivnosti u školi u prirodi. Pri planiranju odlaska dece na terenski rad, potrebno je prethodno konsultovati školskog lekara o lokaciji adekvatnosti vremena, s obzirom na epidemiološku situaciju i zdravstveno stanje učenika, naročito onih čije zdravstveno stanje zahteva poseban tretman.

Pedagoški značaj. Po svojoj osnovnoj ideji i koncepciji, učenje na terenu ima širi pedagoški značaj. Činjenica da se učenje na terenu organizuje i odvija u veoma povoljnim uslovima prirodne sredine, u kolektivnom življenju i radu učenika i nastavnika, predstavlja povoljnu okolnost za šire pedagoško delovanje na formiranje svestrane ličnosti mladih, posebno na razvoj pozitvnih društveno-moralnih osobina ličnosti a time i na efikasnije ostvarivanje vaspitnih zadataka škole i učenja u celini. Pored toga, uslovi u kojima se organizuje život i rad terenskog učenja pružaju šire mogućnosti za uspešniju realizaciju nastavnih sadržaja iz većeg broja nastavnih područja a posebno onih koji zahtevaju da se obrade u neposredno živom kontaktu sa prirodnom i društvenom sredinom, sa događajima i pojavama u njima.

Prirodne pojave i zakonitosti učenici saznaju i doživljavaju neposredno u prirodnim uslovima i na taj način bogate svoja iskustva o živoj i neživoj prirodi, o prirodnim pojavama, o životu i radu ljudi, rezultatima rada, međusobnoj povezanosti i zavisnosti biljnog i životinjskog sveta, dolaze do uverenja da samo udruženi svojim radom i znanjem mogu da stvore sebi bogatiji, bolji i lepši život.

Sva ova neposredna zapažanja i doživljavanja doprinose da deca bogate svoja iskustva kroz rad i aktivnosti, a time bolje razumeju pojave u prirodi, zakonitosti koje vladaju u njoj, što u celini doprinosi formiranju pravilnog dijalektičko-materijalističkog pogleda na svet.

Svojom raznovrsnošću prirodna sredina sadrži brojne izvore i podsticaje za daljim saznavanjem, budi radoznalost i razvija istraživački duh što doprinosi razvoju stvaralačkih sposobnosti i integralnog razvoja dece u celini.

Isto tako, u uslovima učenja na terenu učenicima se pružaju veće mogućnosti za utvrđivanje i proširivanje postojećih znanja, i razvijanje novih interesovanja za praktičnu primenu stečenih teorijskih znanja u svakodnevnom životu.

Još od stare Grčke i Rima, brojni mislioci i naučnici isticali su značaj prirode u vaspitanju mladih.

Svakako da ovaj vid pedagoške delatnosti podrazumeva i promenjenu funkciju nastavnika koja je sve manje predavačka, a više usmerujuća i koordinirajuća. Naime, nastavnik primenom odgovarajuće pedagoške tehnologije i pravilnim vođenjem i usmeravanjem učenika treba da obezbedi uslove za što veću samostalnost i samoaktivnost učenika, da budi želju za zasnivanjem, da stvara okolnosti da učenici na osnovu neposrednog posmatranja pojava u prirodi dolaze do novih saznanja.

Imajući u vidu činjenicu da za vreme učenja na terenu učenici aktivno provode u kolektivnom životu znatan deo vremena, zbog toga organizovan život i rad u kolektivu učenika ima posebno značajnu pedagošku vrednost. U ovakvim uslovima povećavaju se mogućnosti za svestranije i bolje poznavanje ličnosti učenika, za ispitivanje sklonosti i potreba, želja i interesovanja mladih, njihovih problema i teškoća. Svakako da ovo može da pomogne u primeni adekvatnijih pedagoških mera i postupaka u radu sa učenicima, a time i efikasnijoj organizaciji vaspitno-obrazovnog rada škole ili visokoškolske ustanove u celini.

Učenici ili studenti iz različitih porodica i životnih sredina zajedno spavaju, hrane se pod istim uslovima, uz isti režim dnevnog života, dakle žive pod jednakim uslovima. Ovakav način života obezbeđuje i bolje međusobno upoznavanje kako dece međusobno, tako i dece i njihovih nastavnika. U pedagoški pravilno usmeravanom i vođenom kolektivu, ispoljavaju se mnoge osobine dece, kako pozitivne, tako i negativne. One se vrednuju i procenjuju od strane učenika i nastavnika; pozitivne se prihvataju a negativne koriguju ili otklanjaju, što ima poseban značaj za razvoj pozitivnih društveno-moralnih crta i osobina ličnosti deteta. Dakle, ponašanje i rad dece u kolektivu izloženi su moralnom sudu dečijeg kolektiva kao subjekta razvoja ličnosti učenika. Pored toga, u kolektivnim uslovima života i rada dece razvijaju se potrebe i navike da se međusobno pomažu, brinu jedni o drugima, da lične interese usaglašavaju sa interesima kolektiva što u velikom stepenu doprinosi socijalizaciji mladih. Isto tako, zajedničke obaveze, radosti, porazi, želje, doživljaji, svakodnevno zbližavaju učenike i razvijaju prijateljska i drugarska osećanja i učvršćuju ih u snažan i jedinstven kolektiv.

Zajednički život i rad učenika u kolektivu pruža i izvanredne mogućnosti za uključivanje učenika u samoupravne odnose, odnosno razvoj učeničkog samoupravljanja. Tako na primer, učenici se zajednički dogovaraju o poštovanju kućnog reda, režimu života i rada, sastavljanju jelovnika, utvrđivanju redarske službe, organizovanju raznih akcija, takmičenja i slično. Dakle, učenici kroz praktične i svakodnevne aktivnosti učestvuju i osposobljavaju se za samoupravljanje.

Susret sa decom iz okoline, organizovanje zajedničkih priredbi, kako u okviru rada škole u prirodi, tako i za meštane, zatim upoznavanje sa načinom života i rada ljudi u kraju,

njihovim zanimanjima, običajima, načinom života, stvaraju se izuzetne okolnosti za nova prijateljstva, razvija se pozitivan stav prema radnim ljudima i lepotama domovine.

Odlazak dece na terensku nastavu, odvajanje od porodice, navikavanje na kolektvni život u uslovima koji su drugačiji u odnosu na porodične uslove, doprinosi osamostaljivanju dece, navikavanju i osposobljavanju za život i rad u promenjenim životnim uslovima. Isto tako, stvaranjem uslova za odlazak svih učenika na terensku nastavu, bez obzira na materijalne mogućnosti, zajednički život dece iz različitih porodičnih sredina u novim, i za sve učenike istim uslovima, doprinosi smanjivanju socijalnih razlika i nejednakosti u obrazovanju.

Svakodnevne međusobne veze i odnosi i praktične aktivnosti kao što su briga o ličnoj higijeni, održavanje prostorija za spavanje, obedovanje, estetsko uređivanje okoline, učestvovanje u lakšim proizvodnim radovima, negovanje cveća i zelenila i humanog odnosa prema životinjama, pruža izuzetne mogućnosti za razvijanje i ušvršćivanje kulturnih, higijenskih i radnih navika, pravilnog odnosa prema radu, čuvanju i zaštiti čovekove okoline i ljubavi prema prirodi (Nikolić, 1992; Nikolić, 1994).

Društveni značaj. Dosadašnji rad i rezultati terenske nastave opravdali su svoje postojanje. Terenska nastava ima svoje pedagoško i šire društveno opravdanje, s obzirom da doprinosi poboljšanju zdravlja i ukupnom psihofizičkom razvoju mladih.

Zajednički kolektivni život učenika iz različitih sredina i porodica pod istim uslovima doprinosi socijalizaciji mladih a posebno optimalnom razvoju cele populacije dece, bez obzira na socioekonomske uslove njihove porodice što doprinosi smanjivanju socijalne nejednakosti u društvu, u čemu je posebni društveni značaj ovog vida pedagoškog rada sa učenicima.

Jasno je istaknut zdravstveni, pedagoški i društveni značaj i potreba organizovanja nastave na terenu, te dalji napori društva treba da budu usmereni na stvaranju optimalnih uslova za organizaciju ovog značajnog vida pedagoške delatnosti škole i visokoškolskih ustanova.

Sadržaji nastave u prirodi i ekskurzije

Pravilnikom o organizaciji i ostvarivanju nastave u prirodi i ekskurzije u osnovnoj školi („Sl. glasnik RS“, br 30/2019) definisani su i sadržaji ovakvog vida nastavno-obrazovnog rada.

Sadržaji nastave u prirodi ostvaruju se na osnovu plana i programa nastave i učenja iz kojeg se izdvajaju oni sadržaji koji su pogodni za ostvarivanje ciljeva i zadataka nastave u prirodi, a odgovaraju uslovima u kojima se ona realizuje.

Sadržaji ekskurzije i terenskog učenja u prvom ciklusu osnovnog obrazovanja i vaspitanja u Republici Srbiji su posebno:

- Uočavanje oblika reljefa i površinskih voda u okolini i prirodno-geografskih odlika Republike Srbije;
- Posmatranje karakterističnih biljaka i životinja (obilazak staništa biljaka i životinja);

- Posete zaštićenim prirodnim područjima (nacionalni parkovi, rezervati, spomenici prirode i dr.);
- Upoznavanje s prošlošću i kulturnom baštinom zavičaja i otadžbine (obilazak muzeja, kulturno-istorijskih spomenika, etno-sela, spomen-kuća znamenitih ljudi - naučnika, književnika, umetnika, vojskovođa, državnika i dr.);
- Razvijanje sposobnosti orijentacije u prostoru i vremenu;
- Obilazak raznih tipova poljoprivrednih površina i stočarskih farmi (upoznavanje s proizvodnjom zdrave hrane);
- Obilazak privrednih društava i javnih preduzeća (prerada prirodnih sirovina, upoznavanje s različitim delatnostima ljudi, zaštita životne sredine i dr.).

Sadržaji ekskurzije i terenskog učenja u drugom ciklusu osnovnog obrazovanja i vaspitanja u Republici Srbiji su posebno:

- Posete koje omogućavaju upoznavanje sa prirodnim lepotama, prirodno-geografskim i društveno-geografskim odlikama Republike Srbije (planine, reke, jezera, banje, biljni i životinjski svet, zaštićeni prirodni objekti i nacionalni parkovi, stanovništvo, narodi i etničke zajednice u Republici Srbiji i dr.);
- Obilazak praistorijskih, antičkih, srednjovekovnih, novovekovnih i lokaliteta savremenog doba (Lepenski vir, Vinča, Sirmijum, Viminacijum - vojni logor, Gamzigrad - Carska palata, Medijana, Studenica, Đurđevi Stupovi, Žiča, Mileševa, Sopoćani, Gradac, Gračanica, Visoki Dečani, Ravanica, Lazarica, Ljubostinja, Manasija, Kalenić, Sremski Karlovci, Krušedol, Novo Hopovo, Vrdnik, Smederevska tvrđava, Golubac, Niška tvrđava, Petrovaradinska tvrđava, Orašac, Topola, Ćele-kula, Takovo, Tršić, Brankovina, Vraćevšnica, Tekeriš, Struganik, Šumarice i dr.);
- Obilazak Beograda, prestonice Republike Srbije (Dom Narodne skupštine, Narodno pozorište, Narodni muzej, Beogradska tvrđava, Opservatorija, Vojni muzej, Muzej Srpske pravoslavne crkve, Muzej Prvog srpskog ustanka - Konak kneza Miloša, Konak kneginje Ljubice, Narodna biblioteka, kraljevski dvorovi na Dedinju, Muzej grada, Avala, Jajinci, Etnografski muzej, Pedagoški muzej, Muzej Vuka i Dositeja, Saborna crkva, Hram Svetog Save na Vračaru, Prirodnjački muzej, Botanička bašta "Jevremovac", zoološki vrt, Muzej jugoslovenske kinoteke, Muzej Nikole Tesle, Muzej savremene umetnosti i dr.);
- Obilazak ustanova kulture u Republici Srbiji (Galerija Matice srpske u Novom Sadu, Srpsko narodno pozorište u Novom Sadu, Knjaževsko-srpski teatar u Kragujevcu, zavičajni i lokalni muzeji, spomen-kuće i dr.);
- Obilazak privrednih društava i javnih preduzeća (preduzeća u oblasti prehrambene, hemijske, mašinske i elektroindustrije, industrije građevinskog materijala, energetike i dr.);
- Podsticanje ispoljavanja pozitivnih emocionalnih doživljaja („Sl. glasnik RS“, br 30/2019).

Pripreme za organizovanje terenskog rada / učenja na terenu

Priprema učenika, roditelja i nastavnika je uslov realizaciju nastave u prirodi, ekskurzije i terenske nastave. Priprema učenika podrazumeva da se učenici unapred upoznaju sa mestom u koje odlaze, uslovima života u kojima se organizuje nastava u prirodi, odnosno ekskurzija i terenska nastava, oblicima i sadržajima rada, načinom prevoza i ponašanjem u toku puta, potrebnim knjigama, priboru, odeći, obući, pojedinim sportsko-rekreativnim aktivnostima koje će se tamo realizovati.

Učenici, podeljeni u grupe, uz pomoć nastavnika pripremaju kratke referate o oblastima i mestima koja posećuju. Posebna pažnja posvećuje se delu pripreme u kome se nastavnik sa učenicima dogovora oko pravila ponašanja tokom izvođenja nastave u prirodi, na terenu i ekskurzije.

Priprema roditelja za učenike osnovnih i srednjih škola podrazumeva organizovanje roditeljskih sastanaka i pružanje informacija o osnovnim geografskim karakteristikama i klimatskim uslovima kraja u kome se organizuje nastava u prirodi, odnosno terenska nastava i ekskurzija, vremenu odlaska, dužini boravka, ceni, dokumentaciji koju treba pripremiti, uslovima smeštaja, ishrane, zdravstvene zaštite, uslovima života i rada učenika, mogućnostima komunikacije sa učenicima i sl.

Obaveza ustanove je da roditeljima da detaljna uputstva o pripremi učenika, sa spiskom neophodnog pribora za ličnu higijenu, pisanje, potrebnom garderobom, da upozna roditelje sa pravilima ponašanja učenika tokom nastave u prirodi, odnosno na terenskoj nastavi i ekskurziji i zakonskom odgovornošću roditelja za ponašanje učenika tokom iste. Radi prikupljanja važnih informacija vezanih za zdravstveni i psihofizički status dece, njihove osobenosti, specifične navike i interesovanja, organizuju se sa roditeljima posebni razgovori.

Priprema nastavnika obuhvata individualnu i zajedničku pripremu. Zajednička priprema se odvija putem kraćih sastanaka na nivou škole, na kojima se razmatraju organizaciona pitanja od značaja za izvođenje nastave na terenz. Individualna priprema obuhvata dobro informisanje nastavnika o geografskim i geološkim karakteristikama kraja, o flori i fauni, istorijskim podacima, značajnim kulturnim, privrednim i drugim objektima koji se mogu posetiti, običajima i etnološkim karakteristikama područja i mesta na kome će se odvijati nastava u prirodi, odnosno ekskurzija.

Na osnovu prikupljenih podataka i postavljenih ciljeva i zadataka nastave u prirodi i terenske nastave, odnosno ekskurzije, nastavnik sastavlja program koji će se realizovati (pored sadržaja nastave program poseduje i sportsko-rekreativne i kulturne aktivnosti, društvene igre, tipske večernje programe i dr.), odabira metode i oblike rada, određuje dinamiku aktivnosti i priprema sve što će mu obezbediti efikasan i uspešan rad.

Program nastave u prirodi, odnosno terenske nastave i ekskurzije treba da sadrži jasnu strukturu koja ukazuje na ciljeve i ishode u skladu sa programom nastave i učenja, koje treba ostvariti.

Škola sačinjava operativne planove koji, imajući u vidu postojanje nepredvidivih faktora koji su od uticaja na realizaciju nastave u prirodi, odnosno terenske nastave i ekskurzije, poseduju fleksibilnost, odnosno prilagodljivost datim okolnostima npr. lošim vremenskim uslovima i sl („Sl. glasnik RS“, br 30/2019).

Realizacija nastave u prirodi, terenske nastave i ekskurzije

Nastavnik se stara o organizaciji i realizaciji redovne nastave i predviđenih aktivnosti, kao i o bezbednosti učenika za vreme trajanja nastave u prirodi, terenske nastave, odnosno ekskurzije. Pored ovoga, moraju se uvažavati individualne karakteristike učenika, razlike u njihovim potrebama i mogućnostima. Nastavnici treba da podstiču saradnju i timski rad među učenicima, samostalnost i ličnu odgovornost.

Prilikom ostvarivanja programa nastave u prirodi i terenske nastave što više nastavnih i vannastavnih aktivnosti treba realizovati u prirodnom okruženju - uz smenjivanje redovne nastave, samostalnih aktivnosti učenika, sportsko-rekreativnih i kulturnih aktivnosti, igre i zabave, pasivnog i aktivnog odmora.

Nastava u prirodi najčešće se realizuje u trajanju od 7 do 10 dana. Terenska nastava se organizuje prema potrebama nastave i nastavnih sadržaja i u trajanju koje je optimalno za dobro razumevanje i usvajanje sadržaja predviđenih terenskom nastavom.

U skladu sa ciljem i zadacima ekskurzije i terenske nastave određuju se putni pravci, objekti, manifestacije, krajevi i predeli u kojima se realizuju iste.

Ekskurzija se izvodi isključivo na teritoriji Republike Srbije. Za učenike sedmog i osmog razreda osnovne škole, ekskurzija se može organizovati i u Republici Srpskoj.

Studijsko putovanje je sastavni deo godišnjeg plana rada škole kojim se bliže uređuje njegova organizacija, ciljevi i zadaci.

Ako je ekskurzija, odnosno studijsko putovanje organizovano u vreme nastavnih dana, nastava se nadoknađuje za sve učenike, u skladu sa školskim kalendarom i godišnjim planom rada.

Trajanje ekskurzije propisano je planom nastave i učenja.

Za učenike jednog razreda ekskurzija se svake godine organizuje u drugom području Republike Srbije, a to su:

1. Autonomna pokrajina Vojvodina (Bačka, Banat, Srem);
2. Zapadna Srbija sa Tarom;
3. Jugozapadna Srbija (Zlatibor, Zlatar, Uvac);
4. Centralna Srbija: Šumadija i Pomoravlje;
5. Ibarsko-kopaonički kraj;
6. Južna Srbija (Niš-Vranje);
7. Istočna Srbija sa Đerdapom;
8. Beograd i okolina.

Direktor ustanove odgovoran je za zakonitost realizacije nastave u prirodi, ekskurzije i studijskog putovanja („Sl. glasnik RS“, br 30/2019).

Terensko obrazovanje u Srbiji

Terensko obrazovanja u Srbiji je sastavni deo učenja na svim nivoima obrazovanja. Učenje na terenu u Srbiji značajno je iz ugla velikog broja nastavnih predmeta, kako iz grupe prirodnih, tako i iz grupe društvenih nauka. Kako se sve više teži interdisciplinarnosti u učenju, tako se i učenje van učionice planira tako da bude korisno za više predmeta i da obuhvata više oblasti. Učenjem na terenu učenici se upoznaju sa prirodnim i društvenim vrednostima, kulturnim i istorijskim tekovinama i stiču široka i raznovrsna znanja.

Terensko obrazovanje u kurikulumu osnovnog obrazovanja u Srbiji

U prvom ciklusu osnovnog obrazovanja, nastavnici se najčešće opredeljuju za sledeće objekte: Mitrovac na Tari, Stanišinci na Goču, Bukulja u Aranđelovcu, Rudnik na Rudnku, „Stevan Filipović“ na Divčibarama i druge. Svi ovi objekti pripadaju Centru dečijih letovališta Beograda i koriste se i za nastavu u prirodi, kao i za kampove koji se realizuju za vreme letnjih i zimskih raspusta. Pored tematski opremljenih učionica, sala za zabavu, sportskih terena, bazene, skijaških staza, svi objekti imaju i ambulantnu i dvadesetčetvoročasovnu zdravstvenu zaštitu. U svim ovim odmarališta organizuju se obrazovni izleti, šetnje, večernji programi (http://www.cdlbgd.rs/nastava-u-prirodi.html).

U kasnijim razredima, nastava van učionice se češće organizuje i u lokalnoj sredini. Pored nje, mesta pogodna za realizaciju ekskurzije su: Tara, Zlatibor, Gornji Milanovac i druga. Slična situacija je i u srednjim školama koje su do skoro češće birale destinacije izvan granica Republike Srbije.

Istraživanje koje je sprovedeno tokom školske 2017/2018. i 2018/2019. godine među nastavnicima osnovnih škola i odnosilo se na realizaciju nastave u prirodi na teritoriji Republike Srbije. U istraživanju je učestvovalo 406 nastavnika. Analiza rezultata pokazala je da se nastava u prirodi ne realizuje u dovoljnoj meri.

U istraživanju je korišćena Likertova skala stavova (od 1 do 5; sa značenjem 1-u potpunosti se ne slažem i 5-u potpunosti se slažem), gde se veoma jasno mogu videti stavovi nastavnika po pitanju organizacije i realizacije učenja na terenu. Pred nastavnike je postavljeno ukupno 15 tvrdnji. Na osnovu srednjih vrednosti odgovora, treba istaći da je tvrdnja da kod ovakvog vida nastave treba da se angažuje i stručni kadar koji bi bio zadužen za brojne prateće aktivnosti (odnose se pre svega na organizaciju). Ukoliko se u ovaj vid

nastave ne uključi više stručnih ljudi, jednom nastavniku je veoma teško da realizuje sve zahteve koji se očekuju od njega. Najniže je ocenjena tvrdnja da se u nastavi na terenu malo uči, i da se na štetu realizacije obaveznih nastavnih aktivnosti realizuje samo program zabave i rekreacije. Ovo jasno ukazuje da nastavnici smatraju da veliki deo vremena posvećuju nastavnim sadržajima koji odgovaraju datim okolnostima.

Interesantni su rezultati istraživanja prema polu. Nastavnice su nezadovoljnije objektima koji se koriste za realizaciju terenskog rada, ali za razliku od nastavnika smatraju da u Srbiji postoji veliki izbor lokacija za podizanje objekata škola u prirodi. Nedostatak odgovarajuće stručne literature nastavnice vide kao veći problem kako u organizaciji, tako i u realizaciji ovakvog vida nastave. Kod tvrdnje da nastavnici nisu dovoljno obučeni, odgovori oba pola bili su gotovo ujednačeni, ali iz njih se svakako može zaključiti da ni oni sami nisu sigurni da li su u potpunosti spremni da izvode ovakvu vrstu terenskog rada (srednja ocena ove tvrdnje je 2.5). Kod najvećeg broja tvrdnji, nastavnici oba pola su prilično ujednačeni, tako da, pored navedenih, nema veže razlike u stavovima po pitanju organizacije i realizacije rada na terenu.

Ukoliko se posmatraju rezultati u odnosu na mesto matične škole - grad/selo, takođe se uočava dosta ujednačen stav kod većine tvrdnji. Međutim, mora se istaći da su nastavnici koji rade u ruralnim sredinama nešto više ocenili tvrdnju da postoje veliki problemi u vezi sa organizacijom terenskog rada. Ovo jasno ukazuje da su zahtevi organizacije, počevši od same škole, agencija i drugih aktera daleko dostupnije nastavnicima koji rade u gradskim sredinama.

Nastavnici koji ne realizuju nastavu van učionice, više su saglasni sa tvrdnjom da uspeh terenskog učenja u značajnoj meri zavisi od normativno-pravnih rešenja. Ovo može da bude jedan od razloga zbog čega oni ne realizuju ovakvu nastavu, jer bi iskustvo pokazalo da je za ovakav vid nastave neophodna fleksibilnost nastavnika i svih ostalih aktera u svakoj etapi ostvarivanja cilja i zadataka nastave u prirodi. U prilog ovome govori i stav nastavnika koji ne vode učenike u školu u prirodi da postoje veliki problemi prilikom organizacije iste. Oni koji je realizuju, ipak ne smatraju da postoje veći problemi prilikom organizacije. Nastavnici koji ne realizuju terenski rad imaju oštrije stavove i u sledećem:

- Objekti za smeštaj učenika su najčešće namenjeni turizmu i ne zadovoljavaju druge standarde;
- Improvizacija je sveprisutna;
- Organizacija iziskuje veći napor nastavnika;
- Programski sadržaji moraju znatno odstupati od redovnog nastavniog programa;
- Nastavnici nisu dovoljno obučeni;
- Nedostaje odgovarajuća literatura;
- Terenski rad znatno otežava porodični budžet učenika...

The t-test of independent samples was applied in order to compare the arithmetic means of two population groups. Statistički značajna razlika među odgovorima ispitanika prema polu, kao i prema mestu zaposlenja nije uočena ni u jednoj datoj tvrdnji (na nivou

značajnosti $p<0,05$). Ovo jasno govori da razlike između odgovora nastavnika prema polu i o uticaju različitih mesta rada (urbane i ruralne sredine) nisu potvrđene.

Međutim, ukoliko poredimo odgovore između nastavnika koji imaju iskustva u vođenju učenika u škole u prirodi i onih koji ovakav vid nastave ne praktikuje, uočavaju se pojedine razlike. Nastavnici koji ne realizuju terenski rad imaju dosta fleksibilniji stav prema tvrdnji da isti treba da ima isključivo nastavno-vaspitni karakter. Takođe, smatraju da oni nisu dovoljni za realizaciju ovakvog vida nastave, kao i da im je potrebna dodatna pomoć u vidu stručnog kadra.

Nastavnici nisu stava da se na nastavi u prirodi malo uči, ali svakako je primetna razlika između njihovih odgovora jer oni koji realizuju školu u prirodi izrazili su dosta veći stepen neslaganja sa pomenutom tvrdnjom.

Nastavnici koji nemaju iskustva u terenskom radu smatraju da programski sadržaji moraju odstupati od nastavnog programa u redovnoj nastavi. Čini se da se nastavnici sa iskustvom dosta dobro snalaze sa realizacijom predviđenih nastavnih sadržaja, te su izrazili veće neslaganje sa pomenutom tvrdnjom.

Primena jednofaktorske analize varijanse, ANOVA, korišćena je za ispitivanje statistički značajnih razlika između zavisnih varijalbli (stavki vezanih za stavove ispitanika) i nezavisnih varijabli (socijalnih karakteristika ispitanika). U ovom slučaju, ispitivano je da li postoje statistički značajne razlike među ispitanicima sa različitom dužinom radnog iskustva.

Kako je samo za tri od petnaest tvrdnji uspostavljena statistički značajna razlika, smatra se da dužina radnog staža ne utiče na stav nastavnika o organizaciji i realizaciji terenskog rada. Pa ipak, nastavnici sa više radnog iskustva (preko 16 godina) izrazili su veće neslaganje sa tvrdnjama da nisu dovoljno obučeni za školu u prirodi, da ne postoji odgovarajuća literatura, kao da se u školi u prirodi malo uči.

U cilju što potpunijeg prikaza stavova nastavnika prema učenju van učionice rađeno je istraživanje sa anketom otvorenog tipa, gde su nastavnici imali mogućnost da sami unose veći broj odgovora i da se što opširnije izjasne kako izvode nastavu van učionice. Zbog toga što je anketa bila otvorenog tipa i radi lakšeg i jasnijeg iterpretiranja rezultata, u uzorku je bilo 10 nastavnika. Istraživanje je sprovedeno u školskoj 2019/2020 godini. Prosečna starost ispitanika je 42.9 godina i prosečna dužina radnog iskustva 15.5 godina. Među ispitanicima 60% ima završene osnovne, a 40% master studije. Svi ispitanici imaju pun fond časova (20) iz nastavnog predmeta geografija. Nedeljno u proseku imaju po 3 časa dodatnih vidova nastave.

Ukupno 80% ispitanika je u toku samih studija dobro upoznato sa značajem učenja na terenu i isti udeo ispitanika primenjuje metode terenskog rada u nastavi geografije. Većina nastavnika složila se da učenje van učionice, kao glavnu prednost ima očiglednost i mogućnost posmatranja pojava neposredno u prirodi, čime se lakše usvaja znanje, ono je trajnije i može se uspostaviti međupredmetna korelacija. Među najvećim nedostacima učenja na terenu nastavnici su naveli brojna finansijska i organizaciona ograničenja kao i vremenske uslove, ali isto tako i nedostatak interesovanja za ovakav način učenja i kod

nastavnika i kod učenika. Kada su nastavnici pitani za prepreke kod realizacije učenja na terenu, najčešće kao prepreke navode finasijski problem, nedostatak nastavnih sredstava i udaljenost objekata važnih za terensko učenje. Većina nastavnika je dala pozitivan odgovor na pitanje da li učenje van učionice sprovode u korelaciji sa drugim predmetima i da to čine na velikom broju mesta kao što su muzeji, opservatorije, sajmovi, izložbe, planetarijumi, nacionalni parkovi…

Nastavnici su naveli da sa učenicima V razreda najviše obrađuju van učionice nastavne sadržaje vezane za vasionu, atmosferu, klimatske elemente i Zemljine sfere. Tada koriste teleskop, klimatske instrumente, mini meteorološke stanice i geografsku kartu kao nastavna sredstva i često ovakvom radu posvete više časova. Učenje na terenu u VI razredu nastavnici sprovode kod lekcija vezanih za geografsku kartu, stanovništvo i naselja. Tada nastavnici koriste kompas, geografsku kartu i predmete iz prirode kao nastavna sredstva i često ovakvom radu posvete više časova. U VII razredu nastavnici izvode nastavu van učionica kod lekcija iz regionalne geografije, gde se od sredstava najčešće koriste geografske karte, udžbenici i enciklopedije i da je potrebno više časova kod obrade gradiva na ovaj način. Nastavnici navode da u VIII razredu učenike upoznaju sa geografijom lokalne sredine i tada je najviše prisutno učenje van učionice. Nastavnici tada vode učenike u objekte koji su im lako dostupni, i takav način rada sprovode više puta u toku školske godine. U VIII razredu, zbog raznolikosti prostora širom Srbije, učenici mogu van učionice da se upoznaju sa najrazličitijim sadržajima. Kod učenja van učionice u svim razredima osnovne škole nastavnici smatraju da su učenici mnogo aktivniji i uključeniji u nastavu i da ovakav način rada zahteva detaljne pripreme nastavnika.

Terensko obrazovanje u kurikulumu srednjeg obrazovanja u Srbiji

U Republici Srbiji u srednjim školama cilj ekskurzije je neposredno upoznavanje pojava i odnosa u prirodnoj i društvenoj sredini, upoznavanje kulturnog nasleđa i privrednih dostignuća, a u cilju ostvarivanja obrazovno-vaspitne uloge škole. Zadaci ekskurzije ostvaruju se na osnovu plana i programa nastave i učenja, a sadržaji ekskurzije ostvaruju se na osnovu plana i programa nastave i učenja, obrazovno-vaspitnog rada i sastavni su deo školskog programa i godišnjeg plana rada škole. Program ekskurzije treba da sadrži jasnu strukturu koja ukazuje na ciljeve i ishode u skladu sa programom nastave i učenja, koje treba ostvariti. Škola sačinjava operativne planove koji, imajući u vidu postojanje nepredvidivih faktora koji su od uticaja na realizaciju ekskurzije, poseduju fleksibilnost, odnosno prilagodljivost datim okolnostima npr. lošim vremenskim uslovima i slično.

Ekskurzija se, po pravilu, izvodi na teritoriji Republike Srbije, a jednom u toku školovanja može se organizovati i u Republici Srpskoj. Izuzetno, za učenike završnog razreda, ekskurzija može da se organizuje u inostranstvu.

Škola takođe, može da planira studijsko putovanje za grupu učenika u cilju učenja jezika i upoznavanja kulture, saradnje u okviru projekata i drugih oblika obrazovno-vaspitnog

rada, a koje se izvodi uz prethodno pribavljenu saglasnost nadležne školske uprave. Studijsko putovanje je sastavni deo godišnjeg plana rada škole kojim se bliže uređuje njegova organizacija, ciljevi i zadaci („Sl. glasnik RS“, br 30/2019).

Posle izvedenog putovanja, stručni vođa putovanja i predstavnik turističke agencije sačinjavaju zabelešku o izvođenju putovanja, nakon čega stručni vođa putovanja u roku od tri dana sačinjava izveštaj, koji podnosi direktoru, sa ocenom o izvođenju i kvalitetu pruženih usluga. Takođe nastavnik koji bio pratilac učenicima, zajedno sa njima na nekom od narednih časova odeljenske zajednice razgovara o sprovedenoj ekskurziji. Tokom tog časa razgovara o ispunjenim zadacima i vrši proveru ispunjenosti ishoda.

Istraživanje koje je sprovedeno sa nastavnicima osnovnih škola, urađeno je i sa onim nastavnicima koji su zaposleni u srednjim školama. Takođe, i u ovom uzorku bilo je 10 nastavnika. Istraživanje je sprovedeno u školskoj 2019/2020 godini. Prosečna starost ispitanika je 40 godina, a prosečna dužina radnog iskustva 12.4 godina. Među ispitanicima 50% ima završene osnovne studije, njih 40% master studije i 10% doktorske studije. Svi ispitanici imaju po 20 časova geografije nedeljno, a njih 40% provodi do dva časa u dodatnim vidovima nastave.

U toku studija svi ispitanici su se izjasnili da su se dobro upoznali sa značajem učenja na terenu, i polovina primenjuje metode terenskog rada na nastavi geografije. Većina nastavnika složila se da učenje van učionice kao glavnu prednost ima očiglednost i mogućnost posmatranja pojava neposredno u prirodi, čime se lakše usvaja znanje, može se uspostaviti međupredmetna korelacija, učenici su slobodniji i neposrednije komuniciraju sa nastavnicima. Među najvećim nedostacima učenja na terenu nastavnici su naveli nedostatak sredstava i poteškoće oko održavanja pažnje učenika. Kada su nastavnici pitani za prepreke kod realizacije učenja na terenu, najčešći odgovori su finasijski problem, nedostatak nastavnih sredstava, veliki broj vanastavnih aktivnosti kod učenika srednjih škola i opterećenosti učenika. Većina nastavnika (60%) je dala negativan odgovor na pitanje da li učenje van učionice sprovode u korelaciji sa drugim predmetima. Za učenje van učionice koriste se mesta kao što su muzeji i opservatorije.

Nastavnici koji predaju u I razredu gimnazije najviše van učionice obrađuju nastavne sadržaje koji se odnose na Zemlju u kosmosu, reljef, čoveka i klimu. Tada koriste različita nastavna sredstva, posećuju opservatorije i prirodnjačke muzeje i često ovakvom radu posvete više časova. Učenje na terenu u II razredu gimnazije nastavnici sprovode kod lekcija vezanih za geografsku kartu i digitalnu kartografiju. Tada nastavnici koriste kompas, geografsku kartu, GPS uređaje i predmete iz prirode kao nastavna sredstva i često ovakvom radu posvete više časova. U III razredu gimnazije, zbog raznolikosti prostora širom Srbije, učenici mogu van učionice da se upoznaju sa najrazličitijim sadržajima. Posebno su pogodni sadržaji iz lekcija o stanovništvu. Kod učenja van učionice u svim razredima gimnazije nastavnici smatraju da su učenici mnogo aktivniji i uključeniji u nastavu i da ovakav način rada zahteva detaljne pripreme nastavnika.

Terensko obrazovanje u kurikulumu visokog obrazovanja u Srbiji

Na prostoru Republike Srbije postoje tri fakulteta na kojima se školuju geografi sa sedištem u Novom Sadu (Departman za geografiju, turizam i hotelijerstvo na Prirodno-matematičkom fakuletetu), Beogradu (Geografski fakultet) i Nišu (Departman za geografiju na Prirodno-matematičkom fakultetu). U okviru njihovih akreditovanih studijskih programa predviđena je i realizacija terenske nastave.

Zadatak terenske nastave je da studenti geografske predmete i pojave, njihove međusobne veze, privredne objekte, naselja i predele posmatraju neposredno u stvarnosti i da na taj način stiču jasne percepcije, trajne predstave i život– no činjenično znanje koje će im koristiti da bolje shvate teorijske sadržaje. Na terenskoj nastavi koriste se različite metode: neposredno posmatranje geografske stvarnosti, istraživački razgovor, nastavni razgovor, izlaganje, objašnjavanje, opisivanje i dr.

Maršruta terenske nastave je takva da omogućava sticanje pojmovne osnove iz niza predmeta sa kojima će se studenti susretati u toku studija. Tako se stručnim analiziranjem planina, lesnih zaravni, rečnih terasa, aluvijalnih ravni reka i sl. stiču osnovna znanja iz geologije i geomorfologije. Posmatranjem i analizom vodenih tokova, jezera, bara, močvara stiču se aplikativni oblici znanja iz hidrologije. Proučavanjem biljnog i životinjskog sveta na terenu postiže se veća očiglednost u nastavi biogeografije i njena veza sa zemljištem i drugim elementima i faktorima prirodne sredine. U okviru društvene geografije neposredno se stiču saznanja iz stanovništva, naselja, privrede i dr. Osim toga što terenska nastava ima tematski karakter, što znači da obuhvata tzv. granske sadržaje, one su, takođe, i regionalno geografske jer sačinjavaju i kompleksno posmatranje određenih prostora. Taj aspekt terenske nastave služi za potpuno upoznavanje prostora sa svim sastavnim elementima, u njihovoj međusobnoj zavisnosti.

Na **Departmanu za geografiju, turizam i hotelijerstvo u Novom Sadu** terenska nastava je predviđena tokom celokupnih studija nastavnim planom studijskog programa Profesor geografije, Geografija i Master profesor geografije.

Terenska nastava za Master profesore biologije i geografije izvodi se delom u okviru nastavnog programa Departmana za geografiju, turizam i hotelijerstvo, a delom u okviru Departmana za biologiju i ekologiju i u okviru plana i programa je uvršćena kao izborni predmet.

Na I godini studija terenska nastava se za sve studijske programe realizuje po Vojvodini, u II semestru, a traje 3 do 5 dana.

Na II godini studija terenska nastava u okviru studijskog programa Diplomirani profesor geografije i Geografija realizuje se na području Zapadne Srbije (u IV semestru, u trajanju 4 do 6 dana).

Na III godini studija u okviru studijskog programa Diplomirani profesor geografije i Geografija terenska nastava se realizuje na području Istočne Srbije (u VI semestru, u trajanju 4 do 6 dana).

Na IV godini studija terenska nastava u okviru studijskog programa Diplomirani profesor geografije i Geografija realizuje se po centralnoj Srbiji, Crnoj Gori i Bosni i Hercegovini.

Provera znanja stečenih na terenskoj nastavi vrši se u okviru predmeta Terenska nastava 1-4, gde usmenim i/ili pismenim putem proverava znanje, studenti dobijaju ocene i ostvaruju po 3 ESPB na svakom predmetu.

Za studijske programe svih master akademskih studija takođe se organizuje terenska nastava u letnjem semestru, u trajanju od 5 do 7 dana na području Republike Slovenije.

Provera znanja se vrši u okviru predmeta Terenska nastava 5, gde takođe ostvaruju 3ESPB.

Na **Geografskom fakultetu u Beogradu** terenska nastava je vezana za određene predmeta, pa se tako:

Na I i II godini akcenat na terenskoj nastavi je na fizičko-geografskim karakteristikama prostora pa se ona realizuje u trajanju od dva puta po jedan dan na I (kroz predmete Paleogeografija i Dinamička geomorfologija) i jednom u II godini u trajanju od jednog dana (kroz predmet Speleologija).

Na III godini terenska nastava se realizuje na području Stare planine u trajanju od 3 dana. Na ovoj terenskoj nastavi pored posete nekim prirodnim vrednostima, akcenat je stavljen na elemente društvene geografije, kojima se posvećije posebna pažnja. Takođe na III godini se realizuje i terenska nastva u trajanju 3 dana na području Jugozapadne Srbije (Stari Vlah i Raška), gde je akcenat na regionalno-geografskim sadržajima. Na III godini studenti izborno imaju mogućnost odlaska i na terensku nastavu na području Zapadne Srbije gde je akcenat na društveno-geografskim sadržajima.

Na IV godini terenska nastava se realizuje u kontinentalnom delu Crne Gore u trajanju 5 dana, sa akcentom na regionalno-geografskim sadržajima.

Kroz nastavne predmete Terenska nastava I-III (letnji semestar u II, III i IV godini), studenti ostvaruju po 2ESPB.

Na master akademskim studijama nema organizovane terenske nastave.

Na **Departmanu za Geografiju u Nišu** terenska nastava se raealizuje prema utvrđenom planu i programu na osnovnim akademskim studijama i na master akademskim studijama. Na kraju svake godine studija, pod rukovodstvom nastavnika i saradnika fakulteta, u toku maja meseca, predviđena je terenska nastava sa praktičnim radom studenata (praktična nastava).

Na I godini trenska nastava se realizuje na području Šumadije u trajanju od 2 dana.

Na II godini terenska nastava se realizuje na području Istočne Srbije u trajanju od 3 dana.

Na III godini terenska nastava se realizuje na području Zapadne Srbije u trajanju od 3 dana. Pohađajući terensku nastavu studenti imaju priliku da se u prirodi upoznaju sa nekim fizičko-geografskim objektima i pojavama o kojima su prethodno stekli teorijsko znanje.

Za studente master akademskih studija terenska nastava se realizuje na području Vojvodine u trajanju od 3 dana.

Zaključak

Tradicionalno školovanje i shvatanje da je škola institucija čija je svrha samo obrazovanje odnosno podučavanje, sve manje može da odgovori na savremene potrebe i zahteve modernog društva 21. veka. Promene školskog sistema u Srbiji, unapređivanje njegovog kvaliteta kao i pripremanje učenika na uloge i odnose koji ih čekaju u životu, predmet su interesovanja, ne samo stručnjaka i teoretičara koji se bave ovom oblašću, već i ljudi koji imaju svest o bitnosti ovog životnog segmenta i koji žele bolju budućnost za svoju decu. Zbog važnosti školovanja, koje sa sobom ne donosi samo puko znanje, vaspitanje i navike već ceo otvoren sistem koji funkcioniše u skladu sa društvom, veoma je važno da se aktuelna evolucija škole dogodi u najvećoj mogućoj budnosti i koncipiranosti svih onih koji su odgovorni za razvoj školstva.

Jedna od osnovnih polaznih postavki u reformi školstva jesu proučavanja i način primenjenosti objekata u kojima se odvija nastava. Još od srednjeg veka pa do danas, nastavni objekti predstavljaju predmet kritike mnogih reformatora škole i školskog sistema. Kako se sama škola i školski sistemi menjaju i evoluiraju, tako i pristup objektima u kojima treba izvoditi nastavu predstavlja plodno tle za dokazivanje raznih teorija u obrazovanju i njihove praktične primene.

Vanučioničkom nastavom / radom na terenu, učenicima u Srbiji je dato da nauče da samostalno formiraju znanja, da na svojstvene načine dolaze do saznanja i tako postanu aktivni u nastavnom procesu, a ne samo puki posmatrači. Usvajajući znanja u odgovarajućim objektima izvan učionice, deca se osamostaljuju, stiču samopouzdanje i sami planiraju proces usvajanja znanja.

Istraživanja u Srbiji pokazuju da nastavni sadržaji koji su blisko povezani sa prirodnom i društvenom sredinom, i dalje nisu u dovoljnoj meri organizovani u namenskim objektima i pomereni iz klasične učionice prema realnom životu ili namenskim objektima unutar škole, već da učionica zauzima centralno mesto u obradi sadržaja koji su u funkciji saznavanja sveta koji nas okružuje. Postoji jasna potreba za većim funkcionalnim povezivanjem sadržaja nastave i nastavnih objekata (a da to nije učionica). Podrazumeva se da se veliki broj nastavnih tema, kako iz geografije, tako i iz drugih predmeta, na sasvim prihvatljiv i kvalitetan način može obraditi i u učionici, uz primenu raznih modela, maketa, audio i

vizuelnih sredstava, ali takav vid nastave zahteva mnogo veću pripremu i angažovanje nastavnika, a rezultati koji će se postići biće isti ili gori nego da je nastava organizovana u adekvatnijem objektu. Moguće je da neki nastavnici nisu u mogućnosti da u datom trenutku koriste druge nastavne objekte, ali takođe je prisutna i njihova nespremnost i inertnost da aktivnije organizuju nastavu i premeste je u druge nastavne objekte. Može se zaključiti da je učenje van učionice znatno prisutnije u osnovnom obrazovanju, nego u srednjem. Kao jedan od glavnih razloga za to nastavnici navode veliki broj nastavnih predmeta, ali i vannastavnih aktivnosti učenika u gimnazijama i nedostatak vremena zbog opterećenosti učenika gradivom.

Terenska nastava iziskuje znatno veće pripreme nastavnika, ali se ne sme dozvoliti da upravo ta tvrdnja bude razlog ili izgovor za neprimenjivanje nastave van učionice. Ovakav vid nastave treba temeljno planirati i to na svim nivoima obrazovanaja – osnovnom, srednjem i visokom.

Republika Srbija obiluje velikim brojem pogodnih mesta za učenje na terenu i u narednom periodu potrebno je temeljnije izvršiti klasifikaciju istih na nekoliko nivoa – prema vrsti obrazovanja, prema određenim sadržajima predmeta i prema geografskim područjima.

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