

ZgSp2353-7426/06.12.2020/20.12.2020/30.12.2020/04

Doc. PaedDr. Zlatica Huľova, PhD.

ORCID 0000-0001-7116-7754

Catholic University in Ruzomberok

Faculty of Education

Department of Pre-school and Elementary Education

PaedDr. Miroslava Gašparová, PhD.

ORCID 0000-0001-9032-0478

Matej Bel University in Banská Bystrica

Faculty of Education

Department of Pre-school and Elementary Education

**TECHNICAL MONUMENTS, NATURAL ASSETS
AND CULTURAL HERITAGE
IN THE PREPARATION
OF FUTURE TEACHERS
OF YOUNGER SCHOOL-AGE CHILDREN**

Abstract

The authors of the contribution, which is part of the projects VEGA No. 1/0383/19 and KEGA No. 004ku-4/2019, address the issue of transferring knowledge about the monuments of technology, natural values, as well as the cultural heritage of our ancestors, as an important role of future teachers of children of early school-age and younger. The values of landscape, technical monuments, nature and the whole culture left by the ancestors living in the territory of today's Slovakia, are an inexhaustible source of inspiration for educating and training young generation of future teachers. Their task and mission is to appreciate and honour the values preserved here by our ancestors, but at the same time to mediate in the transmission of these values to future generations. Therefore,

their principal task and mission is to prepare children for life in this country and to support them in developing cultural awareness, creative skills and values that will be reflected in the protection and promotion of this heritage. Based on what is mentioned, 180 of future teachers, who are the students of preschool and elementary pedagogy, were surveyed about their opinion on their own preparedness and what their experience in the given area is. By combining a variety of research methods (self-construction questionnaire, dialogues, graphic statements analysis, interviews, and others), we have found that, according to their self-assessment, 95% of students believe that they are well prepared for the future profession, and that they have sufficient knowledge at their disposal. 75% of the respondents stated that the time allocation for the scientific disciplines suits them, 67.8% utilize methods that are activity-inducing, project-based, and developing personality of the pupil during the pedagogical practice, and only 58.3% of the students use professional teaching resources to mediate the curriculum related to the cognition of both natural assets and the cultural heritage of our ancestors.

Keywords: Future Teacher • Pre-Graduate Preparation • A Pupil of Younger School Age • Technical Monuments • Nature • Culture • The Heritage of Slovakia • Nurture and Education.

**ZABYTKI TECHNIKI, MAJĄTEK PRZYRODNICZY
I DZIEDZICTWO KULTUROWE
W PRZYGOTOWANIU PRZYSZŁYCH NAUCZYCIELI
EDUKACJI MŁODSZYCH DZIECI**

Streszczenie

Autorki artykułu, będącego częścią projektów VEGA nr 1/0383/19 i KEGA nr 004ku-4/2019 poruszają problematykę przekazywania wiedzy o zabytkach techniki, walorach przyrodniczych, a także dziedzictwie przodków, jako ważnej roli przyszłych nauczycieli dzieci w wieku wczesnoszkolnym. Walory krajobrazowe, zabytki techniki, przyroda i cała kultura pozostawiona przez przodków mieszkających na terenie dzisiejszej Słowacji są niewyczerpanym źródłem inspiracji w edukacji i szkoleniu młodego pokolenia przyszłych nauczycieli. Ich zadaniem i misją jest przede wszystkim docenianie i szanowanie wartości zachowanych przez przodków, ale jednocześnie pośredniczenie w przekazywaniu tych wartości przyszłym pokoleniom. Dlatego głównym zadaniem i misją przyszłych nauczycieli

będzie przygotowanie dzieci do życia w swoim kraju oraz wspieranie ich w rozwijaniu świadomości kulturowej i umiejętnościach twórczych, które znajdują odzwierciedlenie w ochronie i promocji tego dziedzictwa. Badania przeprowadzono wśród 180 przyszłych nauczycieli pedagogiki przedszkolnej i elementarnej, zbierając ich opinie na temat ich przygotowania oraz doświadczeń w danej dziedzinie. Łącząc różne metody badawcze (kwestionariusz samokonstrukcji, dialogi, analiza wypowiedzi graficznych, wywiady i inne) stwierdzono, że według ich samooceny 95% studentów uważa, że są dobrze przygotowani na przyszłość zawodu i że mają do swojej dyspozycji wystarczającą wiedzę. 75% badanych stwierdziło, że czas przeznaczony na dyscypliny naukowe im odpowiada, 67,8% stosuje metody aktywizujące, projektowe i rozwijające osobowość ucznia w trakcie praktyki pedagogicznej, a 58,3% studentów stosuje profesjonalne zasoby dydaktyczne w programie nauczania związanym z poznaniem zarówno walorów przyrodniczych, jak i dziedzictwa kulturowego przodków.

Słowa kluczowe: przyszły nauczyciel • przygotowanie absolwentów • uczeń w młodszym wieku szkolnym • zabytki techniki • przyroda • kultura • dziedzictwo Słowacji • wychowanie i edukacja.

Introduction

Even though Slovakia is a small country in Central Europe, its cultural and natural diversity is very rich. The diversity of the natural environment determined the emergence of unique cultural sites that created invaluable wealth presenting life, creativity, skill, and artistic expression of its inhabitants throughout the whole history. This is a testament to the many historical monuments preserved to this day, often functional technical monuments, unique places and rural sites with unique architecture, and many different curiosities. Many gems of the landscape as well as of human life are of particular global importance. The evidence of that is their entry in the UNESCO World Natural and Cultural Heritage List. (Convention No. 375/2006 Z.z.).

The uniqueness and diversity of nature, together with the richness and gems of culture are becoming an endless well of inspiration as well as a source of topics and materials for school education. A teacher has them at their disposal during the nurture

and education of children, and they are not only a goal but also an ideal means of education. Given their availability, they are also suitable for children from their youngest age. Children are getting to know their nearest environment, landscape, nature, culture, the life of contemporary people, and also of their ancestors. An important objective is to promote a positive relationship with one's immediate environment, its protection and improvement, which, in the future, will be reflected in the actions of each individual. It is important to perceive, understand, and realize the meaning and necessity of local, surrounding, regional but also global exceptional or unique sites. These are the documentation of the skills and wisdom of the previous generations.

Culture-historical, technical and natural monuments of Slovakia

Like every other country, Slovakia is actively dedicated to the protection, preservation, and also presentation of its cultural and natural heritage. In addition to tangible objects, Slovakia has created a representative list of the intangible cultural heritage, in which important objects are registered and traditional activities are preserved. This includes a relatively large number of the following elements: Traditional manual bell tolling and the function of bell founders in Slovakia; Music from Terchová; Radvaň fair; Shepherd's pipe – a musical instrument and its music; Mining services of miners from Špania Dolina; Traditional puppetry in Slovakia; Bagpipes and bag-piper culture in Slovakia; Ornaments from Čičmany; Banská Štiavnica Salamander; Blueprint; Multi-vocal singing from Horehronie; Ornament from Vajnory; Tulle bobbin lace from Myjava Hills; Maiolica from Modra; Shepherd's pipe trombita; Wooden carved crosses from Podpoľanie; Wire craft and art; Breeding Lipizzan horses in Topoľčianky; Slovak sign language; Falconry; Whistle from the Trenčín region (rífová písťala); Alpine carriers; Folk music, dance, and singing from Podpoľanie (rozkažovačky); Painted Easter Eggs from Polichno; clarinet-like musical instrument called "Gajdica"; Ornament from Čataj.

Several of these have also been gradually included in the UNESCO's list of intangible cultural sites (see Figure 1): Shepherd's pipe (2005) as the "Masterpiece of the Oral and Intangible Heritage of Humanity"; Music from Terchová (2013); Bag-piper Culture (2015); Puppetry in Slovakia and the Czech Republic (2016); Multi-Vocal Singing from Horehronie (2017); Blueprint – joint registry with the Czech Republic, Germany, and Austria (2018); Wire Craft and Art (2019).

Figure 1 Selected elements from the intangible cultural heritage



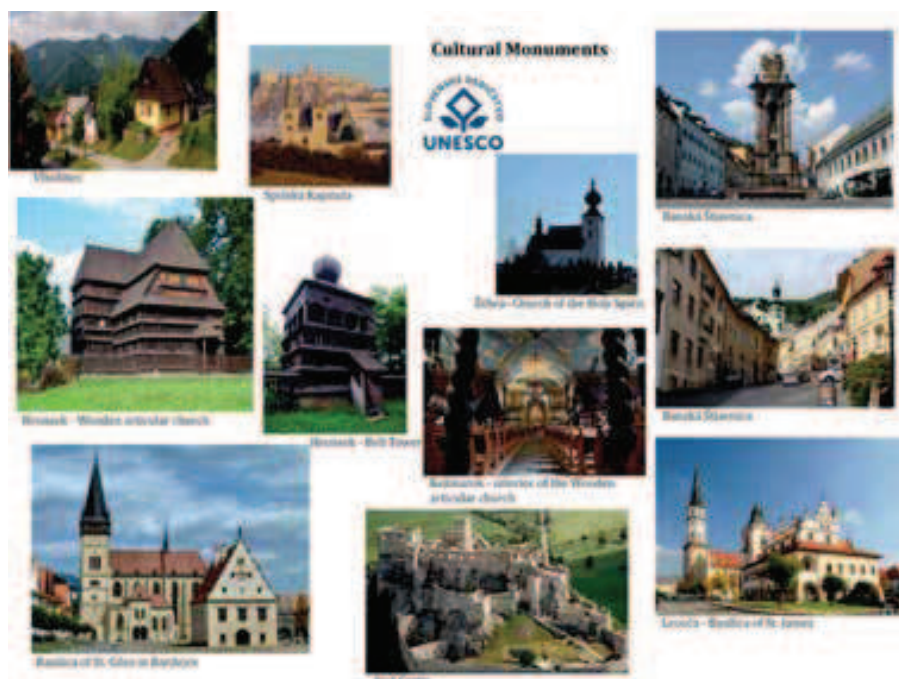
In addition to the farmhouses, the most precious architectural monument is the two-storied log bell tower from 1770, the log windlass well from 1860 but also the brick-walled Baroque-Classical Church of the Virgin Mary's Visitation from 1875. It is listed as a living cultural monument, which still today documents the past way of life. In the same year, Banská Štiavnica, a historical mining town, has entered the list with its cultural and technical monuments, which form a large complex related to mining and processing of precious metals – shafts, tunnels, knocking tower, tajchy – a system of water reservoirs, creeks collecting water. This ingenious system was created in the 16th century and was used until the 19th century. Besides its use in the mining industry, it also provided drinking water for the town. provided drinking water

for the town. It was the most modern work of its kind in the world until the 19th century (www.Unesco.sk/banskastiavnica).

An important site that has entered the UNESCO list in 1993 is Spiš Castle and its surroundings: Spišské Podhradie, Spišská Kapitula, Church of Holy Spirit in Žehra, and the natural sites including Dreveník – a stone town, and travertine piles Sivá Brada. In 2009, the town of Levoča with the work of Master Paul was added to this location. The work is represented by a famous wooden altar of Master Paul of Levoča, which is, with its height of 18.6 m, the tallest of its kind in the world.

In 2000, the town of Bardejov, whose historical center represents the preserved structure of the medieval town, was added to the UNESCO list. In 2008, the World Heritage List was enriched by a set of nine wooden buildings – eight churches (Tvrdošín, Hervartov – Catholic churches, Hronsek, Kežmarok, Leštiny – articular evangelical churches, Ruská Bystrá, Bodružal, Ladomírová – Greek Catholic churches) and one separate wooden bell tower in Hronsek (Zentko, 2010). The oldest Slovak UNESCO entry is the Monument Reservation of Folk Architecture in Vlkolínec and dates back to 1993 (see Figure 2).

Figure 2. Selection of the UNESCO-listed cultural sites



In addition to cultural and historical monuments, several natural sites from Slovakia have also appeared on the UNESCO list.

At first, back in 1995, it was the caves (Fig. 3) and the abyss of the Slovak Karst, which together with the Hungarian Aggtelek Karst form a common karst system: Domica Cave, Gombasek Cave, Ochtinská Aragonite Cave, Jasovská Cave, Krásnohorská Cave, Silická ľadnica ice cave, Snežná diera cave, Zvonivá Abyss.

In the Spiš-Gemer Karst of the Slovak Paradise National Park, there is Dobšiná Ice Cave, which also belongs to the abovementioned list. Domica is a cave that is accessible on both sides of the border – Slovak and Hungarian. As the only cave in Slovakia, it provides the experience of sailing by boat on the underground river Styx. It is a hibernation site of bats, and a discovery site of cave bear bones, remains of fireplaces, or residential objects from the Stone Age.

Figure 3. Pictures of selected caves in Slovakia



Source: Processed by the authors (photo:Jojo/gallery).

Ochtinská Aragonite Cave is unique in its karst decoration in the form of aragonite. Jasovská Cave is a hibernation site of several bat species, a discovery site of cave hyena and cave bear bones. The documentation shows the settlement in the Neolithic, Bronze Age, and Hallstatt, as well as Paleolithic periods. In the Gombasek

Cave, we find a unique decoration of sinter columns, which, in some places, reach a length of up to 3 meters. In Krásnohorská Cave, there is an underground waterway, as well as a massive 32 m high stalagmite. Its base has a diameter of 12 m. Cave pearls are also to be found in the cave.

It is possible to find up to 123 sites of primeval forests in Slovakia. The Carpathian beech primeval forests are a cross-border area that has been on the natural heritage list since 2007. 4 of these primeval forests are located in Slovakia: Rořok, Stuřica, Haveřová, and Vihorlat. Some of them are depicted in Figure 4. When visiting them, one must be aware that many of these sites are protected by the 5th strictest degree of protection. Movement outside of the marked pavements is, therefore, prohibited.

Figure 4. Primeval forests and remnants of primeval forests in Slovakia



Source: www.pralesy.sk

All of them are suitable for trips, strolls, and field trips. However, it is important to maintain and mind the conditions of entry into the highly protected areas – especially into the ones in the 5th degree of protection.

Natural sites have the potential to play a very important role in

getting to know the beauty of Slovakia with the application of the motivational function not only within the framework of regional education but also in fulfilling the whole set of educational standards at the primary level of primary school. With proper leadership of the teacher, this can also encourage interest in one's own and individual will to get to know interesting places and their history. (Gašparová, 2020).

Cultural heritage in the preparation of future teachers in their research

In 2015, the Government of the Slovak Republic approved the Concept of Care for Traditional Folk Culture by 2020. Further, a central database of information on folk culture together with other systematic steps in the protection process have been created (Kosová, K., 2021). One's awareness of the potential in the culture and nature's richness in Slovakia being the source of children's cognition in primary education, and being determined by the teacher's professionalism. A teacher who is a professional and has high-quality and rich equipment of skills, self-knowledge, and their own experience, is a suitable mediator and creator of one's basis of knowledge, acquisition of information, and development of skills and capabilities of children of younger school age. The teacher's enthusiasm and internal devotion to the given issue, which are not primarily oriented at the education of children, cognition, and knowledge, are even more important. Motivation, activity, and real, unmediated sources of learning have stronger positions in conveying the message of historical memory to future generations, as well as in developing children's cognitive competences. It is precisely the choice of educational means thus targeted that we emphasize when getting to know the values of the country. That is always done with regard to age adequacy, the attractiveness of the focus phenomena and their proximity or affinity with their interests, and the specific level of their development.

The cognition and implementation of these into the educa-

tional process of children of early and younger school age allow teachers to maintain an educational standard that is defined by the state educational program in several educational areas. The content-based and performance-based standards are included in the following educational areas: Man and the world of work, Man and nature, Man and society, Man and values, Arts and culture, and cross-sectionally also Language and communication. Because of that, the above presented and many other cultural monuments, as well as their surroundings, are a suitable basis for fulfilling the educational objectives of primary education in many subjects intended for education at the primary level of primary school. In utilizing the content-based complementarity of subjects of natural science, homeland studies, technical education, mathematics, Slovak language, fine arts, or physical education, it is possible to holistically mediate the pupils' cognition of objects and phenomena, always depending on specific conditions. Cross-sectional themes, the content of which also focuses on regional education and traditional folk culture, are a part of educational programs for the primary level too. For getting to know the Slovak cultural heritage, the cross-sectional themes, Regional Education and Folk Culture, as well as Environmental Education and Media Education, have a prominent position within these programs.

An important condition is the professionalism of the teacher, sufficient knowledge, good orientation, and being aware of the standards of education. The teacher and their personal involvement in the field of cognition and education through local significances is already being formed during their preparation for this profession.

Methods, research sample and research questions

As part of our research of the preparedness for the future profession, we surveyed 180 students of the preschool and elementary pedagogy, and have been finding out what knowledge they acquired during their studies in regard to this issue, what methods they uti-

lize during pedagogical practice, whether and with what resources they work most often, and what teaching resources from the area of research they utilize in mediating the curriculum to the pupils.

Throughout the research, we used a set of research methods (self-construction questionnaire, interviews, graphic statements analysis, interviews and others) via which we have obtained compelling data necessary to further examine students' preparedness for the future profession.

Due to the extensive research study, the graphs and tables only present a part of the findings, namely those that are closely related to the requirements for professional competences of the teacher in regard to the given issue, and that we present below.

In the preparation of future teachers, it is important to pay attention to a number of requirements:

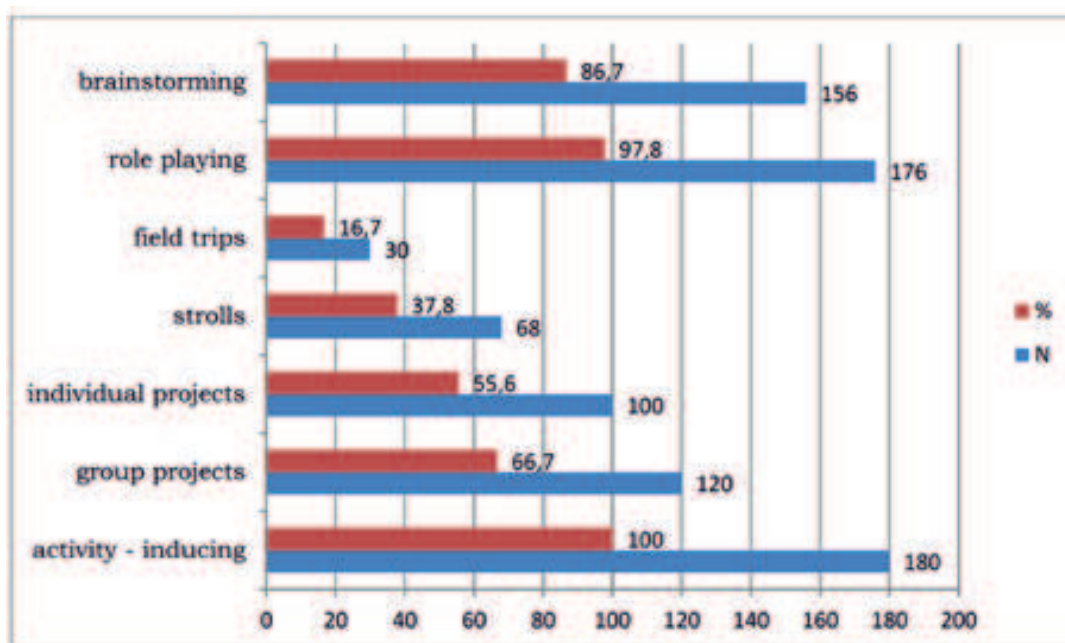
- having a sufficient overview of their cultural and natural environment,
- actively and personally getting to know this environment,
- having the ability to implement acquired competences from this field into the educational process;
- cross-sectionally integrating regional significances into all subjects;
- leading pupils toward actively getting to know their home town, region, and using direct observation of objects and phenomena in this process;
- motivating pupils toward being interested in their immediate environment, landscape, nature, culture as well as the whole region and all its components;
- encouraging pupils to have the need to learn and seek new knowledge;
- using appropriate educational strategies based on the pupils' active approach;
- leading pupils toward their personal involvement in the problems of their surroundings,
- teaching pupils how to appropriately name the problems of the community and society, and teaching them to seek solutions to these problems;

- cooperating with parents, and making them feel interested and motivated in being a part of these activities;
- cooperating with institutions of the external environment and making use of their educational activities offers.

Research outcomes

Students acquire the teacher's competences, which include the knowledge of all aspects of regionalization and the regions of the country, the knowledge of their structure, and a consistent involvement and motivation for one's own active knowledge of the region, in which they live and in with which they will engage in the future. Simultaneously, they train their facilitating skills of supporting the creation of children's long-term internal motivation for getting to know their environment and their surroundings. Due to this reason too, the teacher must know and, above all, use a range of creative and activity-inducing educational strategies. Those that the teachers are familiar with and that they incorporate in their pedagogical practice are listed in Graph 1.

Graph 1. Methods most commonly implemented by students in the teaching part of the pedagogical practice



Each student must understand the formation of pupils' literacy as a process of developing attitudes in symbiosis with both cognitive and psychomotor skills.

One of the many forms of preparation for future teachers, which mediate the values of the country not only for their cognitive but especially affective and conative development, is a field trip. However, based on our examination, it had the lowest representation. It is a signal which one should bear in mind in the didactical preparation of students for future pedagogical practice, because the field trip *“is a platform, which, during the preparation of future teachers, promotes an integrated, complementary approach to the content of education, especially in subjects at the primary level of primary school – homeland studies, elementary science and social studies, ethical education, technical education, but also others”* (Gašparová, M., Kyseřová, J., 2020). However, field trip also has an undeniably encouraging role in the preparation of future kindergarten teachers. It is an effective organizational form of teaching, which utilizes several activity-inducing methods. Teaching in an external environment brings many benefits and breaks down approaches traditionally used in education. It has a motivational effect and impact on recipients and moves teaching into real space. In this space, it combines theory with practice and reality, allowing students to get a comprehensive picture of the landscape, and phenomena that they are directly involved in and directly experience. In the preparation of the teacher, the subject Field Trip is listed as an optional subject in the study program. The students, however, realize its importance and its necessity for their teacher preparation, as well as for the education of pupils. They participate in the field trip every year and subsequently positively reflect on it.

The research findings of educational preparedness, knowledge examination, the use of teaching resources, or the sufficient time allocation are recorded in Table 1.

Table 1. Expression of student satisfaction with the observed variables

| Observed variables | N | % |
|--|-----|-------|
| Readiness and acquired knowledge | 171 | 95% |
| Time allocation for scientific disciplines | 135 | 75% |
| Innovative methods | 122 | 67.8% |
| Teaching resources | 105 | 58.3% |

Workshops, projects, plein air painting, or implementation of external institutions' offers for the education of children of early age into the curriculum are an effective form of preparation of students for activities encompassing the process of getting to know one's cultural and natural environment.

Conclusion

Modernization of traditional education based on the principles of pedagogical pragmatism has returned to pedagogical theory and practice together with the new and old strategies – learning by experience and project-based learning (Huřová, 2017), which builds on the adventures and personal experience of pupils in the process of learning.

In the preparation of future teachers, more attention will need to be paid to the issues that have proved insufficient based on the findings. These include predominantly the improvement of the teaching resources in regard to national significances of Slovakia, so that the students can form a quality picture of their own cognition and, at the same time, with appropriate activity-including methods, influence the quality of pupils' cognition via a more frequent incorporation of field trips.

Thus, they will contribute not only to the acquisition of knowledge and new information among children but, in particular, to the creation and regrouping of pupils' system of values. That results in pupils being in harmony with the needs of both the natural

and social communities, which become a condition and a need for them in leading a satisfied and happy life in symbiosis with the sustainability of that community.

The contribution is published as part of the project VEGA No. 1/0383/19, whose responsible researcher is doc. PaedDr. Zlatica Huľová, PhD., (2019-2021) and the project KEGA No. 004KU-4/2019, whose responsible researcher is, doc. PaedDr. Ivana Rochovská, PhD., (2019-2021).

Bibliography

1. *Puppetry in Slovakia and the Czech Republic.* Available [online], URL:
2. <https://www.ludovakultura.sk/zoznam-nkd/tradicne-babkarstvo-na-slovensku/>
3. BLAŽÍČKOVÁ, I., 2012. Prírodovedné a technické poznávanie v primárnom vzdelávaní v okrese Banská Bystrica prostredníctvom zážitkového učenia. In *Gašparová Miroslava. Vybrané aspekty učenia sa prostredníctvom skúseností- interdisciplinárny prístup. In Zagadnienia Społeczne.* Białystok : Niepaństwowa Wyższa Szkoła Pedagogiczna w Białymstoku, 2020. - ISSN 2353-7426. - 1(13)2020, s. 33.
4. *Convention No 375/2006 Z. z. Convention for the Safeguarding of the Intangible Cultural Heritage.* Adopted on 17 October 2003 at the 32nd session of the UNESCO General Conference in Paris.
5. *Convention No 68/2007 Z. z. The Convention on the Protection and Promotion of the Diversity of Cultural Expressions.* Adopted on 20 October 2005 at the 33rd session of the UNESCO General Conference in Paris.
6. *Photos (a):* archive SACR L. Struhár, R. Buga, A. Vojček, M. Sabo, D. Bugár, M. Nikolaj, J., Lacika, M. Črep, A. Jiroušek, B. Schreiber.
7. *Photos:* Available [online], URL: <https://commons.wikimedia.org/wiki/>
8. *Photos:* Available [online], User:Jojo/gallery
9. Shepherd's pipe Available [online], URL: http://www.fujaravg.sk/o_mojich.htm.
10. GAŠPAROVÁ, M. 2020 Vybrané aspekty učenia sa prostredníctvom skúseností- interdisciplinárny prístup. In *Zagadnienia Społeczne.*

- Białystok : Niepaństwowa Wyższa Szkoła Pedagogiczna w Białymstoku, 2020. - ISSN 2353-7426. - 1(13)2020, s. 33
11. GAŘPAROVÁ, M., KYSEĽOVÁ, J., 2020. Excursion in distance learning. In *Inovace a technologie ve vzdělávání : časopis o nových metodách a inovacích v technickém a přírodovědném vzdělávání*, 1/2020, s. 144-151. - Plzeň : University of West Bohemia, 2020. ISSN 2571-2519.
 12. HUŘOVÁ, Z., 2017. *Projektová, problémová, kooperatívna a výskumná koncepcia vzdelávania v pregraduálnej príprave budúcich učiteľov pre oblasť technického vzdelávania na primárnom stupni školy*. Banská Bystrica : Matej Bel University, Faculty of Education, 2017. ISBN 978-80-557-1275-8.
 13. KOSOVÁ, K. *Svetové kultúrne a prírodné dedičstvo*. Available [online], [cit.2021-01-15], URL: <http://www.unesco.sk/DedicstvoUNESCO>.
 14. KRÁĽOVÁ, E. 2006. Svetovo unikátna strecha jubiluje. In *Bystrický permon*. Vol. IV., No.3. Banská Bystrica: OZ Permon. ISSN 25859420.
 15. *Nehmotné kultúrne dedičstvo na Slovensku*. Available [online], [cit.2021-01-15], URL: <http://www.unesco.sk/nehmotne-kulture-dedicstvo-SR>.
 16. UNESCO Sites: 2013. Available [online], URL: www.travel.sk/Pamiatky%20UNESCO%20na%20Slovensku-1.pdf.
 17. *Technical monuments*: Available [online], URL: <http://www.vypadni.sk/en/mining-museum-in-banska-stiavnica>.
 18. *Representative list of intangible cultural heritage of Slovakia - Centre for Traditional Folk Culture* Available [online], [cit.2021-01-18], URL: www.ludovakultura.sk
 19. *World Natural Heritage* [online], [cit.2021-01-15], URL: <http://www.ssj.sk/sk/svetove-dedicstvo>.
 20. ZENTKO, J. 2010. Sztuka ludowa zważana z religią na Słowacji. In: ПАМЕЖЖА Ў МОЎНАЙ, ГІСТАРЫЧНАЙ І КУЛЬТУРНАЙ ПЕРСПЕКТЫІВЕ, Беларускі дзяржаўны ўніверсітэт, Кафедра тэарэтычнага і славянскага мовазнаўства, Мінск, 2010.