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ADVANTAGES OF USING PALEONTOLOGICAL COMPONENTS IN EXTRACURRICULAR ACTIVITIES IN THE ENGLISH LANGUAGE FOR MIDDLE -SCHOOL STUDENTS

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ABSTRACT

The article explores the use of elements of paleontology in extracurricular activities in the English language. Such integration is consistent with the current language policy of Kazakhstan, as well as the programs "Tugan Zher" and "Sacred Geography of Kazakhstan". The authors state that the educational materials enriched with the linguocultural and historical components contribute to the introduction of students to the linguistic cultures of other ethnic groups within a single state, and also increase the motivation for learning languages. It has been proven that now extinct animals — mammoths, dinosaurs and other representatives of zoological species known from archaeological finds — lived on the territory of Kazakhstan. The correct use of these rich materials in the project activities of schoolchildren provides opportunities for developing social activism and improving cross-cultural and linguistic competencies. The authors refer to the experience of British expert paleontologist Gareth

Dyke and leading researcher Dmitry Malakhov (Department of Earth Remote Sensing, NCSRT) for confirming their hypothesis that elements of paleontology in extracurricular activities in the English language could contribute to the expansion of knowledge base in such school subjects as English and Biology. Thus, the integration of paleontology in students' extracurricular activities and the study of English in project activities can potentially provide a deeper immersion in the culture and history of their country and their small homeland.

INTRODUCTION

Today the methodology of teaching foreign languages is changing under the influence of sociocultural and linguistic factors. In this regard, the concept of "teaching languages" is gradually expanding to "teaching languages and culture" (Maslova, 2009). The stable growth of the indigenous population, whose share in the ethnic composition of the Republic of Kazakhstan as of January 1, 2019, according to the Committee on Statistics, amounted to 70.23% (Abramov, 2018), makes it especially important to use a systemic approach to the formation of interest in knowing national culture and history.

In Kazakhstan, the policy of instilling love, pride and devotion to one's homeland and its history, culture, traditions and way of life and forming a sense of moral obligation towards it is implemented at the state level through the special projects "Tugan Zher" and "Sacred Geography of Kazakhstan", as described in the article "Course Towards the Future: Modernization of Kazakhstan's Identity" (Nazarbayev, 2017; Nazarbayev, 2018). These projects are executed through the introduction of regional components to the educational activities, including the elements of local lore, history and paleontology (Maslova, 2009). Paleontology is a science that studies fossil organisms from different eras (Rychkova & Ryabchikova, 2015).

The special projects "Tugan Zher" and "Sacred Geography of Kazakhstan" can also be implemented through extracurricular activities related to realisation of students' research or design projects under the guidance of teachers, as well as visits to local history museums in Kazakhstan, where students can see interesting paleontological finds (Mustafin, 2017). For example, in the Northern and Eastern Kazakhstan there are museums with the paleontological collections, allowing visitors to penetrate the mysteries of human evolution, flora and fauna and to understand the historical past (Aliyassova et al., 2017, pp.173–183). Visits to such museums and further studies in the history of the ancient flora and fauna of their homeland can increase students' motivation to master natural science disciplines due to the innate interest of children in dinosaurs and other mystical beasts (Barker, 1983, pp. 149–158). It should also be noted that the involvement of middle-school students into various research and project activities increases the intensity of the educational process and the level of training of future competitive specialists (Alekseev & Leontovich, 2001). Moreover, learning the history of dinosaurs as an integral component of both school subjects (Biology and English) promotes the development of critical thinking along with communicative and linguistic skills (Strader & Rinker, 1989, pp. 65–76). Students learn to classify,

compare, solve problems and choose between different types of ancient animals during discussions in pairs and groups or during educational games (Strader & Rinker, 1989, pp. 65–76).

All of the above-mentioned educational activities can be carried out in English, as the multilingual policy is promoted in the Republic of Kazakhstan at the state level in order to develop linguistic processes (Bejsenova & Ibraeva, 2019; Ministry of Education and Science of the Republic of Kazakhstan, 2010). According to the Concept of Development of Foreign Language Education of the Republic of Kazakhstan, a foreign language is defined as the language of international communication that should be learned along with the state language (Kazakh) and the language of interethnic communication (Russian) (Koncepcija..., 2010; Bekebasova, 2018). Thus, the study of foreign languages is recognized at the state level as a socially significant, necessary component of human life in today's world (Bekebasova, 2018). Therefore, the ability to share information about the history, culture, traditions and customs of one's homeland in a foreign language is a necessary skill in the realities of our time (Maslova, 2009).

The aim of the article is to assess advantages of using paleontological components in extracurricular activities in the English language for middle-school students within the frames of the national program "Tugan Zher".

The issues addressed in the article are of particular relevance due to the importance of implementing special projects "Tugan Zher" and "Sacred Geography of Kazakhstan" of the national program "Ruhani Zhangyru" within the frames of educational processes at middle school, which leads to an increase in the quality of education and students' interest in the studied subjects, thus meeting main educational objectives. The authors are the first to provide evidence for the possibility to use elements of paleontology in extracurricular activities in the English language in the middle-school classes of general education institutions.

The research findings can be used in extracurricular activities in the English language for middle-school students of general education institutions.

METHODS AND RESULTS

In our study, we used the following research methods: semi-structured in-depth interviews, survey, quantitative and qualitative analysis and data collation.

The research work was carried out in several stages. At the first stage, we established a methodological foundation for our research, based on the data obtained during two semi-structured in-depth interviews with the expert paleontologists, which were aimed to identify vital issues related to the current situation and prospects of paleontological studies and their influence on the patriotic education of young citizens of Kazakhstan through extracurricular activities in the English language.

The theoretical basis for our study was laid by the works and statements of leading scientists, psychologists and educators both in the field of natural sciences, including biology and paleontology, and in the field of pedagogy and teaching foreign languages. They provided a definition for the term "paleontology" (Orlov, 1959) and identified interdisciplinary relationships between this science and other fields of science (Rychkova & Ryabchikova, 2015). We studied the analysis of paleontological finds on the territory of Kazakhstan (Antonov, 2016; Dyke et al., 2006, pp. 947–953; Dyke & Malakhov, 2004, pp. 669–674; Averianov, 2007, pp. 532–544; Makarkin & Khramov, 2015, pp. 407–415; Bell & Brink, 2013, pp. 265–274; Skutschas & Kolchanov, 2017, pp. 202–208) and the works of Kazakhstan paleontologists (Tleuberdina, 1982; Tleuberdina, 1989; Tleuberdina, 1955; Tleuberdina, 2017; Paleontologicheskoe nasledie Kazahstana; Aubekerov, 1974; Aubekerov & Chalykhjan, 1974; Bazhanov, 1955; Zhumabay, 2017), which prove that "Kazakhstan is a real treasure of world paleontology" (Jurskij period Kazahstana).

At the same time, we considered the main aspects of extracurricular activities for middle-school students (Nesterova, 2017; Vodzinsky, 1961; Kairov, 1961; Lerner, 1980; Amonashvili, 1990; Verzilin, 1983; Babansky, 2004; Mokrousova & Kuzovleva, 1989], including such effective activities as homeroom periods, museum visits and project work(Solomatov & Shatilov, 1985; Vedeneeva et al., 2016; Ivanova, 2012; Bezrukova, 2018, pp. 9–11), and the psychological and age-specific characteristics of 8th grade students (Sgibova, 2014; Volkov, 2017). Our study of the above-mentioned works makes us conclude that the age of 13 is most suitable for the introduction of such forms of extracurricular activities as students' projects with elements of patriotic education or acquainting eighth-graders with the exhibits of historical museums, as such activities can contribute to the acceptance of "oneself" and one's interests, which has a tremendous impact on the future choice of profession.

At the second stage, we conducted a survey among 64 middle-school students of Gymnasium No. 45 in Karaganda (School 1) and Lyceum School No. 17 in Balkhash (School 2) in order to identify their attitude to extracurricular activities in the English language and the level of their knowledge of paleontology, especially paleontological finds in Kazakhstan. The survey consisted of two parts (19 questions). The first part included 6 questions aimed to identify students' attitude to extracurricular activities in the English language and their favourable types of extracurricular activities. The second part included 13 questions aimed to assess students' knowledge of paleontology, especially ancient flora and fauna of Kazakhstan.

At the third stage, we studied the possibility of integrating elements of paleontology into extracurricular activities in the English language.

RESULTS

Our analysis of the first part of the survey revealed the following:
More than half of the survey participants in Schools 1 (63%, n = 20) and slightly more than half of the survey participants in Schools 2 (53%, n = 17) commented positively on extracurricular activities in the English language.

Almost the same number of the School 1 respondents (47%, n = 15) had already had experience of participating in extracurricular activities in the English language, and 53% of eighth-graders (n = 17) would like to take part in extracurricular activities in the English language in future, while only 19% of the School 2 respondents (n = 6) had participated in extracurricular activities in the English language, and 22% of eighth-graders (n = 7) would like to take part in them in future.

The survey revealed the following preferences of the School 1 students in extracurricular activities in the English language: (44%, n = 14) / (38%, n = 12) / (19%, n = 6) chose homeroom periods, museum visits and project work respectively. The survey results for the same question in School 2: (59%, n = 19) / (34%, n = 11) / (41%, n = 13) chose homeroom periods, museum visits and project work respectively (Fig 1).

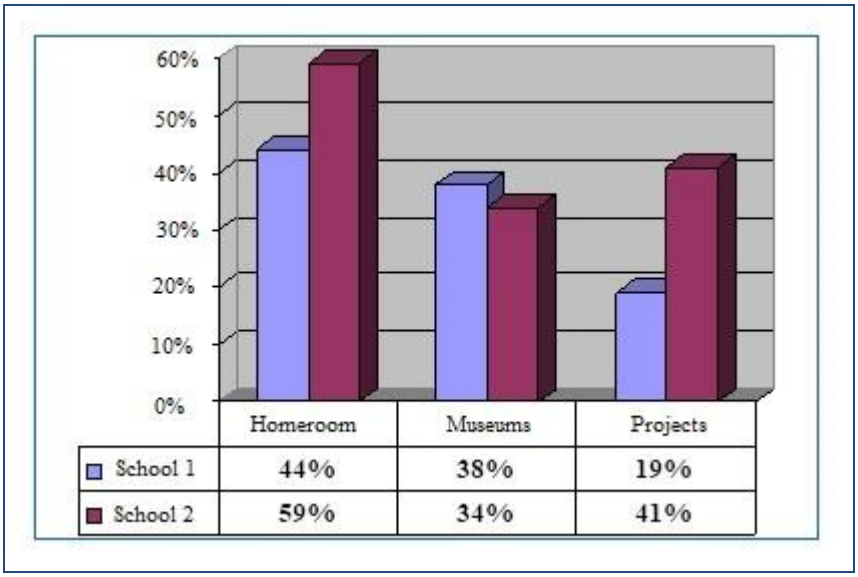

Figure 1. Comparative results for students' preferences in Schools 1 and 2 by types of extracurricular activities

Our analysis of the second part of the survey revealed insufficient knowledge of paleontology of Kazakhstan among the eighth-graders of Schools 1 and 2. More than half of the survey participants in Schools 1 (69%, n = 22) and slightly more than half of the survey participants in Schools 2 (53%, n = 17) did not know the term "paleontology" and its meaning, which, however, did not prevent half of the School 1 respondents (50%, n = 16) and slightly more than half of the Schools 2 respondents (56%, n = 18) from correctly defining a

person involved in paleontological studies, i.e. "a paleontologist". Unfortunately, not all of the School 1 respondents were able to make this conclusion based on the previous questions: 16% (n = 5) called such specialist "an archaeologist", 6.4% (n = 2) – "a scientist" and 28% (n = 9) just answered "I don't know". Some School 2 respondents called such specialist "an anthropologist" (3.2%, n = 1), "a scientist" (3.2%, n = 1), "a historian" (3.2%, n = 1), and 34% (n = 11) just answered "I don't know".

However, the vast majority of the School 1 students (84%, n = 27) named the species of dinosaurs known to them, and almost all respondents (97%, n = 31) attempted to describe the creature. In School 2 only 6.4% (n = 2) could not name any dinosaur species they knew, and absolutely all respondents (100%, n = 32) were pleased to describe the creature.

One third of the School 1 respondents (34%, n = 11) and more than one third of the School 2 respondents (38%, n = 12) were not able to indicate the origin of the largest dinosaur in the world. More than half of the School 1 respondents (63%, n = 20) and the same number of respondents from School 2 (63%, n = 20) could not answer which types of dinosaurs inhabited Kazakhstan in ancient times, and there were those who stated that in this territory there had never been such ancient inhabitants.

Slightly more than half of the School 1 respondents (53%, n = 17), and slightly fewer School 2 students (41%, n = 13), did not know what other ancient representatives of fauna and flora had inhabited Kazakhstan, and only 13% (n = 4) of the Schools 1 and 2 respondents knew or guessed in honour of whom or what the Aktautitan found on the territory of the Republic of Kazakhstan was named.

The answers of the School 1 students to the last question about whether the students would like to learn more about the fascinating world of paleontology, especially about finds on the territory of ancient Kazakhstan, were divided as follows: (41%, n = 13) / (47%, n = 15) / (13%, n = 4) answered "would like", "would not like" and "do not know" respectively. At the same time, the School 2 respondents answered the same question as follows: (72%, n = 23) / (13%, n = 4) / (13%, n = 4) answered "would like", "would not like" and "do not know" respectively (Fig. 2).

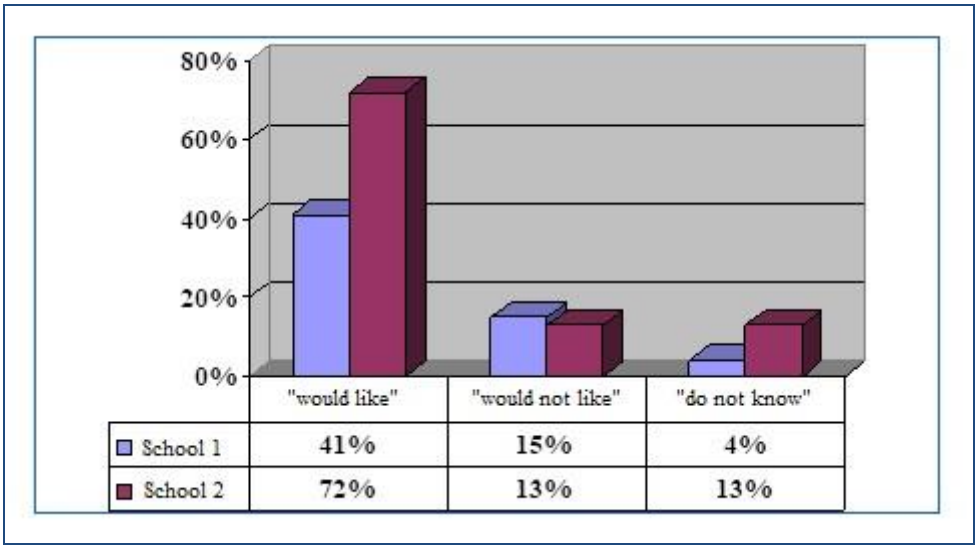

Figure 2. Summary table of survey results on preferences by types of extracurricular activities among students of Schools 1 and 2

As can be seen from Figures 1 and 2, the School 2 students demonstrated a greater interest in project activities, as well as a greater desire to learn something new.

During our conversation with the homeroom teacher at School 1, we found out that in this educational institution, project activities began from the 9th grade, and students of grades 10 and 11 were already participating in projects at the regional and republican levels, so it was logical that the eighth-graders mostly chose homeroom periods or visits to museums and theatres. As for School 2, their regular cooperation with the Karaganda State University named after E.A. Buketov and students' joint projects with the KSU leading scientists, starting from the elementary school, have borne fruit: the students are not afraid of projects, understand their meaning and are ready to participate in them again and again.

Nevertheless, representatives of both schools for the most part voted for such form of extracurricular activities as a homeroom period, which is the most familiar to all of them. Therefore, we could recommend to conduct homeroom periods aimed to familiarize students with the possibilities and advantages of projects, trying to involve students in project activities.

DISCUSSION

The first President of the Republic of Kazakhstan N.A. Nazarbayev in his policy article "Course Towards the Future: Modernization of Kazakhstan's Identity" (2017) states that the platform connecting the past, present and future of the Kazakhstan people is their common history, which, of course, is interesting in its every past period, and any study of the history begins from its most ancient period. It has been proved that the territory of Kazakhstan was inhabited by some animals that are now considered extinct: mammoths,

dinosaurs and other representatives of zoological species that are known to us only from archaeological finds, and they usually can be seen in the first hall of every local history museum in the regions of Kazakhstan and, of course, in the Museum of Nature and Paleontology of the city of Almaty (Antonov, 2016; Dyke et al., 2006, pp. 947–953; Dyke & Malakhov, 2004, pp. 669–674; Averianov, 2007, pp. 532–544; Makarkin & Khramov, 2015, pp. 407–415; Bell & Brink, 2013, pp. 265–274; Skutschas & Kolchanov, 2017, pp. 202–208). These exhibits are of especially high value, as they were all discovered during excavations on the territory of Kazakhstan (Paleontologicheskoe nasledie Kazahstana), and today these paleontological finds become even more interesting due to the fact that scientists are using new research methods that were not known during the initial analysis, which allows opening new pages in the ancient history of the homeland. The knowledge of what species of flora and fauna were in prehistoric times on the territory of current residence allows making a significant contribution to the special projects "Tugan Zher" and "Sacred Geography of Kazakhstan", described in the article "Course Towards the Future: Modernization of Kazakhstan's Identity" (Nazarbayev, 2017; Nazarbayev, 2018).

In secondary schools, these programs can be implemented with the use of such extracurricular activities as homeroom periods, excursions in the homeland or research work (Metodicheskie rekomendacii po formirovaniju..., 2019, p. 124). Homeroom periods contribute to the formation of social activism and patriotic education (Metodicheskie rekomendacii po formirovaniju..., 2019, p. 139). Another interesting form of extracurricular activities is visiting museums or organizing museum rooms in schools. During visits to museums, schoolchildren may see archaeological finds that serve as direct evidence of the evolutionary development of their homeland, which can also contribute to formation of patriotic feelings (Metodicheskie rekomendacii po formirovaniju..., 2019, p. 144). A particular attention should be paid to such a form of implementation of the "Tugan Zher" program as project activities providing a deeper immersion in the culture and history of the country and one's small homeland (Metodicheskie rekomendacii po formirovaniju..., 2019, p. 131). 139).

Students' projects related to fossilized animals and plants studied by paleontology are of particular interest because they lay the foundation for understanding evolutionary development. Some elements of paleontology are present in the middle-school course of biology, where the educational goal is to form students' system of knowledge about the organic world diversity and laws and processes occurring in it, and to develop conscious understanding that a person is its integral part, and one of the objectives is to form a system of knowledge about the structural, functional and genetic foundations of life, reproduction and development of organisms of the main kingdoms of living nature, ecosystems, biodiversity and evolution for understanding the value of all living organisms on Earth (Ministry of Education and Science of the Republic of Kazakhstan, 2019, p. 164). One of the sections of the updated program of the school subject of Biology is "Evolutionary development,

organism and environment" (Ministry of Education and Science of the Republic of Kazakhstan, 2019, p. 165), which is studied in the 9th grade in the amount of 23 hours for such topics as: 1) “Development of evolutionary ideas. Evidence of evolution "(4 hours); 2) "Mechanisms of the evolutionary process" (7 hours); 3) "Emergence of life on Earth" (2 hours); 4) "Development of life on Earth" (6 hours) (Uchebnaja programma dlja 6-9 klassov..., 2013, pp. 24–25). We should also note that that in the 7th grade schoolchildren study the ancient world of flora and fauna within the scope of such topics as "The class Amphibia" (3 hours); "The class Reptilia" (4 hours); and "The class Aves" (6 hours); "The class Mammalia" (9 hours) (Uchebnaja programma dlja 6–9 klassov..., 2013, pp. 14–15). Nevertheless, according to the program of the 8th grade, students study human anatomy throughout the school year, so it is quite natural that they gradually forget the earlier studied topics, and in the 9th grade, they can have some difficulties in the process of studying the topic "Evolution" (Uchebnaja programma dlja 6–9 klassov..., 2013, pp. 16–22).

In view of the foregoing, the continuity of the program material and a smooth transition from one topic to another can be ensured by cognitive paleontological projects for 8th grade students, which will also contribute to the students’ continuous interest and motivation for the further learning of natural science disciplines and will enrich their knowledge of their native land, especially the region of residence and study. At the same time, elements of paleontology in the educational projects combined with references to stimulating examples of famous people whose political or spiritual activity most fully reflected the needs of society and had a significant impact on its development, and whose activities reached beyond the state limits and gained worldwide recognition and fame (Metodicheskie rekomendacii po formirovaniju..., 2019, p. 127–128), could influence the conscious attitude of eighth-graders to the choice of their future profession from among natural science specialisations, such as biologist, zoologist, paleontologist, archaeologist, geologist, etc., so that they could join the ranks of those scientists who, bit by bit, contribute to the development of the paleontological picture of Kazakhstan, introducing us to the fascinating world of flora and fauna of antiquity, with all their specific features. The study of the environment, natural laws and cause and effect relationships forms the students' interest in research activities and desire to be involved in research projects. In future, the acquired knowledge and skills will undoubtedly play a significant role in their professional self-determination (Metodicheskie rekomendacii po formirovaniju..., 2019, pp. 155–156).

The latter conclusion is also supported by the information obtained during in-depth interviews with expert paleontologists – British scientist Gareth Dyke and leading researcher Dmitry Malakhov (Department of Earth Remote Sensing, NCSRT).

The proposed integration of elements of paleontology and extracurricular activities in the English language corresponds to the language policy of the

Republic of Kazakhstan in terms of the balance between the Kazakh (state) language and the Russian language in education and the use of such approaches as the simultaneous study of language and culture according to the principle of the "double acquisition of knowledge", the need for which is dictated by global changes in the contemporary world (Metodicheskie rekomendacii po rezul'tatam..., 2019, p. 325) and which are realised through the Content and Language Integrated Learning (CLIL) (Coyle, 2019, pp. 141–142); development of methodological aids and recommendations for the use of CLIL-technologies in teaching natural sciences and mathematics (Integrirovannoe obuchenie..., 2016; Azhigulova, 2017); translation of textbooks used by the best universities of the world into Kazakh within the frames of the "Rukhani Zhagyru" program (Metodicheskie rekomendacii po rezul'tatam..., 2019, p. 324); and creation of trilingual dictionaries and glossaries to help teachers and students both of secondary and higher education institutions (Metodicheskie rekomendacii po rezul'tatam..., 2019, p. 327).

However, as stated above, the value of trilingual dictionaries increases if they are enriched with linguocultural content in order to familiarize students with the linguistic cultures of other ethnic groups within a single state (Metodicheskie rekomendacii po rezul'tatam..., 2019, p. 226–227). An example of such a dictionary is a dictionary of biological terms with linguocultural components, which was developed by researchers of the private Bolashaq Academy supported by the grant from the Science Committee of the Ministry of Education and Science of the Republic of Kazakhstan (Ishmuratova et al., 2019), which, according to its authors, should contain three versions: paper edition, computer disk and a web search engine for the search of biological terms in three languages, complemented by a rich base of linguocultural video, audio and photo materials (Kalizhanova et al., 2020, pp. 717–718). In 2019, the dictionary was populated with 179 paleontological terms, 12 of which were supplemented with linguocultural components (Kalizhanova et al., 2019), and the dictionary continues to be updated with the help of both the Academy students and schoolchildren.

While adding paleontological terms with linguocultural components to the dictionary, the project participants came up with an idea to use the paleontological data with the related linguocultural components in teaching English in order to improve students' cognitive skills. That idea was also supported by British scientist Gareth Dyke, who noted that the information about dinosaurs and other ancient beasts, especially in relation to the area of residence, can undoubtedly increase interest in the studied disciplines, which is also confirmed by other scientists who refer to the innate interest of children in dinosaurs (Barker, 1983, pp. 149–158).

Analysing the standard English language program, we found such topics as "Fauna and flora (of our country and the country of the studied language)", "Relief, economic and geographical location of the United States" (18 hours) and "My Motherland is Kazakhstan", "Geographical position of Kazakhstan",

"Environmental problems (in our country and in the countries of the studied language)" (9 hours) (Uchebnaja programma dlja 6-9 klassov..., 2013, 13). The grammatical section contains the study of adjectives, including the degree of comparison, which indicates the need to study the characteristics of the native country and countries of the studied language in comparison (Uchebnaja programma dlja 6-9 klassov..., 2013, 14). The interviewed British scientist Gareth Dyke named the USA, Canada and Great Britain among the most interesting countries in terms of paleontological finds, and these are the countries where native English speakers live.

Taking into account that 8th grade students do not study topics related to flora and fauna in their biology lessons, an interesting paleontological project would not only replenish the vocabulary of a trilingual dictionary of biological terms, but would also contribute to effortless and exciting preparation for 9th grade biology program. At the same time, we understand that the number of hours allocated for the study of the flora and fauna of Kazakhstan and the countries of native English speakers is limited, therefore we believe that it will be possible to implement these plans only within the framework of extracurricular activities in the English language, thus also contributing to improving the level of English among students.

CONCLUSION

Summarising our findings, we come to the conclusion that such extracurricular activities as homeroom periods, visits to museums and projects related to replenishing the vocabulary of an existing dictionary or creating a new one, along with the development of any content containing paleo- and linguocultural components, based on the principles of trilingualism, not only will enrich the vocabulary of students, but also can make a significant contribution to their civil and patriotic education.

REFERENCES

Maslova, E.Zh. (2009). Ispol'zovanie regional'nogo komponenta na urokah anglijskogo jazyka kak sredstva povyshenija kommunikativnoj kompetencii uchashhihsja (The use of a regional component in English language classes as a means of improving the communicative competence of students). Otkrytyj urok. Retrieved June 28, 2020, from https://urok.1sept.ru/статьи/561349/

Abramov, V. (2018). Jetnicheskaja karta Kazahstana: kazahov bol'she, evropejcev men'she, tretij mononacional'nyj region (Ethnic map of Kazakhstan: More Kazakhs, fewer Europeans, third mono-ethnic region). Analiticheskij Internet-zhurnal Vlast'. Retrieved June 28, 2020, from https://vlast.kz/obsshestvo/32977-etniceskaa-karta-kazahstana-kazahov-bolse-evropejcev-mense-tretij-mononacionalnyj-region.html

Nazarbayev, N. (2017, April 13). Vzgljad v budushhee: modernizacija obshhestvennogo soznanija (Course towards the future: modernization of Kazakhstan’s identity). Kazahstanskaja pravda. Retrieved from https://kazpravda.kz/articles/view/vzglyad-v-budushchee-

modernizatsiya-obshchestvennogo-soznaniya2/

Nazarbayev, N. (2018, November 21). Sem' granej Velikoj stepi (Seven facets of the Great Steppe). Kazahstanskaja pravda. Retrieved from https://kazpravda.kz/news/prezident2/sem-granei-velikoi-stepi

Rychkova, I.V., & Ryabchikova, E.D. (2015). Paleontologija v tablicah: uchebnoe posobie dlja uchashhihsja Shkoly junogo geologa (Paleontology in tables: Textbook for students of the School of Young Geologists). Tomsk: Tomsk Polytechnic University Publ., 134 p.

Mustafin, S. (2017). Muzejno-kraevedcheskaja rabota kak sredstvo formirovanija tvorcheskih sposobnostej studencheskoj molodezhi v processe prepodavanija istorii Kazahstana (Museum work and regional studies as a means of forming students' creative abilities in the process of teaching the history of Kazakhstan). Nauchnye stat'i Kazahstana. Retrieved June 28, 2020, from https://articlekz.com/article/27759

Aliyassova, V.N., Assylbekova, G.E., & Tarasovskaya, N.E. (2017). Museums of Kazakhstan as centers for preservation and popularization of paleontological collections. Man in India, 97(16), 173–183.

Barker, J.A. (1983). Support your local dinosaur! — a survey of dinosaur teaching resources. J Biol Educ., 17(2), 149–158. doi:10.1080/00219266.1983.9654524.

Alekseev, N.G., & Leontovich, A.V. (2001). Kriterii jeffektivnosti obuchenija uchashhihsja issledovatel'skoj dejatel'nosti (Assessment criteria for development of students' research skills). In Razvitie issledovatel'skoj dejatel'nosti uchashhihsja (Development of students' research skills). Instructional Materials. Moscow: Narodnoe obrazovanie, 128 p.

Strader, W.H., & Rinker, C.A. (1989). A child-centered approach to dinosaurs. Early Child Dev Care, 43(1), 65–76. doi:10.1080/0300443890430107.

Bejsenova, Zh.S., & Ibraeva, A.B. (2019). Jazykovoe obrazovanie v aspekte podgotovki studentov k professional'noj dejatel'nosti (Language training in the context of preparing students for their professional activities). Nauchnye stat'i Kazahstana. Retrieved June 28, 2020, from https://articlekz.com/article/23880.

Ministry of Education and Science of the Republic of Kazakhstan. (2010). Jazyki triedinstva (kazahskij, russkij i inostrannyj jazyki) (Triunity of languages: Kazakh, Russian and foreign languages). State Educational Standard PK 6.08.085-2010. MON RK, 56–67.

Koncepcija razvitija inojazychnogo obrazovanija respubliki Kazahstan (The concept of development of foreign language education of the Republic of Kazakhstan). (2010). Almaty: Kazakh University of International Relations and World Languages.

Bekebasova, A.N. (2018). Zarubezhnye standarty jazykovogo obrazovanija (Foreign standards of language education). Nauchnye stat'i Kazahstana. Retrieved June 28, 2020, from https://articlekz.com/article/ 19632.

Orlov, Yu.A. (1959). Osnovy paleontologii: spravochnik dlja paleontologov i geologov SSSR (Fundamentals of paleontology: A handbook for paleontologists and geologists of the USSR). In 15 vols. Moscow: USSR Academy of Sciences Publ., 512 p.

Mikhaylova, I.A., & Bondarenko, O.B. (1997). Paleontologija (Paleontology). Part 1. Textbook. Moscow: Moscow State University Publ., 448 p.

Antonov, S. (2016). Kazahstan – zemlja tirannozavra (Kazakhstan is the land of Tyrannosaurus). VOXPOPULI. Retrieved July 10, 2020, from https://voxpopuli.kz/kazahstan-zemlya-tirannozavra-12850/.

Dyke, G.J., Malakhov, D.V., & Chiappe, L.M. (2006). A re-analysis of the marine bird Asiahesperornis from northern Kazakhstan. Cretaceous Research, 27(6), 947–953. doi:10.1016/j.cretres.2006.05.001.

Dyke, G.J., & Malakhov, D.V. (2004). Abundance and taphonomy of dinosaur teeth and other vertebrate remains from the Bostobynskaya Formation, North−East Aral Sea Region, Republic of Kazakhstan. Cretaceous Research, 25(5), 669–674. doi:10.1016/j.cretres.2004.06.004.

Averianov, A.O. (2007). Theropod dinosaurs from late Cretaceous Deposits in the North−East Aral Sea area, Kazakhstan. Cretaceous Research, 28(3), 532–544. doi:10.1016/j.cretres.2006.08.008.

Makarkin, V.N., & Khramov, A.V. (2015). A new fossil species of snakeflies (Raphidioptera: Mesoraphidiidae) from the Late Cretaceous of Kazakhstan, with notes on Turonian Neuropterida. Cretaceous Research, 52, 407–415. doi:10.1016/j.cretres.2014.02.010.

Bell, P.R., & Brink, K.S. (2013). Kazaklambia convincens comb. nov., a primitive juvenile lambeosaurine from the Santonian of Kazakhstan. Cretaceous Research, 45, 265–274. doi:10.1016/j.cretres.2013.05.003.

Skutschas, P.P., & Kolchanov, V.V. (2017). Anurans (Amphibia: Anura) from the Upper Cretaceous (Santonian–lower Campanian) Bostobe Formation of Northeastern Aral Sea Region, Kazakhstan. Palaeoworld, 26(1), 202–208. doi:10.1016/j.palwor.2016.01.006.

Tleuberdina, P.A. (1982). Pozdneneogenovaja fauna jugo-vostoka Kazahstana (Late Neogene fauna of southeastern Kazakhstan). Alma-Ata: Nauka, 118 p.

Tleuberdina, P.A., Kozhamkulova, B.S., & Kondratenko, G.S. (1989). Katalog kajnozojskih mlekopitajushhih Kazahstana (Catalogue of Cenozoic mammals of Kazakhstan). Alma-Ata: Nauka KazSSR, 157 p.

Tleuberdina, P.A. (Ed.) (1955). Materialy po istorii fauny i flory Kazahstana (Materials on the history of fauna and flora of Kazakhstan). Collection of Academic Papers, Institute of Zoology, Kazakh SSR Academy of Sciences. Alma-Ata: Nauka KazSSR.

Tleuberdina, P.A. (Ed.) (2017). Mestonahozhdenija iskopaemyh pozvonochnyh fanerozoja Kazahstana: spravochnik dlja paleontologov, geologov i biologov (Locations of Phanerozoic fossil vertebrates of Kazakhstan: Handbook for paleontologists, geologists and biologists). Almaty: Gylym ordasy Publ., 299 p.

Paleontologicheskoe nasledie Kazahstana (Paleontological heritage of Kazakhstan). Retrieved July 10, 2020, from https://paleokz.kspi.kz/index.html

Aubekerov, B.Zh. (1974). Kajnozoj levoberezhnogo Pavlodarskogo Prirtysh'ja (Cenozoic of the left-bank Irtysh River basin in the Pavlodar region). In Aubekerov, B.Zh., & Chalyh'jan, E.V. Kajnozoj zony kanala Irtysh-Karaganda (Cenozoic in the area of the Irtysh–Karaganda Canal).

Alma-Ata: Nauka, p. 31.

Aubekerov, B.Zh., & Chalykhjan, E.V. (1974). Kajnozoj zony kanala Irtysh-Karaganda (Cenozoic in the area of the Irtysh–Karaganda Canal). Alma-Ata: Nauka, 107 p.

Bazhanov, B.S. (1955). Obzor istorii fauny nazemnyh pozvonochnyh Kazahstana (Review of the history of the fauna of terrestrial vertebrates in Kazakhstan). In Materialy po istorii flory i fauny Kazahstana (Materials on the history of fauna and flora of Kazakhstan). Vol. 1. Alma-Ata: Nauka KazSSR.

Zhumabay, G. (2017). Muzej sela Rostovka priznan luchshim v oblasti (The Rostovka Village Museum is recognized as the best in the region). SARYARQA TV Website. Retrieved July 10, 2020, from http://kartv.kz/ru/news/society/muzei-sela-rostovka-priznan-luchshim-v-oblasti.

Jurskij period Kazahstana (Jurassic period of Kazakhstan). (2018). Gylym Ordasy. Retrieved July 09, 2020, from http://www.gylymordasy.kz

Ministry of Education and Science of the Republic of Kazakhstan. (2019). Ob osobennostjah organizacii uchebno-vospitatel'nogo processa v organizacijah srednego obrazovanija Respubliki Kazahstan v 2019-2020 uchebnom godu (On the specifics of organizing the educational process in secondary education institutions of the Republic of Kazakhstan in the 2019-2020 academic year). Instructional and Methodological Letter. Nur-Sultan: Y. Altynsarin National Academy of Education Publ., 476 p.

Nesterova I.A. (2017). Vneklassnaja rabota v shkole (Extracurricular activities at school). Jenciklopedija Nesterovyh. Retrieved July 16, 2020, from http://odiplom.ru/lab/vneklassnaya-rabota-v-shkole.html.

Vodzinsky, D.I. (1961). Vneklassnaja vospitatel'naja rabota (Extracurricular educational activities). Moscow, 235 p.

Kairov, I.A. (Ed.) (1960). Pedagogicheskij slovar' (The Dictionary of Education). Moscow: RSFSR Academy of Education Publ.

Lerner, I.Ya. (1980). Process obuchenija i ego zakonomernosti (The learning process and its patterns). Moscow: Znanie, 96 p.

Amonashvili, Sh.A. (1990). Lichnostno-gumannaja osnova pedagogicheskogo processa (Personal and humane foundation of the pedagogical process). Moscow: Universitet.

Verzilin, N.M. (1983). Problemy metodiki prepodavanija (Issues of teaching methods). Moscow: Prosveshcheniye.

Babansky, Yu.K. (2004). Pedagogika (Pedagogy). Moscow: Prosveshcheniye, 240 p.

Mokrousova, G.I., & Kuzovleva, N.E. (1989). Organizacija vneklassnoj raboty po nemeckomu jazyku: Iz opyta raboty (Organisation of extracurricular activities in the German language: Best practices). Moscow: Prosveshcheniye, 192 p.

Salomatov, K.I., & Shatilov, S.F. (1985). Praktikum po metodike prepodavanija inostrannyh jazykov (Case study on methodology of teaching foreign languages). Textbook. Moscow: Prosveshcheniye, 224 p.

Vedeneeva, O.A., Savva, L.I., & Saygushev, N.Ja. (2016). Teorija i praktika raboty klassnogo rukovoditelja (Theory and practice of the homeroom teacher activities). Textbook. Moscow: Mir Nauki, 140 p.

Ivanova, S.V. (2012). Puti razvitija muzejnoj pedagogiki (Ways of developing museum padagogy). In Ivanova, S.V., Milovanov, K.Yu., Nikitina E.E., & Ivanova, O.V. Muzejnaja pedagogika kak oblast' pedagogicheskoj nauki (Museum pedagogy as a field of pedagogical science). Moscow: RAS Institute of Theory and History of Education Publ., 72 p.

Bezrukova, M.I. (2018). Muzejnaja pedagogika v sisteme doshkol'nogo obrazovanija i vospitanija (Museum pedagogy in the system of preschool training and education). Obrazovanie i vospitanie, 3(18). 9–11. Retrieved July 21, 2020, from https://moluch.ru/th/4/archive/94/3351/

Sgibova, A.Yu. (2014). "Posetitel' muzeja" i problemy formirovanija muzejnoj dejatel'nosti ("Museum visitor" and problems of the formation of museum activities). Diagnostika sociuma. UDC 101.1:316

Volkov, B.S. (2017). Psihologija podrostka (Psychology of a teenager). Textbook. Moscow: Akademicheskij proekt, 240 p.

Leontovich, A.V. (2006). Trening po podgotovke rukovoditelej issledovatel'skih rabot shkol'nikov (Training of leaders for schoolchildren's research). Collection of Questionnaires with Commentaries. Moscow, 54 p. [Series: Biblioteka zhurnala "Issledovatel'skaja rabota shkol'nikov". Collections and monographs].

Metodicheskie rekomendacii po formirovaniju kazahstanskogo patriotizma obuchajushhihsja organizacij obrazovanija cherez programmu "Tuǵan zher" (Methodological recommendations on the formation of Kazakhstan patriotism of students of educational institutions through the "Tuǵan zher" program). (2019). Nur-Sultan: Y. Altynsarin National Academy of Education Publ., 192 p.

Uchebnaja programma dlja 6-9 klassov urovnja osnovnogo srednego obrazovanija (Curriculum for years 6-9 of the basic secondary education). (2013). Astana: Y. Altynsarin National Academy of Education Publ., 33 p.

Metodicheskie rekomendacii po rezul'tatam nauchnyh issledovanij v oblasti treh''jazychnogo obrazovanija v Respublike Kazahstan (Methodological recommendations based on the results of research in trilingual education in the Republic of Kazakhstan). Methodological Recommendations. (2019). Nur-Sultan: Y. Altynsarin National Academy of Education Publ., 152 p.

Coyle, D., Hood, P., & Marsh, D. (2010). CLIL: Content and language integrated learning. Cambridge: Cambridge University Press.

Integrirovannoe obuchenie anglijskomu jazyku i uchebnym predmetam EMC (informatika, fizika, himija, biologija, estestvoznanie) (Integrated teaching of English and natural science disciplines: informatics, physics, chemistry, biology and natural history). (2016). Study Guide. Astana: Y. Altynsarin National Academy of Education Publ., 111 p. Retrieved July 10, 2020, from

https://nao.kz/files/blogs/1488274245371.pdf/

Azhigulova, M.S. (2017). Metodicheskie rekomendacii po razrabotke i vedeniju zanjatij po predmetam «Fizika», «Himija», «Biologija», «Informatika» na anglijskom jazyke (Guidelines for preparing and conducting classes in physics, chemistry, biology and informatics in the English language). Retrieved July 10, 2020, from http://orleuastana.kz/kz/2017/11/01/metodicheskie– rekomendatsii– po– razrabotke– i– vedeniyu– zanyatij– po– predmetam– fizika– himiya– biologiya– informatika– na– anglijskom– yazy– ke/.

Ishmuratova, M.Yu., Kalizhanova, A.N., Maryshkina, T.V., Ibrayeva, B.M., & Orazgalieva, G.Sh. (2019). Anglo-russko-kazahskij, russko-anglo-kazahskij, kazahsko-anglorusskij slovar' po biologii (The English-Russian-Kazakh, Russian-English-Kazakh, Kazakh-English-Russian biology dictionary). Karaganda: RIO Bolashak-Baspa, 222 p.

Kalizhanova, A.N., Maryshkina, T.V., Ishmuratova, M.Yu., Gruzina, Y., & Ibrayeva, B.M. (2020). Creation of an electronic trilingual dictionary of biological terms with linguoculturological components. Opción, 36(27), 705–723.

Kalizhanova, A.N., Maryshkina, T.V., Ishmuratova, M.Yu., Gruzina, Y., & Ibrayeva, B.M. (2019). A trilingual e-dictionary of biological terms for paleobiological and historical research in Kazakhstan. Historical Biology. DOI: 10.1080/08912963.2019.1650276.