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Development of creative abilities of primary school students by means of project-based technologies in foreign countries

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Abstract. In the context of global competition, the ability to think outside the box and work effectively in a team, acquired through the use of project-based technologies, plays a key role in preparing the younger generation for future professional challenges. Methods that promote the active development of these qualities, such as project-based learning, have proven themselves in the international context as an effective way to unlock the creative potential of students. The purpose of the study was to investigate the features of using project-based technologies for the development of creative abilities of primary school students in foreign countries. General methods of scientific research, such as empirical (observation, comparison) and complex (analysis and synthesis), were applied. Various approaches to the interpretation of project-based learning, conditions for its effectiveness and advantages for the development of children's creative abilities are presented. Studies that demonstrate the successful use of project-based technologies in foreign countries, namely: Finland, Great Britain, USA, Canada, Poland, Czech Republic, Netherlands, Norway, Sweden, Spain, Germany, Japan, and methods that contribute to the development of creative and critical thinking in primary school students are analysed. It was found that creativity is a key competence of students' future success. The use of project-based technologies in primary schools contributes to the identification of individuality and the development of personal qualities. The use of project-based technologies in primary schools in foreign countries is an effective means of developing students' creative abilities, the learning environment that promotes students' self-realisation, development of their creative potential, and preparation for the requirements of the modern world. The practical significance of the study is to provide teachers, methodologists and other teachers of Ukrainian primary schools with information and insights on the use of project-based technologies for the development of creative abilities of students based on foreign experience

Keywords: creative abilities of primary school students; project method; project activity; foreign experience; educational process in primary school

INTRODUCTION

In the modern world, the development of creative abilities of primary school students is an important problem in the educational sphere. The growing demands for individual and creative thinking, the need for innovation and the ability to solve complex problems require students not only to assimilate factual knowledge, but also to develop their creative potential. In the context of educational innovations, such as the focus on competencies and the importance of developing basic skills in students, there is a need to turn to new learning strategies. Among such strategies, the use of project-based technologies stands out as an effective tool for stimulating students' creative potential. This

highlights the need to adapt educational methods to requirements that seek to develop the critical skills and competencies needed for a successful future.

The results of the analysis of psychological and pedagogical literature indicate that researchers have investigated various aspects of problems related to the emergence and development of the project method in foreign experience. In particular, Yu. Senko (2019) distinguishes between the stages of development of children's creativity and the stages of manifestation of creative activity. The researcher analysed various methods and approaches to learning that contribute to the activation of students' creative potential, identified key factors that affect the development of creative abilities, and offers specific examples and strategies that can be applied in the educational process. The main focus was on the development and implementation of innovative techniques that help younger students not only develop creative thinking, but also develop skills of critical analysis, self-expression and interaction in the social environment. L. Dubrovska *et al.* (2022) noted that components of students' creative abilities in grades 1-2, such as creative attention and thinking, can be called basic, which means using certain tasks. In addition, the researchers note that with the development of creative abilities, students are increasingly interested in new knowledge, the level of their independence in learning increases, so teachers should focus on revealing students' curiosity and interests, expanding their learning interests, teaching and developing thinking and communication skills, etc.

D. Prima (2020) revealed some content and procedural aspects of the project and research activities of primary school teachers in the context of the requirements of the New Ukrainian School. The focus is on how project-research methods can be integrated into the learning process to promote critical thinking, learners' autonomy and engagement in active learning. The researcher highlights how such activities can support teachers in achieving educational goals, in particular, in developing key competencies of students, considering the needs of a modern school. Y. Didyk & O. Liba (2022) described a theoretical approach that explains the concept of "development of creative abilities" and confirms the pedagogical conditions that contribute to the development of creative abilities in children of primary school age in the course of educational activities. H. Tovkanets & Y. Hapak (2019) defined the advantages and effectiveness of implementing project technology and revealed its role in the development of innovative abilities of younger schoolchildren. The researchers analysed how the use of project-based teaching methods contributes to the development and stimulation of children's creative potential, and affects the increase in their motivation and interest in the educational process. K. Bondareva & O. Ivleva (2021) exploring a new Ukrainian school, discovered unique aspects of using project-based technologies in the classroom as a means of learning about the world. V. Bondar (2020) presented key categories for defining project activities, and a clear explanation of the goals, objectives, functions, and principles of educational implementation. In addition, didactic aspects of using project technology in primary schools were identified.

The study by M. Semankiv *et al.* (2019) demonstrated the importance of using project-based technologies, disclosing their content, studying the pros and cons of implementing project-based technologies in education, and classifying different types of projects. K. Chub (2022) reveals the fundamental principles of using project-based learning technology in primary schools. It was shown that the project technology serves as an innovative educational approach aimed at the spiritual and professional growth of young students, teaching them a variety of creative and research methods. S. Lavrenko (2021) considered the specifics of the project method in primary school, taking into account the age and psychological characteristics of younger schoolchildren. S. Kupchak (2021) analysed the foreign experience of preparing future primary school teachers for the use of project technology. The researcher reviewed various methodological and practical approaches adopted in the educational systems of different countries, with an emphasis on the importance of integrating project-based technologies into teacher training. Special attention was paid to the analysis of educational programmes, teaching methods, and practical experience, which allows future teachers to effectively use project-based technologies for the development of critical thinking, creative abilities and active participation of students in the educational process. O. Mykhaylenko & T. Butko (2023) considered the historical aspects of the development of the project method in foreign and Ukrainian pedagogical theory and practice, and defined the stages of development of this method.

The purpose of the study was an analytical review and evaluation of project-based learning methods as a tool for developing creativity and teamwork among primary school students. The objectives of the study were to investigate the mechanisms of development of creative abilities among primary school students using project-based technologies; analysis of effective methods and practices applied in educational systems of foreign countries that contribute to the stimulation and development of creative potential of children at the initial stages of education; identification of basic principles and strategies that can be adapted and applied in the practice of Ukrainian teachers for the effective development of creative abilities of students.

MATERIALS AND METHODS

The paper used various methods of scientific research for the purpose of detailed consideration and analysis of the problem. The main methods were empirical and complex methods of scientific cognition. In the course of the study, the researchers used observations to draw attention to specific situations and events related to the introduction of project-based technologies in the educational process of primary schools in foreign countries. The main purpose of the observations was to obtain specific data and investigate the real experience of applying project-based technologies,

and their impact on the development of students' creative abilities. The comparison played a crucial role in this study, as it allowed for a better understanding of the analysis and evaluation of the implementation of project-based technologies in the educational process of primary schools at the international level. Using comparative analysis, the authors were able to identify common patterns and unique approaches to developing students' creative abilities through project-based technologies. This helped to identify which strategies are most effective in different cultural and educational contexts, and determine potential challenges and limitations that educators may face when implementing them. The comparison allowed contrasting the results of various studies to identify certain trends and differences in the use of project-based technologies in different countries.

The analysis allowed considering existing research and publications related to the use of project-based technologies in the development of creative abilities of primary school students. During the analysis of the literature sources mentioned in the previous section, attention was drawn to a number of key aspects: the relationship between the use of project-based technologies and the development of creative abilities of younger schoolchildren; the effectiveness of the use of project-based technologies in foreign countries in the development of creative abilities of students; identification of features and factors that contribute to or hinder the development of creative abilities of students in the context of the use of project-based technologies; advantages and disadvantages of using different types of project-based technologies (for example, group projects, individual projects, etc.) for the development of creative abilities of students.

The study was conducted by analysing scientific and pedagogical literature, statistical data, and special reports and studies conducted in foreign countries using project-based technologies in primary education. The paper used a variety of materials, such as scientific articles, monographs, reports and collections of scientific conferences, which provided a comprehensive understanding of the problem under study and enabled a reasonable assessment of the results. The synthesis was used to summarise and systematise the collected data, put forward conclusions and recommendations. Using various sources of information, such as papers, reports and collections of scientific conferences, these data were summarised and systematised to obtain a complete amount of information on the topic under study. Based on the obtained data and their analysis, conclusions were formulated regarding the problem under study. These findings included new ideas, trends, and patterns identified from literature and data analysis. For the convenience of presenting and analysing the collected data, a table has been compiled that reflects the studied criteria for applying project-based technologies in educational institutions of each country (Table 1).

Table 1. Evaluated aspects of project-based learning in primary schools in the analysed countries

Country	Criteria under study
Finland	How does the use of projects contribute to the development of independence, critical thinking, and creative abilities of students?
Wales	The role of project activity as an approach, and what role it plays in the development of independence, critical analysis, and creativity among students.
Great Britain and USA	The impact of project use, integrated learning, role-playing games, and project presentations on the development of students' creative thinking and skills.
Canada	How do social science project assignments contribute to students' development and skills?
Poland	What contributes to the development of self-directed learning and preparation for further education?
Czech Republic	What teaching methods help enrich the learning process?
Netherlands	How does the use of projects contribute to the development of students' emotional sphere and creative abilities?
Norway	What projects are aimed at developing students' creativity and environmental awareness, fostering independence and responsibility?
Sweden	How is the use of project-based technologies aimed at developing students' creative abilities and independence?
Germany	What methods are used to acquire the necessary skills and practical experience that are useful for the future career?
Spain	What projects contribute to the development of students' creative abilities, speech competence, and self-expression?
Japan	What projects contribute to the development of creativity and creative thinking of students?

Source: developed by the author

Thus, the combination of these methods ensured the completeness and objectivity of the study of the problem and the investigation of its various aspects.

RESULTS AND DISCUSSION

Primary school students are a special group of students who are at an early stage of their learning and development. At this age period, the child is in the process of developing basic learning skills, cognitive functions, and social skills. In primary school age, there is a favourable context for the development of creativity in children and their creative abilities (Table 2). It is during this period of childhood development that the active process of imagination, fantasy, creative thinking and curiosity are formed. At this stage, children begin to acquire the skills of observing, comparing, and critically evaluating events and phenomena around them. Psychologically, childhood is an important period for the development of creative

abilities, because it is at this time that children begin to understand the relationship between themselves and the world around, analyse social motives for behaviour, moral assessments, and the importance of conflict situations. At this age, the development of personality passes into a conscious phase. If earlier the game was the main activity, now the main focus is on education – the equivalent of work. A child's school success becomes a criterion for evaluating and determining their attitude to others (Rudakova, 2005).

Table 2. Features of using project-based technologies in primary schools

The use of project-based technologies with younger students has several important features
1) At this age, the younger student has a wide field for the development of creative abilities, because the brain is at the stage of intensive development. It is flexible and able to quickly adapt to new experiences and knowledge. Younger students are interested in the world around them and begin to actively explore it. This gives them the opportunity to experiment and discover new things. The use of project-based technologies gives them the opportunity to express their creativity, generate ideas and apply them in real projects.
2) Expansion of the learning experience: project activities allow younger students to increase their learning experience by working on projects. They can explore different topics, acquire new knowledge and skills, and communicate with experts from different industries.
3) Development of key competencies: the use of project-based technologies contributes to the development of key competencies that are necessary in the modern world. These competencies include critical thinking, problem thinking, communication skills, collaboration, and creativity.
4) Motivation to learn: working on projects encourages students to be motivated to learn. They are more interested and involved in the creative process, as they have the opportunity to choose the topic of the project, put forward their own ideas, and take an active part in its creation.

Source: developed by the author

The use of project-based technologies in primary schools provides students with the opportunity to actively interact with educational material and the world. Instead of passively accepting information from the textbook, students perform real projects, explore topics, solve problems, and present their own results. It is important to note that project-based learning technology not only develops students' creative abilities, but also contributes to the development of critical thinking and self-esteem, and a systematic approach to solving educational problems. Students learn to analyse and evaluate their work, identify the strengths and weaknesses of the project, and look for ways to improve it. This helps them develop self-control and self-discipline. According to the results of research by the authors of this study, in foreign countries, the use of project-based technologies in primary schools allows achieving positive results in the development of creative abilities of students.

In *Finland*, primary school consists of grades 1-6. One of the main principles of organising the educational process in Finnish schools is active learning through play, creative and creative learning, project-based learning, development of creative abilities and the use of innovative technologies (Hrynyova, 2017). According to teachers, the goal of the Finnish learning system is to make learning more practical, considering the specifics of the area and involving students in the life of the community. Students should not just receive knowledge passively, but actively acquire it. The content of training recedes into the background in favour of the training itself. The main goal is to educate students in such a way that they understand themselves and their preferences. Although each school organises projects and integration in its own way, there are common approaches. Learning in projects involves a gradual expansion of knowledge: each new knowledge is based on the previous one. Students work in an "inverted" classroom, where tasks are completed on weekends and then tested on Monday with mini-tests. Homework assignments are completed from grades 1 to 12. During project activities, no other lessons are held: two days a week for eight weeks (although each school does this in its own way) are allocated to the project. Teachers act as a coach or tutor, not just a teacher. They do not teach, but help students learn independently. Projects are implemented starting from primary school (Shvets, 2017). Finland is actively implementing phenomenon-oriented training based on the project method. The basic principles of this approach include connection to real life, indivisibility, and meaningfulness. Finnish teachers emphasise that it is the learning process that is important, and not just its result, as it contributes to the personal development of students and constructive mutual influence (Melnikova, 2021).

In Finland, learning strategies aim to prepare students for real life and develop their autonomy and critical thinking. The Finnish learning system supports students' ability to effectively use information, analyse it, and make informed decisions, and the ability to create projects and work in a team. In Finland, project-based technologies are used to develop students' creative abilities already at the initial stage of training. Children from the first grades are engaged in project work in various subjects, such as studying the world around them, mathematics, music, drawing, and language. Schools in Finland have great autonomy, and each teacher can independently determine the number and content of projects, considering the individual characteristics of students. Students from the first grades are actively involved in the entire process of working on the project,

starting from generating ideas to implementing them. This allows children to be active participants in their learning and interested in its results (Golovina, 2019). The Finnish school has an interesting paradox: it is both pragmatic and philosophical. Subjects in it are considered more as a means of replenishing erudition, with the main goal of expanding the understanding of how this knowledge can be useful for a person. Since the first grade, students have been engaged in a multidisciplinary subject, which officially cancels the clear line between different disciplines in its schedule. However, its main goal is to bring students together during lessons in projects that allow them to use knowledge from different industries simultaneously. For example, in one of the Helsinki schools, the result of one of these projects is a self-prepared cookbook. While working on the project, students are independently engaged in drawing, photographing, searching for recipes, and cooking dishes (Baburets, 2019).

Lyudmyla Kazmiruk, a Ukrainian English teacher, spoke about her experience as a teacher's assistant at a primary school in Wales after she worked at school No. 28 in Ternopil before Russia's large-scale military invasion of Ukraine on February 24, 2022. She was particularly impressed by the method of project work in Wales, where the assistant is also actively involved in the process. She compared this to the Ukrainian education system, where teachers usually have two or three lessons to implement a project in one subject, such as "Me and Ukraine". But at a school in Wales, the project can last from two to three weeks or even longer, covering a wide variety of subjects, including English, history and literature, similar to the Ukrainian "I explore the world". Each project takes about half a day, and schools do not use calls, so teachers independently determine the beginning and end of classes (The experience of..., 2023). When the teacher entered the classroom, the students were actively engaged in a project to learn the history of their native land. They studied this topic in detail from various aspects. The introductory part is organised by the teacher, and then explains what to do and gives instructions. Students are divided into 4 groups, each of which performs its own task:

- the 1st group draws a wizard from local legends, photographs him, and animates him using special software;
- the 2nd group compares photos of their city from the 1970s to the present with a map. Students mark known objects and places, record videos where they analyse changes over time;
- the 3rd group explores the unique Welsh boats – coracles. Students watch videos and choose five interesting facts. After that, they watch another video on how to draw these boats. Then they create a presentation where they draw coracles and tell interesting facts that they remember from the video;
- the 4th group collaborates with the teacher on historical facts and legends of the region.

Students are constantly interacting with modern technologies. The teacher provides for the preparation of necessary materials for the class, creating a special information folder on the school learning platform, which every student has access to. This folder contains videos, texts, and other resources necessary for work on the project. Students do not work with traditional textbooks, because they are not available at school. Instead, each child receives personal notebooks and chromebooks with the school's pre-installed educational platform. This platform is used by teachers to host all the necessary materials for learning. Each of the four groups performs its tasks alternately, meaning that the project components are constantly in rotation between groups. Project work at a Welsh primary school greatly impressed a teacher from Ukraine and brought her joy and pleasure in the learning process. The Ukrainian education system tries to simplify the school curriculum, but it remains quite intensive, leaving no room for ease. Teachers in Ukraine are limited in time to study each topic, after which they are forced to move on to the next ones. There is no such rush at the local Welsh school. Students have the opportunity to study one topic for a long period of time, return to it again and look at it from different angles (The experience of a teacher from..., 2023).

Thus, comparing the two education systems (Finland and Wales) with the Ukrainian one, the main emphasis is on the use of project work in teaching, in particular, in these two countries, as a method that promotes the development of independence, critical thinking and creative abilities of students. It is worth noting that both training systems focus on interactivity, the use of modern technologies and deep study of the topic through long-term projects. The Ukrainian teacher is interested in working methods in Wales, where she observes greater freedom and the possibility of deeper study of the topic, compared to the Ukrainian system, which is often characterised by a greater pace and limited time to study the material. After reviewing the educational systems of Finland and Ukraine, the study will move on to the analysis of other countries to give a more complete comparative overview.

In *Great Britain*, students often visit libraries, as one of the most popular tasks for them is to create a project. At the same time, the teacher only provides a general topic, and the student chooses a specific topic and materials for research. Thus, teachers implement one of the basic principles of the education system, which is that the main task of the school is to teach the child to work with information (Sukhoveenko, 2019). In the UK, the method of projects in primary schools is widely used in the educational process, this approach allows stimulating creativity, independence, and critical thinking of students. They can be used in British primary schools in the following ways. 1. Project weeks or project days. These are specially designated periods of time when students work on projects on a specific topic or subject. They have the ability to research, study, and solve problems in groups or individually. 2. Integrated training. Lessons are aimed at integrating multiple subjects within a single project. For example, a project can combine mathematics, literature, and science around a specific topic or problem. 3. Application of technologies. Students can use

various technologies to research and present their projects. This may include using computers, tablets, video and audio recordings, etc. 4. Role-playing games. Students play role-playing games that help them better understand the topic or problem they are working on. It promotes collaboration, empathy, and creativity. 5. Project presentations. Students have the opportunity to demonstrate their knowledge and skills through the creation of projects, presentations, public speeches or videos. These methods allow students to actively participate in learning, create their own projects, and develop skills that they will need in the future. During the holidays in Britain, children are usually assigned to create an interesting project.

In *USA*, project-based technologies aimed at developing students' creativity are popular. The Dalton School in New York it is forbidden to force students to study, students work independently on projects and perform tasks that gradually become more complex. In addition, tasks are as close as possible to life situations. Students learn to work more in teams, discuss, think independently, and improve themselves. The project method was introduced into the US educational process throughout the 20th century and is actively used in the 21st century. Prominent Ukrainian researcher V.M. Madzhigon (2004), studying the features of labour training of students in developed countries of the world, in particular the United States, in his monograph pointed to the fact that the main methods of labour training in primary secondary schools are the method of projects, the method of business game, and solving problem situations. For example, in Maryland (Sherwood High School), all students participate in projects in pottery lessons. Students do not just learn how to sculpt dishes, vases, figurines, they often fulfil orders of public organisations of the district (Kapelyushna, 2019). This method is used in various forms, namely: authentic, interpreted, and authorial. Students are offered various tasks during project activities, such as designing, re-designing, searching for alternative solutions, evaluating efficiency, explaining expected and undesirable results, checking solutions according to appropriate criteria, developing and implementing technological devices, converting information into a more meaningful form, correctly calculating time and financial resources for a technological project, etc. An interesting and non-standard project task for elementary school students in the United States, which is aimed at reducing the amount of solid waste by reducing the use of packaging. First, students count the amount of packaging waste that accumulates in their homes over a certain period of time. They then visually present their data and combine it with other students' data to get an overall result for the class. These activities promote students' analytical thinking, stimulate their own reasoning, and offer practical strategies for reducing solid waste within the school.

In the UK and the USA, project-based teaching methods are also used to develop students' creativity and independence. These techniques include project weeks, integrated learning, technology use, role-playing games, and project presentations. They contribute to the active involvement of students in learning, the development of their skills and the stimulation of creative thinking. Teachers in these countries actively support students in choosing their own research topics and materials, giving them more freedom in choosing and developing projects. This approach contributes to the development of student initiative and skills in working with information.

In *Canada*, separate independent projects are common as a form of homework. In Canadian schools, each student must complete an independent project that is individual, not group. As part of this project, they collect information, write an abstract, and prepare a presentation for presentation in front of the class. One of the special features is the presence of a consultant in Canadian schools who can help students solve educational problems, including project activities, but does not perform tasks for them. In the city of Mississauga, located in Ontario, Canada, homework assignments are not provided in schools. However, students complete projects at home that may take considerable time to complete. In primary schools in Canada, the SCIENCE course is being taught, which combines knowledge in Chemistry, Physics, and Biology. Students are actively involved in working on their own projects, which allows them to feel like real scientists. In Canadian schools, project tasks are actively used to study the main issue of social sciences – identity. These tasks can be diverse – from creative to research. For example, elementary and junior high school students have the opportunity to express their thoughts and explore themselves. This not only promotes active learning, but also develops self-expression skills.

In *Poland*, there is an American School in Warsaw, which actively uses projects, and this is quite an individual work of schoolchildren. Students have a significant choice of areas for their projects, which include art, 3D modelling, programming, pottery, etc. Each student has the opportunity to work on their project throughout the year, which encourages them to plan their work, calculate the time and effort to achieve results. At the end of this period, each child defends their project in front of a large audience, including friends, teachers, and parents. It is important that this is independent work, where each student works on their own project, and teachers act as consultants if necessary. This approach allows students to explore more deeply what interests them and prepares them for the next stages of education and social life. They get the opportunity to learn how to manage their activities and plan for a long period of time in advance (Koval, 2023). Students of the University of National Education Comision in Krakow, majoring in "Preschool and primary pedagogy", study the discipline "Educational projects". This allows them to get acquainted with the essence of projects, their features and methods of use in the educational process of primary school and preschool education of children (Kupchak, 2021).

In *Czech Republic*, primary school covers the education of students up to the 9th grade. But it is divided into

a 1st-degree school (children aged 6-10 years) and a 2nd-degree school (children aged 11-15 years). In Czech schools, homework assignments are offered in limited quantities, and the curriculum is deployed at a moderate pace, especially at the primary level. This encourages children to be more interested in learning and reduces their workload. Teachers do not move on to the next topic until all students have mastered the material at least at an intermediate level. Various methods are used in the process of teaching the material, such as educational games, group tasks and intersubject classes, which contribute to a holistic perception of information. Special attention is paid to project-based training, which provides good results. The elementary school also offers numerous guided tours, outdoor lessons, and "outdoor activities" with access to the green area (Zabiaka, 2023).

In Canada, Poland, and the Czech Republic, the use of project activities in the educational process is widespread and contributes to the development of independence, creativity and deep assimilation of the material by students. In Canada, each student is involved in independent projects that include individual work and presentation preparation. Social science project assignments help develop students' identity and self-expression skills. In Poland, at the American School in Warsaw, students work on their own projects in various areas, which contributes to their planning and organisation of time to achieve results. This helps them develop self-directed learning skills and prepares them for further education. In the Czech Republic, an elementary school organises student learning, focusing on project-based learning and various methods that promote a holistic perception of the material. Teaching methods are supplemented with excursions and outdoor activities, which enriches the learning process. All these approaches contribute not only to the assimilation of knowledge, but also to the development of students' personality, preparation for life in the modern world and further successful learning.

In *the Netherlands*, primary school covers the ages of 4-12. There are schools with different philosophies, for example, in Dalton Schools, students learn to make individual plans and schedules, work in groups on projects. The main goal of primary school education is to promote the development of students' emotional sphere, and to develop their intelligence and creativity. At the final stage – the development of adequate social, cultural, and physical skills. There are practically no homework assignments, but they offer extracurricular activities and group projects. Project-based technologies aimed at developing the creative abilities of primary school students are used. The project "Life of my family" provides an opportunity for students to explore their family roots, interview relatives, create a family tree, and tell the story of their family. This project develops students' creativity, research skills, and social consciousness.

Norwegian primary school covers the education of children from the 1st to 4th grade and from the 5th to 7th grade (senior primary school). Primary school students have the opportunity to choose one discipline to choose from and participate in project work. The learning system is built in such a way that each person develops only through relationships with others. Project-based technologies are actively used to form students' creative abilities. For example, the ecological city project gives students the opportunity to develop an environmentally sustainable city using the principles of sustainable development and environmental protection. This project contributes to the development of creativity, environmental awareness and social activity of students. The main task of the Norwegian school is to develop students' independence and responsibility. Even if there is homework, the teacher is unlikely to check its completion, but it is mandatory to understand the content of the topic. Children can learn the material in a way that is most effective for them. The teacher can recommend additional literature, specialised websites, exercises, or projects that will help the child understand the topic and successfully assimilate its content. Project-based technologies also help stimulate students' creative and critical thinking. They require students to generate new ideas, find non-standard solutions, and analyse different approaches to solving a problem. Students learn to explore and analyse information, go beyond the usual patterns, and see the problem from different perspectives.

In *Sweden*, primary school students are trained without any special loads. One homework assignment per week per one subject. Students only work at the blackboard during project presentations that children perform in groups of several people. In this way, children are taught to cooperate. Schools have extremely high logistical support. There is a cabinet system for various subjects, a workshop for performing practical projects, which has everything: special clothing and shoes, machines, tools, and materials (Acquisition with education..., 2018).

In *Spain*, primary school covers the 1st-6th grades. In primary school, students receive homework assignments in each subject, but in a small amount. After each trimester and for the final year of study, students are given report cards. Often, the school uses project-based technologies to develop students' creativity and language skills. For example, the "My little book" project gives students the opportunity to write and illustrate their own book using creativity, imagination, and language skills. This project contributes to the development of creative abilities, speech competence, and self-expression of students.

In *Germany*, primary school lasts 4-6 years and often ends with the differentiation of graduate students by ability. In addition to traditional subjects such as language, mathematics, and art, German primary school students occasionally perform projects instead of their usual lessons. For example, they learn to play musical instruments or make videos for a whole week. The German model of a specialised school has a relatively strict approach, but it actively uses the project method to acquire the necessary skills and practical experience that are useful for future careers. In Germany, project-based technologies are used to encourage

creativity and implement integrated learning. The experimental garden project provides an opportunity for students to explore the plant world, conduct experiments, and develop their own organic gardening projects. This project contributes to the development of creative thinking, scientific skills, and environmental awareness of students. The walls in German schools display students' work and projects.

The main objective of the educational policy in *Japan* is the education of creative, creatively thinking, harmonious, and spiritually developed individuals who can act in various social and state structures and contribute to their consolidation. Primary school education lasts for 6 years. In Japan, group project-based technologies are mainly used to develop students' creativity and technological skills. The class is divided into groups that are assigned various "projects-tasks". In the classroom system, the class is often divided into 6-7 mobile groups, depending on the academic performance of students (Sukhoveenko, 2019). For example, the project "Robotics in primary school" gives students the opportunity to design and programme robots, contributing to the development of creativity, problem thinking and technological literacy.

In the Netherlands, Norway, Sweden, Germany, Spain, and Japan, the use of project activities in primary schools is a popular approach to learning aimed at developing creativity, critical thinking, and other key skills of students. In the Netherlands, Dalton Schools provide students with the opportunity to work in groups on projects, which contributes to the development of the emotional sphere and creative abilities. Projects such as "Life of my family" help students explore their family roots and develop social awareness. In Norway, projects such as "Ecological city" are aimed at developing students' creativity and environmental awareness, and building independence and responsibility. In Sweden, Germany, and Spain, the use of project-based technologies is also aimed at developing students' creativity and independence. For example, the project "My little book" in Spain gives students the opportunity to create books independently, while developing their speech skills and creativity. In Japan, where the main goal of learning is to develop creativity and creative thinking, the use of group projects helps students collaborate and develop different skills. All these approaches reflect a focus on the individual development of each student, and supporting their creative potential in the educational process.

The historical and theoretical aspect of the development of project methodology in education, represented by the works of outstanding teachers, such as D. Dewey (2003), as one of the founders of pragmatic philosophy in education, believed that learning should be focused on the student's experience, the idea of active and holistic assimilation of knowledge. His papers emphasise the importance of the relationship between education and real life, where project-based teaching methods allow students to apply theory in practice, while developing critical thinking and independence. W. Kilpatrick (1918) developed the idea of the project method and proposed the first classification of projects according to their purpose. He identified four types of projects: constructive, aesthetic, research, and social, each of which is responsible for the development of relevant skills in students. M. Woodward (1887) was one of the first to introduce the idea of using project-based learning technology not only in higher education, but also in secondary education. He emphasised the importance of real-world experience and practical work for students to better understand theoretical knowledge. C. Richards (1900) proposed the use of project lessons in primary schools, which supported the idea of project-based learning as an effective way to activate children's participation and encourage creative approach to learning. D. Snedden (1923) introduced the concept of a "home project plan" for teaching children in rural areas, which included practical tasks and projects focused on the real needs of the community, and the Ecole Decroly "L'ermitage" school in Belgium, testifies to the long and multifaceted history of using projects in the educational process. Research conducted by D. Fried-Booth (2002) and M. Knoll (1991), refines and expands the understanding of project methodology, demonstrating its evolution and adaptation to modern educational needs. They analyse in detail how project methods can be used to increase students' motivation, develop critical thinking skills, and creativity.

In comparison with historical methods, modern research adds new approaches and practical guidelines for implementing projects in modern educational systems. These studies confirm the effectiveness of the project methodology in developing key skills of students, such as independence, critical thinking and creativity, and emphasise its relevance in the modern educational environment. The results of research on historical and modern approaches to the project methodology indicate its importance in modern education and the constant need for further improvement and implementation. Summarising the analysis of educational systems in Finland, Wales, Great Britain, USA, Canada, Poland, Czech Republic, Netherlands, Norway, Sweden, Germany, Spain, and Japan, it is clear that the use of project-based technologies in primary education is becoming the dominant trend. This approach actively promotes the development of students' key skills, such as self-reliance, critical thinking, and creativity. Each country adapts these methods to its own educational system and cultural needs, ensuring the individual development of each student. Project-based technologies become not only a means of mastering knowledge, but also a preparation for life in the modern world, where independence, creativity and the ability to work in a team are required. This approach allows each student to realise their potential and prepares them for successful further training and development in various spheres of life.

The highlighted examples demonstrate the variety of project-based technologies used by foreign countries to develop the creative abilities of primary school students. It is indisputable that these technologies contribute to the development of creativity, critical thinking, communication

skills, and social consciousness of students. Project-based teaching methods, which are actively implemented in primary schools in different parts of the world, play a key role in shaping not only students' academic knowledge, but also in developing their life competencies. From the UK to Japan, through Finland, Canada and other countries, pedagogical approaches based on project work are aimed at activating the creative potential of children, fostering independence, critical thinking, and the ability to self-organise. The central element is the involvement of students in practical activities through the use of Integrated technologies, role-playing games, individual and group projects that encourage them to independently search for information, analyse and present results. This interactive approach not only promotes deeper assimilation of educational material, but also educates students with the skills necessary for successful adaptation in a rapidly changing world, preparing them for further educational challenges and life situations.

CONCLUSIONS

As a result of the analysis of literature and research on the formation of creative abilities of Primary School students with the help of project-based technologies in foreign countries, it can be concluded that project-based technologies are widely used in the educational process of the analysed countries for the formation of creative abilities of primary school students. These technologies are based on an active approach to learning, when students are active participants in solving real problems and tasks. Foreign experience shows that the use of project-based technologies contributes to the development of creative thinking, independence, critical thinking, communication and collective skills of students. These technologies encourage students to actively participate in the learning process and help motivate them to work independently. Project-based technologies contribute to the integration of various subjects and disciplines, develop students' creativity, analytical and communication skills. They stimulate the development of student initiative and contribute to the development of creative thinking. Successful implementation of project-based technologies in foreign countries requires the training and support of teachers who have appropriate methodological knowledge and skills.

During the implementation of projects, teachers act as organisers and managers of project activities. According to the results of the study, it can be concluded that project-based technologies in the primary contribute not only to the development of creativity, but also to other important aspects, such as speech competence, scientific skills, environmental awareness, problem thinking, and technological literacy. Each country has its own unique approach to the use of project-based technologies, but the overall goal is to form a harmoniously developed personality capable of creative thinking and activity in the modern world. This approach in primary education helps to prepare children for the complex challenges of modern society and develop their potential. The Ukrainian pedagogical community can use the ideas of foreign experience in implementing project-based technologies to develop the creative abilities of primary school students. It is important to be familiar with best practices, adapt them to the conditions of Ukrainian education, and ensure proper training of teachers for the successful implementation of these technologies.

Prospects for further research include the investigation of the long-term effects of using project-based technologies, the quality and sustainability of acquired creative skills, and the impact of socio-cultural factors on the effectiveness of using project-based technologies in developing the creative abilities of primary schoolchildren, considering role of modern technologies, including artificial intelligence.

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CONFLICT OF INTEREST

None.

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Формування творчих здібностей учнів початкової школи засобами проєктних технологій у зарубіжних країнах

Анотація. В умовах глобальної конкуренції, вміння нестандартно мислити та ефективно працювати в колективі, набуті через застосування проєктних технологій, відіграють ключову роль у підготовці молодого покоління до майбутніх професійних викликів. Методики, які сприяють активному розвитку цих якостей, такі як проєктне навчання, зарекомендували себе у міжнародному контексті як ефективний спосіб розкриття творчого потенціалу учнів. Метою статті стало вивчення особливостей використання проєктних технологій для формування творчих здібностей учнів початкової школи в зарубіжних країнах. У статті використовувалися загальні методи наукового дослідження, такі як емпіричні (спостереження, порівняння) та комплексні (аналіз і синтез). Представлено різні підходи до трактування проєктного навчання, умов його ефективності і переваги для розвитку творчих здібностей дітей. Проаналізовано дослідження, які демонструють успішне використання проєктних технологій у зарубіжних країнах, а саме: Фінляндії, Великої Британії, США, Канаді, Польщі, Чехії, Нідерландах, Норвегії, Швеції, Іспанії, Німеччини, Японії, а також методи, що сприяють формуванню творчого та критичного мислення в учнів початкової школи. З'ясовано, що творчість є ключовою компетенцією майбутнього успіху учнів. Використання проєктних технологій у початковій школі сприяє виявленню індивідуальності та розвитку особистих якостей. Застосування проєктних технологій у початковій школі у зарубіжних країнах є ефективним засобом формування творчих здібностей учнів, навчального середовища, яке сприяє самореалізації учнів, розвитку їхнього творчого потенціалу та підготовці до вимог сучасного світу. Практичне значення статті полягає в тому, щоб надати вчителям, методистам та іншим педагогічним працівникам українських початкових шкіл інформацію та інсайти з використання проєктних технологій для формування творчих здібностей учнів, засновані на зарубіжному досвіді

Ключові слова: творчі здібності молодших школярів; метод проєків; проєктна діяльність; зарубіжний досвід; освітній процес у початковій школі