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ДИДАКТИКО-МЕТОДИЧНІ ЗАСАДИ ПІДГОТОВКИ МАЙБУТНІХ ПЕДАГОГІВ ДО ФОРМУВАННЯ УНІВЕРСАЛЬНИХ НАВЧАЛЬНИХ УМІНЬ МОЛОДШИХ ШКОЛЯРІВ

Анотація. У статті розглядаються питання дидактико-методичних засад формування у майбутніх учителів початкових класів професійних компетенцій щодо розвитку універсальних навчальних умінь молодших школярів відповідно до вимог Державного стандарту шляхом наукового осмислення підходів до цієї проблеми в педагогіці, психології та окремих методиках. Зазначається, що основа пізнавальної активності, успішної навчальної діяльності школярів закладається саме в початковій школі. Розглянуто навчальну діяльність як провідний вид діяльності учнів початкових класів, який складається з концептуальних структур (навчальне завдання, навчальна дія, дія контролю та оцінки). Автор статті підкреслює, що молодший шкільний вік є сензитивним для пізнавальної діяльності, тому найважливішим завданням учителя початкових класів стає формування сукупності пізнавальних універсальних навчальних умінь, які ефективно забезпечують розвиток здатності успішно засвоювати нові знання та компетентності, тобто вміння вчитися. Подано перелік основних універсальних умінь, якими мають оволодіти учні початкової школи. Описано гру, спілкування та проектну діяльність як шляхи розвитку універсальних навчальних умінь учнів. Зазначається, що універсальні навчальні вміння стають основою для формування пізнавальної активності і самостійності молодших школярів, їхньої навчально-пізнавальної компетентності, які виступають найважливішими атрибутами особистісно орієнтованого навчання на всіх рівнях освіти. Автором статті встановлено, що проблема формування та розвитку універсальних навчальних умінь молодших школярів достатньо складна і викликає великі труднощі навіть у досвідчених учителів. Матеріалом для такого висновку послужили аналіз та обробка результатів анкетування, проведеного серед студентів та працюючих педагогів. Виявлено протиріччя між можливістю формування в учнів початкових класів універсальних навчальних умінь при вивченні різних дисциплін і недостатньою готовністю до цього педагогів у методичному та організаційно-педагогічному плані. Встановлено, що готовність майбутніх учителів до формування навчальних процесів у молодших школярів визначається когнітивним і діяльним критеріями. Розкрито зміст дидактико-методичної підготовки майбутніх педагогів до формування універсальних навчальних умінь молодших школярів, що складається із завдань до семінарських та практичних занять, ситуаційних завдань з окремих тем, використання кейс-методу, організації самостійної роботи студентів із розроблення вправ та завдань для молодших школярів і їх апробації під час педагогічної практики тощо.

Ключові слова: молодший школяр, універсальні навчальні вміння, загальнонавчальні вміння і навички, вчитель початкових класів, дидактична гра, спілкування, проектна діяльність, ситуаційні завдання, кейс-метод, вправи та завдання для молодших школярів.



DIDACTIC AND METHODOLOGICAL PRINCIPLES OF TRAINING FUTURE TEACHERS FOR THE DEVELOPMENT OF PRIMARY SCHOOL STUDENTS' UNIVERSAL LEARNING SKILLS

Abstract. The study deals with the issue of didactic-methodological fundamentals of the development of future primary school teachers' professional competencies regarding the improvement of primary school students' universal learning skills according to the requirements of the State Standard through a scientific understanding of approaches to this problem in Pedagogy, Psychology, and particular methods. It is noted that the foundation of schoolchildren's cognitive activity and successful learning activity begins in primary school. The educational activity is considered the leading type of primary school students' activity, combining conceptual structures (learning task, educational action, control, and assessment action). The authors of the research emphasize that early school age is sensitive to cognitive activity; therefore the primary school teacher's most important task is the development of a set of cognitive universal learning skills that will effectively ensure the development of the capability of successfully obtaining new knowledge and competences, that is, the ability to learn. We provided a list of basic universal skills for primary school students to master. The authors consider educational games, communication, and project activities ways of developing students' universal learning skills. It is noted that universal learning skills become the basis for the formation of cognitive activity and independence of primary schoolchildren, their educational and cognitive competence, which are the most important attributes of personally oriented learning at all levels of education. The authors of the article learned that the problem of the formation and development of primary schoolchildren's universal learning skills is quite complicated and causes great difficulties even for experienced teachers. The source for such a conclusion was the analysis and processing of the results of the questionnaire conducted among students and in-service teachers. The contradiction between the importance of the development of primary school students' universal learning skills when studying various disciplines and teachers' insufficient methodical and organizational-pedagogical readiness was revealed. Future teachers' readiness to facilitate primary schoolchildren's educational processes is determined by cognitive and activity criteria. The content of the didactic and methodological training of future teachers for the formation of primary school students' universal learning skills is analyzed. In our opinion, this content consists of tasks for seminars and practical classes, solving situational problems, individual tasks, case methods, organization of students' independent work, creation of exercises and tasks for primary school students, and their assessment during pedagogical practice, etc.

Keywords: primary school student, universal learning skills, general education skills and abilities, primary school teacher, didactic game, communication, project activity, situational tasks, case method, exercises, and tasks for primary school students.

INTRODUCTION

The problem formulation. Considering the modernization of the education system in Ukraine, in particular, its primary level, one of the main tasks is to create conditions for the development of primary schoolchildren's personalities. Modern primary school, as the most important social institution, is aimed primarily at the development of children's universal learning skills during school life to realize their intellectual and personal potential. The changes that take place in the modern world require students to be able to think creatively, independently solve non-standard tasks, find innovative solutions quickly, and navigate the flow of information. "In the conditions of the information society, the problem of developing students' learning ability, to acquire knowledge independently, is becoming more urgent. Its significance increases within the boundaries of the first-level school, where the educational activity as a leading one is only beginning to take shape, and therefore there is the necessity to ensure its procedural component, represented both by course (special) abilities and skills and by cross-course (general education), in particular by the ability to learn", - notes Y. Kodlyuk (Kodlyuk, 2015, p. 220). The State Standard of Primary Education states that the development of students' extra-subject, general subject, and subject-specific competencies is the goal and main result of education (State Standard of Primary Education, 2018). Therefore, future primary school teachers should be professionally competent in matters of effective organization of educational and cognitive activities of primary schoolchildren.

Analysis of recent research and publications. Research into the essence and structure of students' universal learning abilities dates back to the times of Plato, Aristotle, J. Locke, I. Kant, G. Hegel, and others. The problem has been studied by many modern Ukrainian and foreign scientists: L. Vygotsky, T. Golovan, N. Zakharova, O. Zozulya, Y. Kodlyuk, I. Lerner, V. Lozova, O. Mytnyk, V. Molyako, O. Savchenko, V. Sukhomlynskyi, T. Shushara, and others.

RESEARCH AIM AND TASKS is to determine the didactic and methodological principles of training future teachers for the development of primary schoolchildren's universal learning skills.

RESEARCH METHODS: theoretical analysis of psychological and pedagogical literature; analysis of practical problem-solving skills.

RESULTS OF THE RESEARCH

Primary school plays an important role in a person's life. Primary school age is characterized by the transition to systematic learning, which fundamentally changes the social condition of the child's development. School life introduces students to a strictly standardized world of relationships, and obliges them to be responsible for discipline, duties, and the acquisition of learning skills. It can be argued that it is to a certain extent stressful in connection with sufficiently strict requirements for the child. At the same time, this period is sensitive to cognitive activity; therefore, the most important task of a primary school teacher is the development of a set of universal learning skills ensuring the effective development of the capability to acquire new knowledge and competencies successfully, that is, the ability to learn. At this level, children should have at least such universal skills as general education, logic, and problem-solving. At primary school age, the



learning activity becomes leading (Zozulya, 2000, p. 59). Under a teacher's facilitation, a student not only acquires special mental actions but also the skills necessary to adapt to new, changed social conditions. The educational activity is complex in terms of content and form of implementation; the child does not absorb it immediately. The teacher needs to make a lot of effort so that in the process of systematic work the student acquires the ability to learn.

The conceptual basis of the structure of educational activity is the educational task; educational action; action of control; evaluation action. A modern primary school student masters the following universal skills:

- cognitive skills: comparing and contrasting facts, highlighting key points, risk assessment, switching from one type of activity to another, perceiving and quickly processing new information, distinguishing between fake and true information, critical thinking, calculating, text analyses, observation, reflection, remembrance ;
- active and self-organizing skills: to communicate online, plan activities, learn independently, use gadgets independently following instructions, organize a workplace, online study, use a computer or phone, online resources, join by link and work with digital tools,
- use digital textbooks, search for additional information, take online tests, work with interactive worksheets, express opinions orally and in writing, co-work, study additional sources, work with presentations, and educational projects, cloud technologies;
- regulation-related skills: to concentrate attention, listen and hear, look and see, concentrate on an activity, manage one's emotions, cope with stress, follow instructions, have a positive attitude to learning, self-organize, show initiative, be independent and responsible, be goal-oriented, to continue study after the "air alarm" signal;
- reflective skills: express emotions, perform a self-check, monitor your emotional state, analyze activity, and monitor your behavior (Onoprienko, 2022, pp. 91-92).

Thus, a primary school student's development is based on the development of educational activities in the process of theoretical knowledge obtaining through analysis, planning, reflection, etc. These processes determine the peculiarities of the development of children of primary school age in connection with their immersion in educational activities.

Universal learning skills development takes place in the process of studying school disciplines. Every course has a certain potential depending on the discipline content and methodology. At the same time, universal learning skills have extracurricular, meta-disciplinary character, ensuring the connections between general cultural, personal, and cognitive development, the continuity of all links of the educational process, and the organization and regulation of student activity regardless of the specifics of the discipline content (Savchenko, 2014). When solving educational tasks, the child's mental activity develops, and his/her thinking process becomes coherent, consistent, and evidential, that is, mental actions aimed at analyzing and managing his/her cognitive activity are formed (Kodlyuk, 2013).

Universal learning skills are general educational actions combining the independent setting of a cognitive goal; searching and structuring the necessary information using various means; meaningful reading; modeling. Several universal learning skills consist of a group of logical universal actions, namely: the creation of hypotheses and their verification, cause-and-effect relationships; logical reasoning; implementation of classifications, comparisons, and generalizations. Solving systematized tasks, primary schoolchildren master the content of various courses actively, as well as such mental operations as analysis, synthesis, concretization, selection of key concepts, etc. They acquire the ability to think creatively. All this is the basis of logical universal learning processes (Zakharova, 2001, p. 69).

Game-based learning, communication, and project activities are of significant importance. The German scientist I. Herbart was the first to initiate a systematic study of game-based learning as a teaching method. He claimed that it is a preparation for life, a means of training for skills necessary for intellectual and personal development. The scientist also proved the social significance of game-based learning as the primary form of the child's involvement in the ethno-cultural educational environment. The game, in his opinion, fosters a sense of responsibility, and self-determination in activities, developing your learning capabilities (Herbart, 1982, p. 126).

A well-known Swiss researcher J. Piaget related the game with activity and thinking and believed that in the game setting, primary schoolchildren learn to navigate it. Types of educational games can be understood in three primary categories: game exercise (complex skills development), educational simulations (affects the process of remembering with the help of symbols and signs), and playing by the rules (develops cooperation).

Game-based learning is being developed in Ukrainian Pedagogy and Psychology by G. Boyko, L. Boyarova, O. Humenyuk, O. Dobrovolska, P. Kuharuk, O. Martynenko, T. Pavlenko, O. Piskun, and others. They associate it with child development activity. Scientists consider game-based learning to be an effective method of educating players.

As noted by I. Ruda, a game is a historically determined, natural cultural element, an independent type of activity in which the social experience of generations, rules, and norms of life is enriched through the adoption of a game role (Ruda, 2016). For example, in the game "Spot the difference" (the teacher successively shows two pictures that differ in detail, and the children's task is to spot the differences); "Visual dictation" (geometric shapes pictures are presented, then students reproduce them from memory on a sheet of paper); "Write a fairy tale" (the teacher shows a picture, and students take turns to make up a fairy tale about what is depicted on it) and others.

The child's interaction with the setting, with the social environment, is of great importance in the development of universal learning skills. Primary school students master various types of activities (learning, productive), starting new forms of communication with adults and peers. Communication is such emotional, informational and meaningful interaction, in which personal and interpersonal relationships are manifested, realized, and formed. Its role is very important in the development of universal learning skills, because, in the process of communication, a child's relationship with the setting, personal relationships, and relationships with adults (trusting - distrustful, interested - indifferent, etc.) are established.



We highlight the great importance of primary school students' communication in their native language (mother tongue), and the preservation and transmission of the linguistic wealth ensured in primary school. It is the basis for the development of primary schoolchildren's universal learning skills, which is impossible without the national language and culture. The mother tongue increases the level of children ethno cultural knowledge because the mental structures of activity and the culture of thinking of its speakers find expression in the language. Thus, language is a means of social development and a tool for children's intellectual growth.

Applying the idea of a group project, a primary school teacher develops not only students' intellectual, but also creative, and communicative abilities. The essence of this technology is that primary schoolchildren, looking for a solution to a given problem, learn to acquire knowledge independently, be acquainted with the cultural heritage of their people, and strengthen national self-awareness. Working on a group project, children become researchers, build hypotheses, draw conclusions, and generalize them, because of which they develop their intellectual and communicative abilities, adapt to modern conditions of school education, and acquire such qualities as responsibility, purposefulness, independence, and initiative. They develop such universal learning activities as an orientation to search activities, and the ability to plan actions independently. Project activity enriches students with new knowledge, develops an interest in learning, and helps systematize knowledge. Each student takes an active part in it, getting an opportunity to realize their abilities, and to develop teamwork skills. In the project work, everyone contributes to the common task and acts simultaneously as an organizer and expert in the activity (Onoprienko, 2009).

Students' universal learning skills become the basis for the formation of their cognitive activity, independence, and educational competence. They are the most important attributes of personally oriented education at every level of education. Educational and cognitive competence is defined as the readiness to carry out educational and cognitive activities at a certain level, a student's set of interrelated knowledge, skills, and personality qualities. They allow him/her to carry out an independent effective cognitive activity, the integrative quality of the student's personality, educational and cognitive competence, resulting in motivation to learn, the ability to organize the educational and cognitive activity, informational and logical thinking skills, the system of knowledge in the discipline area (Turchyna, Vakhrusheva, 2018, pp. 13-14).

Cognitive activity, cognitive independence, and cognitive competence are the basis, a condition, and at the same time are manifested in the student's effective cognitive activity. About schoolchildren, young people, and adults, these categories characterize activities that go beyond just learning, related to the individual's independent and self-regulated activity, aimed at solving current social and personally significant problems, ultimately, with the self-determination and self-realization of the individual in the socio-cultural setting.

The problem of the formation and development of universal learning skills is quite complex and causes great difficulties even for experienced teachers, regarding appropriate methods and teaching tools acceptable for a particular situation.

The material for such a conclusion was the analysis and processing of the results of the questionnaire conducted among students and teachers. We found a contradiction between the possibilities of developing primary school students' universal learning skills when studying different disciplines and teachers' insufficient methodical and organizational-pedagogical readiness.

Students were proposed to fill out a self-diagnosis card assessing their readiness for this activity. Two criteria were singled out: cognitive (understanding of universal educational actions, laws, and mechanisms of development, capability to specify them taking into account the discipline specifics) and activity (capability to select tasks, pedagogical and methodical technologies, educational material taking into account the specifics of the development of universal learning skills). The majority of senior students (67%) stated that they were insufficiently prepared to solve this problem.

Of course, a teacher must possess certain competencies regarding the formation of certain universal skills. Future teachers' training should be aimed at ensuring firm mastering of subject knowledge, methods of teaching disciplines, and capability to use effective technologies, and methods of teaching. Students should be prepared for independent expansion and renewal of knowledge, therefore, great attention is paid to the organization of their independent work in practice.

For thorough preparation for the development of primary school students' universal learning skills, we have accomplished a didactic system consisting of tasks for preparation for classes - seminar and practical. They include situational tasks on certain topics, case methods, independent work of students on the development of exercises, and tasks for primary school students. Analysis of tasks and their approbation in primary school during practice contribute to the effective formation of future primary school teachers' professional competence.

The development of students' universal learning skills is carried out mainly in the process of targeted learning, organized, facilitated, and managed by the teacher. In this regard, there are serious requirements for future primary school teachers' training, which are implemented in the process of general psychological-pedagogical and methodical training, by strengthening the connection between educational, cognitive, and scientific research activities. The first group includes scientific research in the educational process: lectures, seminars, practical classes, selective disciplines, individual tasks of a research nature for a pedagogical internship, etc.; the second is extracurricular scientific and research activities (coursework and graduation qualification works, participation in scientific circles, preparation of scientific articles, etc.).

One of the most difficult problems is the diagnosis of the formation of children's universal learning skills. To do this, we teach students to analyze syllabi, and the educational and methodological curricula of primary education during practical classes.

In our opinion, there are not enough tasks in school textbooks that would teach how to select the right sources of information and promote the development of the ability to analyze information. Children like to make drawings, and diagrams, using various signs and symbols. The modeling method equips them with techniques that help them to be



active and successful, overcome difficulties, create new images, and fantasize when solving a task independently. With this approach to learning, study becomes an interesting type of activity. That is why we are working with future primary school teachers on a methodology for solving non-standard and logical tasks, which are aimed at preparing for work concerning not only the development of primary schoolchildren's critical thinking but also the formation of a logical chain of reasoning.

An important requirement for the professional training of future primary school teachers is an understanding of psychological and pedagogical mechanisms for the formation of universal learning skills. When studying the discipline "Didactics", we consider the issue of "Activity", and "Educational activity"; psychological and pedagogical literature is analyzed, as the structure and peculiarities of the formation of educational activities, criteria for evaluating the formation of students' universal learning skills; the methodology of their development. Recommendations for educators include the following issues: 1) rely on students' personal life experience; 2) try to use interesting game-based material; 3) create problem situations in the learning process; 4) determine the aim and tasks of the educational activity together with students, etc.

Teacher training also involves the development of skills to develop programs for the formation of universal educational skills (subject and meta-subject educational results), which reflect methodological and organizational directions for the development of the activity criterion of students' readiness for professional activity. During classes, students get to know the methods of active learning, and real-life simulation games are widely used. At the same time, we rely on the results of research by O. Ardelyan, Ya. Kodlyuk, V. Reshentnik, O. Savchenko. They consider the concept of universal general learning abilities and skills as the ability for self-development and self-improvement through conscious and active assimilation of new social experiences.

Effective teaching practice promotes and supports the formation of universal skills, gradually developing students' logical structures necessary for the educational activity. The future teacher must possess the appropriate skills because primary schoolchildren often imitate him/her even in the manner of reasoning.

Students must be able to solve standard tasks as well as those that require originality and flexibility of thinking, and cognitive ingenuity. Therefore, considering several ways of solving non-standard tasks with students in elective classes, it is necessary to show ways of solving a similar task and methods of reasoning at the same time.

Students develop lesson notes for all classes and conduct lessons based on them in secondary schools during pedagogical practices. When making notes, attention is focused on such requirements as the ability to formulate correct aims and tasks of the lesson, the mandatory creation of such situations when students face insufficient knowledge of the material, the inability to solve tasks (problematic situations), and the desire to find solutions.

CONCLUSIONS AND PROSPECTS OF FURTHER RESEARCH

Thus, universal learning skills are a set of methods of various actions that contribute to students' active self-development, independent mastering of new knowledge, gaining social experience, and formation of social identity. Their formation takes place during the study of school subjects, in the process of didactic games, communication, project activities, etc. Our research proved that it is necessary to provide additional assistance in the preparation of future primary school teachers for the formation of primary schoolchildren's universal learning skills. Methodological support is one of the important pedagogical conditions that ensure the effectiveness of professional training of future teachers in this direction. We consider the development of programs for the formation of universal learning skills of primary school students, which would help the future teacher to achieve subject and meta-subject educational results, to be a promising direction for further research of the problem.

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