

ОБГОВОРЮЄМО ПРОБЛЕМУ

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ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS OF EDUCATION OF PUPILS WITH INTELLECTUAL DISABILITIES IN THE CONDITIONS OF COMPETENCE APPROACH

The organizational and pedagogical conditions of teaching pupils with intellectual disabilities in terms of competence approach have been analyzed. It is indicated that it is a set of certain facts, circumstances, influences, processes that allow to manage the educational process, as a result of which the child's personality is formed, by means of pedagogical and didactic influences, in order to increase the efficiency of the educational process. The state of research of the problem in the modern scientific literature has been determined. The need to develop organizational and pedagogical conditions for teaching pupils with intellectual disabilities in a competency-based approach has been substantiated by creating a comfortable environment for knowledge, skills and abilities for productive and effective application in life, including: individual approach to pupils, use of modern technological advances and professional resources needed to interest children in learning, to maintain their interest in learning in the challenges of the XXI century. The main factors of formation of key competencies of pupils with intellectual disabilities have been identified.

Keywords: education, organizational and pedagogical conditions, intellectual development disorders, competence approach.

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ОРГАНІЗАЦІЙНО-ПЕДАГОГІЧНІ УМОВИ НАВЧАННЯ ШКОЛЯРІВ З ПОРУШЕННЯМ ІНТЕЛЕКТУ В УМОВАХ КОМПЕТЕНТНІСНОГО ПІДХОДУ

Проаналізовано організаційно-педагогічні умови навчання школярів з порушенням інтелектуального розвитку в умовах компетентнісного підходу. Вказано, що це сукупність певних, фактів, обставин, впливів, процесів, що дають змогу керувати освітнім процесом, у результаті якого формується особистість дитини, засобами педагогічних та дидактичних впливів, з метою підвищення ефективності освітнього процесу. Визначено стан дослідження проблеми в сучасній науковій літературі. Обґрунтовано, необхідність розроблення організаційно-педагогічних умов навчання школярів з порушенням інтелектуального розвитку в умовах компетентнісного підходу шляхом створення комфортного середовища для отримання знань, умінь і навичок для продуктивного та ефективного їх застосування у життєдіяльності, які передбачатимуть: індивідуальний підхід до учнів, використання сучасних технологічних досягнень і професійних ресурсів, необхідних для того, щоб зацікавити дітей до навчання, підтримувати їхній інтерес до пізнання в умовах викликів XXI століття. Виокремлено основні чинники формування ключових компетентностей школярів з порушеннями інтелектуального розвитку.

Ключові слова: освіта, організаційно-педагогічні умови, порушення інтелектуального розвитку, компетентнісний підхід.

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ОРГАНИЗАЦИОННО-ПЕДАГОГИЧЕСКИЕ УСЛОВИЯ ОБУЧЕНИЯ ШКОЛЬНИКОВ С НАРУШЕНИЕМ ИНТЕЛЛЕКТА В УСЛОВИЯХ КОМПЕТЕНТНОСТНОГО ПОДХОДА

Проанализированы организационно-педагогические условия обучения школьников с нарушением интеллектуального развития в условиях компетентностного подхода. Указано, что это совокупность определенных, фактов, событий, действий, процессов, позволяющих управлять образовательным процессом, в результате которого формируется личность ребенка, средствами педагогических и дидактических воздействий, с целью повышения эффективности образовательного процесса. Определено состояние исследования проблемы в современной научной литературе. Обоснована необходимость разработки организационно-педагогических условий обучения школьников с нарушением интеллектуального развития в условиях компетентностного подхода путем создания комфортной среды для получения знаний, умений и навыков для продуктивного и эффективного их применения в жизнедеятельности, предусматривающие: индивидуальный подход к ученикам, использование современных технологических достижений и профессиональных ресурсов, необходимых для того, чтобы заинтересовать детей к обучению, поддерживать их интерес к познанию в условиях вызовов XXI века. Выделены основные факторы формирования ключевых компетентностей школьников с нарушениями интеллектуального развития.

Ключевые слова: образование, организационно-педагогические условия, нарушения интеллектуального развития, компетентностный подход.

The main purpose of modern philosophy of national education is constantly improve the quality of lifelong learning, which provides new educational approaches, technologies for the process of acquiring knowledge, their evaluation, personality-oriented style of educational subjects, the formation of necessary competencies, etc. In this context, in educational circles more attention is drawn to the competence approach, considering it as a connecting link between the educational process and the real requirements of society.

The competency approach is reflected in the field of educational legislation of Ukraine. In particular, in the laws of Ukraine "On Education"», "On Complete General Secondary Education", in the State Standards of Primary and Basic Secondary Education. Educational goals, which are defined in legal documents, outline the basic principles of competence approach to learning, the results of assessing the knowledge of students, the content of which is based on the principles of science, multiculturalism, system, integration, child-centeredness, unity of education, upbringing, etc.

Theoretical aspects of the competency approach as a result of education are presented in a number of works by foreign and domestic scientists: the study of competencies as a result of education, not as the amount of information learned, but as a person's ability to act in various problem situations (N. Bibik, V. Kremen, V. Lugovyi, S. Maksymenko, O. Savchenko, V. Serikov, G. Selevko, O. Pometun, etc.); practical implementation of the competence approach, the formation of personality competencies is revealed in the works of I. Agapov, V. Bolotov, A. Verbytsky, I. Zimna, O. Lebedev, V. Serikov, A. Khutorsky and others.

Numerous works of V. Kremen emphasize the need to change the functions of the educational process in educational institutions of different levels, which has traditionally been focused on obtaining, at best, creative assimilation of the amount of knowledge by pupils. The academician is convinced that along with the acquisition of basic knowledge before modern education there is a task to teach to learn, to develop the need for lifelong learning. Education reform, which is caused by Ukraine's entry into the European educational space, affects all levels of education. The particular

attention is given to school education, in especially the education of children with intellectual disabilities.

The purpose of the article is to analyze and determine the organizational and pedagogical conditions for ensuring a competency-based approach to teaching students with intellectual disabilities.

Optimization of the process of adaptation of pupils with intellectual disabilities to learning, in particular those involved in an inclusive learning environment, causes the need to adapt to new learning conditions of such children, which is seen through the introduction of psychological and pedagogical support. First of all, it is about developing an effective strategy of functioning, which allows to satisfy the needs of the child, which are conditioned by the formation of the child as a subject of education. The level of personal development of the child is determined by the readiness to study at school, motivation, the specifics of learning and other factors. The effectiveness of education depends on the organizational and pedagogical conditions that provide both the disclosure of the personal potential of children with intellectual disabilities in the new didactic realities, and the successful solution of educational problems.

Researchers in the field of pedagogy organizational and pedagogical conditions are understood as a set of circumstances that contribute to the effective construction of the educational process taking into account the needs, interests, opportunities of pupils in learning, providing the most effective flow of this process (I. Aksarina, N. Bukhlova, O Derevyanko, N. Ippolitova, N. Sterekhova, etc.).

Other scientists consider under such conditions a set of socio-pedagogical and didactic factors on which depends the effectiveness of the learning process (R. William, E. Gordon, G. Derbridge, C. Kingsley, T. Kovaleva, R. Cloward, G. Chrisley, D. Rowntree, T. Sarbin, M. Sim, F. Strodbeck etc.) [9].

In our research, organizational and pedagogical conditions are considered as a set of certain facts, circumstances, influences, processes that allow to manage the educational process, which forms the child's personality, means of pedagogical (development of the subject's personality) and didactic (existing learning conditions, there are ways to transform these conditions in the direction of learning objectives, methods and organizational forms of learning, taking into account the principles of optimization) of influences, in order to increase the efficiency of the educational process.

Development of effective organizational and pedagogical conditions of training in the conditions of the competence approach is directed on creation of a comfortable environment for the child with intellectual disabilities in the educational environment that provides: conformity of educational and methodical maintenance to modern tendencies in education; taking into account the peculiarities of the child's development and the organization of joint activities; formation of social and communicative skills; introduction of problem-based learning; focus on self-development and self-organization, etc.

Psychological, pedagogical and didactic conditions for the formation of key competencies are considered as a methodological basis for the holistic development of the competence of a child with intellectual disabilities on the basis of "lifelong learning" through the introduction of new resources (robotics, multimedia) and the use of new forms of presentation, processing, storage and use of information in traditional and non-traditional forms, in order to apply the experience in practice.

According to V. Bolotov and V. Serikov, it is not the pupil's internal organization of knowledge that is important, but the ability to apply competencies in learning and life, in particular: in human relationships, in ethical norms; in assessing their own actions; when choosing a profession and assessing their readiness for such training; if necessary, to solve their own problems: life self-determination, choice of style and way of life, ways of resolving conflicts, etc. [3].

Investigating the implementation of the competency approach in education, scientists have proposed to identify the following models: 1) knowledge-academic, in which the system is used for teaching in primary and basic secondary school, the competency approach is implemented in specialized secondary school; 2) a combination of academic and practice-oriented learning; 3) the use of transitional forms of education through the integration into the educational program of courses in which subject areas are correlated with competencies.

However, researchers do not rule out the possibility of the existence of other options for the implementation of the competency approach, emphasizing that the choice of any model requires «deep exploration and modernization of theoretical foundations of educational systems to create information,

scientific and methodological base and training system, formation of new pedagogical thinking in society»[3].

O. Sergeeva and M. Chadra attach great importance to the formation of organizational and pedagogical conditions for ensuring effective learning in the conditions of the competence approach. Scientists consider organizational and pedagogical conditions as a set of objective opportunities that ensure the successful solution of the tasks, the circumstances of interaction of the subjects of the educational process, which is the result of purposeful planned selection, design and application of content elements, methods (techniques) to achieve pedagogical goals, a set of opportunities for content, forms, methods of holistic educational process aimed at achieving the goals of pedagogical activity [8].

Consequently, the idea of a competency-based approach in the educational process requires changing the conditions for providing knowledge, skills and abilities from formal translation to create conditions for their productive and effective use in life, which in turn ensures the development of personal potential of each child.

Since the problem of integration of children with intellectual disabilities into society is relevant for the education of Ukraine, we offer new approaches to education, social adaptation and integration of such children through the formation of life competencies based on the principle of «lifelong learning». In this context, in our opinion, to ensure the implementation of the competence approach in the education of children with intellectual disabilities, the most appropriate will be a model in which academic knowledge is intertwined with their practical application.

The above involves the creation of such organizational and pedagogical conditions of learning in a competency-based approach, which will include: individual approach to students, use of modern technological advances and professional resources needed to interest pupils in learning, support their interest in learning in the challenges of the 21st century.

To create effective conditions for the formation of key competencies in the educational process requires appropriate resources: legal, personnel and logistical support, which is a system of adaptation of the educational process of pupils with intellectual disabilities in the competence approach.

In this context, the organizational and pedagogical conditions of the competence approach in the education of students with intellectual disabilities should include: the presence of an environment that stimulates the potential of each child; integration of the child into activities that meet its interests and needs; pupil-teacher partnership; changes in the structure, content and organization of the educational process; use of additional educational resources; updating of educational and methodical providing; inclusion of innovative practices in the educational process.

Thus, we think that the main organizational and pedagogical conditions for the formation of key competencies of students with intellectual disabilities should be:

- 1) compliance of the content of curricula and programs with modern trends in education;
- 2) creation of individually-oriented tasks, pedagogical situations in the learning process, in order to form the learning motivation of children;
- 3) adaptation of students to changes in the requirements of modern society and their focus on acquiring the necessary knowledge, skills and abilities;
- 4) introduction of innovative educational and methodical materials in the education of such children;
- 5) ensuring a balance between individual and group forms of work;
- 6) introduction of problem-based learning, which involves solving problems without taking into account the sample of the known algorithm of actions;
- 7) objectivity of assessment;
- 8) application of the latest technical resources (robotics, multimedia), traditional and non-traditional forms of knowledge acquisition by students and their application in practice.

Now we want to dwell on the essence of each of them.

1. One of the organizational and pedagogical conditions for the formation of key competencies is the compliance of the content of curricula and programs with modern trends in education. It is about the subordination of curricula and programs to constant updating of knowledge. The educational process should be an impetus for the constant acquisition of new knowledge by both students and teachers.

2. The second organizational and pedagogical condition for the formation of key competencies, we include a positive motivation for learning and the use of modern information technology in the educational activities of pupils with intellectual disabilities for personal development.

Motivation is an important process not only in the formation of motivational competence, but also any other competencies that are necessary for the full development of the child. Along with this, motivation is a motivating tool for the development of children's abilities, creative development and personality formation.

The introduction of individual-oriented tasks, pedagogical situations in the learning process should include: the formation of learning motivation; creating a favorable emotional atmosphere in the classroom, establishing a partnership between teacher and pupil in the learning process.

3. Adaptation of pupils to changes in the requirements of modern society and their focus on acquiring the necessary knowledge, skills and abilities – is the third organizational and pedagogical condition for the formation of key competencies. In this context, it is advisable to talk about the reorientation of not only the pupil but also the teacher from the transfer of ready-made knowledge to pupils, to the role of leader, who indirectly organizes and stimulates subjects, provides various opportunities for their own self-actualization and development.

The main requirement in the organization of the educational process is to strengthen the child's independence in learning. This is achieved by complicating the requirements for the content and forms of independent work, the introduction of innovative technologies in learning, involving pupils in self-organization in learning, the ability to apply the experience in life independently.

The use of innovative technologies in the education of such children provides assistance to the child, if necessary, in solving various problems in new life situations.

4. It is also important to introduce innovative educational materials in the education of such children, the use of which allow to involve children in the use of innovative materials that will help them acquire the knowledge necessary to perform relevant practical tasks, and it will help the teacher to navigate needs and interests of the child, during the formation of certain key competencies.

5. Organizational and pedagogical condition - ensuring a balance between individual and group forms of work.

The formation of key competencies takes place in both individual and group classes. The use of group teaching methods helps to productively form the ability to design, construct educational tasks, promotes the development of self-reflection. Along with this, the use of group methods and forms of classes, ensures the implementation of the principle of adequacy of educational and cognitive activities of students, promotes the intensification of group learning and more.

6. Introduction of problem-based learning, which involves solving problems without taking into account the sample of the known algorithm of actions. The importance of using problem-based learning, the use of robotics, multimedia technologies and the method of projects in the formation of competencies, allow not only to form knowledge, but also to develop the ability to independently obtain the necessary information, to realize their abilities.

7. Objectivity of assessment is one of the important organizational and pedagogical conditions for the formation of key competencies, which includes monitoring and control over the formation of a particular competence. That is, it is about ensuring comprehensive control over learning. In particular, when simultaneously testing the knowledge of all students, the assessment criteria are: acquired knowledge; number of correct / incorrect answers; types of assistance; the period of time spent on individual tasks and the program as a whole, which allows you to judge the level and quality of knowledge. In addition, the pupil is clearly convinced of their success in mastering a material. At the same time, this organizational and pedagogical condition makes it possible to identify features of pupils' learning activities that do not show activity.

In our opinion, the use of interactive, playful methods in teaching children with intellectual disabilities creates a great interest, better memorization and reproduction of material, and as a result, quality control of learning increases.

8. An important role in the formation of key competencies is played by the use of the latest technical resources (robotics, multimedia), traditional and non-traditional forms of knowledge acquisition by pupils and their application in practice.

The essence of this condition is to change the negative or indifferent attitude of the pupil to the assimilation of educational information for conscious, positive and, as a consequence, successful

learning. Also, the application of this condition in learning contributes to the formation of motivation, strengthens pupils' interest in learning and stimulates them to self-development.

Studying and analyzing the organizational and pedagogical conditions for the formation of key competencies of pupils with intellectual disabilities, we identify the following principles of the process of formation of these competencies, which should be included in the system of adaptation of pupils with intellectual disabilities in the competence approach:

- purposefulness of the pedagogical process;
- correctional and developmental orientation of pedagogical activity;
- the need for special pedagogical support;
- integrity and systematization of the pedagogical process;
- social-adaptive and correctional-compensatory orientation of the educational process;
- rational combination of modern technical means with traditional technologies of teaching pupils;
- comprehensive assessment focused on the final results;
- differentiation and individualization of learning, combination of individual and group forms;
- ensuring creative activity and independence;
- alternative in the construction of an individual trajectory, the choice of forms, methods and means of learning.

Organizational and pedagogical conditions and principles proposed in our study are a structural part of the system of adaptation of the educational process of pupils with intellectual disabilities in terms of competence, which should contain targeted, meaningful, technological and effective components that will allow to reveal new pedagogical technologies, the introduction of which has a qualitative result.

Definition of the whole set of organizational and pedagogical conditions for the formation of key competencies and adaptive learning of students with intellectual disabilities is a complex task, but we identified and substantiated the main organizational and pedagogical conditions have the greatest impact on the child's competence.

Therefore, the prospects for further research are the use of organizational and pedagogical conditions for the formation of key competencies of pupils with intellectual disabilities and testing their effectiveness.

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МОДЕЛІ ТА РЕСУРСНЕ ЗАБЕЗПЕЧЕННЯ НАВЧАННЯ STEM-ДИСЦИПЛІН В УМОВАХ ПАНДЕМІЇ COVID-19

Вказано, що розвиток та вдосконалення людських навичок і можливостей через освіту є ключовими рушіями соціально-економічного, суспільного успіху та особистого добробуту. Актуалізовано потребу підготовки майбутніх STEM-фахівців у закладах вищої освіти (ЗВО). Проаналізовано поняттєвий апарат і нормативне забезпечення реалізації STEM-освіти в Україні. Схарактеризовано особливості навчання STEM-дисциплін, пов'язаних із необхідністю використання обладнання та спеціалізованого програмного забезпечення. Здійснено огляд підходів та наведено