

**IMPLEMENTATION OF ART THERAPY TECHNOLOGIES  
IN THE PROCESS OF PSYCHOLOGICAL SUPPORT  
OF PRESCHOOL CHILDREN  
WITH DEVELOPMENTAL DISABILITIES**

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**INTRODUCTION**

The current stage of reforming the system of education of children with health disabilities is characterized by the active implementation of integrated and inclusive forms of it, which ensure joint education of children with children without health disabilities in general educational organizations. The content and conditions of education of children with limited health capabilities are determined by the peculiarities of the reform of preschool and school education, in which attention is focused on the heterogeneity of the composition of children within each nosological category, which implies variability in the content of educational programs, types and amounts of psychological and pedagogical help they need. The psychological support of transformational processes in Ukraine directly relates to the psychological support of children with special educational needs. As you know, the strategic goal of teaching and upbringing such children is their full integration into society, their ability to participate in the general educational process and social life on an equal footing with their peers with normal development. The psychological and pedagogical support of children with special educational needs is a significant area of activity for educational institutions. The number of children like this in the world is increasing every year. The number of such children in the total population was 6.99% in recent years, but now it's about 8%. It is urgent to address the issue of their social integration, which is facilitated by psychological and pedagogical support.

Today, the problem of inclusive education is relevant and mature, therefore it is the subject of research by many scientists. Among them are Yu. Boychuk, V. Bondar, L. Danylenko, S. Myronova, V. Kovalenko, A. Kolupaeva, L. Pavlenko, O. Taranchenko, who study the current state and trends in the development of inclusive education in Ukraine<sup>1</sup>. Children with psychophysical limitations are included in the category of preschoolers with mental retardation. These are children with reduced intellectual development, the etiology of which is determined by constitutional factors, chronic somatic diseases, long-term adverse conditions of upbringing, organic insufficiency of

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<sup>1</sup> Кроки до компетентності та інтеграції в суспільство: науково-методичний збірник /Ред. кол. Н. Софій, І. Єрмаков та ін. К.: Контекст. 2000. 336 с.

the nervous system of a residual or genetic nature<sup>2</sup>. The correct orientation of educational work in inclusive institutions is determined by these features. The number of scientific studies and publications that have been included has increased in recent years. Accordingly, the need for the development of a complex system for the formation of self-regulation in cognitive activity in children with SEN, which can be implemented in the structure of holistic psychological support for this category of children, has been actualized.

### **1. Psychological features of children with mental retardation**

Retardation of mental development (RMD) manifests itself primarily in the slowing down of the pace of mental development and represents a special type of anomaly that manifests itself in the form of a violation of the normal pace of mental development, when certain mental functions (memory, attention, thinking, emotional-volitional sphere) lag behind in development from accepted psychological norms for this age. Scientists single out four main variants of mental retardation, the parameters of which are given in Table 1:

- mental retardation of constitutional origin (observed in children with personal and emotional immaturity caused by brain immaturity);
- mental retardation of somatogenic origin (observed in children with emotional immaturity due to long-term chronic diseases);
- mental retardation of psychogenic origin (related to adverse conditions of raising a child);
- mental retardation of cerebral-organic genesis (an organic lesion of the CNS is observed in the early stages of ontogenesis)<sup>3</sup>.

Children with mental retardation, compared to the norm, are characterized by a lack of interest and concentration when performing tasks, an inability to control their actions, reduced cognitive activity, due to which this category of children has limited ideas about the world around them, children need more time for assimilation of the passed material. Children struggle with analyzing instructions, do not plan their actions according to the task, and often lack the stage of orientation in the task<sup>4</sup>. Since in this category of children, visual-active thinking and the delayed formation of visual-figurative and verbal-logical thinking prevail, in those cases when the solution of the task is connected with the operation of images, representations, children resort to external actions, to the manipulation of objects.

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<sup>2</sup> Dakhllallah Nijmeh, Aloshi Jihan. Psychological and social characteristics of children with mental disabilities. *International Journal of Humanities and Educational Research*. Volume 4, Issue 4, 2022. 2757-5403.

<sup>3</sup> Ілляшенко Т.Д., Бастун Н.А., Сак Т.В. Діти з затримкою психічного розвитку та їх навчання. Навчальний посібник для педагогів і шкільних психологів. К.: ІЗМН. 1997. 128 с.

<sup>4</sup> Кротенко В.І., Оробей М.О. Загальна характеристика дітей із затримкою психічного розвитку. *Науковий часопис НПУ імені М.П. Драгоманова. Серія 19. Корекційна педагогіка та спеціальна психологія* Випуск 26. Київ. 2014. С. 338-341.

Table 1

**Psychological parameters of children with SEN**

mental retardation forms	Clinical and psychological manifestations	Neuropsychological features
Psychophysical infantilism	<ul style="list-style-type: none"> <li>– relative formation of mental processes, but the slow pace of their formation;</li> <li>– underdeveloped motivation for educational activities;</li> <li>– <u>personal immaturity</u>.</li> </ul>	<ul style="list-style-type: none"> <li>– violation of the dynamics of mental capacity;</li> <li>– decrease in the amount of memory and attention due to insufficient motivation of activity.</li> </ul>
Somatogenic form	<ul style="list-style-type: none"> <li>– formation of mental processes;</li> <li>– asthenia, irritable weakness.</li> </ul>	<ul style="list-style-type: none"> <li>– decrease in the dynamics of mental capacity;</li> <li>– increased exhaustion of attention;</li> <li>– decrease in memory volume in the visual and auditory modalities.</li> </ul>
Psychogenic form	<ul style="list-style-type: none"> <li>– preservation of mental processes;</li> <li>– pronounced decrease in motivation for educational activities;</li> <li>– decrease in the productivity of educational activities in connection with the pathological development of the personality (anxious mistrust, egocentrism, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>– possible "irregularity" of mental development;</li> <li>– uneven development of mental processes.</li> </ul>
mental retardation of cerebral-organic genesis	<ul style="list-style-type: none"> <li>– underdevelopment of mental processes and functions, which leads to impaired intellectual productivity;</li> <li>– partial (partial) underdevelopment of certain mental functions.</li> </ul>	<ul style="list-style-type: none"> <li>– impairment of mental capacity;</li> <li>– underdevelopment of stability, switching, attention span;</li> <li>– decrease in the amount of attention in all modalities ;</li> <li>– underdevelopment of the indicative basis of activity;</li> <li>– underdevelopment of visual-spatial gnosis and praxis ;</li> <li>– pronounced deficiency in the development of certain properties: attention, memory, gnosis, praxis.</li> </ul>

It has been noted that the formation of analytical and synthetic activity is insufficient. Successful learning of the material requires a specially developed

thematic planning for this category of children. Sensory information processing disturbances in children with developmental delay cause it to take longer to receive and process it. The speed of visual perception in them is much slower than the norm, and it is fragmentary and poorly differentiated. As a result, they have a significantly lower visual perception of objects than their normative peers. Their constancy is low. Such a child does not learn about things in an unusual situation, does not understand inverted, schematic images, perceives similarity as identity, because of this, combinations of letters are often confused. Visual thinking is also affected by the inferiority of subtle forms of visual and auditory perception<sup>5</sup>. Consequently, the level of perception development is low compared to normotypical children. Children with mental retardation exhibit disorders in spatial orientation and coordination<sup>6</sup>. The structure of the defect in cognitive activity of this category of children is dominated by violations of voluntary and involuntary memory. However, visual material is remembered better by children than verbal material, and involuntary memorization is less impaired than voluntary memorization. The use of rational methods of memorization is insufficient for children with a delay<sup>7</sup>.

Impulsivity, hyperactivity, or slowness, retardation are characteristics of children with mental retardation in the psyche, which negatively impact memory and cognitive activity. A child with mental retardation lacks interest and attention. It's challenging to recall verbal, graphic material, poems, dialogues from films, and stories. Learning the material is possible only if it provokes a strong emotional response. The child tends to be distracted during memorization, rarely empathizes with the characters of the story, and remembers the content of the work in fragments<sup>8</sup>. Memorizing instructions, rules, and sequences will pose challenges in the future.

The immaturity of the emotional and volitional sphere is a characteristic feature of children with developmental disabilities, which manifests itself in the form of organic infantilism. This type of infantilism in children is associated with the liveliness and brightness of emotions, which are typical of a healthy child. Assessment is not a strong interest of children with cerebral-organic mental retardation, they have a low level of claims, a high level of suggestibility, and a low level of criticality. Monotony, motor inhibition, and

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<sup>5</sup> Kumar I, Singh AR, Akhtar S. Social development of children with mental retardation. *Ind Psychiatry J.* 2009 Jan;18(1):56-9.

<sup>6</sup> Сильов В. М., Матвеева М. П., Хохліна М. П. Психологія розумово відсталого дитини: підручник. Київ: Знання, 2008. 359 с.

<sup>7</sup> Яновська Т. А. Особливості мисленневих процесів молодших школярів із затримкою психічного розвитку. *Науковий вісник Ужгородського національного університету. Серія: Психологія.* 2022. (2), 86-89.

<sup>8</sup> Michel Loranger, Marie Claude Blais, Sandra Hopps, Michel Pepin, Jean-Marie Boisvert and Martin Doyon. Applications of Measures of Speed of Mental Operations among Children with Intellectual Deficiency. *Education and Training in Mental Retardation and Developmental Disabilities.* 2002. Vol. 37. No. 2. 184-92.

lack of imagination are exhibited in game activity. The game is commonly viewed as a means of avoiding unpleasant activities. Children with mental retardation have a slower speech development than their peers, which has its own drawbacks. Impressive (perception and understanding) and expressive (pronunciation) speech disorders are the most prevalent of them. Impressive speech is not well-distinguished when it comes to sound auditory perception, and it's difficult to distinguish the meaning of words and speech shades. Impaired pronunciation of sounds, unformed grammatical structure, and the presence of agrammatisms are characteristics of expressive speech<sup>9</sup>. The presence of specific assimilation is a sign of speech defects in mental retardation of cerebral-organic genesis. Correctly pronouncing words that have sounds that are similar in sound or articulation is not possible for a child with mental retardation. Auditory perception and articulation problems are the cause of this.

In case of mental retardation are observed such features of motor development:

- comparatively with the norm of retardation in formation arbitrary motor and static functions;
- slowness and insufficient coordination movement in;
- restlessness, high motor activity, disinhibition;
- difficulties in assimilation new ones movements, and especially small and precise ones movements;
- insufficiency motor tone that entails a violation automation actions and movement in;
- increased exhaustion (slow pace, unclear movements);
- insufficient rhythmicity and automation movement in;
- violations development fine motor skills,
- general physical and somatic weakening, etc.<sup>10</sup>

Thus, children with mental retardation are characterized by a mosaic of disturbed and preserved links of mental activity, as well as pronounced unevenness in the formation of various aspects of mental activity. The creation of special psychological and pedagogical conditions, as well as corrective work for this category of children, is necessary. In children of preschool age, the formation of mental processes, personal qualities, development, consolidation, improvement of already formed functions is most effectively carried out within the limits of the game activity leading them. The child becomes aware of the need to acquire new knowledge and ways of acting in a game situation. The teacher can successfully carry out the child's development process by managing the game skillfully and contributing to its improvement.

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<sup>9</sup> Омельченко І. М. Психолого-педагогічні основи діагностики і формування комунікативної діяльності у дітей дошкільного віку із затримкою психічного розвитку: навчально-методичний посібник. Полтава: ТОВ «Фірма «Техсервіс». 2015. 185 с.

<sup>10</sup> Ілляшенко Т.Д., Бастун Н.А., Сак Т.В. Діти з затримкою психічного розвитку та їх навчання. Навчальний посібник для педагогів і шкільних психологів. К.: ІЗМН. 1997. 128 с.

## **2. Peculiarities of the implementation of art therapy technologies in the process of psychological support of children with mental retardation**

Psychological and pedagogical support of children with mental retardation is directly related to the features of the conceptual approach to this disorder in children's development: its causes, in particular, the influence of social factors on its occurrence and complications, age characteristics, diagnosis, prospects for correction and the dependence of its effectiveness on learning conditions. The main focus of psychological support for individuals with mental retardation is on tasks and corrections that improve their intellectual development, with the introduction of unified special training and conditions. Psychological assistance to children with developmental disabilities is considered as a complex system of psychological and rehabilitation influences aimed at increasing social activity, developing independence, strengthening the social position of a child with developmental disabilities, forming a system of value attitudes and orientation, developing intellectual processes that correspond to psycho-physical child's capabilities<sup>11</sup>.

In reality, there are various types of psychological aid for children. Specialists who work with children differ in the types of tasks they solve, such as teachers, defectologists, social workers, doctors, and others. One or another model of psychological assistance is formed by these differences. The theoretical basis of each of these models determines the methods of work used.

By its nature, psychological help can be:

- in recommendations related to further education and upbringing of the child;
- in determining the child's readiness for schooling and identifying the causes of learning difficulties;
- in the implementation of psychotherapeutic and psychocorrective effects.

Psychological support of children with mental retardation can be considered as a systematic implementation of the main types of professional activity of a psychologist, differentiated according to the current tasks of modern educational practice and contributing to the successful learning and development of each child with mental retardation. We see the main tasks of support in identifying, eliminating and preventing imbalances between the learning and development processes of children, taking into account their individual capabilities, in the correction of secondary developmental disorders manifested in the cognitive, emotional and social-behavioral spheres, in creating conditions for social-psychological adaptation personality of the child. As a basic component of psychological support, which allows for a differentiated (individualized) approach to determining the educational and

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<sup>11</sup> Войтко В.В. Психолого-педагогічний супровід дітей з затримкою психічного розвитку. Кропивницький: КЗ «КОШПО імені Василя Сухомлинського». 2017. 48 с.

compensatory opportunities of children with mental retardation and setting priorities for corrective work, formulating recommendations for teachers and parents, and monitoring the child's development, we consider a specially organized diagnostic activity a psychologist<sup>12</sup>. The main activities of a psychologist in the process of psychological support of a child with mental retardation are:

1. *Diagnostic direction*. The diagnostic process involves an initial examination, followed by systematic phased observations of the dynamics and correction of the mental development of a child with mental retardation. The work of a psychologist and other specialists at an educational institution (such as a speech therapist, a social pedagogue, etc.) must be coordinated. The collegial discussion of the results of the examination by all specialists makes it possible to develop a unified understanding of the character and peculiarities of the child's development, to determine the general forecast of his further development, a set of necessary corrective and developmental measures, and to develop a program of individual corrective work with the child<sup>13</sup>.

2. *Correctional and developmental direction*. The psychologist determines the direction and means of corrective and developmental treatment work, as well as the frequency and duration of special classes, based on the child's development characteristics. The most important task is the development of individually oriented programs of psychological assistance or the use of already existing developments in accordance with the individual psychological characteristics of a child or a group of children as a whole. The main goals of a psychologist's correctional and developmental work with children with special needs who are in educational integration are: development of the emotional and personal sphere and correction of its shortcomings; development of cognitive activity and purposeful formation of higher mental functions; formation of arbitrary regulation of activity and behavior<sup>14</sup>.

A child with mental retardation has a number of specific features that complicate the process of his communication with peers and adults, which, in turn, negatively affects the further development of his emotional and personal sphere. In this regard, the psychologist's work includes the following most important tasks: education of interest in the surrounding people in children; development of contact and the ability to gain experience from unsuccessful

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<sup>12</sup> Tekinarslan Ilknur Çifci, Sucuoğlu Bulbin Effectiveness of cognitive process approached social skills training program for people with mental retardation. *International Journal of Special Education*. Volume 22, Issue 2, 2007. 8 – 19.

<sup>13</sup> Психолого-педагогічні засади технологій супроводу дітей з особливими освітніми потребами у процесі їх соціальної інтеграції: колективна монографія / наук. ред. А. Г. Обухівська, Т. Д. Ілляшенко. Київ: Ніка-Центр. 2020. 113 с.

<sup>14</sup> Нагорна О. Б. Особливості корекційно-виховної роботи з дітьми з особливими освітніми потребами : навчально-методичний посібник. Рівне. 2016. 141 с.

communication; learning to freely regulate one's emotional state and avoid conflicts<sup>15</sup>.

The development of cognitive functions is a traditional area of work of a psychologist. It provides:

- stimulation of cognitive activity as a means of forming permanent cognitive motivation;
- development of attention (stability, concentration, volume increase, switching, self-control, etc.);
- development of memory (expansion of volume, stability, formation of memorization techniques, development of semantic memory);
- development of perception (spatial, auditory), spatial and temporal representations, sensorimotor coordination;
- formation of mental activity: stimulation of mental activity, formation of mental operations (analysis, comparison, generalization, selection of essential signs and regularities), development of elementary reasoning thinking and flexibility of mental processes<sup>16</sup>.

A psychologist conducts classes according to a plan created in accordance with the child's individual development program. An important condition of lesson planning is the implementation of the principles of complex influence on a number of higher mental functions with the selection, at the same time, of dominant objects of influence that change at least the formation of cognitive activity and its self-regulation in children with mental retardation. Self-regulation formation is particularly important at the start of schooling. A child's psychological readiness for studying at school is determined by their ability to control their behavior. Characteristic of children with mental retardation of preschool and primary school age, insufficient formation of conscious self-regulation of activity is an inhibiting factor of the child's cognitive and personal development, as well as one of the main reasons that cause difficulties in educational and cognitive activities. Therefore, work on the formation of conscious self-regulation of cognitive activity in children with mental retardation should be conducted in several directions related to the formation of a certain set of skills: set and maintain the goal of activity; plan actions; define and store the method of action; use self-control at all stages of activity; make a verbal report on the process and results of activity; evaluate the process and result of activity<sup>17</sup>. Based on the fact that a complex psychological-medical-pedagogical approach to the organization of the

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<sup>15</sup> Кроки до компетентності та інтеграції в суспільство: науково-методичний збірник /Ред. кол. Н. Софій, І. Єрмаков та ін. К.: Контекст. 2000. 336 с.

<sup>16</sup> Психолого-педагогічні засади технологій супроводу дітей з особливими освітніми потребами у процесі їх соціальної інтеграції: колективна монографія / наук. ред. А. Г. Обухівська, Т. Д. Ілляшенко. Київ: Ніка-Центр. 2020. 113 с.

<sup>17</sup> Fatimah Mohammed Palmer Art Teaching in a Special School Setting: Effect on Acquisition of Academic Skills by Children with Conditions of Mental Retardation. *Mediterranean Journal of Social Sciences*. 2013. 4(3), 13.



environment is aimed at social adaptation, rehabilitation and integration of children with developmental disabilities, we have defined a number of principles for the organization of the developing subject-spatial environment as a means of corrective work:

- the preventive orientation of all types of its funds solves the issue of preventing the appearance of deviations in the child's psychophysical development due to the creation of special social-adaptive ways of the child's interaction with people and the environment, as well as the provision of special didactic, game and household materials;

- the propaedeutic orientation of the correctional and developmental environment provides the child with a multi-stage and gradual introduction to the information field, in which a barrier-free space is organized, special equipment is selected and blocks are rationally placed, crucial problems of sensory, motor, intellectual training, psycho-emotional relief and social orientation, etc.;

- The transforming, transformed influence of the environment on deviations in the child's development and the formation of compensatory ways of orientation in children based on the activation of preserved analyzers, thinking, speech, memory;

- a special, accented information field of the developing subject-spatial environment takes into account the peculiarity of cognitive processes in children with developmental disabilities and the specificity of contacts and ways of obtaining and processing information<sup>18</sup>.

3. *Advisory, educational and preventive direction.* The work in this direction is carried out by us to ensure the provision of assistance to teachers and parents in the upbringing and education of a child with mental retardation.

Recommendations are developed in accordance with the age and individual characteristics of children, the state of their somatic and mental health, measures are taken to improve the professional competence of teachers, and to include parents in solving correctional and educational tasks.

The successful implementation of corrective and developmental work necessitates the cooperation of all specialists in the educational institution, as well as the active help and support of parents. In reality, parents tend to treat the interaction with a psychologist and other specialists indifferently, ignoring problems, or even negatively. The degree of their willingness to cooperate is what determines the form and content of work with parents<sup>19</sup>.

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<sup>18</sup> Войтко В.В. Психолого-педагогічний супровід дітей з затримкою психічного розвитку. Кропивницький: КЗ «КОШПО імені Василя Сухомлинського». 2017. 48.

<sup>19</sup> Варіна Г.Б. Особливості використання арт-терапевтичних технологій в процесі психологічного супроводу сімей, які виховують дітей з особливими потребами. Концептуалізація системи сімейно-орієнтованого психолого-педагогічного супроводу родини, яка виховує дитину з особливими потребами: колективна монографія/ О.В. Царькова, О.О. Прокоф'єва, Г.Б. Варіна та ін.; за заг. ред. докт. психолог. наук О.В. Царькової. Мелітополь. 2019. 389-409.

So, taking into account the fact that the child's mental retardation covers the whole mental sphere and is systemic defect, upbringing and development have to build with positions of the system approach. It is necessary to form a full-fledged basis for formation higher mental functions and to provide special psychological and pedagogical conditions necessary for them formation. Organization and contents of Art psychological escort children from delay mental development has specific objectives and task that conditioned special needs of children this one categories, their psychophysiological features and capabilities<sup>20</sup>.

Empirical research on the implementation of art therapy technologies in the process of psychological support of children with mental retardation was conducted on the basis of the "Inclusive Resource Center" of the Melitopol City Council of the Zaporizhzhia Region. 60 children in the 6th year of life took part in the study, including 20 normally developing preschoolers and 40 children with mental retardation (whom we later divided into control and experimental groups) – pupils of kindergartens (groups) of compensatory type. The assessment of the child's examination results was based on a qualitative analysis of the features of his mental activity and, where possible, on the use of quantitative indicators of the child's achievements. Evaluating the performance of each individual task, the following significant indicators were analyzed:

- the child's ability to organize his activities: how he begins to perform the task, how pronounced is the stage of orientation in the task, how the work process proceeds (actions are planned or chaotic, or characteristic impulsive reactions, "field" behavior);

- methods of work (rational/irrational) used by the child when performing the task: visual correlation, trying on, unsystematic repetitive actions;

- the child's ability to control his activities, notice errors in work, find and correct them;

- the child's ability to be guided by a model: the ability to work according to a model, to compare his actions with the model, to carry out step-by-step control;

- the child's attitude to the result of his work: does he show interest in the final result; shows an indifferent attitude; is guided by the experimenter's assessment, and not the result itself;

- understanding of the content of the task, receptiveness to help, the ability to carry out the transfer of the shown method to a similar task.

To study the readiness of children with mental retardation to master the techniques of organizing their own activities, certain degrees of stimulating and organizing help were developed, which were offered to the child

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<sup>20</sup> Zhytnik T., Liapunova V., Varina H., Kobylnik L. Artistic and aesthetic senior preschool age child development: Organizational and management block. *Eduweb-revista de tecnologia de informacion y comunicacion en educacion*. 2022. Volume 16. Issue 3. P. 285-293.

consistently, with a gradually increasing amount of external regulation of his actions. The amount of help, which was sufficient for the successful completion of the task, served as an indicator of the "zone of immediate development", that is, the child's potential capabilities, which are actualized in joint work with an adult. When analyzing the results of the tasks, such characteristics of the child's activity were taken into account, such as complete acceptance of the task, retention of the goal during the entire period of execution, planning of the stages of the activity and their implementation, control and evaluation of the results. For the systematic analysis of the results of diagnostic methods and the determination of the level of formation of voluntary regulation of the cognitive activity of children with different educational opportunities, parameters characterizing different skills of voluntary regulation of activity were selected: set and maintain goals; to organize one's own efforts for a long time; choose methods of action and organize their consistent implementation; evaluate intermediate and final performance results; correct the mistakes made. Special attention was paid to the analysis of the conditions for accepting the task and maintaining the goal of the activity, the ability to follow the instructions of an adult and act according to the rules during frontal and individual work<sup>21</sup>.

On the basis of the selected indicators, four levels of formation of the conscious regulation of cognitive activity of children aged 6–7 years, characterized by different educational opportunities, are defined and described (from the "high norm" variant – 1st level – to pronounced developmental delay – 4th level). They (namely levels from 2nd to 4th) are correlated with the corresponding basic characteristics of the child's mental activity presented in section 4, on the basis of which it is possible to assign him to one or another typological variant of mental retardation, and specify their content for each of these variants.

*1st level.* Children make an effort to work with maximum efficiency during the examination, demonstrating high activity and concentration. At a high level of productivity, mental operations are formed: children independently use rational methods to solve mental tasks; most operations are done mentally. Children can perform intermediate and final task control independently, guided by a sample, and sometimes speak out loud about the sequence of actions. The task's goal is kept constant throughout its implementation, and the results are evaluated adequately. Children don't shy away from challenging tasks after completing an easy task, as a rule. Thus, in children's work, orientational (setting and maintaining a goal, defining significant conditions), prognostic (planning of activities) and executive (formation and maintenance of a course of action) stages of voluntary regulation of activity are clearly observed. For these children, the presence of an adult, external

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<sup>21</sup> Адапована програма з арт-терапії для дітей з обмеженими можливостями. Електронний ресурс. Режим доступу: URL: <http://corr.ks.ua>.

motivation, and the form of task representation are not significant. Their situational independence is evident. This level of self-regulation characterizes mostly children with a rather high "norm of development".

*2nd level.* Children willingly, but often impulsively, without proper prior orientation, accept the task. They tend to be distracted from it after a short time, which is why they need external motivation and the realization of personal experience. They are capable of planning their activities, choosing methods of action and their consistent implementation, but intermediate and final control of their own actions is possible only when reminded by an adult. Mental operations are formed at the appropriate age level, but their independent implementation when performing mental tasks is difficult, which is especially evident in the absence of an adult or frontal work. Children often avoid situations of failure by not choosing more challenging tasks after successfully performing lunges. They are capable of assessing their achievements. Thus, the orientation stage of voluntary regulation of activity in children is difficult and requires external stimulation; predictive and executive stages are formed: children are able to plan their activities, choose methods of action and organize their sequential implementation. The manifestations of voluntary regulation of cognitive activity in children of this age group are dependent on the circumstances. Work productivity is significantly affected by the presence of an adult and even the support of a child's personal experience. Children with mental retardation who are conditionally assigned to group A have a high level of self-regulation.

*3rd level.* When children are playful and accept the general purpose of the activity, they will willingly start performing tasks without realizing or losing most of the rules. It's hard to maintain long-term attention to one type of activity and organize one's own efforts. As a rule, they require visual support when performing intellectual tasks. Satisfactory productivity of the activity is ensured not only by the presence of an adult, but also by his active participation in all its stages: formulating and maintaining the goal of the activity, determining the conditions for its achievement, drawing up a program and choosing methods of action, evaluating and correcting the results of the activity. The children fail to critically evaluate their successes (most often they claim that they have completed the task). Children rate tasks that are interesting in content and successfully completed by children as easy. Children demand more challenging tasks after performing an easy task incorrectly. The executive stage has already formed, making the orientational and prognostic stages of voluntary regulation of activity in these children difficult. The success of the activity depends significantly on the presence of an adult and the presentation of the task. Children with developmental disabilities have a level of self-regulation that is tentatively assigned to group B.

*4th level.* It is common for children to be reluctant to start work, get distracted, avoid intense intellectual efforts, get tired quickly, overlook the

importance of the task, and fixate on insignificant details. Their mental activity is not productive and they are unable to independently perform even potentially available tasks. In this regard, they need the active participation of an adult not only at all stages of determining the purpose and conditions of activity, but also during the implementation of specific actions. The child's attention is diverted from the general goal when the material is presented in a playful way, leading to playing. The formation of self-evaluative events is poor. Not only are orientational and prognostic stages, but also executive stages of arbitrary regulation of activity are difficult for these children. The children don't exhibit clear situational dependence; they are equally unsuccessful in situations with different external motivation and presentation of the task. Children with mental retardation who are conditionally assigned to group C are characterized by this level of self-regulation. The purpose of the experimental stage of our research work was an in-depth study of the structural and substantive features of the holistic process of conscious regulation of activity in preschoolers with learning disabilities, aimed at determining the conditions for its successful implementation, development and testing, within the framework of organized psychological support, a comprehensive program for the formation of the regulatory sphere in children of the specified categories of means of art therapy.

At the ascertaining stage of the study, the possibilities of conscious self-regulation in children with mental retardation were studied: its links were analyzed, such as the child's acceptance of the purpose of the activity, definition and maintenance of the activity program, formation and preservation of the method of action, implementation of intermediate and final control. When analyzing the results, special attention was paid to indicators of activity productivity and efficiency of regulation: decrease or increase of work capacity, readiness to automate skills, transfer of self-regulation skills to new conditions, switching to new tasks. The impact of various types of aid on the effectiveness of activity regulation was also taken into account. The following methods were used in the work: " Tapping test ", Pieron-Ruser test, "Graphic pattern". For the qualitative analysis and interpretation of the results of the Tapping test, 4 levels of arbitrary regulation of actions were selected.

1st level: effective performance of task 2, which requires the student to self-organize actions according to a new, unfamiliar rule. At the same time, tasks 3 and 4 are effectively performed. This indicates the presence of the ability to self-regulate actions in new conditions.

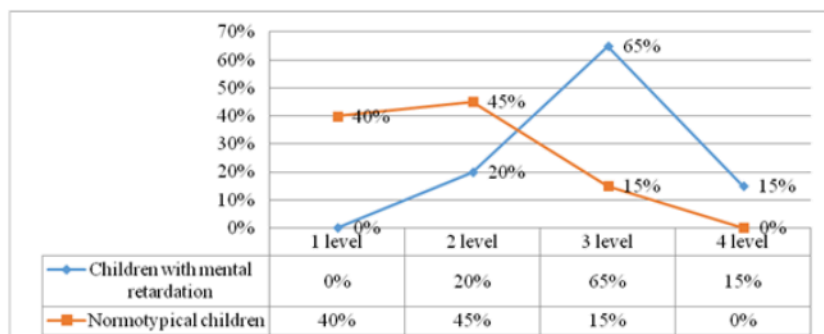
2nd level: effective performance of tasks 3 and 4, in which self-regulation skills are transferred to new, but insignificant conditions (at the same time, task 2 is not performed). This suggests that the child is able to achieve good results if he is able to reduce complex conditions to simpler ones.

3rd level: effective performance of task 3, which requires the child to self-organize in conditions familiar to him, in case of failure to perform tasks 2

and 4. This indicates sufficient formation of self-regulation skills of actions in stereotypical conditions.

4th level: failure to complete tasks 2, 3 and 4, which indicates the lack of self-regulation of actions even in stereotypical conditions.

The level of development of voluntary regulation of actions in children with ASD and their normally developing peers was characterized by significant differences ( $p < 0.01$ ). Children with mental retardation (both control and experimental groups) mostly showed sufficient formation of regulation of actions in stereotypical, familiar conditions for students (level 3 – 65%), but the transfer of self-regulation skills to new, slightly changing conditions (level 2) was carried out independently only 20% of preschoolers. Inability to regulate stereotypic processes (level 4) was observed in 15% of children with mental retardation. None of them showed the possibility of self-organization of actions according to a new, unusual rule for children (level 1).



**Fig. 1. Results of the "Tapping test", % (confirmatory experiment)**

Children mostly demonstrated sufficient energy to perform task 1 productively (average performance during task 1 was 106.3 points). However, they had insufficient stability in their work and problems with maintaining effort during long-term performance of simple work (judging by the drop in performance of task 5 by 10-15% compared to task 1; average performance at task 5 – 85.9 points). Regardless of the performance of tasks 2, 3, and 4, the productivity of their performance decreased by about half in all children (2nd task – 41.7; 3rd task – 53.8; 4th task – 44.3). Apparently, this can be explained by the effort invested in the regulation of voluntary activity during the implementation of an action according to a rule. The majority of normotypical children completed the tasks mainly at the 1st (40%) and 2nd (45%) levels. 15% of preschoolers showed the third level. Not a single child of this group showed a low result. The performance of tasks 1 and 5 practically did not change (120.3 and 118.5 points, respectively). The change in productivity when performing tasks that require conscious regulation of voluntary activity

showed the same dynamics as in children with SEN (2nd task – 61.5; 3rd task – 58.6; 4th task – 60, 3 points).

The possibility of conscious regulation of voluntary activity in cognitive activity differed among children with mental retardation from their normative peers. In most cases, these children were only able to regulate their actions freely in stereotypical, familiar conditions. It was challenging to transfer self-regulation skills to insignificant conditions independently. The characteristic of these children was a decrease in performance associated with fatigue. The study of voluntary regulation of activity (programming by the child of his own actions and their control, retention of instructions, distribution of attention according to a number of signs, switching to new tasks), as well as the influence of various types of assistance on the effectiveness of activity was carried out using the Pierson-Ruser method. For work, children used a simple pencil and a form with the image of geometric figures (4 types), located at the same distance from each other in a square matrix of 10 x 10. The experimenter drew a sample of filling the figures on the board. Conventional designations (symbols: point, plus, vertical line, etc.) were put in three figures. The fourth figure always remained "empty". The sample remained on the board until the end of the work. In accordance with the purpose of the study, three variants of the task were used:

The 1st option (traditional) made it possible to analyze the purposefulness of the activity, the ability to retain the instruction, determine the total working time, as well as the number of figures filled in each minute (the dynamics of the change in the pace of activity), and count the number of errors.

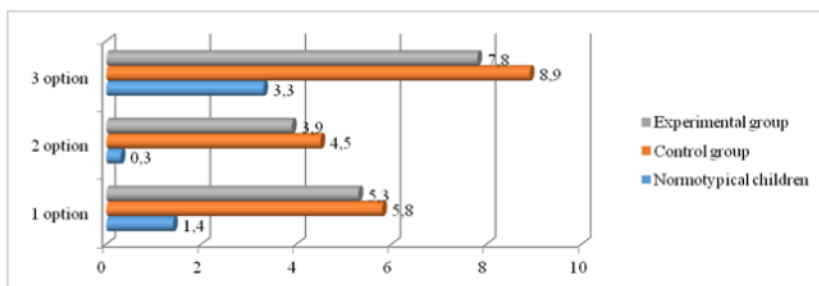
2nd option (with instructions that provide organizational help): children were asked to complete the task as carefully as possible, take their time, concentrate as much as possible, check the correctness of the execution. During the execution of the task, this instruction was repeated several times. This variant of the technique allowed us to analyze the possibilities of activation of self-regulation skills with the help of the experimenter.

The 3rd option (filling the figures with other symbols; given immediately after the 1st or 2nd option) allowed to assess the individual possibilities of switching and automating the skill when changing the instructions.

In the process of performing the task, the number of shapes filled in every minute was recorded. In the examination protocol, the experimenter noted from what moment the child starts working from memory, how often he refers to the sample, whether he performs speech regulation of activity, whether he is distracted during the task, etc. The generalized results of the Pierson-Ruser test are presented in fig. 2.

The activity of children with mental retardation was characterized by unevenness. The number of shapes filled in each minute varied throughout the task. With the standard application of the method (option 1), the subjects with ZPR made significantly more errors than their normotypical peers (on average, 5.3 and 1.4, respectively; the difference is significant at the level of

significance  $p < 0.01$ ). On average, they spent more time on the task than children with normal development (4'45" and 3'20", respectively). Insufficient purposefulness of preschoolers' activities was a distinguishing feature. Frequently, they were distracted, skipped a line in the form, and were confused by symbols. Having forgotten what this or that figure should be filled with, these children did not refer to the sample, but tried to remember the corresponding symbol, losing a lot of time and increasing the probability of mistakes. During work, they might focus on their own previous designations instead of the sample, resulting in repeated mistakes. These children rarely conducted speech regulation of activity.



**Fig. 2. The results of the Pierson-Ruser test (average values of absolute values)**

To study the influence of the experimenter's organizational help on the activation of self-regulation links, a modified instruction was given that focused the children's attention on maximum concentration, leisure and control of the correctness of the task (option 2). In children with mental retardation, this type of assistance did not lead to a significant increase in productivity (3.9 and 4.5; the difference is not reliable). Despite the awareness of the instruction (maximum accuracy regardless of the speed of execution), it was difficult for them to organize the consistent implementation of the activity program, as well as to control its result. Normotypical children significantly improved their results (1.4 and 0.3 errors, respectively;  $p < 0.05$ ). At the beginning of the work, they often refer to the sample, saying their action out loud and checking it. During the entire task, speech regulation was preserved in many children. From the outside, they appeared healthy and focused. The assessment of the individual ability to switch and automate the skill when changing the instruction (option 3 – filling in the figures with other symbols) showed a significant deterioration of indicators ( $p < 0.05$ ) both in children with mental retardation (7.8 errors) and in their normotypical peers (3.3 errors). It was difficult for the children to switch from the activity program they had already mastered to another program. For example, in the previous option (1 or 2), they had to mark a triangle with a dot, a circle with a

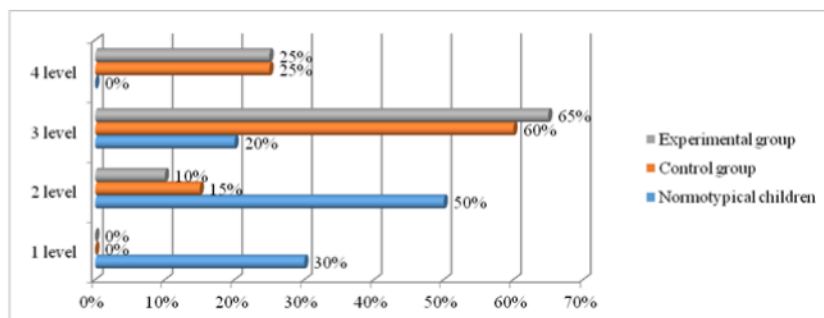


plus sign, a rhombus with a vertical line, and leave the square "empty". Option 3 consisted in changing the program: now children should mark a square with a plus sign, a triangle with a vertical line, a rhombus with a horizontal line, and leave the circle empty. A significant number of returns to the previous activity program were observed during the task, particularly at the beginning and end of the work. The amount of time required to finish the task increased significantly: in children with mental retardation from 4'45" to 5'35", and in normal children from 3'20" to 4'40". During the work, several children with mental retardation began to refuse to continue. In difficult conditions, both children with mental retardation and their normal peers experienced characteristic problems in regulating activities.

The study of conscious self-regulation skills (ability to work according to a model, to define and maintain an activity program, to form and save a course of action, to carry out intermediate and final control, to correct mistakes) was carried out using the "Graphic pattern" technique. Children used a simple pencil and a grid notebook for their work. As a sample, the children had to redraw the graphic pattern depicted by the experimenter on the board and continue it to the end of the line. The task involved evaluating the accuracy of copying the sample and the correctness of reproducing the pattern afterwards. Four levels of task performance were chosen to analyze and interpret the results. Children who were able to complete the task without making any mistakes were considered the first level of success. The pattern was copied exactly and continued until the end of the line. The children worked with attentiveness, concentration, and were constantly checking with the model. The 2nd level consisted of children who accomplished the task, but acknowledged some inaccuracies, which they corrected by comparing their result with the sample. Children who did not make mistakes at the first stage of the task (drawing a pattern sample) belonged to the 3rd level, but experienced difficulties when continuing the pattern on their own: it was difficult for them to independently maintain a program of actions and control the correctness of its execution. Children who were unable to independently copy a graphic pattern from a visual sample were classified as the 4th level. The results of the task showed a significant difference between children with mental retardation and normal peers ( $p < 0.01$ ). No child with mental retardation achieved the 1st level of task performance (Fig. 3).

Children with mental retardation were found to have the most typical level of task success (60%). The children started the task and dealt with the first stage almost without any errors. At the second stage, they assumed errors expressed in the omission or replacement of individual elements of the pattern, going beyond the boundaries of the cell, etc. This was especially evident at the end of the work. Concentrating on purposeful activities was a challenge for these children. The mistakes made were not noticed because they did not check with the sample after completing the task. At the 4th level (25%), difficulties were already observed in some children with SEN at the first stage

of the task (drawn from a sample). These preschoolers were able to cope with the task with varying degrees of success due to the organizational changes in the diagnostic procedure, which involved individual work. Children with normotypical development during frontal work accurately copied the sample and continued the pattern to the end of the line; at the same time, they either did not make any mistakes (1st level – 30%), or independently corrected errors and inaccuracies, comparing their work with the sample (2nd level – 50%). Only 20% of children achieved Level 3 results.



**Fig. 3. The results of the "Graphic pattern" technique, % (confirmatory experiment)**

A generalized analysis of the results of the ascertaining stage of the study allowed us to draw a conclusion about the insufficient degree of conscious regulation of voluntary activity in cognitive activity in 6-year-old children with cerebral palsy and the reliable difference of such children from their normative peers in terms of the level of formation of various links and skills of conscious self-regulation. Self-regulation problems were observed in both the presence of a pronounced delay in mental development in a child and in its mild forms. During frontal work, it was difficult for preschoolers with special needs to organize their own efforts for a long time, choose methods of action and consistently apply them, evaluate intermediate and final results of activities, and correct mistakes. Making changes to the conditions of conducting the examination, external help in organizing activities (simplified repetition of instructions, emotional support, transition from frontal work to individual work, etc.) led to a significant improvement in results.

The identified features of arbitrary regulation of the cognitive activity of preschoolers with mental retardation explain the difficulties these children experience as described by educators: they have difficulty learning academic skills, they do not obey the requirements of discipline, they have conflicts with their peers. The conducted experimental research made it possible to reveal the actual level and zone of immediate development of voluntary regulation

of cognitive activity in children with mental retardation, as well as to scientifically substantiate their special needs in the field of its formation:

- accounting of the specifics of self-regulation of children with mental retardation when organizing the entire educational process;
- provision of preschoolers with special help in understanding and overcoming self-regulation difficulties;
- special work on the formation of the ability to independently organize one's own activities, awareness of emerging difficulties, the ability to ask for and use the help of an adult;
- special socio-pedagogical and psychological activation of independence when solving educational, game and household tasks;
- special work should be devoted to the formation of the ability to apply knowledge and skills acquired during education and upbringing in everyday life.

Special psychocorrective conditions necessary to actualize the potential of these children should include, on the one hand, the external organization of the environment aimed at developing the leading activities of the child and the formation of age-appropriate life skills, and on the other hand, special psychological work on the formation of conscious self-regulation skills and activation of own efforts. At the same time, the program of correctional and developmental work of a psychologist must be differentiated and take into account the special needs of children with mental retardation with different levels of formation of the conscious regulation of cognitive activity. Taking into account the peculiarities of the development of children with mental retardation and the leading type of activity, it is advisable to develop and implement a program based on art therapy.

The practical application of art therapy in the process of working with children with mental retardation is manifested in psychological and pedagogical support – activities aimed at creating a system of social and psychological conditions that contribute to the successful learning and development of each child. Art tools play a leading role in ensuring socio-pedagogical work, because it is a unique source of socialization of a child with special needs, enriches the child's inner world with immediacy and visibility. Negative emotional manifestations in the family and children's team are regulated by this, which has a positive effect on the emotional sphere. Through art, one can cleanse themselves of accumulated negative emotions and perceive the environment in a positive way. Art therapy is a technique for healing that utilizes artistic creativity to awaken certain emotions. Art therapy work can incorporate drawing, sculpting, music, fairy tales, movement, dance, and other forms of human creative activity, but visual activity is the primary activity. Art therapy tools are effective in the educational process because they combine thought processes with emotional saturation. Art therapy enables you to create a 'situation of success', as creativity creates a sense of satisfaction, which is crucial for children with retardation. Art therapy provides the

necessary socializing function by providing a sense of contact with others. Art therapy, which deals with the influence of various art forms on a person, is used both independently and in conjunction with medicinal, pedagogical, and other means. Art therapy can be done with children using a variety of approaches. Further consideration will be given to information about art therapy methods in a concise form.

In the process of organizing classes, it is important not so much to achieve a certain result, but to create such conditions that contribute to the general development of the child and the correction of his psychophysical disorders, under which he will believe in his abilities and feel success, satisfaction, and emotional elation during classes. Based on the fact that the child perceives the surrounding environment through creativity, namely through tactile senses, hearing, sight, I decided to implement music therapy in the lessons of fine arts and manual labor. Thanks to the pedagogical observations of children with mental retardation during lessons and during recess, I discovered the following: children who have high anxiety and children who have difficulties in communicating with the surrounding children during the use of musical pauses in the lesson and during recess, their emotional state improved, it became easier for them to make contact with other people, the level of shyness and shyness began to decrease. Children who did not work independently in lessons without the help of an adult due to the fear of making a mistake, doing it wrong, but during the use of a musical pause, a desire to perform tasks on their own, which was not observed before, awoke in them.

The child's mental development is greatly impacted by productive activities, such as drawing. The development of visual thinking and skills like analysis, synthesis, juxtaposition, comparison, generalization, etc. is closely tied to drawing. Younger schoolchildren can learn to distinguish features, qualities, external properties of objects, main and minor details, convey proportions, and compare the sizes of details by working on a drawing. Drawing also teaches children to think and draw conclusions. The vocabulary has been enhanced. Program for the development of conscious regulation of cognitive activity with elements of art therapy includes:

1. Isotherapy – influence means artistic arts : drawing, sculpting, decorative and practical art etc.;
2. Music therapy – influence through perception music ;
3. Fairytale therapy – influence in form fairy tales, parables.
4. Games therapy – influence with using games \_

Children with mental retardation have an insufficiently formed readiness for mastery of knowledge and subject concepts, which is associated with a low level of their cognitive activity, which leads to underdevelopment of language and thinking. Children with this disorder are not well-perceived by others, making it challenging for them to integrate into society. The use of art therapy methods in the practice of the work of a psychologist help a child with developmental disabilities to expand their understanding of the world around

them, to realize its integrity, and to develop hand motility. Therefore, the issue of organising and conducting correctional and developmental work with elements of art therapeutic methods with this category of children aimed at harmonising their inner world, improving their social and psychological adaptation, and raising the level of general development becomes relevant.

**The purpose of the program** is to promote the development of conscious regulation of cognitive activity in a child with mental retardation, to create conditions for the realization of his inner potential, help in overcoming and compensating deviations that hinder his development. **Tasks of the program:**

1. Reduction of emotional tension, restoration of emotional balance.
2. Correction and development of cognitive processes.
3. Activation and improvement of mental operations.
4. Development of communication skills and abilities.
5. Improvement of movements and sensory-motor development.
6. Vocabulary enrichment.
7. Learning auto relaxation techniques.

**The structure of the corrective and developmental lesson:**

1. Traditional greeting.
2. Exercises for the development of hand motility.
3. Exercises for the development of cognitive processes, cognitive sphere.
4. Art therapy exercises.
5. Relaxation
6. Reflection.
7. Farewell.

The work was carried out according to a certain scheme of joint activities of a child and an adult, aimed at the assimilation and implementation of the action program by the child.

1. Joint step-by-step performance of actions according to a visual model with the accompanying guidance of an adult. At this stage, programming and control was provided by a psychologist.

2. Joint step-by-step execution of actions according to a visual sample. At this stage, programming and control were shared between the adult and the child. The psychologist organized compliance with the program and control actions of the student – checking the result with the program.

3. Joint execution of actions according to the visual program with the transition from step-by-step to collapsed forms of program implementation. At this stage, the psychologist's role in programming and control was reduced.

4. Independent execution of the action according to the internalized program with a return to the visual program in case of difficulties. The child performed and controlled his actions independently. The psychologist monitored whether the child turned to the visual program in case of difficulties, and reminded him of this if necessary.

5. Independent performance of the action according to the internal program and transferring it to the new material. The possibility of transfer was controlled by an adult<sup>22</sup>.

When completing the tasks, we sought to form the child's awareness of all aspects of self-regulation: awareness of the task; awareness of conditions and rules of activity; awareness of the action program; awareness and assessment of activity results; awareness of the need to correct activity results.

The psychologist chose the initial level of difficulty of the tasks and the pace of progress (depending on the need for repeated performance of the same type of tasks or the student's ability to quickly move to more complex ones). When organizing corrective and developmental classes, it is necessary to proceed from the child's capabilities: the task should lie in the zone of moderate difficulty, but be accessible, since the first stage of corrective work must provide the child with a subjective experience of success and, in return, certain expenditure of effort. According to the results of the Tapping test, after corrective work, about half of the children from the experimental group were able to regulate simple actions and effectively transferred the skill to complex actions. 40% of children with mental retardation acquired the ability to simultaneously organize complex events.

During the performance of the task, the children showed interest in the quality of performance. It is interesting to note that the children of the experimental group began not only to place the dots in the form of the corresponding shape tasks, but also to consistently (and not chaotically, as at the beginning of the year) place these shapes in the corresponding field of the form. With a slight increase in activity productivity (according to the number of points scored before and after the experimental training – 106.3 and 110.7, respectively), there was a significant improvement in the performance of tasks ( $p < 0.05$ ), which cannot be explained only by the growing up of children, since in children with mental retardation in the control group did not observe such an increase in efficiency. These changes in the efficiency of regulation of voluntary activity can be explained by the special work that was carried out with the children of the experimental group.

Thus, in comparison with the results of the ascertaining experiment, the indicators of self-regulation of the children of the experimental group significantly approached the indicators of their normative peers (1st level – 70%, 2nd level – 30%). No significant changes were observed in the control group (1st level – 10%, 2nd level – 20%, 3rd level – 65%, 4th level – 5%). The effectiveness of performing the tasks of the Pieron-Ruser method by children with special needs in the experimental group also increased. They began to make significantly fewer errors (an average of 5.3 and 1.0,

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<sup>22</sup> Fatimah Mohammed Palmer Art Teaching in a Special School Setting: Effect on Acquisition of Academic Skills by Children with Conditions of Mental Retardation. *Mediterranean Journal of Social Sciences*. 2013. 4(3), 13.

respectively, before and after the experimental training;  $p < 0.01$ ), while the time to complete the task did not change significantly. Many children carefully studied the sample before starting the task, whispering comments on the symbols to fill in the shapes, indicating pre-programming of actions and verbalization of the program. When the activity program was not fully mastered at the initial stage, the children turned to the sample, trying to remember not just individual correspondences, but the entire set. Different methods were employed to regulate speech during activity. Some children spoke the names of symbols at the stage of learning the program, others resorted to language regulation at the end of the work, thus helping themselves to avoid mistakes due to fatigue. After reaching a certain level, the activity pace either increased gradually or remained unchanged. Almost all of the children immediately corrected their mistakes. The experimenter's organizing help (option 2) did not lead to a significant improvement in the results of the children of the experimental group (1.0 and 0.3 errors; the difference is unreliable). The reason for this was different from the one that occurred during the ascertaining experiment. Before the experimental training, children had problems with the organization of consistent implementation of the activity program and control of its results. By the time of the control experiment, as a result of corrective and developmental classes, these problems were mostly overcome, and the children had already formed an internal attitude to attention in various types of activities, which allows them to effectively cope with the task without additional organizational help of the experimenter.

Children's work during the task became more uniform. However, certain problems of arbitrary regulation of activities in difficult conditions still remain (if it is necessary to switch attention – option 3). When performing this version of the methodology, they made a significant number of errors (4.2), but, unlike at the beginning of the year (7.8), they independently noticed and corrected some of the errors during the work.

The results of tasks performed by the children of the control group showed a certain improvement in some parameters, in particular, in the number of mistakes made (5.8 and 3.5 at the beginning and end of the school year, respectively). This improvement was especially noticeable during the execution of the task with the organizational help of the experimenter, which was significant for these children ( $p < 0.05$ ) and led to a significant improvement in the efficiency of the activity (the number of errors decreased from 3.5 to 1.9 in total). It should be noted that the pace of activity of children in the control group remained uneven, as it was at the beginning of the year. Exhaustion set in pretty quickly.

In general, the results of the children from the experimental group were significantly better, and their comparison with the results of the control group showed the reliability of the difference ( $p < 0.05$ ).

The results of the implementation of the "Graphic pattern" technique also demonstrated an improvement in the effectiveness of activity regulation in the

children of the experimental group (1st level – 30%, 2nd level – 40%, 3rd level – 30%;  $p < 0.05$ ).

Thus, about 70% of children have developed the ability to work accurately according to the model, to independently correct the mistakes and inaccuracies made during the task. The children showed a steady interest in the quality of the task. The children did not need the experimenter's organizational help, the task did not cause any difficulties.

Normotypical children's results also improved (1st level – 55%, 2nd level – 45%), while no such significant changes were observed in the control group.

the corrective and developmental work carried out on the formation of conscious regulation of cognitive activity in the children of the experimental group.

## **CONCLUSIONS**

The analysis of numerous scientific and research developments directly or indirectly related to the problem of accompanying children with mental retardation allows us to assert that, despite the undisputed recognition of the high significance of this activity and the presence of separate productive attempts to implement its specific directions, at present there is no holistic conceptual approach to psychological support, which takes into account the heterogeneity of the development of children of this category and is oriented towards achieving the goals of modern education of children with special educational needs. The implementation of these goals based on the potential possibilities of psychological support requires a description of the range of professional participation and specific areas of the psychologist's work, as well as specification of the spectrum of tasks and content of his activity. Based on the results of the analysis of existing approaches to the content and organization of psychological support for children in the educational environment, as well as on the basis of the integration of our own work experience in this field, we identified and described three main interrelated types of activities that determine the functionality of a special psychologist who provides professional support of children with mental retardation in a modern educational environment – diagnostic, corrective-developmental, expert-consultative. The need to identify typological variants of mental retardation as the basis for a differentiated approach to building programs of comprehensive correctional assistance for children with mental retardation is confirmed. The proposed scheme for building the specified typology is based on a detailed phenomenological description of the variants of mental retardation. The main guidelines for correctional work are based on the specifics of mental activity, behavior, and social-emotional development of children in this category. The content of correctional and developmental work aimed at the formation of life competencies as the basis of social adaptation and conditions for successful socialization of children with mental retardation



is described. In order to ensure the productive practice of establishing options for the development of children with mental retardation, which are the basis for determining differentiated educational conditions for them, the basic characteristics of the child's mental activity and behavior are highlighted and described, allowing to assign him to one or another typological variant of mental retardation. Based on them, a compact, differentiated description of different groups of children is presented, based on which additional possibilities for streamlining the procedure of functional diagnostics and increasing the effectiveness of the application of its results in solving the tasks of psychological support appear. The effectiveness of the proposed program for the development of voluntary regulation of the cognitive activity of children with mental retardation with elements of art therapy is shown, which implies the need for a differentiated approach to the organization of correctional work depending on the expressiveness and nature of the child's mental development disorders.

### **SUMMARY**

The analysis of psychological characteristics of children with mental retardation is the focus of the work. The article provides a detailed analysis of the psychological factors that influence the personality development of a child with mental retardation. In the system of correctional work with children with mental retardation, the main areas of use of art therapy are highlighted: psychophysiological, related to the correction of psychosomatic disorders; psychotherapeutic, related to the impact of art therapy technologies in the cognitive and emotional sphere; psychological, performing cathartic, regulatory, communicative functions; socio-pedagogical, related to the development of aesthetic needs, the expansion of the general and artistic-aesthetic horizons, and the activation of the child's potential in practical artistic activity and creativity. The paper presents the results of the implementation of a correctional and developmental program with elements of art therapy, aimed at the development of the conscious regulation of cognitive activity in a child with mental retardation, the creation of conditions for the realization of his inner potential, help in overcoming and compensating deviations that hinder his development. Art therapy, providing a dynamic and harmonious interaction between the child, the product of his creativity and an adult (psychologist, teacher, educator), not only has a therapeutic or corrective effect on the psychophysical state of the child, but also implements the main functions of psychological support: educational, developmental, diagnostic, corrective, socializing. According to the results of the empirical study, the effectiveness of the implementation of the program based on art therapy technologies in the process of development of the conscious regulation of cognitive activity in a child with cerebral palsy has been proven.

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