E-learning Environment as a Means of Inclusion of Students with Special Needs

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Abstract

This article dwells upon the issue of selection of appropriate pedagogical approaches in order to create positive eLearning experience for students with special needs in the inclusive education environment, which conforms to the students' needs and guarantees maximum curiosity and engagement. The article is based on the results of the recent research in the area of application of eLearning for schoolchildren with special needs. It explores effective approaches and knowledge management tools that provide active participation and immersion of students in eLearning process, and as a result – the formation of new life competences.

Keywords: e-learning environment, inclusive education, students with special needs, active engagement and immersion, principles of inclusive virtual learning environment, pedagogical approaches.

E–learning jako sposób inkluzji uczniów ze specjalnymi potrzebami edukacyjnymi

Abstrakt

Artykuł ukazuje nowe podejście do kwestii edukacji włączającej, promujące stosowanie e-learningu w procesie nauczania uczniów ze specjalnymi potrzebami edukacyjnymi. Zaprezentowane wyniki najnowszych badań w tym obszarze pokazują, że wykorzystanie nowoczesnych technologii informacyjno-komunikacyjnych w połączeniu z odpowiednio dobranymi metodami nauczania, przyczynia się do wzrostu aktywności i zaangażowania uczniów a co za tym idzie do rozwijania nowych kompetencji życiowych.

Słowa kluczowe: środowisko e-learning, edukacja włączająca, uczniowie o specjalnych potrzebach edukacyjnych, aktywne uczestnictwo, metody dydaktyczne stosowane w wirtualnym procesie nauczania.

Eлектронне навчальне середовище як засіб інклюзії учнів із особливими потребами

Анотація

У статті розглянуто питання вибору відповідних підходів з метою створення позитивного досвіду електронного навчання учнів з особливими потребами в інклюзивному освітньому просторі, яке відповідає їх потребам і гарантують максимум зацікавленості, так і зацікавленості. Стаття ґрунтується на результатах останніх досліджень в області застосування електронного навчання для школярів із особливими потребами. У ній досліджено ефективні підходи та інструменти управління знаннями, які забезпечують активну участь і занурення учнів у процес електронного навчання, а як результат, – формування в ньому нових життєвих компетентностей.

Ключові слова: електронне навчальне середовище, інклюзивна освіта, учні з особливими потребами, активна участь і занурення, принципи інклюзивного віртуального навчального середовища, підходи.
Introduction

The development of life competencies and socialization of students with mental and physical disabilities are considered as a priority area of in special education reform aimed at providing all students with equal access to education, inclusion of students with special needs in a general education environment, while maintaining a balance between the academic and personal development components, i.e. expanding horizons, literacy, responsibility, communication skills and team work, willingness to learn, etc.

It has been hypothesized that eLearning as a form of distance education can help overcome certain challenges due to the following features of the eLearning environment [1]:

— providing continuous access to information resources and expanding educational space outside the class settings;
— flexibility in organization of students and teachers’ work, individual and differentiated approach to learning, since the electronic form of learning allows students with special needs to work at an optimal pace that corresponds to their level of preparation, speech development, learning style or circumstances, while it allows a teacher to plan the most suitable learning path for each student with special needs in the integrated class setting;
— networked learning, where a student communicates and studies in cooperation with other participants in the created eLearning Network (virtual community of students), with a high level of interactivity;
— use of various types of visual aids and multimedia technology;
— easy adaptation of training materials;
— life-long learning.

The formation of a virtual education environment is based on specific learning tasks, curriculum design, emerging technology, and a teachers-parents-students’ community. Based on our previous research of peculiarities of eLearning environments for personal development and mastering life competences, we have found that the first eLearning success factor is trust and decrease of distance between students and teachers (tutors). The second factor necessary for the development of a successful inclusive education environment is the creation of situations of success and knowledge management techniques that require acquisition of new knowledge for decision-making.

The selection of an appropriate pedagogical approach that works in this specific context of inclusive education on the base of emerging technologies is a challenging task. In this paper we will dwell on the issue of selection of appropriate pedagogical approaches in order to create positive eLearning experience.
that conforms to the students’ needs and expectations and guarantees maximum curiosity and engagement (active absorption and immersion).

In 2006-2010, a thorough research was conducted aimed at development of the educational technology for organizing eLearning environment in which young students with hearing impairments become motivated and actualize their need for communicating, networking and studying online. Our task was to find a model of involving students in eLearning process through creation of a natural and friendly communication and learning environment adapted to their special needs. In order to engage students in active communication and knowledge construction process, we defined students’ values shared by all participants and formed the eLearning environment based on them, and then we used tools to increase and support students’ motivation for self-development and self-realization.

Figure 1. Collectively accepted values by students with hearing impairments as the basis for creating atmosphere of trust in eLearning environment

Thus, we managed to transform students’ behaviour from passive absorption (interest in new technology for education and communication) – through passive immersion (creation of a virtual gallery, demonstration of their talents and achievements) – to active absorption (active participation in joint knowledge creation using forum discussions, teamwork, and case studies). It became possible when a friendly environment was formed based on trust and reduced distance between the tutors and the students. It was essential when everyone presented his/her values and passions, and together the students defined common ones for their eLearning environment, as shown in Fig. 1.

In 2008-2013, a series of e-courses were organized and conducted for mixed groups of students. They have formed a heterogeneous audience of active young people, leaders by nature. In order to support their active engagement in the eLearning process and to shift their behaviour from passive absorption to active immersion, we used our 4A model [3]. Thus, by realizing the general didactic principle of active learning, organization of students’ work in the eLearning environment is designed to:

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**Figure 1. Collectively accepted values by students with hearing impairments as the basis for creating atmosphere of trust in eLearning environment**
1A – draw attention: to raise curiosity, personal interest in the new form of training and communication, access to a community of practice;

2A – actualize: to reveal their interest and actualize the need for communication and learning, leadership and professional growth;

3A – attract: to engage students in joint learning and communication activities, to provide up-to-date knowledge, skills; to make them feel excitement and enhanced productiveness;

4A – act: to achieve students’ complete immersion in the eLearning community of practice, perhaps in different roles, make students be able to evaluate their life competences developed and ideas generated within the community.

Students with special needs are able to enhance their life competences by immersing themselves in different experiences in order to stimulate inner emotions and to acquire knowledge. Such immersion into different experiences produces extra values, self-images and life competences of the people who are involved. eLearning environments focused on specific topics are perfect for this kind of demand. They provide students with a chance to be a part of a new lifestyle, to experiment with their own identity and to fulfil some other human dimensions [4].

The idea of students’ immersion into the experiential eLearning context was defined by us as the process of facing and living through specific experiences that are supported by students’ own experiences and that help them contribute to the on-going process of life competences development. When immersion takes place in a specific context, different subjective experiences are cumulated by students and help them develop wider life competences, like an idea generation, decision making, reaction to a situation, communication and their own identity etc.

In 1998, Pine and Gilmore separated services and experiences as two different offerings. Since the demand for the experiences has grown a lot, nowadays schools and other education institutions can provide their core products with experiences wrapped around them. However, it is not enough just to attach experience to the service – eLearning.

According to the authors, experience is created when a service (learning) is used as a stage and is able to engage each and every individual student in a way that creates a memorable event. “…Services are tangible, and experiences are memorable” (Pine II B. J., Gilmore J. H. (1998). This article defines the main characteristics of eLearning experience that makes students active, engaged and deeply involved in it. We suggest looking at the experience education across two dimensions.

The first one is students’ participation. At one edge we have a passive participation, which characterizes those who are observers of what is going on around them. At the other edge we have an active participation, when students
take active part in the creation (co-creation) of knowledge and, more widely – life competences (Katernyak, I., Loboda, V. and Sheremet, M. (2009).

The second dimension is defined as a connection (environment relationship) that has a unification role with a student and e-course. The two extremes are absorption and immersion.

By combining these two dimensions, four categories of students’ experiences in the inclusive eLearning are depicted, as represented in Fig. 2 below:

![Diagram showing four categories of students’ experiences in eLearning](image)

**Figure 2.** Four categories of students’ experiences, based on the following dimensions: passive/active participation (x-axis) and absorption/immersions (y-axis)

Our ambition was to transform students’ behaviour in eLearning environment and to move it from passive absorption – through engagement – towards intellectual escapism, which means that while studying, they live their ‘second life’ in the virtual community of practice, communicate, and master new competences.

In different settings and for different groups of students various Knowledge Management tools are used, like: communities of practice, storytelling, six thinking hats etc. When dealing with knowledge management in eLearning environment, a teacher (tutor) should focus on the nearest future – ‘tomorrow’, as it provokes the main interest among students and stimulates the idea generation process, which is a unifying element of an inclusive virtual learning environment. Thus, as it was noted at our e-courses, the questions offered by students that provoked most active discussions were related to the nearest future as well as personal issues.
The next step is transforming students’ behaviour towards more active participation and immersion in eLearning environment. This can be achieved due to thorough facilitation of the eLearning process, by applying certain techniques to stimulate and maintain learners’ motivation, including:

a) self-assessment tools and positive thinking paradigm ‘Appreciative Inquiry’ (Cooperrider, D.L. et.al (2000));
b) establishing common community values, or passions;
c) using empowering questions that are focused on the nearest future and form the vision of ‘tomorrow’;
d) creating the situations of success – when a learner feels inspired by own achievements and can demonstrate them to other peers;
e) developing communication skills;
f) increasing personal and team capacity and capabilities.

The aforementioned techniques were integrated in two main pedagogical approaches, which have proved to be effective with our diverse audience: (1) creating and supporting competitive spirit, and (2) engaging students in role games.

In the e-course ‘Creative Thinking’ the competitive approach was used. All the students, including those with special needs, were divided into equal teams, and they took part in a well-planned eLearning process. All their activities were monitored and registered, and a summary was prepared by the tutor on a weekly basis. In such a way, students could see constantly updated ratings of their teams as well as individual contributions to the overall team scores. Additional activities were suggested by the tutor, where students had a chance to ‘earn’ extra scores for their teams. The spirit of the e-course was highly competitive; each participant was responsible for the success of his/her team. Those students were immersed in the eLearning process and spent more than three hours on-line daily.

At another e-course, ‘Leaders of Tomorrow’, the students’ immersion was achieved by using case-study method and role games, though without any competitiveness between the teams or individual students. The learners were offered to play a specific part in the case-based e-course. Besides, the tutor supported every discussion thread in forums, gave very quick feedback and comments, which made the impression of a very dynamic, almost 100% real-time eLearning process. Here is some feedback from the students:

“It was very interesting, informative, and high-quality learning process!”
“The approach to learning based on sharing our experiences is very effective. No wonder they say that the learning process is mutual and reciprocal!”
“...sometimes just one question leads to generation of unusual ideas and makes us build up a chain of thoughts.”
“We are engaged in an atmosphere of friendliness and mutual understanding.”

“Usually I entered the e-course very late at night, but with great pleasure.”

“To some extent, I have devoted a lot more time and attention to this course than to others, and I have no regrets, as I have learnt many useful things necessary for my future.”

“The distance approach (eLearning), in my opinion, is a very useful form of training, as I would not always have dared to ask a question in public, or for example, to formulate my thoughts and findings correctly, but as soon as I get in the relaxed atmosphere, I have time to think it over, to consult and to ask an urgent question; and to be sure that I will receive a response. Thank you!”

As a result, among 55 students in both courses, more than 1 350 messages were published in forums within one month. On average, the students spent daily 2-3 hours online, while the highest ‘peaks’ of their participation were observed at weekends, as it is presented in figure 3 below:

![Figure 3. Statistics of students’ participation in one-month e-course, with four ‘peaks’ at weekends](image)

This immersion of students in e-learning process, living ‘second life’ in the intellectual environment of joint knowledge construction, with focus on tomorrow and real-life case studying, guaranteed the development of life competences necessary for performing everyday functions.

**Conclusion**

E-learning supported by specially trained tutors can be an effective means of inclusion of students (schoolchildren) with special needs. Thus, the inclusive virtual learning environment based on positive experience of students includes the following engagement factors: drawing students’ attention to a favourable virtual environment (micro-group) built upon common values shared by the participants;
actualizing students’ need for the development of new life competences; attracting
them to a friendly and intellectually provoking atmosphere where students are
comfortable to act – communicate and learn together, share experience and co-
create knowledge. As a result, it provides memorable experience for students. The
key driving forces for student’s engagement in eLearning are as follows:
• students social and cognitive presence, supported by tutors – for creating
students’ profiles, adjusting learning trajectories, and monitoring learning
results;
• students’ diversity and team spirit – for communicating and sharing experi-
ence in the inclusive virtual learning environment;
• situations that provoke curiosity and exchange of ideas – for creating posi-
tive feeling of success, excitement and fun.

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Training primary school teachers to work with weak-sighted children

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Abstract
The article deals with the problem of training a modern educator to work with children of special needs, namely with vision disorders. The experience of a special boarding school for the weak-sighted children has been analysed. The tendencies of the work that are worth paying attention to in training the future teachers to work with children with vision disorders have been revealed.

Keywords: inclusive education, children with vision disorders, training future educator

Przygotowanie nauczycieli szkół podstawowych do pracy z dziećmi słabowidzącymi

Abstrakt
Artykuł podejmuje problematykę dotyczącą nowoczesnego modelu kształcenia nauczycieli przygotowujących się do pracy z dziećmi z dysfunkcją wzroku. Nowatorskie wskazania, warte uwzględnienia w procesie kształcenia przyszłych nauczycieli, wypracowano w oparciu o doświadczenie dydaktyczno-wychowawcze szkoły z internatem dla dzieci z zaburzeniami wzroku.

Słowa kluczowe: edukacja włączająca, dzieci z dysfunkcją wzroku, przygotowanie przyszłych nauczycieli

Підготовка вчителів початкової школи до роботи зі слабозорими дітьми

Анотація
У статті розглядається проблема підготовки сучасного педагога до роботи з дітьми з особливими потребами, а саме — з порушеннями зору. Проаналізовано досвід спеціальної школи-інтернату для слабозорих дітей. Виявлені тенденції роботи, на які варто звернути увагу при підготовці майбутніх вчителів до роботи з дітьми з порушеннями зору.

Ключові слова: інклюзивна освіта, діти з порушеннями зору, підготовка майбутніх педагогів

The society is extremely concerned about the increasing number of children with mental and physical deviations in their development and children with disabilities. According to the UN experts’ researchers, people with limited life and social functions make 10% of the world population. More than 120 million of them are children and teenagers.

Unfortunately these global problems haven not bypassed our country. In recent years in Ukraine the number of children with psychophysical disorders has
increased by 22 %, whereas a number of children with disabilities increases by 5-6 thousand yearly.

Today we are on the threshold of fundamental changes in the educational policy of Ukraine concerning this category of children. A characteristic feature of today is reconstructing the system of special education based on democratic principles.

At the present stage of the Ukrainian national education development, taking into account the environmental situation in the country and increasing the morbidity of children, special attention should be paid to forming a healthy nation. In primary school programs key competencies of young learners are distinguished, one of them is the health saving program which is formed on the inter-subject level using subject competencies considering the specificity of subjects and pupils’ cognitive abilities (The state report, 2011). It provides personal and social development of a child, acquiring the health saving experience by the pupils considering the state of health (The state report, 2011). Therefore, the teacher faces one of the major tasks – to teach primary school children to strengthen their health, which is considered to be an important life value, bring up conscious effort to cultivate a healthy lifestyle and socialize the child if he / she has special needs.

Nowadays active work at introducing integrated and inclusive education is being done. Inclusive education is introduced in accordance with the UN Convention on the Rights of the Child and the Convention on the Rights of People with Disabilities, a number of Presidential Decrees, the Law of Ukraine “on General Secondary Education”.

There are specialized schools for children with special needs in Chernihiv: the school № 23 – for children with hearing disorders; a special comprehensive school of the I-II levels for the children with shortcomings of intellectual development and a special boarding school of the I-III levels attached to Chernihiv Regional Council for weak-sighted children. Besides, one inclusive class was opened in 2013, where only one child with autistic disorders studied. Following in 2014 eight inclusive classes in schools № 10, № 17, № 18, № 30 and № 24 were opened. In kindergarten № 73 a special group for children with severe speech disorders was opened, and in kindergarten № 52 the model of pre-school inclusive education is being introduced. In this casa training future teachers to work in inclusive groups becomes urgent because “the teacher should organize and provide the best learning environment, favorable atmosphere in the group, encourage learning with useful information, promote the application of knowledge, an ability to connect it with live but also assess the achievements” (Savchuk L., 2014, p.40)

The problems of inclusive teaching and bringing up children with special needs in educational institutions during the last two decades have been at the cen-
ter of many researchers’ scientific interests, such as: V. Bondar, V. Zasenko, A. Kolupaieva, T. Skrypnnyk, T. Sak, O. Taranchenko, S. Lytovchenko, N. Sofii, Y. Naida, N. Diatlenko, S. Yefimova and others.

Forming teachers’ adequate attitude to people with psychophysical disorders and their families, appropriate professionally important traits of personality, including such as love for children regardless of their health, tolerance, empathy, is becoming of great importance.

The school teachers should master common problems of Corrective Pedagogics and Special Psychology:

— nature and classification of mental and physical disorders, their causes;
— peculiarities of t structure of abnormal development;
— general characteristics of an modern system of educational and correctional services;
— selection of children to the special institutions and participation of comprehensive school teachers in it;
— psychological and pedagogical characteristics of the children with mental and physical development disorders and uniqueness of work with them in terms of corrective and inclusive education;
— individual approach to the children while learning and educating depending on the category of disorder of their mental and physical development.

It is necessary to form in comprehensive school teachers the skills of psychological support for the children with special needs; the ability to organize a conflict-free social interaction with different levels of mental and physical development; ability to cooperate with different types of families; skills of team interaction with their colleagues. The absence of all this is the main drawback inhibiting the implementation of inclusive learning.

Undoubtedly, a purposeful teacher training process promotes successful solution of the problem of educating children with special needs.

The goal of this article is to explore peculiarities of the future primary school teacher training to work with weak-sighted children.

The beginnings of going to school is an important stage in a child’s life, it creates demands related to influence on his / her of numerous specific and still unfamiliar factors. Firstly, it is a great static load that requires special organizing of the motor mode to meet natural needs of the body in movements; secondly, there is a necessity of mastering a great deal of diverse information and stressing the visual apparatus after long lasting work with small objects while reading, writing, drawing etc. On top of all, children with special needs have such problems as:
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— communication with adults and healthy children, treating the child by others, the language barrier;
— disease, a defect, a delay in verbal and physical development, motility disorders;
— disorder of the rights to educate children with disabilities (Duraklevich I., 2005, p.13).

Disorders of sight get a special place in pediatric pathology which can lead to blindness. According to the Institute of Hygiene and Medical Ecology named after A. Marzeev AMS of Ukraine researchers have found out that in pupils from the 1st to the 9th forms the frequency of the sight acuity decreasing and the tendency to the scoliosis increases by 1.5 times. That is why a modern teacher should be familiar with the methodologies and methods of preventing these diseases.

Unfortunately, insufficient time, to our mind, is spent on preventing eye diseases in modern regular school. The main reasons for this are:

1) Large loading of the pupils with the program material – the saturation of the lessons which leads to increasing fatigue and decreasing both mental and physical ability.
2) Low level of teachers’ knowledge of anatomical and morphological and physiological characteristics of children.
3) Reluctance of teachers “to spend time” of the lesson on the relaxation of the visual analyzer and the activation of its ability.
4) Lack of teachers’ attention to individual students’ problems is in the prophylaxis of eye diseases.
5) Superficial parents’ knowledge of the progressive sight disease found among children.
6) Lack of collaboration of parents and teachers in this field.

In higher educational institutions while preparing a future primary school teacher the courses aimed at general pedagogical knowledge and specific methodology training. Ecological and health education is gaining a great importance which includes the following subjects as “Anatomy and physiology of children with the basics of genetics”, “The basics of valeology”, “The basics of medical knowledge and the basics of health”, “Safety of life and the basics of labor” and “The basics of ecology”. In addition, a formation of a modern specialist involves the study of special subjects to work with children with special needs such as: “Inclusive Education” (90 hours according to the curriculum), “The basics of defectology and speech therapy” (90 hours) in the fourth year and “The basics of correctional pedagogy” (72 hours) in the fifth year. Non-traditional activities in this process are of great importance – meetings with teachers, working with weak-
sighted children and workshops, which are held on the basis of special schools. Let us examine the activities mentioned above.

Almost every year there are meetings with teachers, university graduates who work with children with special needs. So, the principal of a special boarding school of the I-III levels for the weak-sighted children attached to Chernihiv Regional Council O.V. Zhytniak distinguishes three main directions in the school work:

1) Organizational and pedagogical – determining the level of development of each child (the diagnosis), staffing the groups and subgroups of children, taking into account mental and physical characteristics while choosing games, scientific and visual materials.

2) Treating and renewable – the purpose of which is the development and preservation of residual vision, flawless performance of the security regime by the pathologist, the educators, the teachers of music and physical training.

3) Correctional and educational – the prospect of every child’s sight development is determined by the ophthalmologist, the mode of the visual load is set, correction with glasses and other types of hardware treatment is prescribed.

Children with sight disorders who go to a special boarding school require constant treatment and regular monitoring on the part of medical professionals. Working with these children in a teaching, process with the respect of their physical education should be carried out under the direction of tyfloeducators, psychologists and optometrists.

At one of the meetings with a primary school methodologist at the same institution V.I. Beloshapko the students learned specific techniques to work with children with vision disorders which can be briefly referred to as follows:

Ensure the absence of all obstacles on the way to the learner’s workplace.

— When writing on the classroom board they try to locate a material so that the pupil does not blend it into a solid line. To find out which colour chalk lettering the pupil sees better.

— Enable the pupils to come to the board or the visual aid to discern the written word better.

— Read aloud all that is written.

— Try all that is written on the board to duplicate with handouts.

— Participate for the pupils with vision disorders in the frontal class work using some individual educational materials such as cards, tables and charts.
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— Pay attention to the quality of the handouts: the paper should be matte, not glossy, the print should be large and contrast.

— A pupil with vision disorders needs more time for doing exercises, reading texts. Do not burden the pupil with reading long texts during the independent studying of the material, it is better to explain it verbally again, to make sure that the student has understood everything.

— Check the pupil’s understanding of the material submitted at the lesson more often.

— Monitor the pupil’s posture, however, not to limit his/movements when he/takes the texts too close to his/eyes.

— The child can see the facial expression of the teacher badly, cannot realize that he is appealing to him—it is better to approach the pupil and touch him calling by his name.

— Always call yourself and other communicants, as well as all the present, and those who went out or came back to the room.

— While dealing with a group of children, not forget to call the person you are addressing to.

An experienced methodologist V.I. Beloshapko said that the failures of weak-sighted children caused by the factors that are not directly related to the peculiarities of their development, such as lack of proper training conditions in the family, as a result some children are educationally neglected and cannot cope with the educational material in the first days of schooling. Parents often do not have full knowledge about the opportunities of treatment, rehabilitation of the child, basic skills of the preventive work with children, they are unaware of the importance of systematic and consistent work after school.

As the senior teacher of physical therapy of a special boarding school of the I-III levels attached to the Chernihiv Regional Council R.G. Chala notes that among sight disabled children the changes of the muscles and skeletal system, such as the violation of the posture, scoliosis and flat foot can be found more often than in healthy schoolchildren. Primarily this is due to the incorrect posture while reading and writing, so that these children have fast back muscles fatigue. The disorder of the posture, in its turn, affects the state of the internal organs and systems, especially the respiratory and cardiovascular systems, causing more fatigue. In the 2013-2014 academic year only 3 % of the boarding school pupils did not have any disorders of the muscles and skeletal system. From the experience of the teacher R.G. Chala, warming ups which are held at every lesson (including secondary and high school) 1-2 times can prevent and correct the defects in the physical development. Special attention is given to gymnastics for the eyes. The
teacher of physical therapy has developed different sets of exercises for the eyes to relieve the fatigue, improve circulation, relax the eye muscles, develop complex eye movements etc. The eye motor gymnastics complex has two directions — recovering and training it varies depending on the workload the dosage of the exercises varies. Renewable exercises include relaxation for the eyes, the direction of gaze at the horizon, blinking repeated throughout the day from 8 to 10 times which is relieving the eye strain and improving circulation.

Training exercises are based on turning and rotating the eyeball, fixing the view on the tip of the nose, fixing on the gap between the brows, fixing on the right and left shoulders. These exercises provide the eyeball, eye tissues, eye motor muscles with the blood supply regulation. They also increase ability of the lens to focus the sight on different distances, generally stabilize and raise the level of functional abilities of eyes.

According to R.G. Chala’s opinion, the complex prophylaxis becomes a more reliable system of protecting the sight in children with deviation and one of the main ways which is referred to as a medical physical training.

Close attention should be paid to a visit at special school for the weak-sighted children and explore the organization of the living and educational conditions by the students. It can be seen that the walls of the educational and play rooms; on the floor at the walls and under each step of the stairs there is a bright yellow stripe sized 50 cm that can helps the children move. The classrooms should have the natural lighting. In addition, some of them (the gym, the workshop, the assembly hall) require both the upper and side lighting. The furniture (desks, tables, bookcases) should be of natural wood color or light green. The classroom boards are dark green or dark brown in colour. The boards must be also equipped with additional lighting. The students learn about different types of visibility with the increased print, the background is not white but light yellow or light green, which is best seen by the children with some certain eye diseases.

Thus, educating children with vision disorders should provide appropriate conditions aimed first of all at preserving the weak sight, facilitating the visual perception and preventing the fatigue.

The teachers of a special boarding school of the I-III levels attached to Chernihiv Regional Council noted that the slower pace of the lessons requiring the participation of the vision, the use of special visual aids available for perception by weak-sighted children, a widespread use of individual forms of work ensure that weak-sighted children successfully learn and master the program material.

Thus, according to the experts, the use of rehabilitation and correction techniques is a prerequisite activity not only in special, but also in comprehensive educa-
Within the sphere of inclusions issues. Polish and Ukrainian scientific experience exchange

In national institutions. After all, a high percentage of weak-sighted children go to public comprehensive schools.

Despite the fact that at the present time the Institute of Special Education and Psychology of NPU named after M.P. Drahomanov provides the teachers with special education, the situation with the staff remains very serious.

Traditional university general training of the professionals alarming towards the effective work with the children with various disorders in their development is not enough. At this stage there is a need of specially trained primary school teachers, subject teachers and pathologists, psychologists, speech therapists. In special comprehensive schools 60 % of the teachers have had higher mental defectological education. There are no defectologists in comprehensive schools with special classes where integrated learning is implemented. Most teachers have no special psychological and pedagogical training, motivation to work with this category of children, but have fear, despair and desire to avoid such work etc. According to the studies, 65 % of teachers who attend the training courses do not know the methods of working with the children with special educational needs, 23 % of the teachers examined are not familiar with special programs, do not know psychological characteristics of the children of this category.

A teacher working with children with special educational needs should be able to put a diagnosis of the child’s capabilities and needs, give their expert assessment and develop on this basis individual training programs, refuse the collective methods. In order to do this the teacher should have a deep knowledge of his subject, the teaching methods and the methodology of working with the children with special needs.

Many teachers have difficulties because they do not have such knowledge, have no experience of working in the team, do not use the knowledge and experience of the colleagues, parents in educational process. It is very important to prepare teachers to work, to equip them with the knowledge of special pedagogy, provide the tools and models of alternative education.

The attitude of comprehensive school teachers towards the children with special educational needs is humane, but counterproductive. These children need help in socializing into our life to become full members of the society. The teachers must be prepared to progressive trends in educational policy, which is possible only if the professional development is continued.
References


