

EDUCATION OF CHILDREN WITH AUTISM IN E-LEARNING

Adam Adamski, Adriana Adamska

University of Silesia in Katowice
Faculty of Ethnology and Educational Science in Cieszyn
Bielska 62, 43-400 Cieszyn, Poland
a_adamski@o2.pl

***Abstract.** Considering the education and therapy of an autistic child, you should start by getting to know his patterns of behaviour and the data the child is interested in. A child with autism should be provided with a stable, orderly, safe environment, because it cannot function when there are too many changes around him. These children love to be moving around, so physical, rhythmic and musical activities are recommended. For a child with autism touch is the primary source of knowledge. When communicating we use short, simple sentences, look straight into their eyes. Autism teaches us to read the whole body. In education and therapy, you should use natural materials and objects from the child's every-day life, but also it is important to present multimedia exercises and introduce tasks for correction of movement, stimulation, mechanism of imitation, which are essential in the learning process.*

Keywords - autism, education, therapy, correction of movement .

1. THE CONCEPT OF AUTISM IN THE LIGHT OF PREVIOUS LEARNING

Autism is usually diagnosed around the age of three, when the child begins to participate in organized social gatherings such as preschool activities, the child's name day or family celebrations. It is noted that the children's social skills are lower in the case of normal children. Playing with other children is limited, they stay the same, and do not want to be touched by anyone. They refrain from eye contact, have difficulty expressing themselves verbally, and sometimes do not say anything at all. According to statistics, autism in children occurs once in 10 000 children, more often in boys than in girls. Autism can manifest itself in the following areas:

a) the child develops speech poorly or does not develop at all, uses words without meaning, communicates with gestures instead of words, have difficulty focusing attention;

- b) the child will spend more time alone than with other children, is not interested in making friends, their eye contact is poor, smiles little;
- c) the child is hypersensitive to touch or does not respond to pain, vision, hearing, touch, sense of pain, smell, taste may be more or less impaired;
- d) the child lacks spontaneity or creativity when playing, does not propose any action, does not invent any playground activities;
- e) the child lacks a mechanism of imitation, has a distorted sphere of reasoning;
- f) the child is characterized by hyperactivity, or dementia, has frequent outbursts of bad temper for no reason, is excessively attached to one subject, or may show aggression or autoimmunity;
- g) the child has problems with communication in a group, cannot cope with common activities;
- h) the child presents a different attitude to the outside world from the normal man (Wolski 1996).

2. EDUCATION AND TREATMENT OF CHILDREN WITH AUTISM

Education of people with autism requires taking into consideration learning in the field of traditional methods, multimedia based on various information technology, but also a wide therapeutic area, the aim of which is to overcome the student's deficits and disharmony development. Learning should be planned and adapted to the child who is able to understand and solve educational tasks. In the learning process there should be carried out simultaneously exercises for general functions, such as perception, thinking, attention, intentional action, motion control, and so on. Goal can be well used in the home, as well as in recreational and playground, as well as in multimedia education (Stefańska 2001, p.34).

Teaching traditional skills like reading, arithmetic, learning about the world or the use of the mother tongue becomes much easier and more effective if we use for this purpose the student's natural environment. An important element is also the autistic person's learned reaction to natural stimuli and objects, as well as teaching aids that contain natural objects related to his everyday life. The fundamental rule in the education of an autistic child is that the pace, form and function of exercise should be imposed by the student rather than the teacher. The student should be active, setting and controlling the direction of the course. The teacher in this model plays the role of facilitator and adapts to spontaneous interaction, which is produced by the student (Bloom and Lahey 1978).

Knowledge about autism is growing tremendously. Since the first formulation of the phenomenon of autism in 1943, there has still been no cure for the changes in brain that create the symptoms of autism. We are still looking for better ways of understanding the disease and helping patients adapt, but we are unable to achieve a

full understanding of what autism is. There are different types of therapy in the field of speech, behaviour, vision, hearing, as well as drugs and dietary recommendations, but they are often ineffective. Treatments should be tailored to the individual needs of the patient.

The author of this work will pay attention to the corrective therapy movement, and the mechanism of imitation, these two factors in autism do not exhibit synchronization, because the child did not receive it during the birth. Autistic children from the area have movement disorders, and the lack of a mechanism of how to imitate. My research results confirm the view that the movement disorder and the mechanism of imitation are inherent in the phenomenon of autism. The research was conducted in preschools during lessons. The study used the method of observation and experiment. The observation evaluated the overall activities with children in several preschools. The experiment included the following exercises:

1. The teacher distributes children percussion instruments (drums, tambourines), which are designed to repeat the previously presented sound or rhythm. A group of six children performed flawlessly rhythms and repetition of sound. Autistic children with hypoplastic, ADHD had a hard time, or could not cope with it.
2. Each child presents its contrived beat playing the drum, the rest of the group must repeat it exactly. Most children have difficulty performing the task, which is correctly reproducing little rhythm. A child with autism in general do not execute it.
3. Children are supposed to learn the choreography for the song, split into pairs. Children with autism have difficulty reconciling singing and dancing, do not remember the end of the dance.

The results of the research have enabled the author to conclude that the teacher in his work is guided by the principle of generality. Team education provides poor insight in the education of the individual. Similarly, internet programs lack flexibility, understanding of the child, offer too difficult tasks to perform, disproportionate to the mental development of the child. A child with mental disabilities is getting bored quickly, does not perform these operations indicated by the teacher, which leads to the child's low educational effects.

The study of movement disorders in children, and the mechanism of imitation, may serve as an early indicator of autism for diagnosis methods. They point to the need for the development of therapies to be used from the first months of life in autism.

Movement disorders in children with autism have been revealed in the lip shape, in sitting down, crawling, walking, and mobility in all motility. In normal walking, movements involving the arms and legs are symmetrical. In a child with autism there is an asymmetry (Suchowierska, Ostaszewski, Babel 2012).

Movement and music are combined in a natural way and the original eurythmics looking for the relationship between body movement and the movement in music; the relationship of music to the movement makes a man referring to the music to know himself, his values, the complexes, acts on the system of motivation, feelings, emotions, the level of concentration and attention (Adamski 2008:163).

Physical activity in addition to the development of muscles, bones, heart and lungs, strengthens also the basal ganglia, cerebellum, and the corpus callosum, and also increases the number of connections between neurons. Movement enriches and deepens the sense of rhythm is an important equalizer efficiency of human locomotion. Calisthenics, while linking music and movement, looking for relationships between body movement and the movement of sounds (Bring 1995; 79).

The movement belongs to the natural needs of the child conditioning its proper biological and psychological development. Dance as a form of traffic created as a natural need for movement to the music and to "manifest" their feelings through gestures, movements and facial expressions. Hand dancing satisfies not only the needs of the child movement, but also develop a series of psychophysical his disposal: perception, memory, concentration of attention, responsiveness, visual-motor coordination, orientation in the scheme's own body and space. It activates the body and mind of the child, developing his imagination, provide new impressions and experiences in the field of communication and interaction in a group, developing self-discipline. It teaches conscious control over the movement of the body. Dancing is a great way of recovering from stress, shock, accumulated aggression and tension, as well as an excellent form of exercise, developing physical fitness (Dutkiewicz 2000; 73).

A very important element in the development of the child's personality is fun – physical fun. The child not only practices the movements, but also learns the social world around them. Fun gives the child the fullness of life, which it needs: it is for him work, thinking, creativity, realism, fantasy, rest, and a source of joy (Zebrowska 1973; 243).

A particularly noteworthy is the therapy through movement of Veronique Sherborne. The main idea of this method is the use of movement as a tool to support the development of psychomotor and treatment of the development disorders. This method was started in the 1960s by Veronique Sherborne. There are several categories of the Developmental Movement:

- a) the movement leading to the knowledge of your own body and motor improvement,
- b) forming a compound unit movement of the physical environment,
- c) the movement leading to the formation of a compound with another person,
- d) the movement of the guide to co-operate in a group,

e) creative movement. (Sherborne 2003).

This method is used in educational institutions, by health professionals working with children with various disorders of development, as well as in working with autistic children. During the course children develop a sense of security, trust in others, responsibility. Classes are designed to help your child in learning itself, in getting to trust each other, understanding others and learning to trust them, learning is an active, creative life. For children with autism who are very afraid of these contacts, it is necessary, this fear of contact with others can be eliminated by spontaneous physical play, like swinging, bouncing, rolling on the floor, playing with a doll, and then the living man.

Physical activity can be carried out with the child at home, a group in class, using the traditional method, but also by multimedia. It would create the appropriate agencies to develop different types of physical activity, developing physical education, and to stimulate the mechanism of imitation. Parents know their child and thus can choose the educational and therapeutic program, which will result in the process of teaching and upbringing of their child. Developing synchronization between the movement and the mechanism of imitation, they activate further social, mental processes that will enhance the educational area. This is necessary in each treatment of an autistic child.

3. THE THIRD MAN IN THE INTERACTION OF MEDIA

The development of technology, especially computers and mobile phones, has created a virtual space. Virtual closeness does not require the existence of ties, nor does it lead to its creation, in contrast to the spatial proximity in a traditional style. Virtual space allows you to change sex, race, education, nature, etc. The environment in virtual reality is a world where you can freely express your emotions, your own beliefs, develop creativity linguistic, cultural and distance education (Burszta 2003).

Jahn Suler believes that there is a difference between the interactions taking place in the virtual and natural space listing them:

- a) reduction of sensory experiences - the main form of transmission is written contact, which leads to reduced physical contact,
- b) the liquidity of identity and anonymity - the written communication, the internet can reveal only certain elements of their identity. The writer can create a dual personality: attractive for the use of the network and daily uninteresting, but true.
- c) equalization of status - in the virtual space are equal opportunity to express themselves all its members, regardless of their status, wealth, or race.

- d) overcoming space constraints - everyone can communicate with people with similar interests and needs, regardless of the distance which separates them.
- e) the availability of multiple contacts – the surfer alone can search, select, filter, defined by our contacts.
- f) the possibility of a permanent record - each contact can be globally documented and stored as files.
- g) altered states of consciousness - codes keyboard can control a reality and experience altered states of consciousness.
- h) the experience of the "black holes" - Internet interaction can come in the blink of an eye and you may be excluded from contact (Goban – Klas 1999; 17).

4. MULTIMEDIA MEANS OF EDUCATION AND COMMUNICATION OF INFORMATION

The process of communication between people has played a huge role in the development of civilization. The ancient used the characters with symbolic meaning. They knew the technique of drawing, which led to finding the graphic forms of thought and speech writing (Goban- Klas 2001: 14).

The layout of characters led to the emergence of alphabetic writing and the invention of printing. Since the release of the first book Gutenberg printed in 1455 the impact of the first mass media has systematically developed. Telecommunications and computerization began in the mid-nineteenth century. Then came the telegraph, telephone, photography, gramophone records and film. Development of radio and television is the first half of the twentieth century, the era of the computer began in the late twentieth century (Goban- Klas 1999: 19).

Today, the most important form of communication, the mass media of information that have a significant impact on the contemporary culture. According to Gajda "mass media" as a tool of information is "the means of mass information." The concept of media is meant as "institutions and technical equipment for a broad and rapid transfer of information to groups of people (Gajda 2002: 26).

Media can be divided into (a) traditional (newspapers, radio, book), (b) alternative (Satellite TV, Internet), and more generally, are places and objects of worship, national memory and works of art. In parallel, there is the concept of information technology, which means combining in one audiovisual transmission of different types of information, especially audio, video, animation and text, through the use of the latest computer technology (Walczak 2003: 12).

Multimedia have a great potential in education as they offer the multicode flow of information. According to Morbitzer the process of knowledge creation is realized by means of three codes: pictorial, verbal and abstract. In the development of the human primary code there was code imaging, in a subsequent period, the verbal

code, nowadays the abstract code, which is a tool for mental operations. Multimedia Education distinguishes codes imaging and traditional education focuses on verbalism. In education, this important role should be played by the teacher, his task is to generate a smooth transition between the codes, because then the student carries information specific knowledge (Moribitzer 2001: 3).

The mass media are an integral part of everyone's life, an effective tool of civilization and cultural transformations, causing constant changes in norms, values, patterns of behaviour, exploration of scientific, artistic and technical aspects. Specific recognition of multimedia won encyclopedias, dictionaries, lexicons, programs for learning foreign languages. The extensive form of media allows individualization of the learning process and the implementation of various forms of distance learning. Knowing how to use the media is an essential element of human education and it needs to be directed so that the reception of the media could not cause a significant decrease in reading books and attendance at cultural institutions. Using the transfer of elite culture, such as theater or museum, is now rare. In a global society, the role of media education is so significant. Living in the information society provides many positive attributes, especially a rapid flow of information and access to databases, but also a large threat with such a huge amount of information. For the average consumer it is simply information overload, which he cannot cope with. Information has its value only when it is available where it is needed, useful and necessary.

Many young people are fascinated by virtual reality, especially when they are offered interactivity. The latest multimedia techniques, combining sound and three-dimensional image, and even touch, are creating such an impression of reality that a return to the real world is "necessary evil". Young man is very often identified with a virtual hero and he cannot see the border between the world of fantasy and the reality. This situation is changing autistic children who need it, they will experience altered states of consciousness and sense impressions of reality, they want the world to be to mimic the virtual characters. The present author noted that the relevant selected screenings for autistic children have a very positive impact on their mental and social sphere. They begin to talk, liaise with peers, play an identical role as a virtual hero. The sense of time and space in these children becomes reality, there are created cause and effect relationships (Adamski 2014).

There are changes in stereotypical behaviour and rigid belonging to the object and person. But you have to remember that the Internet is addictive according to Taboń (Taboń 2003: 28).

Internet addiction has symptoms such as: maintaining contacts with people only through the Internet, loss of interest in other forms of activity, change of the language, lack of control of the time spent on the network. To distract young people from everyday activities, and move long before a glass screen, it would create alternative channels of communication (Izdębska 2003: 27).

In addition to threats from the media, they are also great benefits. Through the media we get to know and understand the phenomenon of a global nature, for example a war or the threat of civilization. They play an important role in the dissemination of the achievements of culture of different nations. The mass media can create mass events, such as. Sporting, musical, cultural and educational, etc.. They are involved in the broad sense of cultural education (Frolowa 2002: 10).

Since 9 November 2002 Educational Satellite TV Edusat has been operating. It implements the program for viewers who wish to expand their knowledge in the various fields of science. This program brings and supplements knowledge of economics, education, psychology, management, education, science, foreign languages, environmental protection, tourism, extensive socio-political issues, including EU issues. This Satellite TV, transmitting academic lectures live from the auditorium of the university, can earn a bachelor's degree in extra curriculum system in the country and abroad (<http://www.wsseuczelnia.edu.pl/show.php/page/35>, accessed 12.07.2013).

It should be noted that children with autism need modern educational methods. The modern model of education should prepare users to make an effective use of multimedia tools and methods. Dissemination of information technology has a huge impact on schools and running in their learning process. The main problem is the skillful incorporation of the computer as a tool and method in the content of education, the student should master the new model of education. Memory mastery of the message should be replaced by the mastery of methods to search for, collect and analyze information. This would effectively prepare the student to the operation pattern in the computer world. To maximize the use of a computer at school is not enough adequate facilities teacher knowledge and skills of computer programs. Much more important is to teach him the creative use of the program in the educational process. The use of appropriate educational programs creates excellent conditions for the development of creative thinking learning children and the impact on their personality, and they accelerate and facilitate the acquisition of various skills and social competences.

5. THE IMPACT OF INFORMATION TECHNOLOGY ON THE TRANSFORMATION OF SOCIAL LIFE

The 21st century society is a global information society, which is the result of technological progress and the development of science. Information technology is associated with contemporary reality and affects all spheres of human activity. It creates wide possibilities of action in many areas of social life. Information technology is a set of means such as: computer, computer network, media, software, etc. It includes:

- a) the elements of computer science (at school),
- b) the impact of media messages,

- c) social communication, through the news media
- d) the social and ethical aspects of human activities in the field of information technology,
- e) analysis and synthesis of information (processing, selecting and creating a consistent image)
- f) safety systems and data (Siemińska 2007: 17).

Modern technology came into all spheres of social life, and it gives you new opportunities and the use of human potential (Toffler 2001: 25).

The Internet is an invaluable tool in the process of education and upbringing. It provides quick access to all kinds of information, allows you to have a conversation with other people, even in remote parts of the world and makes it easy to establish the broad social contacts (Adamski 2005: 84).

CONCLUSION

The mechanism of imitation plays a very important role in children learning, socialization and the acquisition of social skills. The nature of a normal child has endowed this mechanism, but the situation changes in a child with dyslexia, autism, depression, neurosis, ADHD or with mental retardation. In these children a mechanism of imitation is limited, and it works almost non-existent, such as autism. Educational programs often do not take this problem into account. They are meant for education of a global character with no intention to provide education for children with mental disabilities. This makes the teacher helpless in the face of this problem, but it becomes a serious problem for the child. The child is incomprehensible to other children and teachers, which leads to many psychological distortions in the child. Art has extremely important features to meet the individual needs of the child, among which we highlight: experiencing the need to survive, the need for attractive leisure activities, the need for creativity and the need for expression of feelings. Art teaches us living, developing desirable traits of character, deeper understanding of life and the world, determines the spiritual development of man. It contacts us through the art of approaching children and people together, giving them the opportunity to establish an emotional bond, develops interpersonal contact, making children vulnerable to the dramatic nature of the human experience, thereby raising the creative, dynamic thinking, and shapes teamwork, discipline and responsibility, creates social attitudes and the whole process of adaptation to the environment.

REFERENCES

- Adamski, A., 2005: *The computer and the Internet in psychological research*, In: Informatic in Pedagogy and Culture 2005, Edited by: Andrzej Mitas, University Silesia, Cieszyn 2005, pp. 84-91. ISBN 83-921190-9-6]. [In Polish]
- Adamski, A., 2008: *The perception of music, its dimension in art and psychology quantum*. Publishing house "Compal", Bielsko-Biala. 2008, p.155. ISBN 978-83-926186-4-5. [In Polish]
- Adamski, A., Borowik B., 2014: *The Role of Art and the Collective Unconscious of Jung in the Process of Raising a Child* . Cross-Cultural Communication – CSCCanada Vol.10, No. 5, pp. 21-31. ISSN 1712-8358
- Bloom, L., Lahey, M., 1978: *Language development and language disorders*. New York, Wiley.
- Brink, S., Smart, M., 1995: *New research suggests, That folks from 8 to 80 can shape up Their brains with Aerobic exercise*, In: US World and News Report 118 (19) P. 79.
- Burszta, W., 2003: *Internet policy in three short scenes*, In: Why do we need reality, screen, myth, reality, ed. W. Burszta, Warszawa 2003, ISBN 978-83 - 7231-068-3]. [In Polish]
- Dutkiewicz, K., 2000: *Body language through dance*. Life of the school in 2000, 6. pp. 67-78 [In Polish]
- Frolov, J., 2002: How the new media affect the reading? Librarian's Guide. 12. 2002.: 10-19.
- Gajda, J., 2002: *Conditions cultural media education* In: Media Education, J. Gajda, S. Juszczyk, B. Siemieniecki, K. Wenta, Torun 2002, pp. 26-35. ISBN 978-83-7481-071-5]. [In Polish]
- Goban-Klas, T. 2001: *Origin and development of the media. From cave paintings to multimedia*, Krakow. ISBN 978-83-200-4517-8 [In Polish]
- Goban-Klas, T., 1999: *The Media and mass communication. Theories and analysis of press, radio, television and the Internet* Krakow, 1999. ISBN 978-83-200-4517-6. [In Polish]
- <http://www.wsseuczelnia.edu.pl/show.php/page/35>, (access 07/12/2013).
- Izdebska, J., 2003: *Youth-electronic media. The new education space*. Media Education. 2003, 26. Pp. 23-34. [In Polish]
- Morbitzer, J., 2001: *A multimedia look educator*. Librarian's Guide. 2001 No. 6, : 3. ISBN. 978-83-02-10792-6. [In Polish]

- Sherborne, W., 2003: *Growing movement for children. The backdrop.* with j. ang. M. Bogdanovich. PWN. Warsaw 2003 [In Polish]
- Siemińska, A., 2007: *Internet in the preparation of teachers for the application of information technology*, Adam Marszalek, Toruń, 17. ISBN 978-83-7587-268-2. [In Polish]
- Stefańska, R., 2001: *Autism and education.* World Autism No. 3, Fall, p. 34.
- Suchowierska, M., Ostaszewski, P., Bąbel, P., 2012: *The Behavioural therapy of children with autism.* Ed. GWP. Warsaw 2012. EN ISSN 2083-4179. [In Polish]
- Taboła, S., 2003: *Cyber addiction.* Media Education. 2003, No. 1 pp. 27-28. [In Polish]
- Toffler, A., 2001: *The Third Wave.*, PIW, Warsaw, ISBN. 978-83-02-10632-3. [In Polish]
- Walczak, M., 2003: Media in the education of modern man Vol. 1 "Librarian's Guide" of , No. 1, p. 12.
- Wolski, A., 1996: Psychomotor therapy and support in the development of a child with autism. In: W.i J. Pileccy /red./: Psychomotor stimulation in the development of children with reduced mental. WSP, Krakow. 1996. ISBN 978-81-9161-8-5]. [In Polish]
- Żebrowska, M., 1973: *Psychology of children and adolescents.* PWN. Warsaw 1973]. [on-line] at <http://www.terapia.rubikon.pl/html/2003/zagrozenia%20z%20ieci.htm>, (accessed 07 November 2013). [In Polish]

STATEMENT

This article has not been published in other journals and scientific publications