Good practices in Bulgaria

Despite its many years of pedagogical experience, Bulgaria has no experience in the field of neuropedagogy and, more specifically, educational practice with adults. Globally, all practices described below are based on the Precedent-Rule principle.

Andragogical developments of the quality and effectiveness of training as the subject of the conducted research. In Bulgaria, the andragogic aspects of this problem became particularly popular in the late 1970s and early 1980s of the last century - under the socialist socio-economic and political formation, in the conditions of the then existing highly centralized Unified National System for raising qualifications of the footage. Then the first professional andragogic studies were conducted (with the author's participation), incl. of quality and efficiency. The research had a theoretical-applied nature and was related to the large project of the International Labor Organization, which was implemented at the time, aimed at improving the quality and increasing the efficiency of professional training and the qualification of workers in Bulgaria.

Education is a social phenomenon - it is an activity of society as a whole, of communities and the family, as well as of the individual, which has historically been independent and connected to educational institutions. In addition, there are undifferentiated, non-independent forms of education and self-learning, which are woven into the main activities of people - work, play, leisure activities, etc. In social practice, training and education are manifested as three main types: a) formal education, in the sense of separate, institutionalized training and education for children and youth, which is carried out by educational institutions - the various types of schools, universities, colleges and others; b) non-formal education - i.e. separated as an activity and institutionalized for the most part education for adults, conducted mainly by organizations that do not have the status of educational institutions, vocational training centers, schools, training institutes of non-governmental organizations, etc.; c) informal education, which is completely undifferentiated (in the sense that it is part of other human activities), non-institutionalized (there are no schools) and autonomous, carried out independently as self-education and self-education in the process of professional, family, social, sports and other human activities.

Carnegie Educational Center for the European Neuroscience Center

European Neuroscience Center was founded in early 2016 and is a leading provider of educational technology, curriculum and professional learning solutions. Through our partner Carnegie Learning Inc., we offer high-quality offerings in English, math, social and emotional skills, vocational training, and more.

A European Neuroscience Center is changing the way we think about learning and offering powerful tools for both teachers and students. Our unique approach is cross-disciplinary, combining the sciences of the human brain and its plasticity with adaptive learning technologies. Trial and error, models and games as a primary and natural way of learning are at the core of our programs.

To achieve the vision, innovation, neuroscience, brain plasticity, individual approach according to possibilities, shared experience, experiential learning are used. Working with children and adults to create a better place to live. It is important to help children express themselves and their essence, to enjoy their differences, knowledge and innate curiosity. The goal is to create a borderless community where all of this can happen.

Introduction of modern technologies in the learning process in Bulgaria - Fast ForWord, Reading Assistant, MATHia and others. In this way, the aim is to provide training that is tailored to the individual needs and strengths of each student, as close as possible to the natural way of learning in humans.

Brain plasticity therapy

Online therapy and training entirely based on neuroscientific research, through brain plasticity (neuroplasticity) and the science of successful learning.

Neuro Therapy through Fast ForWord is applied to:

- Dyslexia
- Hyperactivity
- Attention deficit
- Learning difficulties

Reading problems

- Difficulties in learning English

- Auditory Processing Disorder
- Auditory-speech rehabilitation after placement of a cochlear implant
- Social and emotional difficulties
- Phonological disorders

Fast ForWord is used to treat the following difficulties:

- Receptive speech disorder
- Expressive speech disorder
- Childhood degenerative disorder
- Delay in mental development

Pervasive Developmental Disorders (PDD)

- Asperger's syndrome
- Down syndrome
- Rett syndrome
- Autism

In addition, the following are improved:

Memory, concentration, focus and more than 40 cognitive skills. Key executive functions and the ability of the brain to change its own structure and functions through thought and action is brain plasticity (neuroplasticity), also known as neural plasticity or neuroplasticity. Every time we learn something new, the brain changes.

Professor Dr. Michael Merzenik, one of the creators of the Fast ForWord program is considered the father of brain plasticity because he was the first scientist to scientifically prove how the brain works, how neural connections are made and what the conditions are to be 100 years old and to have a brain like a 20-year-old. It was his idea and under his guidance that the cochlear implant was created. Over 40 cognitive skills are developed through the Fast ForWord program. Cognitive abilities are mental skills that are needed to complete a task, from the simplest to the most complex. Cognitive skills are related to the mechanisms of learning, remembering, solving problems, responding and performing tasks.

In addition, Fast ForWord improves key executive functions necessary for the learning process and human development. Fast ForWord is an effective tool for developing executive functions and reading.

Scientists have proven that the effective acquisition of complex cognitive skills such as reading, for example, depends on how well the executive brain functions are developed. These functions determine a person's ability to plan, focus attention, remember instructions, organize their time, and switch successfully from one task to another

Why use ForBrain®?

Caution

ForBrain®'s dynamic filter trains the brain to pay more attention, improving not only attention but also auditory information processing and sensory integration.

Speech

ForBrain® helps people improve speech fluency, pronunciation, sound discrimination and rhythm, for clearer and more effective communication.

Memory

ForBrain helps people improve their short-term memory, which affects skills like reading and writing.

How it works?

Bone conduction

Bone conduction transmits the sound of your own voice 10 times faster and with greater clarity than air conduction.

Dynamic filter

The dynamic filter enhances specific speech frequencies and constantly surprises the brain to increase memory, attention and processing of sensory information.

Audio feedback

ForBrain® corrects the way you hear your own voice, resulting in better pronunciation and increased confidence.[1]

THE DR MELILO CENTER

Dr. Robert Melillo is a world-leading expert on brain development and neurodevelopmental disorders and has researched these issues since the early 1990s. He is a professional with over 30 years of clinical practice. He is trained in a variety of disciplines, but has always focused primarily on neurology and rehabilitation. In this regard, he is one of the leading experts in the fields of functional neurology and functional medicine. His interest in working with children began when his own children were diagnosed with various developmental issues. The first questions he asked himself then, and from which it all started, were "What is going on in the brain of a child or adult with ADHD, autism or dyslexia?" and, most importantly, "What is ADHD and autism?"

In the years since Dr. Melillo first asked these questions, he has come to realize that no one can really answer them. He decided to conduct his own studies and research, and later connected with other researchers around the world. Together, they managed to discover what actually happens in the brain and what causes these disorders. They found that the underlying problem was rooted in something called "functional connectivity" in the brain.

They also found that the root cause of most developmental neurological, mental and learning problems is the so-called "Functional disconnection" -where there has been a developmental imbalance between the two cerebral hemispheres.

During development, one half of the brain slows down and the neural networks in it remain immature and underdeveloped. To compensate, the other accelerates its development, which can lead to overactivity of some neural networks in it. The result is uneven and inappropriate skills for the child's age. The observed symptoms are due to the combination of underdeveloped skills and underactivity in one half of the brain combined with overactivity of the other, and often overdeveloped skills associated with it. For example, in ADHD (attention deficit hyperactivity disorder), we see an attention deficit caused by an underdeveloped right side of the brain that controls attention. Hyperactivity, on the other hand, results from the overactivity of a network in the left side of the brain that regulates levels of motor activity, along with impulsivity and compulsivity. So, hyperactivity, tics, and obsessive-compulsive disorder are problems of an overactive left hemisphere, and this happens because of underactivity or underdevelopment of the right hemisphere.

This discovery by Dr. Robert Melillo and his colleagues leads to the first truly new approach to these problems in over 50 years. Everything within this product is achieved without the use of drugs and the results are impressive. Dr. Melillo has been developing and perfecting this method for over 25 years. Dr. Robert Melillo has over 30 years in private practice and has worked with thousands of children and adults. More than 30,000 children have passed through its training centers in the United States. He has also trained over 10,000 healthcare and education professionals worldwide.

For the past 2 years, Dr. Robert Melillo has been regularly visiting Bulgaria and working with Bulgarian children and their families. His book "Detached Children" became a bestseller in the country and is one of the most useful manuals for parents and specialists in our country. He also conducts seminars for Bulgarian professionals in the field. Dr. Melilo already knows the unique problems in Bulgaria and has dedicated himself to helping solve them in every possible way. Over the past year, he has worked to refine his method and create new and improved protocols to treat multiple problems, but particularly severe forms of autism. This modern and high-tech approach is known as the "Melillo Method" and the center in Sofia, Bulgaria, will be the first in Europe to officially use it.

The Melillo Method is a unique intervention approach developed by Dr. Robert Melillo to correct or improve the underlying problem in most neurodevelopmental disorders and learning disabilities in children and adults.

The main problem is a developmental imbalance between the two brain hemispheres, which leads to a wide range of symptoms. Since the brain controls everything, imbalances in it can lead to imbalances in all body systems. Children with such problems have many different deviations from the norm, which are individual for each child, but are rooted in the same basic cause - an imbalance in the brain.

The goal is quite simple: to restore balance in the brain by targeting specific neural networks in one hemisphere using the corresponding specific stimulation. By combining different types of stimulation (light, sound, smell, movement, balance, touch) with cognitive and literacy activities, we can activate certain neural networks on one side of the brain and help them develop and connect better with the others.

How does the method work?

The details of the intervention offered at the center are individualized for each child to meet their specific needs, but the general procedure is similar.

Survey/Assessment

Each child is first tested using a number of standardized and/or commonly accepted tests to determine if there is an imbalance in the brain, which part of the brain is underdeveloped and which is overdeveloped, and exactly which parts of the brain are most underdeveloped you are To make this assessment, motor and coordination abilities, sensory processing, cognitive and academic skills are measured. Diet and habits that may negatively affect the brain and its development and balance are also assessed.

Intervention

Based on the results of the testing, an individualized treatment plan is developed that addresses the specific needs of the particular child. A multimodal approach is used for maximum effect and supporting the integration of different brain areas, as well as the two hemispheres as a whole. Usually, no one child needs all possible interventions, but a unique combination involving some of them. Children visit the center between 3 and 5 times a week for a minimum one-hour session. The number of hours depends on the results of the initial and follow-up tests. There is always a home program that runs parallel to the visits to the center and parents are instructed in advance how to do with their child the various exercises and simulations included in it. The ideal option is for the child to receive specific targeted stimulation several times a day. If a large part of them is done at home, the achievement of the result is accelerated in time and costs are reduced for the families.

Here are some of the modalities used at the center:

Sensory stimulation

- Light, optokinetic and other types of visual stimulation
- Sound and music therapy
- Scents and aromatherapy
- Tactile stimulation
- Vibration stimulation
- Balance and proprioception exercises
- Vestibular activities with rotation

Digital health

- Neurosage's video game programs
- Neurosage's virtual reality programs
- Neurosage programs with music, sounds and vibrational frequencies

Behavioral and social therapies

- Mirror therapy
- Behavioral modifications
- Green therapy

Eating habits

- Provision of information on existing:
- Elimination diets
- Food challenge samples
- Diets to balance the immune system
- Diets to support brain function
- Detox diets

Motor activities

- Exercises to suppress/integrate primary reflexes
- Developmental exercises
- Exercises for strength and stability of the central and lateral muscles of the torso
- Exercises to balance muscle tone
- Exercises to develop the dominant side
- Interactive metronome
- Eye exercises – balancing and tracking
- Fine motor exercises

Cognitive and learning activities for the development of:

- Caution
- Concentration
- Memory
- Executive functions

- Phonological awareness and word decoding
- Reading
- Comprehension when reading and listening to a text
- Spelling
- Mathematics
- Organizational skills
- Goal setting and achievement skills[2]

"Milea" Private Elementary School association

"Milea" Private Elementary School association with a non-profit purpose and for public benefit was established in 2018 with the mission of being an ambassador of change in education for every child. The idea of this new school for Bulgaria is to be a Mentor School in the field of inclusive education. Milea Primary School Association sees education as freedom and power, and every child should have access to it. Its purpose is to develop and stimulate the standard capabilities of children, by discovering the non-standard ones.

The first school in Bulgaria with the mission to synchronize the state educational standards and the sensory-based educational approach in an innovative concept for success among school-aged children. The school that will enter the heart of every child because it masters their language and will turn every opportunity into a skill. A school that offers support and acceptance of different learning styles and stimulates the development of the child's natural potential, allowing him to preserve his unique identity and need for play and movement, and above all to improve his educational skills every day.

The idea

For years, the Milea language and speech development center has been working with children for whom state educational standards are a challenge. Incorporating a complex working method, a multidisciplinary team and a well-structured educational environment, we have achieved significant progress in the overall development of children. It is he who is our motive and inspiration to move forward. We also thank the parents who trusted us and insisted that this school happen.

Mission

Milea School aims to introduce the sensory-based learning approach as a supportive method in the Bulgarian school and to prove that it helps children to feel motivated and successful in the initial stage of their education.

Vision

"Milea" School provides an opportunity for every child to learn in a motivating and impactful learning environment, with an innovative way of teaching - the sensory-based learning approach.

Educational environment

A structured educational environment specially adapted to the natural need for movement and learning of our students. Specially selected material base to stimulate active learning, communicative and cognitive development.

Adapted classrooms

Visual support /schedules for the day, for classes, etc./

Individual tables / adapted to the needs of each student - using lycra, heavy cushions, heavy vests and toys, balance cushions, chair-ball, static pedals, etc./

"Relaxation corner"

- Interactive whiteboards in every classroom
- Specially equipped room for sensory therapy and occupational therapy
- Multidisciplinary team
- Primary and preschool pedagogy teachers
- Special educators
- Montessori teacher
- Behavioral therapist
- Psychologists
- Speech therapists
- Occupational therapists

Milea School provides access to the following educational and therapeutic approaches:

- Sensory therapy based on the Iris approach, Ergotherapy
- TLP, Spectrum and inTime programs to stimulate auditory processing

- The Glenn Doman Method for Global Reading
- Behavioral therapy
- Montessori pedagogy Montessori educational approach
- PECS – picture exchange communication system
- EAP – Equine Assisted Therapy
- Brain Gym

A sensory-based learning approach

Learning is a complex concept. In one word "Learning", people include dozens of other concepts - academic knowledge, qualities, skills, requirements, maturation, development, success, intelligence, expectations, dreams for the future, emotions. In "children's language", learning sounds different, but often adults impose their "translation" on children. For the child, learning is an adventure, pleasure from shared time and emotions, curiosity, a sense of success and a desire for self-improvement.

It is important that the school and teachers respond to children's learning needs. A sensory-based learning approach is the easiest and most effective way for the learning process to incorporate what children understand and put into the word 'learning'. The child must be an active participant in the process of selecting the learning material, mastering it and applying what he has learned.

The main concept of this approach is that the child is a person and as such is not just an "open vessel" to be filled with information by teaching, but a system of components - body and senses, emotionality, cognition.

The sensory-based learning approach includes purposeful work on the development of all three components, which are interrelated and dependent. Following this approach the teacher should first take care of:

Body and senses / how and where the child is sitting, from what angle he perceives the text, what sensory environment and stimuli help and hinder his ability to concentrate, etc./

Emotionality /whether he feels successful in the learning process, whether he is accepted and fully included in the learning process, every child CAN and the strengths in his development should be taken into account and used in the learning process/[3]

PROJECT: SENPOWER National Association of Resource Teachers /NARU/ - Bulgaria

A main goal of the project is to take a step forward towards a more inclusive school, where better personal achievements of students lead to development and overall progress. The project is aimed at students with specific learning difficulties, such as attention deficit/hyperactivity disorder and autism spectrum disorders, aged 6-11 years, from the primary stage of education, as well as their teachers.

The specific goals are aimed at achieving higher levels of knowledge in mathematics and science in order to improve the achievements of each child, as well as to engage them more actively in school life. Teachers will improve their competences in identifying the specific educational needs of students from the primary stage of education; they will learn to develop specific models to support students and to adapt educational materials in mathematics and science to the needs of students with relevant difficulties.

As a result of the implementation of the project, the following materials are expected to be developed:

- SENPower methodology that teachers will be able to use to adapt the teaching and learning process in maths and science classes at the primary stage of education to the needs of students with specific learning disabilities, autism spectrum disorders and attention deficit disorders /hyperactivity.
- Mathematics for All Teacher Toolkit (M4ALL) including ready-to-use teaching resources on specific mathematics topics at the primary school level
- Stage 1: SENPower project experts will initially, after international consultation, create resource models on a range of topics. These topics will be selected taking into account the following criteria: (1) common topics in the primary school mathematics curricula in the partner countries; (2) key topics for student progress in the subject, or (3) identified as difficult to teach to students, particularly students with SEN.
- Stage 2: After the joint learning events, the participating teachers will create their own teaching materials on specific topics from the primary school mathematics curriculum. The resources will be tested and analyzed, and finally modifications will be proposed to fully comply with the SENPower methodology. The new learning resources will be added to the M4ALL Teacher's Toolkit. Science for All Teacher's Toolkit (NS4ALL) - a teacher's

toolkit including ready-to-use educational resources on specific science topics at the primary school level

- Stage 1: SENPower project experts will initially create, following international consultation, model resources on a range of topics.
- Stage 2: Similarly, after the short-term collaborative staff learning activities, participating teachers will create their own science teaching resources. The latter will eventually be added to the NS4ALL toolkit.[4]

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