Šiauliai University, Department of Special Education
Lithuanian Logopedists' Association

5th Congress of Baltic States SLTs'

ALTERNATIVE AND AUGMENTATIVE COMMUNICATION: MORE THAN WORDS…

BOOK OF ABSTRACTS

26-27 April, 2018

Šiauliai

Sponsors of the Congress

5th Congress of Baltic States SLTs'. *ALTERNATIVE AND AUGMENTATIVE COMMUNICATION: MORE THAN WORDS…* BOOK OF ABSTRACTS

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Contents

Introduction

The topic of the 2018 year across the Europe in the field of SLT's is *Alternative and augmentative communication*. This topic was distinguished as relevant by European Association of Speech and Language Therapists' (CPLOL). Following this topic, Lithuanian Speech and Language Therapists' association (LLA) in collaboration with the Department of Special Education (Šiauliai University) is organising the *5th Congress of Baltic States SLT's.*

The main issues will be discussed at the Congress:

- ✓ *What is theoretical and research background of AAC use improving the communication and participation process?*
- ✓ *How is defined and explained AAC?*
- ✓ *What are the main statements related to the application of AAC?*
- ✓ *What are aided/unaided communication systems, strategies and methods and how they could be used in different cases, fields of practice?*
- ✓ *Solving the dilemma: to work on speech and language or focus on communication and participation, while using AAC?*
- ✓ *Successful practice and challenges of work with children/adults: what, when and how to use AAC strategies, methods?*

All the participants (researchers, practionnaires and SLT students) from different countries (Lithuania, Latvia, Estonia, Bulgaria, United States, Israel) and various work contexts (health care and education institutions) will be welcomed at the Congress. We hope every participant of the Congress will expand knowledge and have the great opportunity to share their professional experiences.

On behalf of the Scientific and Organising Committees of the Congress,
PhD Daiva Kairienė

Congress programme

1st DAY PROGRAMME, 26 April 2018

08.00 – 09.30	Registration
09.30 – 09.45	Congress opening

1 session: *AAC use developing language and communication skills of children*

(Chairs: Prof. PhD Stefanija Ališauskienė, PhD Yael Kimhi, room 205)

09.45 – 10.30	*Intervention Practices for Late-Talking Toddlers, including Use of Augmentative and Alternative Communication* (Assist. Prof. PhD Shari DeVeney, US)
10.30 – 11.15	*Developing Emergent Literacy Skills for Kindergartners with Autism Spectrum Disorder: A Pilot Study* (PhD Yael Kimhi, Meital Achtarzad, PhD Gila Tubul-Lavy, Israel)
11.15 - 12.00	*Early Intervention for Children with Down Syndrome: Benefits of AAC* (MS Korey Stading, US)

12.00 –13.00	Lunch break, review of poster presentations, exhibition of the educational materials

2 session: *AAC use developing communication* in children and adults

(Chairs: Assoc. Prof. PhD Baiba Trinite, PhD Daiva Kairienė, room 205)

13.00 - 13.45	*Implementing AAC Systems to Enhance Communication and Support the Learning of Children and Adults with ASD in Their Lives' Circles* (PhD Orly Hebel, Israel)
13.45 – 14.30	*AAC Supports for Adults with Degenerative Diseases* (PhD Amy S. Nordness, US)
14.30 – 15.15	*Theoretical Background of Eye Controlled Assistive Technologies Use in Speech and Language Therapy* (Assoc. Prof. PhD Maurice Grinberg, Assist. Prof. PhD Evgeniya Hristova, Bulgaria)

15.15 –15.45	Coffee break, review of poster presentations, exhibition of the educational materials

3 session: *AAC use experiences in Baltic Countries*

(Chairs: Prof. PhD Sarmite Tubele, PhD stud. S. Daniute, room 205)

15.45 – 16.05	*The Challenges of Socialisation Process in Persons with Special Needs* (Deniss Kargins, Latvia)
16.05 – 16.25	*Overviewing the Experiences of the Estonian SLTs' using AAC* (Maarja Heina, Estonia)
16.25 – 16.45	*Possibilities and Challenges of AAC* (Valerija Liaudanskienė, Lithuania)
16.45 – 17.00	Closing the 1st day of the congress *SLT of the 2017 year*: award ceremony

2nd DAY PROGRAMME, 27 April 2018

08.00 – 09.00	Registration

	1st workshop (room 205, ŠU library) Moderator: PhD Daiva Kairienė	**2nd workshop** (room 215, ŠU library) Moderator: Assoc. prof. dr. Lina Miltenienė	**3rd workshop** (519 room, ŠU) Moderator: Prof. dr. Stefanija Ališauskienė
09.00–11.00	*Patient-Provider Communication for Patients who are Communication Vulnerable* (PhD Amy S. Nordness, US)	*Eye-controlled Assistive Technologies for Children with Special Needs* (Assist. Prof. PhD, Evgeniya Hristova, Assoc. Prof. PhD Maurice Grinberg, Bulgaria)	*Strategies and Evidence Based Interventions Developing Literacy for Children with ASD* (PhD Yael Kimhi, Israel)

11.00 – 12.00	Coffee Break

	4th workshop (room 205, ŠU library) Moderator: PhD student Rita Kantanavičiūtė	**5th workshop** (room 215, ŠU library) Moderator: PhD student Simona Daniutė	**6th workshop** (519 room, ŠU) Moderator: Assoc. prof. PhD Renata Geležinienė
12.00–14.00	*Evaluation and Implementation of Low-tech and High-tech AAC Strategies for Young Children* (MS Korey Stading, US)	*The Use of IPads to Enhance Communication Experiences and Social-Emotional Relationships of Children with Complex Communication Needs* (PhD Orly Hebel, Israel)	*Procedural Memory in Young Children and Its Predictive Value in Academic Achievements Kindergarten and First Grade Children* (PhD Mona Julius, Israel)

Authors	**Published poster presentations**
Baiba Trinite	*Noise, Working Practice and Voice Disorders inTeachers*
Sarmite Tubele	*Alternative and Augmentative Tools for Better Communication*
Lucija Anoško	*Non–Verbal Communication of 3 – 4 Years Old Children with DLD (Developmental Language Disorders)*
Egija Laganovska	*Information and Communication Technologies in Speech and Language Therapy*
Simona Daniutė	*Theoretical Principles of Evidence-Based Practice in Speech and Language Therapy*
Rita Kantanavičiūtė	*Using the Thematic Intervention to Fluency Therapy for the Young Stuttering Children*
Daiva Kairienė	*Approaches to the Treatment of Motor Speech Disorders in Children*

Authors	Non-published poster presentations (presented in Lithuanian)
Valerija Liaudanskienė, Eglė Bužavienė	*Alternatyviosios ir augmentinės komunikacijos taikymo praktika Vilniaus „Vilties" specialiojoje mokykloje ugdant vaikų kalbą ir plėtojant vaikų bei suaugusiųjų komunikacijos galimybes*
Virginija Kazlauskienė, Jolanta Bružauskienė	*Vaikų ir suaugusiųjų kalbėjimo, kalbos ir komunikacijos sutrikimų ugdymas taikant alternatyvios komunikacijos priemones*
Jurgita Brazauskienė, Jūratė Prasauskienė	*Mokinių, turinčių didelių ir labai didelių specialiųjų ugdymosi poreikių, kalbos ir komunikacijos gebėjimų ugdymas*
Laima Paulauskienė	*Autizmo spektro sutrikimą turinčių mokinių komunikavimo ypatumai*
Ligita Naujokienė	*Simbolių sistemų naudojimas, logopedinių pratybų metu, vaikams turintiems autizmo spektro sutrikimų*
Rūta Mirauskienė	*Ugdytinių, turinčių specialiųjų ugdymosi poreikių, komunikavimo kompetencijos ugdymas netradicinėse aplinkose*
Loreta Baltrušaitytė	*Kalbos terapijos kaita ir efektyvios terapijos paieškos logopedo/logoterapeuto darbe su pacientais, sergančiais Parkinsono liga*
Milita Akambakienė, Ingrida Masteikienė	*Mokinių skaitymo kompetencijų ugdymas "kitaip"*
Liuda Jarošienė, Raimonda Žemaitaitienė	*Žaismingos užduotys, ugdant šešiamečių rišliąją kalbą*
Jolanta Džiuvienė	*Vaikų ugdymo tęstinumas namuose*

Key-note speakers of the congress

Assist. Prof. PhD Shari DeVeney, US

I am an Assistant Professor at the University of Nebraska at Omaha and completed my education and training in the United States. My undergraduate degree is from the University of Nebraska-Lincoln (UNL), masters from Kansas State University, and doctorate from UNL. Prior to obtaining with my doctorate degree, I spent 10 years as a practicing speech-language pathologist working mainly in early childhood and educational settings with students from toddlerhood through late adolescence.

My primary research focus is in early child language and phonology with long-range goals that include the advancement of evidence-based, effective assessment and intervention for young children whose communication delays are likely to persist and/or worsen without early childhood intervention.

My major research interests incorporate the investigation of several aspects related to the early communication development of young children: (1) characteristics, including speech sound and play skill development, of late-talking toddlers; (2) assessment practices for early speech and language concerns including the use of communication samples and informal phonological analyses; (3) individualized early intervention strategies and (4) influential early factors for infants at risk for communication delays and autism. I am currently serving as co-chair for the *Language in Infants, Toddlers, and Preschoolers* topic for the 2018 *American Speech-Language-Hearing Association* annual convention.

MS Korey Stading, US

Korey Stading is a Speech Language Pathologist who received her masters degree at Texas Christian University. She has worked at Munroe-Meyer Institute at the University of Nebraska Medical Center for the past 20 years. She specializes in AAC and works mainly with pediatric patients and adults with developmental disabilities. She completes AAC evaluations at the University as well as in the public schools. She consults with classroom teachers and provides recommendations for implementation. She provides individual and group therapy and has run an outpatient AAC preschool group for 20 years. She works with children with a variety of disabilities, ranging from apraxia, cerebral palsy, autism, and a variety of genetic syndromes. She works with alternative access for those children that require this for access to AAC. She specializes in work with children with Down syndrome and is currently running a research study looking at AAC and early intervention with this population. She has participated in additional research in AAC looking at children with apraxia and those who require alternative access. She presents regularly on a local, state, and national level. She has also presented at ISAAC. She is active in student training and guest lectures for graduate and undergraduate classes at local universities.

PhD Amy S. Nordness, US

Dr. Amy Nordness is an Assistant Professor and the Director of the Speech-Language Pathology Department at the Munroe-Meyer Institute for Genetics and Rehabilitation at the University of Nebraska Medical Center. Dr. Nordness earned a Bachelor of Science degree in speech-language pathology from Marquette University, a Master of Science in speech-language pathology from the University of Nebraska-Lincoln (UNL), and a Ph.D. in Communication Disorders from UNL.

Her research and clinical interests involve motor speech disorders and augmentative and alternative communication (AAC) across the lifespan. Specifically, she is interested in computer supported learning in childhood apraxia of speech, functional communication using AAC devices in children and adults, improving patient-provider communication for patients who are communication vulnerable, and improving early swallowing skills in infants in the neonatal intensive care unit.

Dr. Nordness has published numerous papers, posters, and journal articles and has provided presentations across the country and internationally. She is a member of the American Speech-Language Hearing Association, the Nebraska Speech-Language-Hearing Association, the United States Society for Augmentative and Alternative Communication, and the ASHA Special Interest Division for AAC.

PhD Yael Kimhi, Israel

Dr. Yael Kimhi is the Acting Rector at the Levinsky College of Education in Israel. She teaches special education at the Graduate program at Levinsky College of Education and was the Head of the Excellence Program (a fast track excelling pre-service teachers' program). Until this year, she taught the cognitive academic practicum, specializing in ASD, at the Graduate program in Special Education, Bar Ilan University. Her main field of research is the academic and cognitive development on the Autism spectrum.

She was a special education inspector and a referent inspector for ASD at the Ministry of Education in the Central district of Israel. Prior to her position as inspector, she was the leading national ASD counselor in Israel, leading both segregated and inclusive models for pupils with ASD.

PhD Orly Hebel, Israel

I'm speech therapist and a family counselor working for more than 30 years with children with ASD and their families. I specialized in implementing Augmentative and Alternative Communication (AAC) systems to enhance the communication and support the learning of children and adults in their life's circles. From an ecologic perspective I developed a model of working with families and other communicative partners as part of the intervention. For the last five years I am leading in our college as the head of the special education department a training program of teaching with IPads in the educational setting of students with complex disabilities as Autism.

I am a member of ISAAAC International and presented in the International conventions on this topics. My Phd is from Phoenix University in AZ, USA on Curriculum and Instruction for students with disabilities. I have an extensive expertise working with nonverbal children and adults with ASD and with implementation of AAC system in their life circles as well as with verbal students with whom we use AAC for development of TOM and social wellbeing.

Assoc. Prof. PhD Maurice Grinberg, Bulgaria

I am a cognitive scientist working in various areas of research like decision making, cognitive modelling, social and moral dilemmas and eye-tracking. During the last three years my activity includes assistive AAC technologies with a focus on eye control.

Assist. Prof. PhD Evgeniya Hristova, Bulgaria

Evgeniya Hristova, PhD is assistant professor in the Department of Cognitive Science and Psychology and in the Research Center for Cognitive Science at New Bulgarian University. Her research interests include judgment and decision making in social and moral dilemmas, eye-tracking and bio-signal recordings, mind perception. Evgeniya Hristova is a co-founder of 'ASSIST – Assistive technologies' – the first Bulgarian NGO promoting and disseminating high-tech AAC technologies in Bulgaria with a focus on eye gaze assistive technologies for computer access and communication for people with severe physical disabilities.

Abstracts of key-note oral presentations

Assist. Prof. PhD Shari DeVeney
University of Nebraska at Omaha, US

Issues in SLT practice: Intervention Practices for Late-Talking Toddlers, including Use of Augmentative and Alternative Communication

This presentation includes the latest information regarding 'late talkers,' two-year-old children slow to develop expressive language skills not secondary to causal conditions such as Autism Spectrum Disorder, intellectual deficits, or sensory impairments. This presentation addresses characteristics of late talking and intervention approaches including the 'watch and see' approach, general language stimulation, focused language stimulation, milieu teaching, and augmentative and alternative communication (AAC). Findings from several studies as well as a summary of the support level for each intervention approach are discussed. In addition, interventionist considerations will be briefly reviewed. The aim of the presentation is to describe the research evidence-base regarding treatment approaches for late talkers in order to inform clinical practice. Participant learning outcomes are as follows: (1) Describe late talkers, characteristics associated with late talking, and characteristics predictive of persistent language deficits, (2) identify typical intervention approaches for late talkers, and (3) consider potential uses of manual signs and graphic symbols to facilitate expression for this population.

Key words: late talkers, intervention approaches, AAC.

Key references:

1. Camarata, S. (2015). *Late talking children: A symptom or a stage?* Cambridge, MA: MIT Press.
2. DeVeney, S., Cress, C., & Reid, R. (2014) Comparison of two word learning techniques and the effect of neighborhood density for late talkers. *Communication Disorders Quarterly, 35,* 133-145.
3. DeVeney, S., Hagaman, J. & Bjornsen, A. (2017). Parent-implemented versus clinician directed interventions for late-talking toddlers: A systematic review of the literature. *Communication Disorders Quarterly, 39,* 293-302.
4. Fisher, E.L. (2017). A systematic review and meta-analysis of predictors of expressive-language outcomes among late talkers. *Journal of Speech, Language, and Hearing Research, 60,* 1-14.
5. Paul, R. (1996). Clinical implications of the natural history of slow expressive language development. *American Journal of Speech-language pathology, 5,* 5-21.
6. Rescorla, L. (2009). Age 17 language and reading outcomes in late-talking toddlers: Support for a dimensional perspective on language delay. *Journal of Speech, Language, and Hearing Research, 52*, 16-30.
7. Rescorla, L., & Dale, P. (2013). *Late talkers: Language development, interventions, and outcomes.* Baltimore, MD: Brookes.
8. Roberts. M.Y. & Kaiser, A.P. (2015). Early intervention for toddlers with language delays; A randomized controlled trial. *Pediatrics, 135,* 686-693.
9. Zubrick, S., Taylor., C., Rice, M., & Slegers, D. (2007). Late language emergence at 24 months: an epidemiological study of prevalence, predictors, and covariates. *Journal of Speech, Language, and Hearing Research. 50,* 1562-1592.

PhD Yael Kimhi
Levinsky College of Education, Israel
Meital Achtarzad
Ministry of Education, Israel
PhD Gila Tubul-Lavy
Ono Academic College, Israel

Developing Emergent Literacy Skills for Kindergartners with Autism Spectrum Disorder: A Pilot Study

Aims. In typical development, emergent literacy skills predict successful reading abilities. Code-related literacy skills may include letter knowledge, print concepts, early writing, and early phonological awareness. Meaning-related literacy skills may include lexical and grammatical ability, story retelling, and comprehension. Children with ASD (Autism Spectrum Disorder) show, on the most part, poor reading comprehension abilities, yet up to date, research regarding emergent literacy skills in ASD is limited. We conducted a study to investigate a naturalistic, standards-based national literacy program, for kindergartners with ASD, ages 5-8 years in their kindergarten setting.

Methods. We implemented an ASD-adapted intervention as an intensive group treatment over 6 weeks, with a pretest-posttest design to examine emergent literacy gains.

Results. The children with ASD demonstrated gains in both code-related and meaning-related skills following intervention.

Conclusions. The findings of the current pilot study indicate that kindergartners with ASD can advance their emergent literacy skills considerably in most measures of code-related and meaning-related domains, after participating in an intensive 6-week group treatment in their natural educational setting. The naturalistic group intervention based on the holistic standards-based literacy program contained specific, appropriate strategies for advancing the emergent literacy abilities of children with ASD. The clinical and theoretical implications will be discussed regarding the importance of an intensive structured literacy intervention for children with ASD before entering school.

Keywords: early literacy, ASD.

Key references:

1. Browder, D., Ahlgrim-Delzell, L., Flowers, C., & Baker, J. (2012). An evaluation of a multicomponent early literacy program for students with severe developmental disabilities. *Remedial and Special Education, 33*, 237–246.
2. Kimhi, Y., Achtarzad, M., & Tubul- Lavy, G. (2017). Emergent literacy skills for five kindergartners with autism spectrum disorder: A Pilot Study. *Journal of Research in Special Educational Needs*. doi:10.1111/1471-3802.12406
3. Mims, P., Browder, D., Baker, J., Lee, A., & Spooner, F. (2009). Increasing participation of students with significant cognitive disabilities and visual impairments during shared stories. *Education and Training in Developmental Disabilities, 44,* 409-420.
4. Mucchetti, M. (2013), Adapted shared reading at school for minimally verbal students with autism. *Autism, 17,* 358 – 372.
5. Nation, K., Clarke, P., Wright, B., & Williams, C. (2006). Patterns of reading ability in children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 36*(7)*,* 911–919.
6. National Early Literacy Panel. (2008). *Developing early literacy*. Washington, DC: National Institute for Literacy.

MS Korey Stading
University of Nebraska Medical Center, US

Early Intervention for Children with Down Syndrome – Benefits of AAC

Aims. Children with Down syndrome have known delays in communication, but speech therapy is often not involved in service provision until after 2 years of age. This presentation will discuss the results of a research study looking at the potential benefits of speech therapy interventions for children with Down syndrom between the ages of 12-24 months. Participants will learn different tools to support communication, such as gestures, manual signs, and applications on an iPad for voice output. Participants will be able to identify specific early intervention strategies that are beneficial to promote communation and will learn how to embed them within play. Video examples of therapy strategies will be used. Photos of iPad set ups will be displayed.

Methods. A single subject alternating-treament design was used to measure the effects of high-tech, low-tech, and no-tech communication supports on speech, expressive language, and communicative intent. There were two treatment groups, one targeting use of a Speech Generating Device, manual signs, and speech and the other targeting manaual signs and speech, along with a control group.

Results. Children who participated in the treatment programs had significantly higher change in the mean Communication and Symbolic Behavior Scales – Developmental Profile (CSBS-DP) scores as compared to the no treatment group. The treatment group that targeted manual signs and speech had the largest change in pre and post-test scores. A between groups anova was used to compare the groups.

The average number of words (spoken or signed) was higher at 24 months for the treatment groups as compared to the control group.

Conclusions. The total score on the CSBS-DP did show strong differences between the control and treatment groups. Direct speech therapy is beneficial in the development of expressive language between 12 and 24 months of age.

Keywords: augmentative and alternative communication, Down syndrome, early intervention.

Key references:

1. Capone, N. & McGregor, K. (2004). Gesture Development: A review for clinical and research practices. *Journal of Speech, Language, and Hearing Research*, 47, 173-186.
2. Caselli, M., Vicari, S., Longobardi, E., Lami, L, Pizzoli, C & Stella, G. (1998). Gestures and words in early development of children with Down syndrome. *Journal of Speech, Language, and Hearing Research*, 41, 1125-1135.
3. Chan, J. & Iacono, T. (2001).Gesture and word production in children with Down syndrome. *AAC: Augmentative and Alternative Communication*, 17, 73-87.
4. Wetherby, A. & Prizant, B. (2002). *Communication and Symbolic Behavior Scales*: Developmental Profile First Edition (CSBS-DP) [Assessment Instrument]. Baltimore, MA; Brookes Publishing Company.

PhD Orly Hebel
Levinsky College of Education, Israel

Implementing AAC Systems to Enhance Communication and Support the Learning of Children and Adults with ASD in Their Lives' Circles

The aim of this presentation is to review the latest research and clinical practices on *communication competence* as a platform for the *participation* of persons with complex disabilities in their life circles.

Method. The use of Augmentative and Alternative Communication (AAC) systems will be discussed in alingment to the person's abilities and barriers. The *Participation Model* developed by Beukelman and

Mirenda will be illusrated through two case studies. This will allow to explore the implementation of different AAC methods and the relationship of those methods to the person‘s ability to communicate in various life contexts. Special focus will be drawn to the *triangle of school-child- family* and *teacher-parent* collaboration in the AAC context.

Results and conclusions. The relationship between the use of AAC systems in teaching children with disabilities and their academic achievements and emotional well being in class will be discussed from the the latest practices developed in the field. The latest research supports the use of tablets for improving communication skills in individuals with ASD and other developmental disabilities. Investigators in several studies have reported an improvement in functional communication (e.g., requesting) and prosocial behaviours (e.g., decrease in aggression behaviours) in children and adolescents with ASD and developmental disabilities after the implementation of IPads with AAC apps.

Key words: AAC, participation , communication competence .

Key references:

1. Beukelman, D. R., Mirenda, P. (2013). Augmentative and alternative communication: Supporting children and adults with complex communication needs (4th ed.). Glenview, IL: Brookes.
2. Light, J., Drager, K. (2007). AAC technologies for young children with complex communication needs: State of the science and future research directions. *Augmentative and Alternative Communication, 23,* 204–216. doi:10.1080/07434610701553635
3. Sigafoos, J., Lancioni, G. E., O'Reilly, M. F., Achmadi, D., Stevens, M., Roche, L. Green, V. A. (2013). Teaching two boys with autism spectrum disorders to request the continuation of toy play using an iPad-based speech-generating device. *Research in Autism Spectrum Disorders, 7*, 923–930. doi:10.1016/j.rasd.2013.04.002
4. Xin, J. F., Leonard, D. A. (2014). Using iPads to teach communication skills of students with autism. *Journal of Autism and Developmental Disorders, 45*, 4154–4164. doi:10.1007/s10803-014-2266-8

PhD Amy S. Nordness
University of Nebraska Medical Center, US

AAC Supports for Adults with Degenerative Diseases

Aims. Participants will be able to identify strategies to support communication at each of the 5 stages throughout the progression of the degenerative disease, amyotrophic lateral sclerosis (ALS).

Summary. The communication needs of patients with the degenerative disease, amyotrophic lateral sclerosis (ALS), change over time. This presentation will discuss research-based and evidence-based standards of care to support individuals when 1) there is no detectable speech disorder, 2) a speech disturbance is detected, 3) speech intelligibility declines, 4) natural speech is supplemented with AAC, and 5) no useful natural speech remains. Different AAC supports and tools can be utilized at all stages, including voice/message banking, monitoring speaking rate, voice amplification, low-tech AAC, high-tech AAC, phone/text/writing supports, ICE card, and call signals, to support various communication needs and they should be addressed early to prepare for upcoming changes. Photo and video examples of multiple AAC supports will be utilized.

Keywords: AAC, degenerative, amyotrophic lateral sclerosis, ALS.

Key references:

1. Ball, L. J., Beukelman, D. R., & Bardach, L. (2007). Amyotrophic lateral sclerosis. In D. R. Beukelman, K. L. Garrett, and K. M. Yorkston (Eds.), *Augmentative Communication Strategies for Adults with Acute or Chronic Medical Conditions.* Baltimore, MD: Paul H. Brookes Publishing Co.
2. Ball, L. J., Beukelman, D. R., & Pattee, G. L. (2002). Timing of speech deterioration in people with amyotrophic lateral sclerosis. *Journal of Medical Speech-Language Pathology, 10*(4), 231-235.

3. Ball, L. J., Willis, A., Beukelman, D. R., & Pattee, G. L. (2001). A protocol for identification of early bulbar signs in amyotrophic lateral sclerosis. *Journal of the Neurological Sciences*, 191, 43-53.
4. Beukelman, D., Fager, S., & Nordness, A. (2011). Communication support for people with ALS. *Neurology Research International, 2011,* 1-6.

Assoc. Prof. PhD Maurice Grinberg,
Assist. Prof. PhD Evgeniya Hristova
New Bulgarian University, Bulgaria

Theoretical Background of Eye Controlled Assistive Technologies Use in Speech and Language Therapy

The aim of the talk is to present the potential of augmentative and alternative communication (AAC) with eye control in the work with children with severe physical disabilities related to cerebral palsy, Rett syndrome, and autistic spectrum disorders. Children with severe physical impairments in many cases cannot talk and can achieve their full potential only using AAC.

AAC provides means which help or replace speech and writing. Recent research has shown that about 1.5% of the population has difficulties with speech which leads to difficulties in communication, education, and social inclusion. High-tech AAC is based on modern information and communication technology and consist of devices and software compensating for deficiencies in language and communication.

These assistive technologies are among the most used as they provide children with a mean to communicate and learn even without speech and fine motor skills. The principles and the levels of usage will be presented with a focus on communication and development of language skills. Assessment of cognitive development and planning of future activities for children with limited communication abilities will be also discussed.

The talk will provide the theoretical and methodological background behind eye-controlled assistive technologies and will introduce the main technology – hardware and software – involved in its usage.

Keywords: eye-tracking, eye-control, augmentative and alternative communication.

Abstracts of workshops

PhD Amy S. Nordness
University of Nebraska Medical Center, US

Patient Provider Communication for Patients who are Communication Vulnerable

Aims. Participants will identify individuals who are communication vulnerable and will identify ways that both patients and providers can prepare in advance to support communication in a medical setting. Participants will identify tools that support communication in a medical setting and will review checklists that can encourage accountability.

Summary. All medical providers must be prepared for communicating with communication vulnerable patients in medical settings to ensure that they are meeting patient needs and improving overall outcomes. This presentation will discuss different personnel roles that support communication, ways to order communication supports in a medical facility, preparing patients who have a pre-existing communication disability, and preparing providers. Specific tools that may help support communication, including hearing supports, low-tech AAC, high tech AAC, and written references to personal information, will be discussed as well as how to maintain tools and share information between all providers. Medical facilities must establish policies and procedures that ensure patient provider communication is timely, effective, and consistent. Checklists that support accountability will be shared and reviewed.

Keywords: communication vulnerable, patient provider communication, augmentative and alternative communication (AAC).

Key references:

1. Beukelman, D. & Nordness, A. (2017). Patient-provider communication for people with severe dysarthria: referral policies that lead to systems change. *Seminars in Speech and Language, 38*(3), 239-250.
2. Beukelman, D. R. & Nordness, A. S. (2015). Patient-Provider Communication in Rehabilitation Settings. In S. W. Blackstone, D. R. Beukelman, and K. M. Yorkston (Eds.), *Patient-Provider Communication. Roles for Speech-Language Pathologists and Other Health Care Professionals.* San Diego, CA: Plural Publishing Inc.
3. Blackstone, S. W., & Pressman, H. (2016). Patient communication in health care settings: New opportunities for augmentative and alternative communication. *Augmentative and Alternative Communication*, *32*(1), 69–79.
4. Hemsley, B., & Balandin, S. (2014). A metasynthesis of patient-provider communication in hospital for patients with severe communication disabilities: Informing new translational research. *Augmentative and Alternative Communication*, *30*(4), 329–343.
5. Nordness, A. & Beukelman, D. (2017). Supporting patient provider communication across medical settings. *Topics in Language Disorders, 37*(4), 334-347.

Assist. Prof. PhD Evgeniya Hristova,
Assoc. Prof. PhD Maurice Grinberg
New Bulgarian University, Bulgaria

Eye-controlled Assistive Technologies for Children with Special Needs

The aim of the workshop is to present the eye-controlled assistive technologies and their application for children with cerebral palsy, Rett syndrome, autistic spectrum disorders, multiple disabilities, etc. Eye-controlled assistive technologies are one of the most powerful methods for augmentative and alternative

communication (AAC). They are used for early intervention and early cognitive development for children with special needs - they are used for training attention, cause-and-effect understanding, choice, etc. Eye-controlled assistive technologies provide means to use not only specialized communication software but also to use standard computer software only by gaze interaction. Because of this, eye-control is an indispensable tool for children and adults without speech and without fine motor control. Eye-controlled assistive technologies are used for communication, education, personal and professional growth, entertainment.

Methods. Several examples of using eye-controlled assistive technologies are going to be presented. Examples cover different goals of usage like early cognitive development, communication, literacy, computer control, environmental control. Success stories and best practices are going to be presented along with a discussion of existing problems to be overcome. Attendees of the workshop will also have the opportunity for hands-on experience of eye-controlled assistive technologies.

Results. Attendees of the workshop will be acquainted with the various applications of eye-controlled assistive technologies and their application for children with special needs.

Conclusions. Eye-controlled assistive technologies provide a tool for development for many children with severe physical impairments and also for children with communication disabilities.

Keywords: eye-control, augmentative and alternative communication (AAC), cerabral palsy, Rett syndrome, early intervention.

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Strategies and Evidence Based Interventions Developing Literacy for Children with ASD

Aims. In typical development, emergent literacy skills have been found to predict successful reading abilities such as decoding, oral reading fluency, and reading comprehension, as well as writing.This predictive relationship starts in preschool and continues through high school. To become proficient readers, children develop *code-related skills* such as letter knowledge, understanding of print concepts, early writing, and early phonological awareness, as well as *meaning-related skills* such as lexical and grammatical ability, story retelling, and text comprehension. Research concerning decoding and reading comprehension in ASD shows that decoding may be a relevant strength in ASD, but reading comprehension is not. Appropriate early interventions that include exposure to both code-related and meaning-related activities facilitate emergent literacy skills for children with ASD. As with all young children, it is crucial to apply early literacy intervention before children with ASD are exposed to regular reading education as they enter school.

In the workshop, a variety of evidence based practices relevant for developing early literacy abilities within ASD, an all cognitive functioning levels will be reviewed. Various adaptations that have been found to advance these abilities shall be introduced and discussed.

Keywords: early literacy, ASD, evidence based practice.

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Evaluation and Implementation of Low-tech and High-tech AAC Strategies for Young Children

Aims. Participants will be able to describe the differences between gestures and manual sign language, low-tech, mid-tech, and high-tech AAC. Participants will be able to describe three key components to implementing AAC use with children, including communication expectations, teaching, and providing opportunities.
Summary. There are a variety of AAC devices and strategies that can be used with children. These include gestures and manual sign language, low-tech, mid-tech, and high-tech AAC. Participants will be able to describe the differences between each type of AAC, as well as identify their benefits and drawbacks. Video examples of each type will be shown. Various iPad apps will be shared. Three types of alternative access to AAC will be discussed, including switch scanning, head tracking, and eye gaze. Video or photo examples of low and high-tech versions of these alternative methods will be shown. Evaluation considerations will be discussed, including matching individual AAC features to the child's abilities and future planning for AAC needs, to determine the best AAC system for the child. AAC implementation strategies, such as communication expectations, teaching, and providing communication opportunities, will be described. Suggestions for how to incorporate AAC into various home, classroom and therapy activities will be shared, including key components to insure more successful use. Video examples will be used to show these in action and to model how the same activity can be modified to meet the varying needs of individual children within a group.
Keywords: augmentative and alternative communication (AAC), AAC evaluation, AAC implementation, low-tech AAC, mid-tech AAC, high-tech AAC.
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The use of IPads to Enhance Communication Experiences and Social-Emotional Relationships of Children with Complex Communication Needs

Aims. Children with complex disabilities as for example children with motor disabilities or children diagnosed on the Autistic Spectrum are challenged in communicating what they feel, think or believe. In the last years specialized applications for building communication boards on the iPad have been developed to allow these children to express themselves and interact in broader communication circuits. Yet, even though they use these specific apps on a daily basis, the focus of teachers, parents and therapists is frequently on communicating basic personal needs related to their daily schedule (Binger and Light, 2006). As a result, from a very young age these children do not enjoy mutually rewarding social communication and they develop throughout their lifespan a passive attitude in social contexts. Interventions to promote social–emotional growth in young children need to involve parents, caregivers, and/or peers in social contexts in a natural, enjoyable way (Case-Smith, Clark and Schlabach, 2013).

In this workshop the use of popular apps for making movies, stories and photo collages on mobile devices will illustrate how it is possible to enhance the "emotional presence" of the child with complex communication needs in social contexts by "mirroring" his experiences and interactions with others through pictures and movies. In addition, apps will be explored to offer support of interactions by prompting those that relate to social and emotional learning. It will be demonstrated that mediation of children's interaction within natural contexts can be reinforced by using those simple apps and the experience of taking pictures together provides implicit support by embedding turn-taking and cooperation within a social setting. Various case studies will be presented to demonstrate the use of applications that encourage "the embodiment" of the child, Theory of Mind (ToM) development, and participation in social media experiences in order to shed light on how to use simple media opportunities to enhance the child's engagement and well-being in social interactions (Brady, Thiemann-Bourque, Fleming and Matthews, 2013; Miller, 2014). It will be proposed that the potential of using apps is not just in their content but also in how they can be used in various contexts to augment and facilitate the emotional and social interactions of children with complex disabilities.

Key words: IPads, social competence, participation, children with complex disabilities.

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Procedural Memory in Young Children and Its Predictive Value in Academic Achievements Kindergarten and First Grade Children

Aims. In the current study, 5- to 8-year-old children's handwriting and reading were associated with the production of the ILT (Invented letter task), a simple, graphomotor procedural skill learning task. In Phase I of the current study, children's handwriting (speed and legibility) was assessed contemporaneously with the ILT. The following year, Phase II assessed both handwriting and reading speed. The findings clearly indicate that the performance of the ILT showed strong associations to handwriting and reading.
In the workshop it will be discussed the relation between procedural memory and academic acheivements and demonstrate procedural learning in typical children as well as children with SLI and ADHD. Implementation of findings in early educatuion and elementary school will be discussed.
Keywords: procedural memory, motor skill learning, handwriting speed, reading speed, kindergarten-2nd grade.
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Noise, Working Practice and Voice Disorders in Teachers

Teachers are at considerable risk of developing vocal health problems due to intensive voice use during teaching [1]. The background noise in the classrooms affects teachers' speaking behaviour. Noise, as well as loud and excessive voice use, are considered as voice ergonomic risk factors that can affect the voice [2].

The aims of the study were (1) to investigate working environment in the classrooms and speaking habits of teachers; (2) to discover the relationship between self-evaluated voice disorders and voice ergonomics factors.

Methods. One hundred six teachers responded to an online questionnaire on noise, working practice and voice amplification. Teachers filled in Vocal symptoms questionnaire [3] and those who had two or more voice symptoms every week or more often were included in the voice disorder group.

Results. Of the subjects, 87.8% reported that noise from outside is clearly audible during the lessons. Consequently, 49.1% reported about the noise from equipment and 34.9% about clearly audible noise from engineering systems (heating, ventilation, water pipes). Seventy-one percent of teachers spoke with a loud voice, and 82.1% noted that voice use is excessive during the working day. The statistically significant correlation was found between activity noise in the classroom and loudness of teachers'voice ($r = 0.335$, $p<0.01$). Fifty-three teachers were self-evaluated voice disorders (Me_{age}=46 years, SD 10.84, range 22-62), as well as 53 teachers had a healthy voice ($Me_{age=}$47 years, SD 11.86, range 21-30). Teachers with voice disorders complained more about clearly audible noise from ventilation ($\chi=7.36$, $p<0.01$), from equipment ($\chi=3.78$, $p=0.05$), from adjacent rooms ($\chi=3.81$, $p=0.05$). Teachers with voice disorders had an excessive or continuous voice during the work day more often than teachers without voice disorders ($\chi=5.19$, $p<0.05$).Teachers with voice disorders reported higher activity noise in the classrooms ($\chi=12.74$, $p=0.01$)
Teachers with voice disorders consider that they need a voice amplification systems in everyday teaching ($\chi=3.85$, $p=0.05$).

Conclusions: 1) The most common noise source which affects classroom acoustics is noise from outside, dominant from adjacent rooms and corridor. 2) There are differences between teachers with and without self-evaluated voice disorders in the exposure of noise in the classroom and speaking habits. 3) Teachers with voice disorders consider the necessity to use voice amplification systems.

Keywords: voice disorders, noise, working practice.

The study was supported by Post-doctoral Research Aid, N 1.1.1.2/16/I/001. Research project "The long-term effects of sound amplification systems on teachers' vocal load and comprehension of verbal instructions of children", 1.1.1.2/VIAA/1/16/001.

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Alternative and Augmentative Tools for Better Communication

Aim. Research is done in theoretical framework to state – what is Alternative and Augmentative communication and which tools we use to improve the possibility to communicate. There are different cases in children and also in adults, when verbal communication is limited or even impossible.
Used method – analysis of existing means of AAC theoretically. When AAC is used with support means and when without support tools? What are support tools and how they are used? Some attention is devoted to state the evaluation of communication possibilities and how we choose the AAC. There are some rules how to create the dictionary. History of AAC in Latvia is characterised.
Discussion. How the concept of understanding about reality is created? When the progress is positive and when the development of communication is limited?
Conclusions. When verbal communication is limited or impossible, AAC tools must be used to create the understanding of reality. Adequate AAC tools are necessary for children or adults to express their wishes and thoughts.

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Non–Verbal Communication of 3 – 4 Years Old Children With DLD (Developmental Language Disorders)

The non-verbal communication is one of the ways of communication used by people from the early childhood. Non-verbal communication allows us to express our attitude, emotional state, and it functions unconsciously, not knowingly. Up to 2 years of age the children often use the non-verbal communication as the main tool for interaction. Afterwards the verbal communication appears in the life of a child and gradually replaces the non-verbal communication. However, there are children who in the age of 3 and even 4 years do not speak, or speak using separate sounds and combinations of sounds in their speech to name the things they want to express. These children have DLD (Developmental Language Disorders) and use the non-verbal communication broadly; it helps them to communicate with others and to be understood.
The aim of the abstract is to explore which tools of non-verbal communication are used by the children with DLD in order to communicate with peers and adults.
Methods. Based on the scientific literature about the subject of the research the methods used are pedagogical observations, processing and analysis of the collected data.
Results. Participants of the research were 12 children aged 3 – 4 from two pre-school educational institutions (PEI). One of the educational institutions is a specialized PEI for children with speech and language disorders (5 children), the second educational institution is general PEI (7 children). From the 12 children 3 are girls and 9 are boys. The research was done during the period when children use the non-verbal communication as the main tool of communication, i.e., approximately 2 months. The non-verbal communication was tested taking in account different criteria: attraction of attention; request; social rituals and the usage of gestures. The results acquired during the research show that 91,6% of the children use gestures as a tool for communication, 25% of children often use eye contact, especially in order to attract attention and make requests.
Conclusions. The children with DLD very often and broadly use the means of non-verbal communication as a tool for interaction. These children mostly use different gestures, mainly directional gestures.
Keywords: non-verbal communication, 3 – 4 years old children, DLD.

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Information and Communication Technologies in Speech and Language Therapy

Nowadays increasing the number of children with speech and language disorders in pre- and primary schools of Latvia, so it is necessary to find new challenge in speech and language therapy to keep up with the new ways children are learning to communicate. With ICTs that is constantly developing, new opportunities open up for children with speech and language disorders that allow them to achieve an increasingly better level of functional communication. 21st century is asking new tools in speech and language therapist (SLT) box and SLT must see all technological tools as just part of the therapy. SLT must find modern means to keep children's attention and motivate them to be good communicators. This article discusses: Is the ICTs an effective speech and language therapy tool for SLT? Does the ICTs serve as a sustained motivational tool for the student in speech and language therapy? Does the ICTs serve as an accurate and effective administrative tool for the SLT? Do latvian SLT use in speech and language therapy ICTs?

Methods: analysis of scientific and methodological literature, a survey of pre- and primary school speech and language therapist from Latvia, data collection and analysis.

Results. Main findings – role of ICTs in speech and language therapy pre- and primary schools of Latvia.

Conclusions. "It seems like everyone wants a tablet in education and in speech therapy," said Sailers. "I felt like a lot of [therapists] were kind of hesitant to use the technology… but once they started using it, they realized how easy it was to learn. I feel like those professionals are taking chances more with technology, and I feel like our kids benefit as a result, because they love technology so much." Eric Sailers, an SLP app developer.

Keywords: information and communication technologies (ICTs), speech and language therapy, pre-school, primary school children.

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Theoretical Principles of Evidence-Based Practice in Speech and Language Therapy

The report presents theoretical analysis of the concept of evidence-based practice (EBP): a brief history, definition of EBP and basic principles which may be followed in speech and language therapy will be present. Also the presentation will review the benefits and limitations of EBP for speech and language therapists (SLTs).

EBP is very common research object among foreign scientists. It last about three decades. The philosophical origins of EBP extend back to the mid-19th century (Mead, 2000, cit. McCurtin, Roddam, 2012, p. 12) but primarily the term was started to use in the medical field since the end of 20th century (Claridge, Fabian, 2005). The most frequently cited (for example it was cited by Spek, 2015; Justice, 2010; Roddam, Skeat, 2010; S. L. Gillam, R. B. Gillam, 2006; Zippoli, 2005; Dollaghan, 2004 etc) and original definition of evidence based medicine (EBM) is published by Sackett et al (1996). Later (since the 2000s) EBP has spread to other areas such as management, politics, education, including speech and language therapy (Dollaghan, 2007; Lass, Pannbacker, 2008; Shortello at al., 2001).

It is very important to discuss what does EBP means in field of speech and language therapy. According to McFadden, Thiemann (2009), there is no single and universal definition of EBP. In many cases this term has been over-used, or used inaccurately (Roddam, 2016). There are three essential components of EBP (Roddam, 2016; McCurtin, Roddam, 2012; Roddam, Skeat, 2010 etc.): best quality research evidence, experienced clinical judgement and factors relating to the individual patient. On the ground of analysis of theoretical sources, these components and other aspects of EBP (the 5-step model, PICO, level of research evidences) will be explored in more detailed way in this presentation.

Lemoncello, Ness (2013) note that the EBP should guide all clinical decisions in speech and language therapy, including prevention, assessment and diagnosis, *treatment* or *management*, and discharge. It means that SLTs are encouraged to be evidence-based practitioners in clinical practice (McCurtin, Roddam, 2012). Despite the limitation of EBP, it is essential for the future success of the SLTs profession (Lass, Pannbacker, 2008).

The author of presentation hope that this report will help for SLTs from Baltic countries to understand the importance of EBP and their clinical decisions will become more effective in the future. EBP can help to unite research and practice and improve services (Schlosser, 2003).

Keywords: evidence-based practice (EBP), research evidence, effectivness, speech and language therapy.

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Using the Thematic Intervention to Fluency Therapy for the Young Stuttering Children

Over the past 15 years, researchers and practioners have recognized the necessity to develop an integrated approach to stuttering therapy based on models from whole language intervention, to demands/capacities, to multifactorial components (Kaufman, 2005). Using the thematic intervention for fluency therapy, the specch language therapist can provide the stuttering children with better understanding of stuttering, work with them on speech skills of stuttering fluency shaping, and use skills learned in a variety of realistic speaking situations. All of this is then developed of a topic of interest for the each stuttering child. The speech and language therapist discusses with the children areas of interest including books, hobbies, celebrities, games (card and video), sports, etc. The thematic intervention are distinct invarious ways – they are directed to the strenghts of each child who stutter, could be based upon what the child can (Shapiro, 2011).

The aims of the study – to disclose the possibilities for stuttering using the thematic intervention to fluency therapy for the young stuttering children.

Research participants: eleven young children who stutter.

Methods: analysis of scientific and methodological literature, case study, data collection and analysis.

Results. The mutually chosen topic or theme was facilitate responses from the children at a level of both challenge and success. The children could choose able to model desired activities. Goals, as established, were both meaningful and attainable for the children who stutter. While goals was broad enough to include the multiple domains of fluency disorders, they also was individualized for the stuttering children.

Steps in applying the thematic intervention to fluency therapy (Charles Healey, Trautman, Panico, 2001):

Step 1 in planning treatment is selecting a topic that is highly interesting to the child;

Step 2 required to consider how much contextualization the child will need to support talking;

Step 3 involves developing ideas for therapy activities and collecting materials associated with the theme;

Step 4, the stuttering children should plan therapy activities that follow the theme and will facilitate learning of speech modification skills through systematic manipulation of various levels.

Conclusions. The using thematic approach to therapy was interesting, fun for stuttering children. It is a dynamic, multidimensional process that allows for the interaction of factors which maintain stuttering and for addressing those factors in an individualized way. Through this thematic construct of therapy, goals of treatment related to understanding the disorder, to feeling positively about self and speech, to being able to formulate the message, to managing stuttering and speech strategies, and to be feeling comfortable in a variety of speaking situations can be achieved over time.

Keywords: fluency therapy, stuttering children, thematic intervention.

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Approaches to the Treatment of Motor Speech Disorders in Children

Approaches to the treatment of motor speech disorders (speech dyspraxia, dysarthria) in children should be applied due to the expected outcomes of the speech and language therapy. *Strategies of non-speech oral therapy* (oral motor exercises), most often applied by speech and language therapists' raise many scientific discussions concerning differences between oral and speech motor activities. *Strategies of speech-based therapy* (traditional motor learning approach) are more effective when learning clear and intelligible children's speech, because when applying them there is no orientation to imitation of articulatory movements only; consistency of traditional teaching of sound pronunciation is maintained by applying sensory prompts, phonetic placement and phonological therapy. *Cognitive strategies* (interaction enhancement, self-monitoring skills, over-pronountiation, difficult word avoiding, speech rate control, etc.) and/or use of *alternative and augmentative communication modes* are used aiming at communication effectiveness (Hodge, 2002; Roth, Worthington, 2016).

In a cases *of speech dyspraxia,* there is no weakness of muscles; therefore, no strengthening of muscles of the articulators is needed (Yorkston, Beukelman et al., 2010). Non-speech exercises for improvement of oral motor movements and traditional motor learning approach are not recommended because in treatment of speech dyspraxia the teaching of consistent movements should be applied by creating motor speech programmes and not teaching sound pronunciation (Hegde, 2001; Velleman, 2003).

In a case *of dysarthria,* goals of strengthening of muscles of the articulators and increase of the volume of movements are treated in a controversial way because in speech one needs only minimal muscle force. Exercises on muscle strengthening integrated in the process of speaking are treated as more effective (Hegde, 2001). Exercises on stretching and resistance are recommended in cases of severe dysarthria only.

Summarising, in cases of *motor speech disorders* (speech dyspraxia, dysarthria), the most effective are the strategies oriented to the process of speech: strategies of phonetic placement, use of sensory prompts or sensory integration, also strategies aiming at intelligibility of speech, essential vocabulary and other compensatory strategies, i.e. slowing down the speed of speech or over-pronunciation (Caruso, Strand, 1999; Hegde, 2001; Velleman, 2003; etc.). Some non-speech, oral motor development or compensatory strategies are recommended in cases of severe motor speech disorders.

Keywords: motor speech disorders, children, treatment approaches, non-speech oral motor strategies, traditional motor learning approach, cognitive strategies, AAC.

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