

Jolanta Falana-Kozłowska, Małgorzata Kozłowska

Articulatory Movement Method by J. Falana-Kozłowska

Abstract: The method has been verified by the 20-year experience in the therapy with children and adult patients with speech impediment and speech disorders such as dyslexia or other speech disorders manifested in articulation. It may also be applied in speech therapy articulation exercises treatment for foreigners. It is based on a purposefully organised didactic background and characterised by precisely structured therapeutic procedures related to the left cerebral hemisphere, which is responsible for linguistic and mathematical/logical intelligence and sequential memory. It is designed for children older than 5 years old (primed by previous execution of the Preliminary Speech Therapy Stimulation Method Programme), or older children with serious disorders, speech impediment and/or displaying aural and mixed dyslexia. Therapeutic effects are visible after several sessions, but there is the requirement of intensive cooperation between the therapist, the child and its parents. It is utilised in numerous therapy centres throughout Poland. Due to its high effectiveness there is a growing interest in the application of the method. The author has been training specialists from all over Poland in the field of the Articulatory Movement Method.

Key words: speech impediment, speech disorder, dyslexia, speech clarity, articulation, sequential memory, phonematic hearing disorder, articulatory kinaesthesia disorder, phonematic deafness (no sense of phonematic substance in a word).

*

Metoda Ruchów Artykulacyjnych Jolanty Falany-Kozłowskiej

Abstrakt: Metoda autorska zweryfikowana 20-letnim doświadczeniem, sprawdzona w terapii dzieci i pacjentów z wadami i zaburzeniami mowy, dyslektycznych oraz wszystkich innych wadach i zaburzeniach mowy przejawiających się (również) na płaszczyźnie artykulacyjnej. Może mieć zastosowanie w ćwiczeniach artykulacyjnych również dla obcokrajowców. Oparta o specjalnie przygotowane zaplecze dydaktyczne. Charakteryzuje ją bardzo precyzyjne uporządkowanie kolejnych działań terapeutycznych z odniesieniem do lewej półkuli mózgowej – odpowiedzialnej, m. in. za inteligencję językową, matematyczno-logiczną i pamięć sekwencyjną. Przeznaczona dla dzieci po 5 roku życia (przygotowanych przez realizację programu metody wstępnej stymulacji logopedycznej) lub starszych z bardzo poważnymi wadami, zaburzeniami mowy i/lub dysleksją głównie słuchową i mieszaną. Efekty terapeutyczne widoczne są już po kilku zajęciach, wymagają jednak intensywnej współpracy: logopeda – dziecko – rodzice. Jest stosowana w wielu ośrodkach w Polsce. Z powodu wysokich efektów terapeutycznych zainteresowanie pracą z zastosowaniem metody ciągle rośnie. Od wielu lat autorka szkoli z zakresu *Metody ruchów artykulacyjnych* specjalistów z terenu całego kraju.

Słowa kluczowe: wada wymowy, zaburzenie mowy, dysleksja, wyrazistość mównia, artykulacja, pamięć sekwencyjna, zaburzenie słuchu fonematycznego, zaburzenie kinestezji artykulacyjnej, głuchota fonematyczna (brak poczucia substancji głoskowej wyrazu).

1. Introduction

AMM (The Articulatory Movement Method) is successfully applied in the therapy of children with:

- speech impediment,
- delayed development of speech,
- phonematic deafness,
- aural and mixed dyslexia,
- other speech disorders, e.g. motor aphasia, alalia, deafness and hypoacusia,
- all other speech disorders which surface in the act of articulation,
- disorders in sequential memory leading to difficulties in phonemisation or in the inability to phonemise,
- articulatory kinaesthesia disorders,
- need for diction and speech clarity exercises.

It is designed for children older than 5 years old, who have been primed by participation in the PSTSM (Preliminary Speech Therapy Stimulation Method) or for older children displaying dyslectic problems.

PSTSM is the first stage in a structured therapeutic procedure designed to stimulate speech in a therapist's surgery. The stage is designed to be utilised with children with deafness or hard of hearing, with young children with "speech impediment risk", who are not ready for proper speech therapy, as well as for children with extensive speech impediment and speech disorder and for children mentally handicapped.

PSTSM is divided into 2 periods, which may, but do not need to be implemented one after the other:

Period 1 encompasses:

- stimulation of cognitive, emotional/motivational and executive functions, (the therapy is administered by a child clinical psychologist),
- practice involving the lexical and syntactic system in utterances,
- practice in nonverbal hearing.

Period 2 encompasses: practise of phonetic/phonological awareness in the context of: a sentence, a word, a syllable, a vowel (initial, central, final position), and a consonant (initial, central, final position).

After the completion of PSTSM proceedings, the child is ready to tackle the phonetic system and is aurally open to phonemes. It is now possible to administer the proper speech therapy (AMM), as:

- nonverbal hearing (the ability of differentiating sounds from natural environment) has been developed,
- basic phonetic/phonological awareness has been crystallised and exercised, which involves: correct understanding of the notion of a sentence and a phoneme, the ability to analyse a sentence, i.e. the children hear a sentence and are able to count its words, identify the initial central and final word, are able to create 2, 3, 4, 5-word sentences on their own, are able to divide a word into syllables and identify initial, central and final syllables randomly,

– identification of initial and final phonemes has been mastered, especially vowels *i* and *y*.

2. What is this method?

AMM is a thoroughly pre-programmed working procedure in phonetic/phonological subject matter. The execution of the method is based on purposefully devised didactic background, featuring individually tailored manuals for each child (patient). The prop labelled as *Układamy wzorce wymowy* “We Structure Pronunciation Patterns” (Falana-Kozłowska, 2001a) constitutes the basis for the practice. It contains 45 simplified Polish phonemes’ pronunciation charts, which are a suggestion of Polish phonetic transcription for the use in communication with children and their parents.

The phonetic jigsaw includes:

- a single chart for each of the following phonemes: *fi, vi, pi, bi, mi, ki, gi, χi, li, ni,*
- a double chart for each of the following phonemes: *t, d, n, f, v, p, b, m, k, g, ch, j, ł,*
- a triple chart for dental phonemes and *r, l,*
- a triple chart for oral vowels: *o, a, u, e, i, y,*
- a double chart for nasal vowels: *ą, ę.*

The 34 charts are accompanied by corresponding illustrations, which are meant to associate the illustration of a phoneme with the mode of its pronunciation and its graphic equivalent, i.e. a letter. There are no illustrations for the nasal vowels *ą, ę*, nor for the phonemes *fi, vi, pi, bi, mi, ki, gi, chi, li.*

The stages of AMM:

1. Introducing the child to conscious perception of phonemes already present in its phonetic system, which are those that the child is able to utter (also in keywords);
2. Practising phonemes in logotomic and syllabic (lengthened and shortened) sequences;
3. Practising phonemes in consonant clusters;
4. Elicitation of substituted phonemes or correction of defective phonemes and their drilling in isolation, in logotomic and syllabic (lengthened and shortened) sequences;
5. Articulatory kinaesthesia exercises in the following arrangements:
 - logotomic and syllabic,
 - consonant clusters,
 - in clusters divided by an oral vowel,
 - in direct vicinity;
6. Practising correct pronunciation of all Polish phonemes in the context of words, 2-word clusters and sentences;
7. Practising correct pronunciation of all Polish phonemes in reading

aloud, telling stories and uncontrolled independent articulation. It is a stage in which total articulation control may be required of children.

Each child is an individuality, and just like in case of other skills, it is also true about the art of speaking. The AMM-based programme must be adapted to specific, individual constraints.

It is advisable to commence the therapy with a detailed analysis of the way in which a phoneme /l/ is produced, followed by the analysis of vowels in the following order: a, o, u, e, y, (i).

The exercises should be accompanied by the use of the manual *Ćwiczenia pionizacji języka* ("Exercises in Tongue Verticality") (Falana-Kozłowska, 2000b). The manual is designed for practice with children who display the following disorders:

- flat position of the tongue in the mouth cavity,
- incorrect swallowing tract,
- absence of alveolar fricatives *sz, ż, cz, dż* and phonemes *l, r,*
- flawed articulation of alveolar fricatives and *r, l.*

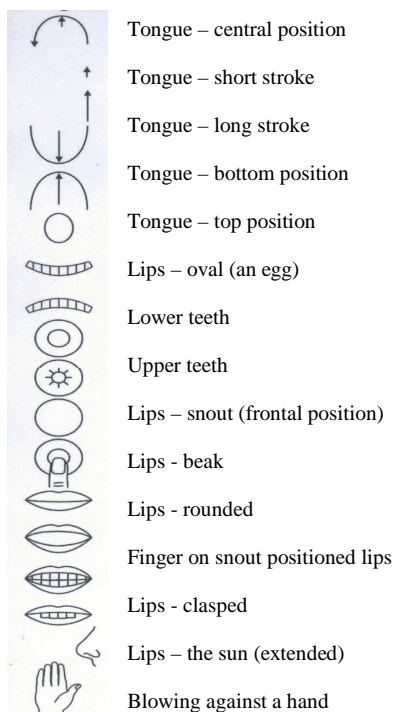


Figure 1. Conventional signs applied in simplified phoneme charts (Falana-Kozłowska, 2001a)

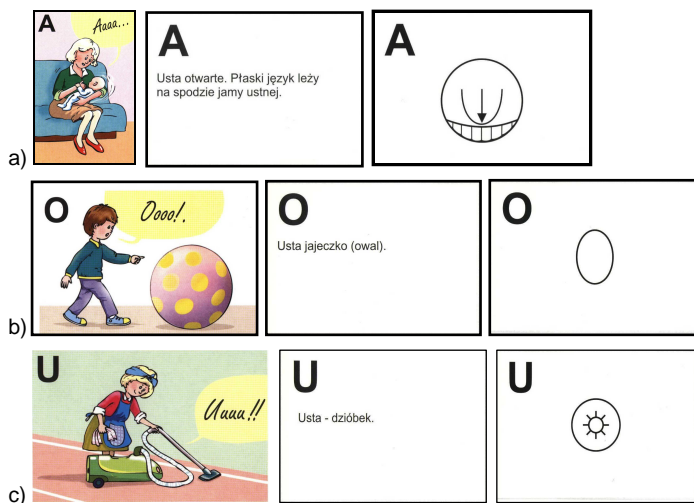
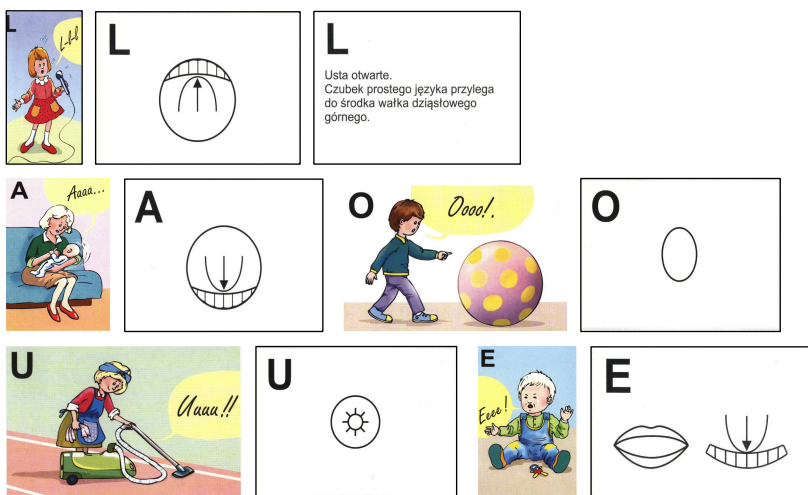


Figure 2. Sample illustrations and charts of phonemes: a) illustration A – mum is putting her baby to sleep and a chart of vowel a; “A – Mouth open. Flat tongue lies at the bottom of mouth cavity”, b) illustration O – a boy is surprised at the fact that he got a big ball and a chart of vowel o; “O – Lips – an egg (oval)”, c) illustration U – a woman is vacuum-cleaning and a chart of vowel u; “U – Lips – a beak“ (Falana-Kozłowska J., 2001a)



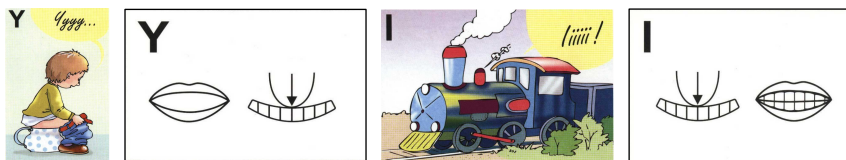


Figure 3. Model to practise the phoneme / with vowels; “L – Mouth open. The tip of straight tongue is adjacent to the centre of upper alveolar ridge” (Falana-Kozłowska, 2001a)

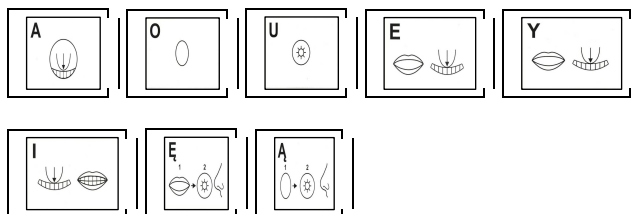


Figure 4. Model to vowel pronunciation exercises (Falana-Kozłowska, 2001a)

One to three sessions are devoted to the problem of tongue verticality, depending on child's needs and predisposition. While describing and demonstrating the exercises in front of the mirror, we mark in the manual those that have proved difficult to tackle.

The essence of the exercises is based on the distribution of logotomic phoneme / articulation (liaisons between phoneme / and vowels) onto separate speech movements. Prior to commencing exercises the child must be instructed on how to pronounce oral vowels and the phoneme / on the basis of photographs and short descriptions. We do these exercises in front of the mirror with the therapist's or instructor's articulatory apparatus serving as a demonstration model. If required, the child's chin may be supported, so that the exercises are performed with mouth wide open, and the tongue is propped up with a finger, so that it remains straight, and so that there is a contact between the tip of the tongue and the centre of the upper alveolar ridge (exercises: version 1 – with the same vowel, version 2 – with various vowels).

The manual *Poradnik Minimum gimnastyczne dla szeregów: sz, ż, cz, dż; s, z, c, dz; ś, ź, ć, dź oraz głoski r* (“Gymnastic Minimum for sz, ż, cz, dż; s, z, c, dz; ś, ź, ć, dź and the Phoneme r Series”) (Falana-Kozłowska, 2003). Prior to commencing the practice with the manual the child must be acquainted with the essential elements of speech apparatus, such as: upper gum, lower gum, upper lip, lower lip, lower teeth, upper teeth, palate, mouth corners, middle tongue, tip of the tongue. The gymnastic minimum contains exercises illustrated with photographs, whose execution

must be driven to perfection, which constitutes a solid basis for further phoneme elicitation and correction. We introduce these exercises even in case when the apparatus in question is fully able and there is no apparent need to improve it. The child must master the skill of controlling its speech apparatus to the maximum, so that it can sustain a movement or perform it when prompted. All exercises are demonstrated to the child in the presence of its parent and a daily 10 to 20-minute gymnastic session at home is recommended.

All exercises from the manuals *Minimum gimnastyczne dla szeregów sz, ż, cz, dż; s, z, c, dz; ś, ź, ć, dź oraz głoski r* ("Gymnastic Minimum for *ż, cz, dż; s, z, c, dz; ś, ź, ć, dź* and the Phoneme *r*") and *Ćwiczenia pionizacji języka* ("Exercises in Tongue Verticality") are indispensable.

The exercises from the manual *Ćwiczenia mięśnia okrężnego warg* ("Exercises of Labial Orbicular Muscle") are merely of auxiliary and supplemental nature, and we include them according to particular requirements. The exercises included in the manual may serve multiple purposes. They are designed particularly for practice involving children with lowered agility in lip movement or displaying problems in speech clarity. They may also be applied in the stuttering and speech disfluency therapy, especially in case of young children, whose therapy should be accompanied by visual illustration of a given phoneme. Practice on vowels may also serve to prolong the exhaust phase and prompt overall improvement of articulatory apparatus.

The essence of the exercises is based on very thorough pronunciation of oral vowels in isolation (one by one), and then on various combinations, differing by the number of elements and the order of their application. The selection of order of vowels does not make use of all possible combinations, but is rather based on the most opposing articulatory movements. Prior to commencing the exercises, the child must be thoroughly instructed on how to pronounce oral vowels (on the basis of photographs and short descriptions). The information must then be transferred onto the child's articulatory apparatus. The exercises, especially at initial stages, must be performed in front of the mirror, so that the child sees the manner of articulation of exercised phonemes on its own example. In stuttering, disfluency and prolonging of the breathing phase exercises, vowel combinations must be uttered in one breath, one sequence at the time, e.g. *a-o-u-e* or in multiple sequences, e.g. *a-o-u-e, a-o-u-e, a-o-u-e*, etc.

Suggestions for the practice:

- exercise 10 to 15 minutes daily,
- exercise in front of the mirror, so that the child controls its tongue and lips,
- exercise to the rhythm of counting up to 10, so that the child learns the skill of sustaining a movement,
- we commence with the easiest exercises and terminate with the most difficult ones,
- each exercise must be performed slowly and thoroughly, so that it

eventually is driven to absolute perfection,

– having mastered all exercises we may proceed to the elicitation and correction of flawed phonemes.

2.1. How to apply it in practice?

The therapy refurbishes children with “phonematic hearing” and makes them able to independently write from hearing and memory. It also applies to children who do not feature any speech impediment, but display weak aural memory or “phonematic deafness” (dyslectic children).

On commencing practice of the phonetic system, the order of vowels must be decided beforehand: *a, o, u, e, y, (i)*. It is how automation of exercise models becomes effective. In case of extensive disorder, a child must become acquainted with all manners of phoneme formation (phonematic awareness).

The phonemes should be exercised in the so called long logotomic sequences, i.e. where in the intra-phoneme pattern, the first vowel stays the same, but final consonants change, e.g. prolonged logotomic sequence of a phoneme *p*: *pa, po, pu, pe, py, pi, apa, apo, apu, ape, apy, api, opa, ope, opu, ope, opy, opi, upa, upo, upu, upe, upy, upi, epa, epo, epu, epe, epy, epi, ypa, ypo, ypu, ype, ypy, ypi, ap, op, up, ep, yp, ip, pap, pop, pup, pep, pyp, pip* and/or in a simplified version: *pa, po, pu, pe, py, pi, apa, opu, upu, epe, ypy, ypi* shortened sequences *pap, pop, pup, pep, pyp, pip*.

Children with extensive disorders display the problem of phonemisation, so at this stage aural analysis and synthesis must be introduced (further practice of phonematic hearing). The child must phonemise all articulated models, according to a predestined order, and later randomly.

The same procedures are applied to all phonemes present in the child's phonematic system. Therapeutic sessions may be based on shortened logotomic sequences, and parents at home are obliged to exercise their offspring on the basis of prolonged logotomic sequences. This shortens the duration of the therapy.

It is then when we should commence our work on consonant clusters. We exercise all consonant clusters of given phonemes existing in the articulation. The phoneme [p] features the following articulatory consonant clusters: *pm, pn, pf, pt, pk, ph, pl, pł, pń* (at this stage we refrain from exercising consonant clusters with dental phonemes: *sz, ź, cz, dź, s, z, c, dź, ś, ź, ć, dź*, which are usually not in child's active repertoire). Among the consonant clusters, we practise the neighbouring phonemes in two different ways, e.g. *pm* – but also *mp*, so that the quality and the order of articulatory movements change.

The structure of practice on consonant clusters is based on a particular order of vowels, therefore *a, o, u, e, y (i)* results in: *pm – pma, pmo, pmu, pme, pmy, (pmi), apma, apmo, apmu, apme, apmy, (apmi), opma, opmo, opmu, opme, opmy, (opmi), upma, upmo, upmu, upme, upmy, (upmi), epma, epmo, epmu, epme, epmy, (epmi), ypma, ypmo,*

ypmu, ypme, ypmy, (ypmi); mp – mpa, mpo, mpu, mpe, mpy, (mpi), ampa, ampo, ampu, ampe, ampy, (ampi), ompa, ompo, ompu, ompe, ompy, (ompi), umpa, umpo, umpu, umpe, umpy, (umpi), empa, empo, empu, empe, empy, (empi), ympa, ympo, ympu, ympe, ympy, (ympi) or/and a shortened version: *pma, pmo, pmu, pme, pmy, (pmi), apma, opmo, upmu, epme, ypmy, (ympi), mpa, mpo, mpu, mpe, mpy, (mpi), ampa, ompo, umpu, empe, ympy, (ympi)*.

All patterns must be phonemised in a particular order, as well as randomly. In case of difficulties, we may resort to thorough observation of articulatory movements in front of the mirror. After a while, the child is able to utter particular consonant clusters on its own (with visual support).

Having gone through all consonant clusters within the phonemes existing in the phonematic system (either less demanding in articulation, or more contrasting), the child is usually ready to elicit nonexistent or deformed phonemes.

Each elicited phoneme is treated in the same way as in case of phonemes exercised previously, i.e. we exercise them in shortened and prolonged logotomic sequences, which facilitates their reinforcement. We elicit or introduce the awareness of the creation of all dental phonemes and exercise them in shortened and prolonged logotomic sequences.

Next, we proceed to exercising articulatory kinaesthesia involving eliciting phonemes.

The scheme of practice involving phonemes *sz – s – ś* involves exercises in articulatory kinaesthesia in logotomes (at least in three patterns out of the nine that are possible):

1. *sz-s-ś, sza-sa-sia, szo-so-sio, szu-su-siu, sze-se-sie, szy-sy-si, asza-asa-asia, oszo-oso-osio, uszu-usu-usiu, esze-esie-esie, yszy-ysy-ysi, asz-as-aś, osz-os-oś, usz-us-uś, esz-es-eś, ysz-ys-yś, szasz-sas-siaś, szosz-sos-sioś, szusz-sus-siuś, szesz-ses-sieś, szysz-sys-siś;*

2. *s-ś-sz, sa-sia-sza, so-sio-szo, su-siu-szu, se-sie-sze, sy-si-szy, asa-asia-asza, oso-osio-oszo, usu-usiu-uszu, esie-esie-esze, ysy-ysi-yszy, as-aś-asz, os-oś-osz, us-uś-usz, es-eś-esz, ys-yś-ysz, sas-siaś-szasz, sos-sioś-szosz, sus-siuś-szusz, ses-sieś-szesz, sys-siś-szysz;*

3. *ś-sz-s, sia-sza-sa, sio-szo-so, siu-szu-su, sie-sze-se, si-szy-sy, asia-asza-asa, osio-oszo-oso, usiu-uszu-usu, esie-esze-esie, ysi-yszy-ysy, aś-asz-as, oś-osz-os, uś-usz-us, eś-esz-es, yś-ysz-ys, siaś-szsz-sas, sioś-szsz-sos, siuś-szusz-sus, sieś-szesz-ses, siś-szysz-sys.*

The child must master the set in a specified order and randomly, e.g. it repeats *sza-sa-sia*. It is also important to differentiate the phonemes aurally. The therapist pronounces the logotome with the phoneme: *sz, s, ś*, and the child points at the corresponding chart (pictu-re). Next, the procedure includes all consonant clusters of dentalised phonemes.

The phoneme *sz* features the following consonant clusters: *szm, szn, szp, szt, szf, szk, szch, szł, szl, szń, szcz, szs, szc, szś, szć, szr*. They are followed by exercises in articulatory kinaesthesia included in the so called collected consonant clusters: *sz – s – ś*, with the phoneme *m*: *szma-sma-*

śma, szmo-smo-śmo, szmu-smu-śmu, szme-sme-śme, szmy-smy-śmy, asma-asma-aśma, oszma-osmo-ośmo, uszmu-usmu-uśmu, eszme-esme-eśme, yszmy-ysmy-yśmy, msza-msa-msia, mszo-mso-msio, mszu-msu-msiu, msze-mse-msie, mszy-msy-msi, amsza-amsa-amsia, omszo-omso-omsio, umszu-umsu-umsi, emsze-emse-emsie, ymszy-ymsy-ymsi. Typically, only a single combination is practised during one session, and the remaining 2 out of 9 possibilities are practised by parents at home. It is very important to master the phonemisation of the aforementioned sets randomly, i.e. the therapist pronounces a given set, e.g. *eszmu* and the child repeats and phonemises.

The selected consonant clusters of phonemes: *ż – z – ź, cz – c – ć, dż – dz – dź* are practised in the same way.

The procedure is followed by the practice of articulatory kinaesthesia within phonetic sets separated by an oral vowel: *a, o, u, e, y.*

The differentiation of phonemes from sets: *sz, ź, cz, dź; s, z, c, dz* (12 combinations). The example for *sz – s*: *szas, szos, szus, szes, szys; aszas, aszos, aszus, aszes, aszys; oszas, oszos, oszus, oszes, oszys; uszas, uszos, uszus, uszes, uszys; eszas, eszos, eszus, eszes, eszys; yzas, yzos, yzus, yzes, yzys; sas, sos, sus, ses, sys; asas, asos, asus, ases, asys; osas, osos, osus, oses, osys; usas, usos, usus, uses, usys; esas, esos, esus, eses, esys; ysas, ysos, ysus, yses, ysys.* All sets should be phonemised in the explicit order and later randomly.

In the case of very serious articulatory disorders, it is indispensable to introduce the awareness of creation of all phonemes, including soft phonemes of *pi, bi, mi* etc., which feature less frequently in articulation. It is also important to differentiate between them in opposing logotomic sets, as well as in sets separated by vowels. Such therapy incorporating the phonetic system may be followed by the practice on words, two-word clusters, sentences etc., with special care attached to the precision of articulation. All long words of intricate phonetic structure and words featuring opposing phonemes mainly from sets of *sz, ź, cz, dź; s, z, c, dz; ś, ź, ć, dź* and *r – l – j*, should be phonemised (with visual support) and recorded in writing (if the child can write).

AMM constitutes the first element in therapeutic procedures with dyslexic children, but it must be applied either as a whole, or partially in case of disorders other than dyslexia. Its implementation guarantees 100% of effectiveness of the therapy, accordingly to child's intellectual potential. The phase must be followed by the intervention of a re-educator, whose assignment is to practise the following:

- spelling of the written record,
- the pace and technique of reading with comprehension,
- the ability to produce written and oral utterances.

3. Closing thoughts

AMM is based on the concept of polysensory cognition and makes use of 3 analysers: sight, hearing and movement, whose coordination is indispensable in the mastering of reading and writing. It is accompanied by specific didactic background in the form of individually tailored manuals, which are given to the child undergoing the therapy. The therapy that utilises AMM is 100% effective, if it is completed by the age of 8. Depending on the type and scope of the disorder, the AMM programme must be executed as a whole, or partially. The practice on the system of dentalised phonemes and phonemes *r-l-j* constitutes a fundamental part of the programme. The practice of articulatory clarity, based on linguistic material, must be accompanied by detailed explanation of the differences between spelling and pronunciation rules.

After the completion of the AAM therapy, the child's behaviour should be monitored by periodical check-ups. The first check-up should take place 6 months after the completion of the therapy; the second after 12 months and the third after 18 months. AMM may be applied to all languages making use of letter alphabets. It influences mainly the left cerebral hemisphere, responsible for speaking, reading and writing, as well as for academic performance and sequential memory. Therefore, all exercises must be carefully planned, selected and executed with utmost precision. The implementation of the method compensates the child's developmental deficiencies. By the same token, it is a key to learning to write, to read, to learn foreign languages, as well as to assimilate knowledge and skills. The schoolchild with speech impediment or disorder and/or phonematic deafness should remain under the care of 2 specialists: a speech therapist and a pedagogue. If the child has been diagnosed with aural dyslexia, phonematic hearing disorder, phonematic deafness or disorders in sequential memory, then AMM should constitute the fundamental part of pedagogical therapy.

References:

- Falana-Kozłowska, J. (2000a). *Ćwiczenia mięśnia okrężnego warg*. Radomsko: Wydawnictwo P.W.D. "Apex".
- Falana-Kozłowska, J. (2000b). *Ćwiczenia pionizacji języka*. Radomsko: Wydawnictwo P.W.D. "Apex".
- Falana-Kozłowska, J. (2000c). *Praca nad kinestezją artykulacyjną w obrębie szeregów sz, ż, rz, cz, dż, ś, ź, ć, dź, s, ż, c, dz, głosek r, l*. Radomsko: Wydawnictwo P.W.D. "Apex".
- Falana-Kozłowska, J. (2000d). *Usuwamy wady wymowy. Głoski: g-d*. Radomsko: Wydawnictwo P.W.D. "Apex".
- Falana-Kozłowska, J. (2001a). *Układamy wzorce wymowy. Listonosz przyniósł depeszę*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2001b). *Usuwanie wady wymowy. Głoski: sz, ż (rz), cz, dż, s, z, c, dz*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2001c). *Usuwanie wady wymowy. Głoski: k-t*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2001d). *Usuwanie wady wymowy różnicowanie samogłosek: e-a, o-u, i-y*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2002a). *Ćwiczymy percepcję i pamięć słuchową część I Słuch awerbalny*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2002b). *Ćwiczymy percepcję i pamięć słuchową, część II Słuch werbalny*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2003). *Poradnik Minimum gimnastyczne dla szeregów: sz, ż, cz, dż; s, z, c, dz; ś, ź, ć, dź oraz głoski r*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2004a). *Przez zabawę do mówienia, czytania i pisania, czyli wstępna stymulacja logopedyczna*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2004a). *Usuwanie wady wymowy. Głoski dźwięczne i bezdźwięczne: w-f, wi-fi, b-p, bi-pi, d-t, g-k, gi-ki, część I*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2004a). *Usuwanie wady wymowy. 3 szeregi głosek dentalizowanych: sz, ż (rz), cz, dż; s, z, c, dz; ś (si), ź (zi), ć (ci), dź (dzi), część I*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2005a). *Usuwanie wady wymowy. Głoski szczelinowe i zwarto-szczelinowe*. Radomsko: Wydawnictwo P.W.D. "Apex".

Falana-Kozłowska, J. (2005b). *Zastosowanie autorskiej "Metody ruchów artykulacyjnych" w terapii dziecka głuche i z niedosłuchem*. Online: http://www.logopedia.pl/index.php?option=com_content&task=view&id=145&Itemid=37. Date: 07.07.2005.