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The Critical Evaluation of the Approach Underlying the Helen Doron Method (HDM)

Streszczenie

Celem niniejszego artykułu jest charakterystyka i ocena podstaw teoretycznych dotyczących metody Helen Doron. W zakresie teorii i metodyki nauczania języków obcych, metoda ta jest oparta na badaniach neurolingwistycznych oraz na podejściu humanistycznym. Jednak przede wszystkim należy ona do nurtu wczesnej edukacji reprezentowanej przez Marię Montessori, a zwłaszcza przez dr Glena Domana, neurochirurga z Instytutu Osiągnięć Potencjału Ludzkiego w Filadelfii oraz przez dra Shinihi Suzuki, autora 'metody języka ojczystego' w nauczaniu muzyki. Ponadto metoda ta zawiera elementy kinezjologii edukacyjnej Dennisona.

Summary

The aim of this paper is to characterize and assess the approach underlying the Helen Doron Method (HDM). In terms of applied linguistics and language teaching methodology, the method is based on research into neurolinguistics and on the Humanistic Approach. Most importantly however, it belongs to early childhood education represented by Maria Montessori, and in particular by dr Glen Doman, a brain surgeon from The Institute for the Achievement of Human Potential in Philadelphia and by dr Shinihi Suzuki, the creator of the Mother Tongue Approach for music training. In addition, the method includes the elements of Dennison's Educational Kinesiology.

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1. Doron's view on first and second language acquisition

Doron (2000) defines language as a system consisting of the following levels: intonation (prosody), pure sound (phonetics), sound system (phonology), word structure (morphology), sentence structure (syntax), and meaning (semantics). Thus, learning a language means transition from the intonation and sounds of a foreign language to the level of meaning.

With respect to first language acquisition, Doron emphasizes the child's innate predispositions as well as an interaction with other people in the environment. As it will be shown later, Suzuki relies on behaviourism and habit formation. Doman and Doman (1994a) claim that both nature and nurture are necessary for human development. They say that 'At birth the child is an unwritten book with the potential to be anything that any human being ever was, is or may ever be. He remains so until six.' (Doman and Doman: 1994a: 64). This view clearly coincides with Locke's concept of 'tabula rasa', characteristic for behaviourism. Doman and Doman (1994a) further state that this potential is due to a genetically inherited, uniquely human cortex, the only question being if the environment provides stimulation for the cortex to develop. Doron (2000) reviewed a number of studies into neurolinguistics which indicate, contrary to Chomsky's innateness theory, that children actually learn some language from the input they receive in the process of interaction with other people. Following other researchers, she ventured a suggestion that it is primarily the need to communicate that might be inborn.

With respect to second language acquisition, Doron relies on research into neurolinguistics, and in particular on the work of Chugani, Doman, and Johnson and Newport. Dr Chugani (in Doron: 2000) who conducted research into the levels of glucose utilization responsible for information processing, discovered that the greatest capacity to learn is at the age of three when the child's brain energy exceeds adult rate by 225%. At the age of four, the brain energy becomes constant due to hyperconectivity i.e. the process of forming excessive connections by cortical neurons, which are later preserved or eliminated depending on exposures and stimuli. The process of losing brain plasticity begins around the age of 10 and lasts till the age of 16 or 18 when glucose utilization is at the adult rate. According to Chugani, different brain regions are developed systematically and thus there are critical windows for the opportunity of learning. Chugani claims that a given skill e.g. a second language, should be developed when the brain cortex is being wired for it since the task is then easier physically and biologically, with the connections clear and unobstructed.

Doron (1993) follows Doman's (1994a) view that all significant growth of the human brain is finished by the age of six and that by that time children, born with a rage to learn in order to survive, are able to absorb immense number of facts first and then discover the rules. In line with Doman's (1994a) claim that language is made of facts called words, Doron (1993) says that learning a language involves receiving the real facts of the language and sorting them to discover grammatical rules and the meanings of words. What is more, following Doman's (1994a) premise that the brain grows through use and that one brain function facilitates its other functions, Doron (1993) claims that learning such a highly sophisticated function as another language before the age of six, the child's brain growth and general intellectual capacity are increased for the whole of its life.

In reference to the critical period hypothesis, Doron (1993) maintains that children acquire language in a natural and effortless way, including good pronunciation. She points

out that a younger learner has an advantage in the skills already acquired in the mother tongue i.e. speaking and comprehension. An older learner seems to have lost the ease of acquiring spoken language and aural comprehension but is better in skills of abstraction and analysis i.e. syntax and morphology. Doron (1993) refers to the study by Fatham (1975) which shows no difference in the route of language acquisition between younger and older learners but which shows the advantage of the former in phonology and of the latter in morphology. She also refers to Swain's (1981) study in French immersion program in Canada, according to which younger learners performed better on listening comprehension tests whereas older learners on reading comprehension tests. She further quotes Spolsky's 'Native Pronunciation Condition' (1989) according to which the earlier one starts learning a second language the better chance one has for native-like pronunciation. However, Doron (2002) primarily relies on the study by Johnson and Newport (1989) indicating that the biological readiness to learn a language is between the age of 3 and 7.

As far as bilingualism is concerned, it is said that children who learn two languages simultaneously acquire them by the use of similar strategies and build two meaning systems for different contexts. They are called coordinate as opposed to compound bilinguals who have one meaning system from which two languages operate (Brown: 2000). Doron (2003) points out that according to the Unitary Language System (ULS) hypothesis, formulated by Genesee (1989), bilingual children at the beginning have one linguistic representation for their dual language input which is split into two systems around the age of two. She relies on the study by Paradis (2001) carried on English and French bilinguals, which shows that bilinguals posses two separate but non-autonomous language systems with some interaction in between. Doron (2003) replicated this study with 'twolinguals' i.e. Israeli children learning English according to her method, and obtained similar results.

Doron is also concerned with affective factors influencing second language acquisition. She has adopted the BASIS model for self-esteem, the basic notion of the branch of Suggestopedia i.e. Accelerated Learning, where B stands for belonging, A for aspirations, S for Safety, I for Identity and S for success (Doron: 2001). With reference to anxiety, Doron (1993) follows Horwitz, Horwitz and Cope (1986) who pointed out that anxiety is most often associated with listening and speaking and that difficulty is commonly experienced with speaking. She also quotes Spolsky's (1989) 'Second Language Learning Anxiety Condition' which says that learners with low initial proficiency, low motivation and high general anxiety develop anxiety which interferes with language learning. Doron (1993) maintains that starting to learn English by focusing on listening and speaking for one or even three years, children start to know the language in a non-threatening environment, which should neutralize anxiety associated with learning L2.

As for motivation, Doron, who follows Doman's (1994b) laws of success and failure, believes that it is the success as opposed to failure that is the basis for the child's high motivation, high self-esteem and capability of learning. Like Doman (1994b), she says that real motivation consists in the appreciation of the child's individual progress as opposed to a comparison with some external norms. She also refers to Gardner (1985) according to whom positive experiences in language learning develop self-confidence, which in turn serves to motivate individuals to learn the second language.

HDM is called a natural method since learners are said to acquire the target language the way they acquire their mother tongue i.e. by repeated hearing and positive reinforcement (Doron 2000). As it will be shown later, Doron's Mother Tongue Approach is based on a rather intuitive Suzuki's Mother Tongue Method of violin teaching. According to Doron (2002), HDM, implementing background hearing, constitutes a system which is as close to an immersion system as possible within the normal school system.

It is important to add that the method fits into the framework of a Communicative Competence Model of teaching methodology since functional use of spoken English is of primary importance whereas learning grammar of secondary (Doron 2000). Language is mainly speech and communication and not only reading and writing.

2. The Humanistic Principles in the Helen Doron Method

HDM belongs to the Humanistic Approach of language learning and teaching for a number of reasons. The approach to HDM shares some characteristics with the Montessori Method but is primarily based on the work of Doman, Suzuki and Dennison. Yet, all these writers represent ideas common to the Humanistic Approach. Montessori had advocated many principles common to Humanism long before it gained prominence. Doman's Gentle Revolution is rooted in the humanistic thinking since it dates back to the 1960s and exemplifies a movement for the fulfilment of human potential. Suzuki, described as an educator, humanitarian and musician, shows great concern for humanity and says that the goal of human development is becoming a whole person. As Legutke and Thomas (1991) point out Dennison together with Paul Goodman, the co-founder of Gestalt therapy, belonged to the Free School movement whose aim was a reform of the formal education system.

The method itself fosters holistic, personalised and experiential learning. The learner is treated as a whole person since not only intellectual but emotional and physical development is considered important. Consequently, language learning is skilfully linked with music, artistic abilities and physical movement. Learning is personalized and meaningful in that the course content is adjusted to learners' cognitive and affective needs. It is also multi-sensory and experiential as children learn through activation of all senses, through action and experience as opposed to explanation. What is more, learning is interpersonal in the sense that learners are assumed to learn from one another in heterogeneous age groups. At a more advanced level, learning may be also said to be self-initiated e.g. during the so called encoding session learners ask the teacher about words they do not know, which makes the whole process learner-directed.

The method is learner-centred as it displays utmost concern for learner's feelings and needs. It respects the learner's free will and ensures the right to pass. What is more, the method emphasizes a nurturing attitude towards learners, a safe learning environment, a non-competitive learning atmosphere, and unobtrusive correction.

The method implements TPR techniques, and shares many Suggestopedic principles the most important of which refer to indirect absorption of language, emotional encoding of language, holistic learning, addressing different learning styles and learning to learn (Doron 2001). It is important to notice that in both methods, the indirect absorption of language to the long term memory is achieved through various activities, the difference

being that concert readings are in most HD courses replaced with repeated background hearing. Yet, active and passive concerts have been incorporated in the course called 'Paul Ward and the Treasure', which is primarily based on Suggestopedia.

3. Early childhood education

3.1. The Montessori Method and the Helen Doron Method

As it has already been mentioned, Montessori (1964) advocated some issues common to the Humanistic Approach. Firstly, she introduced holistic, experiential, self-initiated, and inter-personal learning in heterogeneous age groups. Secondly, she emphasized the learner's centredness and positive learning environment. Thirdly, she aimed at fostering learners' autonomy and responsibility. Comparing the Montessori Method and HDM some conspicuous similarities and differences are observed. The most important similarities lie in the emphasis on the absorbing psyche, environment and repetition, active and multi-sensory learning, and learner centredness, in particular respect for the learner's free will, needs, and time needed to learn parallel to the silent period. Some further analogies refer to the teacher-learner relationship, safe learning environment, attractiveness of teaching materials, and flexible age grouping. The main differences lie in the emphasis on the child's individual work, autonomy, and self-correction, which is due to the fact that learning a foreign language a very young learner has limited language resources and needs closer teacher's guidance. Another difference refers to the system of rewards. Although Doron (2002) believes that learning a language is a reward in itself for the child, she advocates the use of different forms of encouragement.

3.2. Glen Doman's early education

3.2.1. Doman's theory and work with brain-injured children

Doman's theory is said to commingle elements of developmental psychology, anthropology and neurolinguistics. Working with brain-injured and healthy children, Doman (1994b) has created the model of cybernetic circuit, the developmental profile and the model of neurological organization. The model of cybernetic circuit explains that all information is gained by a set of incoming sensory pathways responsible for visual, auditory and tactile competences, it is processed, and returned to the environment in the form of a response by means of outgoing motor pathways responsible for mobility, language and manual competences. The developmental profile shows that the development of the competences, which culminate in such uniquely human functions as reading, comprehension, identifying objects by touch (sensory skills), upright walking in a cross-pattern, speaking and writing (motor skills), involves the progress through seven stages correlated with seven stages of brain development. It is important to add that Doman (1994b) and his co-worker Delacato maintained that the omission or shortening of crawling and creeping, the two stages in the development of mobile competence essential for hemispherical co-operation, may lead to learning and behaviour problems. The model of neurological organization treats neurological development as a dynamic process. It shows that, depending on the neurological environment, a brain-injured child, average child and

gifted child form a continuum which ranges from severely or mildly disturbed neurological organization to the average and ideal one.

Doman's (1994b) main premise is that function determines structure or in other words that the brain grows by use. The sensory and motor pathways become physically bigger, mature and competent if the child is provided with sensory information with increased frequency, intensity and duration and with opportunities to function by the age of six. His main premise is supported by Klosovski's and Krech's experiments on animals showing that an environment of sensory enrichment leads to better brain development and more intelligent behaviour, and by the observation that children under five are able to read if given such an opportunity, which in turn permits function and creates more mature visual pathways.

In line with these principles, Doman (1994b) has proposed a non-surgical method of treatment for brain-injured children which consists in reproducing patterns of the neurological development of healthy children by means of special programs for each competence. It is important to add that in order to develop mobility competence, Doman used patterning i.e. physical exercises which mime the body movement characteristic for a given stage of development, which were later adopted and advanced by Dennison and Denison in Educational Kinesiology. On the one hand, Doman's work is treated as a breakthrough (Hannaford: 1995, Dennison and Denison: 1994) but on the other his therapy has been rejected by pediatricians (Novella: 1996).

3.2.2. Doman's work with healthy children – Gentle Revolution

The revolution started after the publication of the book 'How to Teach Your Baby to Read' in 1964. It was mainly based on two observations, namely that healthy children do not use their full potential since they are at the same stage in development as brain-injured children who received some years of treatment, and that both healthy and brain-injured children can read before the age of 5, especially if a large, clear, loud, often repeated bit of information is provided. The objective of the Gentle Revolution is 'to give all parents the knowledge required to make highly intelligent, extremely capable and delightful children, and by so doing to make a highly humane, sane and decent world'. (Doman and Doman: 1994a: 1)

Doman and Doman (1994a) contended that the first six years are the genesis of genius, and that a young child is able to absorb and retain a huge number of facts, which facilitates its intellectual growth and development. For them each fact i.e. a single bit of new information, when presented precisely, discretely and non-ambiguously is the basic building block of intelligence. Intelligence is defined as the product of brain growth and measured by comparing the child's abilities with peers in terms of the developmental profile. Doman and Doman (1994a) maintain that brain growth is stimulated and the baby's intelligence multiplied at the age of 12 or 18 months by early reading, early maths, encyclopaedic knowledge, music, physical excellence and learning a language, the first three programs being the most important.

Doman's programs are based on flashcards or bit of intelligence cards which are shown to a child for a flash of a second three times a day. For the reading program (Doman and Doman: 2002), Doman used white flashcards with red words, for the maths program with red dots and later with numerals (Doman and Doman: 1994b), and for the encyclopaedic knowledge program with pictures (Doman 1994a). The programs involve constant revision of the material. Furthermore, they are based on the assumption that the brain may be accessed with increased frequency, intensity and duration. Therefore, many brief, spaced in

time, sessions should be carried out (frequency), appropriate printing of letters and dots or pitch and clarity of voice should be used (intensity), and one card per second should be shown (duration). The duration principle is based on the observation that children absorb instantly and do not need to stare and concentrate on a given card.

The most important program in terms of HDM is the encyclopaedic knowledge program. It consists of categories of intelligence representing different divisions of knowledge i.e. biology – 10 different birds, and of programs of intelligence. Each program includes 10 related facts ranging from the simplest to the most complex about a given item e.g. a common crow, providing in this way 'an ascending magnitude of knowledge within a category' (Doman: 1994a: 295). Once the cards representing different categories are introduced, the first fact i.e. information of the first magnitude about ten different items e.g. birds, is introduced in one session, the second magnitude in the next session and so on.

As mentioned before, Doron has adopted Doman's view that language is a set of facts and that early language learning determines the child's intellectual capacity for all life. In congruence with the encyclopaedic knowledge program, her courses include elements of such divisions of knowledge as biology, human physiology, geography, music, math, and literature, and sets of vocabulary representing encyclopaedic knowledge e.g. names of trees. What is more, Doman's use of flashcards is a basic HDM procedure, and the lesson plan resembles to some extent the program of intelligence in that different topics are covered in a given lesson to be reviewed and expanded to the next magnitude in another lesson.

Doron also follows Doman's key principles connected with learning (Doman and Doman: 1994a). Firstly, learning is a reward, pleasure, and privilege and not a punishment, chore or denial. It is also the greatest adventure, fun and game and should be approached as such, as opposed to duty, by both a parent/teacher and a child, which coincides with the view that the more fun, humour and pleasure the more learning takes place. Secondly, sensory, experiential and meaningful learning is advocated. Doman and Doman (1994a) emphasize the need for moving from concrete to abstract and for demonstration and context as opposed to explanation. They further state that new information should be introduced in the familiar context, and related to old information in order to create an interrelated network of knowledge. Thirdly, the child's natural desire to learn is nurtured by introducing less material than the child would like to see and by introducing new material often. At the same time, drilling on a narrow body of information is avoided since it causes learners to lose attention and interest, and not to await new information. Fourthly, testing very young children is rejected in favour of the belief that the teacher should show trust as opposed to doubt in children and their knowledge since not displaying one's knowledge does not equal not knowing (Doron: 1994). Testing is believed to introduce unnecessary tension into the learning situation as well as to decrease learning and willingness to learn. Finally, the importance of the parent's/ teacher's nurturing attitude towards the child is emphasized together with the safe and friendly learning environment free from visual, auditory and tactile distractions.

3.3. Suzuki's early education

3.3.1. Suzuki's philosophy

Shinihi Suzuki, an educator and musician, is the founder of the Talent Education Movement which started in 1945 in Matsumoto, Japan, and which aimed at the musical

training of very young children to a high degree of proficiency on a string instrument or piano.

According to Suzuki's philosophy, humans are determined by their environment in that superior environment creates superior ability or talent whereas inferior environment leads to inferior ability (Suzuki: 1983). In his view, humans are born with a natural ability to learn. Thanks to their life force, they adjust to the environment through the process of physiological conditioning, internalizing various abilities from the environment (Suzuki: 1981). The only difference lies in the speed and sensitivity with which different individuals adapt to the environment (Suzuki: 1983). Human growth, whose ultimate goal is becoming 'a whole, well-rounded human being' (Suzuki: 1983: 37), is explained in terms of a triangle representing the power to absorb the environment which is the greatest in the infanthood but ceased at the age of 18 together with the physical development of the brain (Suzuki: 1981). At the same time, an inverted triangle represents self-reflection and judgement, weak at the beginning but growing with age, which are necessary for adults to continue their development.

Suzuki (1996) treats common ability as the ability of the lowest level and maintains that children's ability in any area may be raised to the level of speech if it is fostered by means of the same kind of instruction. The purpose of ability development is to create a highly active and efficient brain, which is achieved by fostering an outstanding ability in a single area e.g. math, language, art, music, dance etc. (Suzuki: 1996) It is important to add that for Suzuki (1996), character is as important as ability in that his talent education aims not only at playing the violin but advancing human nature (Suzuki: 1981).

As far as education is concerned, Suzuki says that 'The foundation of education is to carefully raise children with the ability to be fine human beings without being hindered by their individual characteristics' (Suzuki: 1981: 52). Suzuki Early Childhood Education aims at realizing one's potential by active and reactive participation in the environment which is understood as everything surrounding the child before and after birth.

3.3.2. Suzuki's and Doron's Mother Tongue Approaches

Suzuki developed his method observing how children learn their mother tongue and called it The Mother Tongue Approach. During HD conference in Brzeg in June 2004, Doron admitted that her method primarily developed from the Suzuki Method. Following Suzuki's notion of life-force and ability as life, she defined learning as 'a vital life-force that holds the nature of the world in its hands' and a nurturing teacher as a life-giver (Doron: 2004). With respect to language, Doron says that whereas the Suzuki Method teaches the language of music, HDM teaches the music of language.

Suzuki's method is said to resemble the process of learning the mother tongue in the following ten aspects, all of which are applicable to HDM: expectation of success, early beginning, listening, repetition, review, natural reading, parent teacher, nurturing, social environment, performance.

Suzuki's method is based on the belief that every child can learn when given the opportunity to develop with love and patience (Suzuki 1981). Doron (1993) claims that every child is born with a brain function to learn any language. In both methods, the child's success depends on daily listening to the tape.

Suzuki (1981) observed that children are exposed to their mother tongue from the moment of birth and encouraged by parents to use language from a very young age. Hence,

he believes that the key to the fuller development of human potential is education 'from age zero'. Doron, on the basis of neurological findings, Doman's and Suzuki's work, addresses her method to 2 or even 1 year old children.

Suzuki (1996) claims that children acquire their mother tongue by listening and repetition, the length of silent period being dependent on the amount of daily repeated stimulation in the child's environment. According to Suzuki (1981), children repeat the sounds they hear, repeat new words they are learning many times, incorporate the words they acquired as an infant into their lexicon and continue to use them while building new skills. Doron (1993) explains that learning the mother tongue children repeatedly hear specific lexical and grammatical items. They are able to comprehend language long before they speak since linguistic performance is always preceded by linguistic competence. Their first words are rewarded by parents with joy and affection, which makes children repeat the words many times. Thus, the cornerstone of both methods, is background hearing, repetition and review. In both methods, learners are to listen to a tape at home twice a day without focusing to familiarize themselves with the new material and to review the old material. In HDM, background hearing allows for passive absorption of the texts, songs and rhymes whose meaning level is taught during a group lesson (Doron: 1993). Doron (2002) notes that while listening, the child's attention shifts back and forth from playing, drawing etc. to actively joining in with the cassette even before the child understands the meaning of what is heard. According to Doron (1993), texts are heard effortlessly and children are given the opportunity to use the same words and structures repeatedly in an enjoyable and rewarding way. Background hearing is one of the elements which allows for repetition and review in language learning. Doron (2000) underlines the fact that children thrive on repetition, and makes the following comment in this respect: 'Repetition is a learning skill – repetitive hearing and repetitive saying, while demonstrative praise is the reward' (Doron: 1993: 120). Analogically to Suzuki's music repertoire, children's language repertoire is built by the review process in that old material is reviewed while the new one is added in a step by step fashion. Both methods emphasize the importance of correct daily practice, the difference lying in Suzuki's emphasis on learning as formation of correct habits.

In line with the fact that children first learn to speak and then to read, Suzuki's learners receive a lot of memory training to play music without notations, and learn to read music around the age of 6 (Suzuki: 1981). HD learners proceed through 5 levels of spoken English and 2 levels with all skills integrated, following a natural order of language skills i.e. listening, speaking, reading and writing.

Suzuki's triangle shows equal importance of the learner, the parent and the teacher. Both in Suzuki's and Doron's methods the parent assumes the role of the home teacher who not only attends the child's lessons but directs practice at home (Suzuki: 1981). Parental involvement ensures children's greater interest and faster progress. The real teacher is the musician recorded on the tape for Suzuki's learners and Doron herself for HD learners. In the first case, learners are believed to internalize the sensitivity of a famous musician whereas in the second case, the native-speaker's knowledge of English. Suzuki or the class teacher is only the learners' helper or guide as his/her role is to help the learners in their lessons with a famous musician or Doron, respectively.

One of the roles of the teacher and parent is to establish a friendly learning environment for the child to be nurtured with love, support, enthusiasm, skill and care in

the spirit of fun, co-operation and lack of stress. Hence, the elements like interest, fun, enjoyment, the right attitude and motivation become vital. Just like in case of children's efforts to speak, all their efforts to learn should be welcomed with enthusiasm and joy. Positive reinforcement i.e. praising and encouraging learners at each step of a skill, is assumed to strengthen their incentive. Additionally, the social environment is the same as in learning the first language since both Suzuki's and Doron's learners learn both within family and outside home. Learners are also said to learn from one another in flexible age groups.

Parallel to the fact that parents proudly display their child's linguistic abilities, Suzuki's learners perform a lot in group lessons and recitals. HD learners perform in front of their parents during their lessons or during a review lesson summarising the course.

4. Educational Kinesiology

Educational Kinesiology (Edu-K) was created by Dr. Paul E. Dennison and his wife Gail E. Denison on the basis of sensory-motor training, applied kinesiology, and behavioural optometry (Hannaford: 1995). It is the study and application of natural movement experiences (kinesiology) to enhance learning. Edu-K is recognized as an innovative whole-person approach to education which emphasizes whole-brain learning, learners' unique potential, individual differences and unique learning styles, as well as safety, trust, and freedom to learn.

Edu-K recognizes that every individual possesses innate learning potential which is made available through movement patterns releasing physical, mental and emotional blocks in learning (Dennison and Dennison: 1994). The blocks are said to occur when the body is tense and information cannot flow freely among functional centres located throughout the brain and sensory motor system. In contrast to traditional assumption that learning is a purely mental activity, Edu-K emphasizes visual, auditory, motor and postural mechanics or physical components of learning and aims at integrating learning into the physiology. Dennison and Dennison (1987) believe that learning difficulties and behaviour problems are due to deficits in physical or perceptual abilities.

Edu-K is based on the brain functioning. The right hemisphere, called the reflex or gestalt brain, and the left hemisphere, called the 'try' or analytic brain, are connected by the corpus callosum or 'the academic brain', which constitutes what Dennison and Dennison (1987) call one's internal midline. Ideally, this part of the brain should be developed in infancy due to creeping and crawling which facilitate brain integration. The midline is defined as 'the line which separates one visual field and hemispheric awareness from the other when there is incomplete integration', and the midfield as 'the area where one visual and hemispheric field overlaps the other for integrated learning' (Dennison and Dennison: 1987:79). For the effective learning to take place, the midline has to be crossed, allowing for the integration of the two hemispheres. Although everyone crosses the midline to some extent, it still constitutes a bridge or barrier for learning depending on one's learning experiences. The most important reason for having a midline barrier is homolaterality defined as 'the involuntary choice to access only one cerebral hemisphere at any given moment, thus blocking integrated thought and movement' (Dennison and Dennison: 1987:79). It is important to add that homolaterality may result from childhood experiences.

Thus, the aim of Edu-K is the achievement of brain integration defined as 'the lifelong process of realizing one's physical, mental, and spiritual potential, the first step being the simultaneous activation of both cerebral hemispheres' (Dennison and Dennison: 1987: 79).

The brain should be integrated in three dimensions, namely left and right parts (laterality), back and front parts (focusing), and top and bottom parts (centring). Laterality is vital for reading, writing, communication, co-ordination, and simultaneous moving and thinking. Focusing is important for comprehension, the ability to find meaning, and the ability to experience details within their context. Centring is fundamental for organization, grounding, feeling and expressing emotions, a sense of personal space, and responding rationally.

Edu-K aims at brain integration by repatterning procedures and brain gym activities. As it has already been said, Dennison updated conventional cross-patterning movements developed by Doman and Delacato. In 1981 he coined the term repatterning which means 'a return to the natural, integrated pattern imprinted within the nervous system during normal development' (Hannaford: 1995: 130). Dennison Laterality Repatterning is a procedure applied to diagnose an individual as heterolateral or homolateral and in case of the latter to establish the preference for bilateral processing by helping the learner to cross the midline (Denison and Denison: 1987). The procedure makes use of the muscle checking technique and a series of Edu-K activities. Brain gym activities are used for all age groups in different areas e.g. business, sport, art and in the classroom. In terms of the three brain dimensions, brain gym activities were created to stimulate (laterality), release (focusing) and relax (centring) learners in specific learning situations and so to interconnect the brain (Denison and Denison: 1994). They are said to bring about actual physical changes in the brain since they stimulate the flow of information within the brain and sensory system.

Research shows that they enhance learning and memory, increase self-confidence, self-esteem, motivation and ability to cope with stress, improve vision, listening, self-expression, and coordination as well as attitude, attention, discipline, test and homework performance.

Doron (2001) defines Edu-K as a 'process for re-educating the mind/ body system for accomplishing any skill or function with greater ease and efficiency'. In HDM, brain gym activities are called brain jogs and are connected to language use, which means that language chunks are introduced on the basis of physical activity. Physical activity is said to encode new learning in the motor memory and promote the connections between right and left hemisphere thus leading to whole-brain learning. The activities are used to practise grammatical structures, vocabulary and language expressions. It is worth adding that brain jogs are also used in Doron's early math program called Mathjogs.

5. The evaluation of the approach underlying the Helen Doron Method

The theoretical consideration underlying HDM might raise some doubts. Firstly, it has to be said that the critical period hypothesis has become a very controversial issue. Research into the influence of age on SLA, as summarized for instance by Ellis (1995), shows that age does not influence the route of SLA, the only exception might be phonology. It also does not affect the rate of SLA since children have been shown to learn at

a slower tempo than teenagers and adults. More importantly, however it has been shown that the starting age is not the only factor determining the achievement of native-like proficiency in the target language since many studies have shown that some adults are able to obtain such proficiency even in terms of pronunciation. Therefore, many researchers have adopted the view of SLA as a complex process affected not merely by age but as interplay of cognitive, social and affective factors.

Secondly, Doron's (2000) view on language learning appears to be controversial since the prevailing belief is that language is acquired through interaction with other people, with language acquisition device, and not only the need to communicate, being inborn. Furthermore, Suzuki's ten characteristics of the mother tongue approach applied to HDM are rather intuitive and Doron's claims not completely precise. Whereas Doron (1993) states that language competence always precedes performance, Brown (2000) points out that linguistic competence has at least four modes related to speaking, listening, reading and writing, and that it is useful to distinguish production competence and comprehension competence since research shows that production might be superior to comprehension in that children are able to produce some aspects of language they do not understand. Furthermore, the emphasis on repetition and practice may be only partially supported since the two concepts account only for the very early and routine aspects of first and second language acquisition. Brown distinguishes between surface-structure imitation, where attention is directed to the phonological level, and deep-structure imitation, where the focus is on the semantic level. He argues that surface-structure imitation is common only in the earliest stages of first language acquisition and that generally children as opposed to adults are good at imitating the deep-structure since they approach language as a tool for meaningful communication. It has to be noted however, that HDM does not implement any rote practice techniques. As far as the role of practice is concerned, Brown (2000) says that practice should be understood in terms of frequency of both hearing and producing language items. He points out that on the one hand forms frequently appearing in the input are acquired first, and on the other that forms important in terms of deep structure are acquired irrespectively of the frequency. This means that it is not merely the frequency of stimuli that is vital to language acquisition but the frequency of the meaningful items in the input. In SLA, it means that contextualized and meaningful communication is more important to learn a given item than the frequency of stimuli and the number of times a given form was practiced. However, it has to be noticed that in spite of the fact that Doman, Suzuki and Doron emphasize the frequency of stimuli and the amount of practice, HDM stresses contextualized communicative language use.

Thirdly, Doron points out that HDM belongs to a Communicative Competence Model but does not specify any particular model, whether by Hymes (1972), Canale and Swain (1980) or Bachman (1990). It is important to notice that language syllabus for children, no matter how extensive, is relatively restricted and as such fairly difficult to analyze in terms of communicative competence models. At the same time, it has to be noted that HDM relies on context, situation and information gap though the majority of activities are not typical information gap activities. In terms of Scrivener's (1996) ARC model, language in HDM may be described as Restricted rather than Authentic Use. However, such language is most proper and natural in case of young learners whose language resources are indeed restricted.

Fourthly, it has to be said that HDM differs substantially from immersion systems used in Canada for English speaking children learning French. Although background hearing

blurs the boundary between foreign and second language acquisition, it is used for passive absorption of language and is far from the process of negotiating meaning in an interaction with significant others. Yet, it has to be said that a lot of negotiation of meaning takes place in the classroom where only the target language is used.

Finally, as it has already been pointed out Doman's work has been equally praised and criticised. On the one hand, Delacato's and Doman's reading method based on brain integration was a breakthrough and their work on brain integration was continued by the Dennisons, on the other his therapy with brain-injured children has been rejected by some pediatricians who in addition argued that there was no evidence supporting the thesis that his early programs lead to intelligence growth.

Summing up, the approach to HDM appears to be an ingenious compilation of theories from a variety of areas such as multiplying intelligence of healthy and brain-injured children, musical training of playing the violin, humanistic education, Suggestology which underlines Suggestopedia, and Educational Kinesiology. It is worth noting however that the method itself is generally recognized by children, parents and teachers as a success and that research into this area may bring some promising results.

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