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Valentina Stoeva, Milena I Tsvetkova

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Rethinking Emergent Reader's Policies: The Mediating Roles of the Parents in the light of the Theory of "First Thousand Days"

Valentina Stoeva, PhD Student
Sofia University St. Kliment Ohridski
Faculty of Journalism and Mass Communication
Sofia, Bulgaria
e-mail: vmikova@uni-sofia.bg

Milena Tsvetkova, Dr., Associate Professor
Sofia University St. Kliment Ohridski
Faculty of Journalism and Mass Communication
Sofia, Bulgaria
e-mail: milenaic@uni-sofia.bg

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Abstract:

This paper revises the category of the emergent reader in the light of the media theory of reading. The *purpose* is to find a solution to the long-occurring problems of the readers from the age of the television and the digital age, among which are easier reading refusal, reading incomprehension and susceptibility to manipulation when reading. *Methods:* Systematic and critical analysis was applied to the studies of the new theory of the First Thousand Days of Life, as well as to the effects of the pre-literacy and emergent literacy programs. We also took into account the findings and the recommendations for future research on the developing readers, formulated in the "Stavanger Declaration Concerning the Future of Reading" published in January 2019. The *results* show that reading foundations are laid much earlier before it was ever thought – a circumstance that is underestimated by parents, politicians, educators and even researchers. Taking into account the increasing risks in the global reading medium, we *propose* the development of policies for expert trainings on "future image" of the child, professional mentors on home and family reading and personal tutors for reading culture.

Keywords: media theory of reading, reading studies, pre-literacy, family reading culture, reading environment

INTRODUCTION

“*Those who can read see twice as well.*”, said 2300 years ago the Greek dramatist Menander (342–291 B.C.). In the alarming times of disinformation and viral content we can easily be convinced that the aphorism by Menander obtains the status of an axiom. Only the intelligently reading person can resist the manipulative messages. And only the completed, directed and step-by-step mastered reading allows the individual to stand out of the crowd and change the environment, in which he lives.¹ But even the most eager reading researchers and educators are still looking for a solution to the deepening problems of the readers from the age of the television and the digital age, among which are easier reading refusal, reading incomprehension and susceptibility to manipulation when reading.

METHODOLOGY

Systematic and critical analysis was applied to the studies of the new theory of the First Thousand Days of Life, legitimized and promoted by the United Nations, UNICEF, World Health Organization (WHO), National Academies of Sciences (USA), American Academy of Pediatrics (AAP), National Scientific Council on the Developing Child (Harvard University), National Childbirth Trust (UK), National Health Service (NHS England), New Zealand College of Public Health Medicine, Analysis & Policy Observatory (Australia), Australian Research Alliance for Children & Youth, et al.^{2,3,4,5,6},

¹ Milena Tsvetkova, *The Reading – antimanipulated filter* (Sofia: Gaberoff, 2000): 108-113

² Thousand Days, *Why 1000 days?* 2016. Accessed June 15, 2019, <http://thousanddays.org/the-issue/why-1000-days>

³ Sarah Cusick, and Michael K. Georgieff, *The first 1,000 days of life: The brain's window of opportunity* (Florence: UNICEF Office of Research, 2017). Accessed June 7, 2019, <https://www.unicef-irc.org/article/958-the-first-1000-days-of-life-the-brains-window-of-opportunity.html>

⁴ Sarah Cusick, and Michael K. Georgieff, *The first 1,000 days of life: The brain's window of opportunity* (Florence: UNICEF Office of Research, 2017). Accessed June 7, 2019, <https://www.unicef-irc.org/article/958-the-first-1000-days-of-life-the-brains-window-of-opportunity.html>

⁵ Suzanne Brundage, “The First 1,000 Days on Medicaid.” In *Applying Neurobiological and Socio-behavioral Sciences from Prenatal through Early Childhood Development: A Health Equity Approach*. National Academies of Sciences, USA, 2018. Accessed June 7, 2019, <http://nationalacademies.org/hmd/Activities/Children/ApplyingNeurobiologicalAndSocioBehavioralScienceSFromPrenatalThroughEarlyChildhoodDevelopment/2018-AUG-06.aspx>

as well as to the effects of the common pre-literacy and emergent literacy programs. We also took into account the findings and the recommendations for future research on the developing readers, formulated in the “Stavanger Declaration Concerning the Future of Reading” published in January 2019⁷.

For the purposes of this research we use the theoretical construct of the reading as a 6-step communication algorithm⁸ which includes: perception, reception, understanding the significance, realizing of the meaning, interpreting, self-transforming and influence on external behavior (Figure 1).

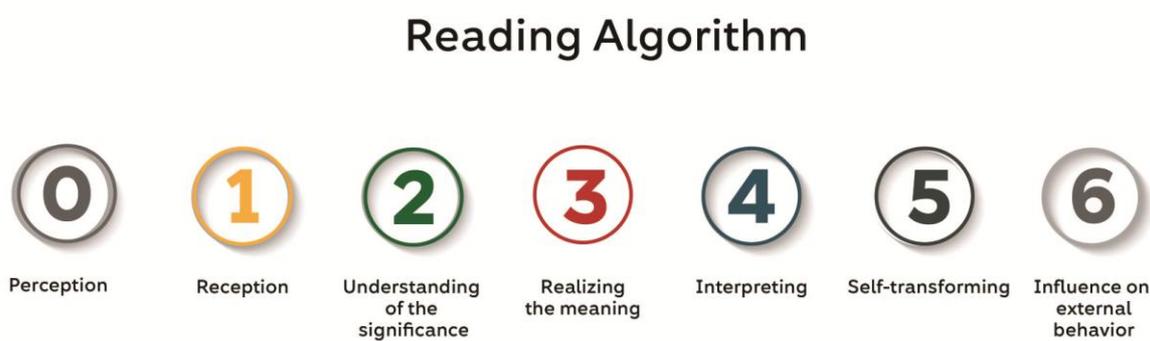


Figure. 1. Linear reading algorithm⁹

According to the information communication theory of reading, its structure is progressive (step-by-step), and not a holistic one – it is not done “en bloc”, even because reading is an unnatural activity for the human nature – it is not inherent, but acquired cultural practice, as Maryanne Wolf already proved¹⁰. Many neurophysiological studies support our thesis, that *the roots of the reading problems are on the input of the reading*

⁶ NCT, *First 1,000 Days: New parent support* (London: National Childbirth Trust, 2019), <https://www.nct.org.uk/about-us/first-1000-days>

⁷ COST E-READ, *Stavanger Declaration Concerning the Future of Reading*. Accessed February 17, 2019, <http://ereadcost.eu/wp-content/uploads/2019/01/StavangerDeclaration.pdf>; Milena Tsvetkova, “In Respect of Future of Reading: Stavanger Declaration.” *BBA online: The Journal of the Bulgarian Library and Information Association* 9, no. 4 (2019): 9-11. Accessed June 17, 2019, [https://www.lib.bg/publish/Списание/Избрани-статии/534-Относно-бъдещето-на-четенето-\(Декларацията-от-Ставангер\)](https://www.lib.bg/publish/Списание/Избрани-статии/534-Относно-бъдещето-на-четенето-(Декларацията-от-Ставангер))

⁸ Milena Tsvetkova, *The Reading – antimanipulated filter*. (Sofia: Gaberoff, 2000): 58-64.

⁹ Milena Tsvetkova, “Reading and viewing screen version: Methodic of parallel autoreflection.” *Annual of Sofia University "St. Kliment Ohridski". Faculty of journalism and mass communication* 15 (2009): 75.

¹⁰ Maryanne Wolf, *Proust and the Squid: The Story and Science of the Reading Brain* (Cambridge: Icon Books, 2010): 222.

algorithm – on the phases (1) reception and (2) understanding. When reading is not mastered progressively and structurally, it becomes analogous to a “broken production process”. The ineffective transition through phases 1 and 2 inevitably leads to initially deformed reading – to *anti-reading*.

Reading maturity can be sought after, only when the individual practices in full capacity and fluently the first two phases of the reading algorithm – reception and understanding. They allow easier flow through the next, more complicated stages of reading – realizing of the meaning, interpretation, formation of knowledge and culture, and influence on external behavior of the individual, - which guarantee the acquisition of reading maturity (Figure 2).

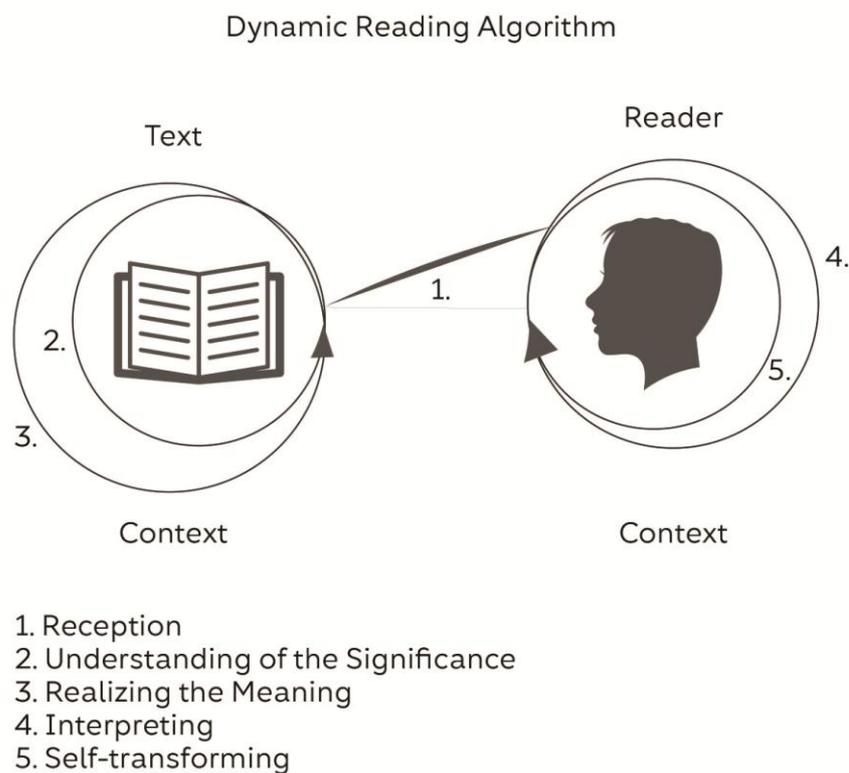


Figure.2. Dynamic reading algorithm

The more complex stages of the reading intelligence require the acquisition of great quantity of knowledge for the world around us and the development of skills for their objective selection, organization and application with the purpose of conscious

impact over the environment. Basic reading stages, on the other hand, are affected to an extent by the formation of basic reading intelligence, which depends on the skills acquired by the future reader even during the development of the brain in the utero to recognize the main linguistic systems, and by the later actions for the proper development of the child in the preliteracy and emergent literacy periods (the period of the first 1000 days and below – to the sixth/seventh year of age).

Rethinking the policies regarding the emergent readers requires the rethinking of the ability of a child to perceive and understand what is heard or seen in books. This is the reason to combine the information-communication theory of reading with the media theory and to admit as relevant the following definition of reading: a complex mediated process, in the basis of which is the readiness of the individual to percept visual, tactile or hearing stimuli from written messages and which is fundamental to the formation of intellectual, social and emotional experience of the recipient of those messages¹¹. We accept as reading not only the alphabet-based reading, but also the “acoustic reading” or reading aloud, and the “tactile reading”.

This definition of reading is the most relevant to our aim to rethink the role of the parents and the family in raising future readers in the light of the theory of the First Thousand Days of Life of the future reader.

RESULTS

According to the World Health Organisation, health is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”¹². To accomplish to full extent health and well-being over the life course, the most important period of human development turns out to be from conception to the end of the second year after birth.

¹¹ Milena Tsvetkova, “Lies of the reader: Disadvantages of the sociological research methods for the study of the reading.” *European Journal of Contemporary Education* 7, no. 1 (2018): 191-192, DOI: 10.13187/ejced.2018.1.190.

¹² WHO, “Constitution of the World Health Organization. Adopted by the International Health Conference held in New York from 19 June to 22 July 1946, signed on 22 July 1946 by the representatives of 61 States (Off. Rec. Wld Hlth Org., No, 2, p. 100), and entered into force on 7 April 1948.” In *World Health Organization: Basic Documents, Supplement 2006*. Accessed June 7, 2019, https://www.who.int/governance/eb/who_constitution_en.pdf

The exact number “1000 days” is obtained by the sum of three numbers: 270 is the average amount of days during the pregnancy of the human beings, 365 days from birth to the end of the first year and 365 days from year 1 to the end of year 2 (Figure 3).



Figure 3. The first 1000 Days of Life – how to count¹³

Research over the early childhood from the last 5-7 years^{14,15,16} unambiguously show that what happens during the first 1000 days of human’s life has lifelong consequences over human’s health and well-being.^{17,18,19} Moreover, new evidence identified and published periodically shows that in this specific period negative effects

¹³ Danone Nutricia, “The first 1000 days of life, a unique window of opportunity for lifelong health.” *Nutricia MMP*, 2019. Accessed June 2, 2019, <http://www.nutricia-mmp.com/en/1000-days>

¹⁴ T.G. Moore et al., *The First Thousand Days: An Evidence Paper*. (Parkville: Centre for Community Child Health, Murdoch Children’s Research Institute, 2017). Accessed June 2, 2019, <https://www.rch.org.au/uploadedFiles/Main/Content/ccchdev/CCCH-The-First-Thousand-Days-An-Evidence-Paper-September-2017.pdf>

¹⁵ Social Research Unit at Dartington, *The ‘science within’: What matters for child outcomes in the early years*. (Dartington, Totnes, UK: The Social Research Unit at Dartington, 2013), <http://betterstart.dartington.org.uk/wp-content/uploads/2013/08/The-Science-Within1.pdf>

¹⁶ National Scientific Council on the Developing Child, *Establishing a Level Foundation for Life: Mental Health Begins in Early Childhood: Working Paper 6*. (Harvard University, 2012). Accessed June 16, 2019, <https://developingchild.harvard.edu/resources/establishing-a-level-foundation-for-life-mental-health-begins-in-early-childhood>

¹⁷ Center on the Developing Child, *The Foundations of Lifelong Health Are Built in Early Childhood*. (Cambridge: Centre on the Developing Child, Harvard University, 2010), http://developingchild.harvard.edu/index.php/resources/reports_and_working_papers/foundations-of-lifelong-health

¹⁸ S.E. Fox, P. Levitt, and C.A. Nelson, “How the timing and quality of early experiences influence the development of brain architecture.” *Child Development* 81, no. 1 (February 2010): 28-40, DOI: 10.1111/j.1467-8624.2009.01380.x.

¹⁹ T.G. Moore, “Understanding the nature and significance of early childhood: New evidence and its implications.” *Investing in Early Childhood – the future of early childhood education and care in Australia*, (Melbourne: The Royal Children’s Hospital, 25th July 2014), DOI: 10.4225/50/5578DA99168A5

lead to worst damages, whether the beneficial interventions lead to the best possible effect^{20,21} and the global consensus hardens into the political actions need of urgent and intensive support of families for the optimal life start of every child²².

In this very period the *plasticity of the developing human being (developmental plasticity²³)* - the ability of the human to adapt to social and physical environments - is at its greatest^{24,25}. The neuroplasticity, greatest during the sensitive periods^{26,27} of development, allows the baby brain to build and develop neuronal circuits, which allow the brain to develop and adapt constantly to the environment and exposures. This ability of the brain to adapt can lead to positive, as well as negative changes, if the developing organism is exposed to malignant impact factors (severe stress during pregnancy, toxic substances exposure etc.).^{28,29}

The baby is born with billions of neurons, but the synapses, which allow the information flow between brain cells, are relatively few³⁰. The initial switch of the synaptic connections starts from birth, when the child goes through a process of rapid learning. The more one neuronal circuit is used, the stronger it becomes. On the opposite, the others which are not used, become weak and fade away through the process of *synaptic pruning*.^{31,32,33}

²⁰ L.M. Richter et al., "Investing in the foundation of sustainable development: pathways to scale up for early childhood development." *Lancet* 389, no. 10064 (2017 Jan 7): 103–118, DOI: 10.1016/S0140-67.

²¹ A. Lake, *The first 1,000 days: a singular window of opportunity*. (New York: United Nations Children's Fund, 2017 Jan 18), <https://blogs.unicef.org/blog/first-1000-days-singular-opportunity>

²² Thousand Days, *The first 1000 days: Nourishing American's future*. (Washington, D.C.: 1000 Days, 2016), <https://thousanddays.org/wp-content/uploads/1000Days-NourishingAmericasFuture-Report-FINAL-WEBVERSION-SINGLES.pdf>

²³ Moore et al., *The First Thousand Days: An Evidence Paper*.

²⁴ Moore et al., *The First Thousand Days: An Evidence Paper*.

²⁵ P. D. Gluckman, M. A. Hanson, and F. M. Low, "The role of developmental plasticity and epigenetics in human health." *Birth Defects Research Part C: Embryo Today: Reviews* 93, no. 1 (March 2011): 12–18, DOI: 10.1002/bdrc.20198.

²⁶ F.Y. Ismail, A. Fatemi, and M.V. Johnston, "Cerebral plasticity: windows of opportunity in the developing brain." *European Journal of Paediatric Neurology* 21, no. 1 (2017): 23-48, DOI: 10.1016/j.ejpn.2016.07.007.

²⁷ Moore et al., *The First Thousand Days: An Evidence Paper*.

²⁸ Moore et al., *The First Thousand Days: An Evidence Paper*.

²⁹ C. Blair, and C. C. Raver, "Child development in the context of adversity: Experiential canalization of brain and behaviour." *American Psychologist* 67, no. 4 (May-June 2012): 309-318, DOI: 10.1037/a0027493.

³⁰ Moore et al., *The First Thousand Days: An Evidence Paper*.

³¹ E. Santos, and C.A. Noggle, "Synaptic Pruning." In *Encyclopedia of Child Behavior and Development*. Ed. by S. Goldstein, J.A. Naglieri. (Boston: Springer, 2011), <https://doi.org/10.1007/978-0-387-79061-9>, https://link.springer.com/referenceworkentry/10.1007%2F978-0-387-79061-9_2856

³² Moore et al., *The First Thousand Days: An Evidence Paper*.

Well developed neuronal circuits track the pathway to the activities, connected to gross and fine motor skills, emotions, language, memory. And opposite, if a neuronal circuit is not well developed, it can undermine the ability of a person to achieve perfection in the acquisition of a skill, if this skill is built on weak foundation.^{34,35} The initial development and strengthening of the neuronal circuits in the brain of a small child is through the interaction between the child and his parents, on first place³⁶; later on this circle widens to include the family, the caregivers and kindergarten teachers, as well as to be influenced by the social environment (Figure 4).

³³ Center on the Developing Child, *Applying the Science of Child Development in Child Welfare Systems*. (Cambridge: Centre on the Developing Child, 2016), <http://developingchild.harvard.edu/resources/child-welfare-systems>

³⁴ Moore et al., *The First Thousand Days: An Evidence Paper*.

³⁵ Center on the Developing Child, *Applying the Science of Child Development in Child Welfare Systems*.

³⁶ Moore et al., *The First Thousand Days: An Evidence Paper*.

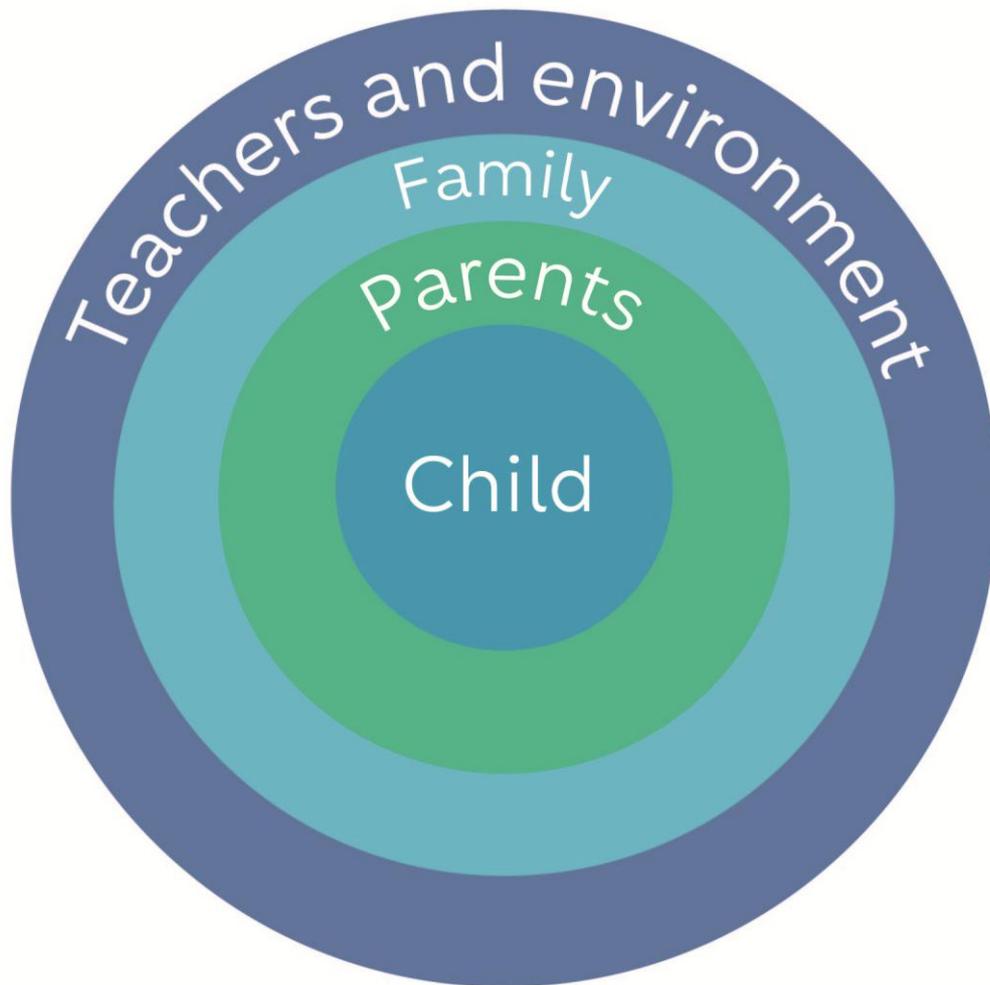


Figure. 4. Concentric circles of impact over the child as “emergent reader”

The child interacts with the environment through facial expressions, gestures, sounds, and expects the adults to reply with similar engagement. If the parents/caregivers do not react adequately through gestures, vocalization or appropriate emotional reactions, the baby brain’s architecture development can be disrupted because of the under-stimulation.³⁷

„We were never born to read“. With this sentence the famous neuropsychologist Maryanne Wolf starts her thorough research on the amazing ability of the human brain, developed over the course of the evolution of the human species – to develop neuronal circuits, responsible for the acquisition of the skill to decode symbols and connect them

³⁷ Moore et al., *The First Thousand Days: An Evidence Paper*.

to words and to find meaning beyond that.³⁸ Taking into account how complex is the process of reading and that it requires individual tuning in the brain of every person, the ability to read for yourself requires great efforts and assumes the development of an individualized educational system, which takes into account the specific features of every child.

Recent research approve the crucial effect of the first 1000 days on the life course of the humans and reinforce the conviction, that it is necessary to lay down stable foundation in helping the child to develop skills to become future reader through the accumulation of rich lexical reservoir, to understand the concepts laid down in the text, to follow the plot and to connect it to the illustrations, and to understand the idea behind the decoding of symbols and their transition into words and sentences. The development of those skills should start even before birth, when the unborn child recognizes the mother`s voice; to continue after birth, when parents develop the child`s senses through appropriate books and answer to the child`s reactions through appropriate facial expressions and vocalization.

This is how we come to the question through which media should the described parent-baby interaction be executed to perform fully competent care for the “emergent reader”, regardless of the concentric circles level in which this “emergent reader” is positioned. We are convinced this should be executed through the two oldest communication media – the voice as medium and the book as medium. Summarized features of the human voice as medium prove it has irreplaceable energetics for the parent-baby environment – it subtilizes it with non-verbal rhetoric, and the reading aloud upholds it in mode of attention and transfers the information in an “*affectionate sound air*”. The methodological framework of audio-reading as physiologized and submedial communication is applicable to contemporary methodologies of family literacy and early home-based pedagogy. Proving the implications of the reading voice as medium supports the rethinking of family communication and the maintaining of nourishing home cognitive environment for the emergent reader.³⁹ Regarding the second indispensable medium – the book, we support the conviction of the German

³⁸ Maryanne Wolf, *Proust and the Squid: The Story and Science of the Reading Brain*. (Cambridge: Icon Books, 2010), 3.

³⁹ Milena Tsvetkova, and Darina Pahova, “Multidisciplinary Explanation of the Reading Voice as a Medium: Challenge to Family Media Literacy.” *Media Literacy and Academic Research* 2, no.1 (2019): 86.

Professor of Media Economics Dietrich Kerlen: “The book, in the role of a media, has a specific content and an important function. In a world where signals are distracted, and there is an accelerated, massive informational overload, it influences the building of a stable personality structure. We can affirm ourselves against the multiplied stimulus of the multimedia world only if we develop the ability to appraise, imagine, have patience and spiritual calm, be articulate and have intellectual sensitivity. The book facilitates all this – as no other media.”⁴⁰

One of the strongest developmental stimulations before birth and afterwards is the voice of the mother - even in the utero the baby recognizes the voice of the mother⁴¹, as well as the mother tongue. Studies in the field of the emotional and social development of the child prove that the human brain, and especially that of a baby is wired to feel security through touch and human voice. The use of the voice as medium for the parent-baby interaction and the shared time, in which the parent reads a book to the child, is not only a generator of message of security and positive emotions; this approach lays down the foundations of the *family media literacy* and prepares the child to return to a reader⁴². While listening how the parent reads, the child acquires primary knowledge for the script: the child starts to understand, that the pictures are sometimes letters, grasps a notion about the text direction (left to right in Bulgarian and English), receives a tactile feeling of the book as object etc. the understanding of these concepts favors the future development of the true literacy.

It is important to take note of the digital-visual medium in which adults live actively from 2000 until now and which inevitably impacts the development and growth of the children and the ability of every human being to read. The ability to recognize images and icons is developed in children much earlier than their ability to read. This leads to enriched basic visual literacy, required by some of the new professions. This visual literacy, acquired through the new technology (computers, television, video games, internet) does not compensate the weaknesses in other important cognitive processes like the abstract vocabulary, reflection, inductive problem solving, critical

⁴⁰ Dietrich Kerlen, *Lehrbuch der Buchverlagswirtschaft* (Stuttgart: Hauswedell, 2003).

⁴¹ Maryanne Wolf, and Stephanie Gottwald. *Tales of literacy for the 21st century: the literary agenda* (Oxford: Oxford University Press, 2016), 16.

⁴² Hildegunn Støle, “Why digital natives need books: The myth of the digital native.” *First Monday* 23, no. 10 (September 2018), DOI: 10.5210/fm.v23i10.9422.

thinking and imagination.⁴³ Brain regions, activated during computer and smart technology use, are responsible for the fast decision making and multitasking, but they also stimulate surface reading, skimming, hyperlink following and therefore do not develop the deep reading, which means they don't help the child to reach to the more complex stages of the reading algorithm. Moreover, small children, who receive sensitive stimuli through screen instead of through live contact with beloved adult, can suffer under-stimulation, which can have a negative impact over future periods of development, learning, behavior and health.⁴⁴

These scientific findings we synthesize in the admonition that the *visual culture should not precede the reading culture*, even because, as Julia Kristeva convinced, *the image puts an end to the imagination and the screening puts an end to the interpretation*.

CONCLUSIONS

Critical analysis was applied to the national programs for the promotion of reading in Bulgaria and it shows that they are mainly focused on the ability of the student (from 7 years of age and up) to read by himself, and moreover – to read fiction. Pedagogical practices in school and in preschool age are mainly focused on the ability of the children to symbols decoding and phonemic awareness, to understand and comprehend. The development of a stable foundation for the understanding of the concept of the text, the ability to follow the plot, to suggest the next word according to the rich vocabulary is not of interest of the educational programs and therefore it does not pay great attention to the important role of the future parents.

The studies on the reading practices are also interested in the mature reader and the challenges before him in the digital age, but they do not seek the roots to the changes of the reading habits of the adults in the first 1000 days of life and explore much later period, when the window of opportunities is already closed.

After the rethinking of the 6-phase communication algorithm in the light of the new “theory of the first 1000 days”, we suppose that the key reasons for the unsuccessful reading in children, as well as in adults, is hidden in the pre-reading phase, prior to the

⁴³ P. Greenfield, “Technology and Informal Education: What Is Taught, What Is Learned.” *Science* 323, no. 2 (January 2009), DOI: 10.1111/j.1467-8624.2009.01380.x.

⁴⁴ Moore et al., *The First Thousand Days: An Evidence Paper*.

stages of the reading algorithm. We call them *barriers in the pre-communication reading phase*. Their presence leads us to the conclusion that the preparatory approach for transition of the children from listening of read aloud words to independent reading is often incompetent and is too late applied.

IMPLICATIONS

In Bulgaria, an ecosystem of innovators is timidly emerging, but we are still far away from reaching the “critical mass”, capable of moving the change from its dead-point. It is obligatory scientists, who possess and validate the recent science facts and theories to become a “driver” of re-intellectualization of the policies for the development of reading reneration. Aggressively communicated education policy, based on science, will stimulate and encourage families to think about the responsibility to form their own incredible child, adequate to the age of superiority of the human kind over the artificial intelligence.

In the light of the theory of the first thousand days and the recommendations of the “Stavanger Declaration Concerning the Future of Reading”, we propose the development of national policies for *expert* trainings on the importance of the early childhood development not only on literacy, but on the intelligence.

Taking into account the increasing risks in the global reading medium, we propose the development of policies for expert trainings on “future image” of the child, professional mentors on home and family reading and personal tutors for reading culture.

We put an accent over the important role of the parents and the family and the need of development of *educational policies for family media literacy*, which include the following actions:

- ☑ Reading in the family to be considered as vital and important as the other health and cognitive activities;
- ☑ Reading out loud to be levelled to breast feeding;
- ☑ Youth in school (as future parents) to pass an education course on family communication literacy;
- ☑ Families to receive early support and education on development of the domestic reading culture even before conception;

- ❑ Families of infants to receive book packs (home reading material) with instructions for correct stimulation of the infants' senses, in order to build the foundation for the development of a personality that is able to communicate in a stable manner and have media intelligence.

The *ecology of reading* is responsible for the correction of all mistakes during the preparation of the future reader, for removal of the “contaminations”, as well as the maintaining of “cleanliness” in all reading phases. This is new area whose potential is still not widespread among educational interventions in the phase of pre-reading. On this hypothesis our future research will be focused.

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