

**Πρόγραμμα Μεταπτυχιακών Σπουδών Εξειδίκευσης
του Τμήματος Ελληνικής Φιλολογίας του Δημοκριτείου Πανεπιστημίου Θράκης
σε συνεργασία
με το ΕΚΕΦΕ Δημόκριτος – Ινστιτούτο Πληροφορικής και Τηλεπικοινωνιών
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της ένταξης»**

ΕΡΓΑΖΟΜΕΝΗ ΜΝΗΜΗ ΚΑΙ ΔΥΣΛΕΞΙΑ

WORKING MEMORY IN DYSLEXIA

της

Αργυράκη Μαρίας

Μεταπτυχιακή διατριβή που υποβάλλεται

στην τριμελή επιτροπή για την απόκτηση του μεταπτυχιακού τίτλου του
Προγράμματος Μεταπτυχιακών Σπουδών Εξειδίκευσης
Του Τ.Ε.Φ. – Δ.Π.Θ. σε συνεργασία με το Ε.Κ.Ε.Φ.Ε. Δημόκριτος – Ινστιτούτο
Πληροφορικής και Τηλεπικοινωνιών
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της Ένταξης»

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ΠΕΡΙΛΗΨΗ

Η εμπλοκή της ανεπαρκούς εργαζόμενης μνήμης στη συμπτωματολογία της δυσλεξίας εγείρει τα τελευταία χρόνια το ερευνητικό ενδιαφέρον. Η παρούσα εργασία διερευνά μέσα από τη μέθοδο της βιβλιογραφικής ανασκόπησης τη σχέση των υποσυστημάτων της εργαζόμενης μνήμης με τη δυσλεξία, σύμφωνα με το κυρίαρχο μοντέλο των Baddeley και Hitch. Παρουσιάζει, επίσης, αντιπροσωπευτικές μελέτες που προτείνουν τρόπους παρέμβασης για την ενίσχυση της μνήμης εργασίας των ατόμων με δυσλεξία.

Λέξεις - κλειδιά: εργαζόμενη μνήμη, δυσλεξία, φωνολογικό κύκλωμα, οπτικοχωρικό σημειωματάριο, κεντρική εκτελεστική μονάδα, διαχειριστής επεισοδίων, σημασιολογικό buffer, τρόποι παρέμβασης

Βιβλιογραφία

- Aboitiz, F., Aboitiz, S., & García, R. R. (2010). The phonological loop: a key innovation in human evolution. *Current Anthropology*, 51(S1), S55-S65. doi:[10.1086/650525](https://doi.org/10.1086/650525)
- Adubasim, I. (2018). Brainfeed Intervention Programme: An Alternative Approach for Supporting People Living with Dyslexia. *Online Submission*, 5(2), 124-143. Ανακτήθηκε από [\(PDF\) Brainfeed Intervention Programme: an Alternative Approach for Supporting People living with dyslexia \(researchgate.net\)](#)
- Alloway, T. (2006). How does working memory work in the classroom?. *Educational Research and Reviews*, 1(4). Ανακτήθηκε από [\(PDF\) How does working memory work in the classroom? \(researchgate.net\)](#)
- Alloway, T. P. (2009). Working memory, but not IQ, predicts subsequent learning in children with learning difficulties. *European journal of psychological assessment*, 25(2), 92. doi:[10.1027/1015-5759.25.2.92](https://doi.org/10.1027/1015-5759.25.2.92)
- Alloway, T. P., Banner, G. E., & Smith, P. (2010). Working memory and cognitive styles in adolescents' attainment. *British Journal of Educational Psychology*, 80(4), 567-581. doi:[10.1348/000709910X494566](https://doi.org/10.1348/000709910X494566)
- Alloway, T. P., Gathercole, S. E., Adams, A. M., & Willis, C. (2005). Working memory abilities in children with special educational needs. *Educational and child psychology*, 22(4), 56-67. Ανακτήθηκε από [STORRE: Working memory abilities in children with special educational needs \(stir.ac.uk\)](#)
- Alloway, T. P., Gathercole, S. E., Kirkwood, H., & Elliott, J. (2008). Evaluating the validity of the automated working memory assessment. *Educational Psychology*, 28(7), 725-734. doi:[10.1080/01443410802243828](https://doi.org/10.1080/01443410802243828)

- Alloway, T. P., Gathercole, S. E., & Pickering, S. J. (2006). Verbal and visuospatial short-term and working memory in children: Are they separable?. *Child development*, 77(6), 1698-1716. doi:[10.1111/j.1467-8624.2006.00968.x](https://doi.org/10.1111/j.1467-8624.2006.00968.x)
- Alloway, T. P., Robinson, T., & Frankenstein, A. N. (2016). Educational application of working-memory training. *Cognitive training*, 167-175. doi:[10.1007/978-3-319-42662-4_16](https://doi.org/10.1007/978-3-319-42662-4_16)
- American Psychiatric Association (2013), Diagnostic and statistical manual of mental disorders (5th ed.) (Arlington, VA, American Psychiatric Association). Ανακτήθηκε από [DSM-5.pdf - Google Drive](#)
- Angelopoulou, E., & Drigas, A. (2021). Working memory, attention and their relationship: A theoretical overview. *Research, Society and Development*, 10(5), e46410515288-e46410515288. doi:[10.33448/rsd-v10i5.15288](https://doi.org/10.33448/rsd-v10i5.15288)
- Artuso, C., Bellelli, F., & Belacchi, C. (2019). Developmental dyslexia: How taxonomic and thematic organization affect working memory recall, *Child Neuropsychology*, 26(2), 242-256. doi:[10.1080/09297049.2019.1640869](https://doi.org/10.1080/09297049.2019.1640869)
- Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In *Psychology of learning and motivation* (Vol. 2, pp. 89-195). Academic Press. doi:[10.1016/S0079-7421\(08\)60422-3](https://doi.org/10.1016/S0079-7421(08)60422-3)
- Baddeley, A. (1992). Working memory. *Science*, 255(5044), 556-559. doi:[10.1126/science.1736359](https://doi.org/10.1126/science.1736359)
- Baddeley, A. (2003). Working memory: looking back and looking forward. *Nature Reviews Neuroscience*, 4(10), 829-839. doi:[10.1038/nrn1201](https://doi.org/10.1038/nrn1201)
- Baddeley, A. D. (2006). Working memory: an overview. In S. Pickering (Ed.), *Working Memory and Education* (pp. 1-31). New York: Academic Press.

- Baddeley, A. D. (2012). Working memory, theories, models and controversy. *The Annual Review of Psychology*, 63, 12.1–12.29. doi:[10.1146/annurev-psych-120710-100422](https://doi.org/10.1146/annurev-psych-120710-100422)
- Baddeley, A. D., & Hitch, G. (1974). Working memory. In *Psychology of learning and motivation* (Vol. 8, pp. 47-89). Academic press. doi:[10.1016/S0079-7421\(08\)60452-1](https://doi.org/10.1016/S0079-7421(08)60452-1)
- Baddeley, A. D., & Hitch, G. J. (1994). Developments in the concept of working memory. *Neuropsychology*, 8(4), 485. doi:[10.1037/0894-4105.8.4.485](https://doi.org/10.1037/0894-4105.8.4.485)
- Baddeley, A., Allen, R. J., & Hitch, G. (2010). Investigating the episodic buffer. *Psychologica Belgica*, 50(3), 223-243. Ανακτήθηκε από [Investigating-the-episodic-buffer.pdf \(researchgate.net\)](#)
- Bäckman, L., Nyberg, L., Soveri, A., Johansson, J., Andersson, M., Dahlin, E., ... & Rinne, J. O. (2011). Effects of working-memory training on striatal dopamine release. *Science*, 333(6043), 718-718. doi:[10.1126/science.1204978](https://doi.org/10.1126/science.1204978)
- Barbosa, T., Cruz Rodrigues, C., Mello, C., Silva, M., & Bueno, O. (2019). Executive functions in children with dyslexia. *Arquivos de Neuro-Psiquiatria*, 77, 254-259. doi:[10.1590/0004-282x20190033](https://doi.org/10.1590/0004-282x20190033)
- Beneventi, H., Tonnessen, F., Erslund, L., & Hugdahl, K. (2010). Working Memory Deficit in Dyslexia: Behavioral and fMRI Evidence. *The International journal of neuroscience*, 120(1), 51-9. doi:[10.3109/00207450903275129](https://doi.org/10.3109/00207450903275129)
- Βλάχος, Φ. (2010). Δυσλεξία: Μια συνθετική προσέγγιση αιτιολογικών θεωριών. *Hellenic Journal of Psychology*, 7, 205-240. Ανακτήθηκε από [Volume 07 Issue2 Vlachos.pdf \(pseve.org\)](#)
- British Dyslexia Association (χ.η.), Ανακτήθηκε 16 Ιουλίου, 2022 από [British Dyslexia Association \(bdadyslexia.org.uk\)](#)

- Brooks, A., Berninger, V., & Abbott, R. (2011). Letter Naming and Letter Writing Reversals in Children With Dyslexia: Momentary Inefficiency in the Phonological and Orthographic Loops of Working Memory. *Developmental neuropsychology*, 36(7), 847-868. doi:[10.1080/87565641.2011.606401](https://doi.org/10.1080/87565641.2011.606401)
- Cowan, N. (2014). Working memory underpins cognitive development, learning, and education. *Educational psychology review*, 26(2), 197-223. doi:[10.1007/s10648-013-9246-y](https://doi.org/10.1007/s10648-013-9246-y)
- Conway, A. R., Kane, M. J., Bunting, M. F., Hambrick, D. Z., Wilhelm, O., & Engle, R. W. (2005). Working memory span tasks: A methodological review and user's guide. *Psychonomic bulletin & review*, 12(5), 769-786. doi:[10.3758/BF03196772](https://doi.org/10.3758/BF03196772)
- Della Sala, S., Gray, C., Baddeley, A., Allamano, N., & Wilson, L. (1999). Pattern span: A tool for unwelding visuo-spatial memory. *Neuropsychologia*, 37(10), 1189-1199. doi:[10.1016/S0028-3932\(98\)00159-6](https://doi.org/10.1016/S0028-3932(98)00159-6)
- Drigas, A., & Dourou, A. (2013). A review on ICT based applications for intervention and assistance of people with memory deficits. *International Journal of Emerging Technologies in Learning (IJET)*, 8(5), 47-49. Ανακτήθηκε από [A Review on ICT Based Applications for Intervention and Assistance of People with Memory Deficits - Learning & Technology Library \(LearnTechLib\)](#)
- Drigas, A. S., & Elektra, B. (2016). Dyslexia and ICTs, Assessment and Early Intervention in Kindergarten. *International Journal of Emerging Technologies in Learning*, 11(2). doi:[10.3991/ijet.v11i02.5193](https://doi.org/10.3991/ijet.v11i02.5193)
- Drigas, A. S., & Ioannidou, R. E. (2013). Special Education and ICTs. *International Journal of Emerging Technologies in Learning*, 8(2). doi:[10.3991/ijet.v8i2.2514](https://doi.org/10.3991/ijet.v8i2.2514)

- Drigas, A., & Kokkalia, G. (2014a). ICTs and special education in kindergarten. *International Journal of Emerging Technologies in Learning (IJET)*, 9(4), 35-42. doi:[10.3991/ijet.v9i4.3662](https://doi.org/10.3991/ijet.v9i4.3662)
- Drigas, A. S., & Kokkalia, G. K. (2014b). ICTs in kindergarten. *International Journal of Emerging Technologies in Learning*, 9(2). doi:[10.3991/ijet.v9i2.3278](https://doi.org/10.3991/ijet.v9i2.3278)
- Drigas, A., Mitsea, E., & Skianis, C. (2021). The Role of Clinical Hypnosis and VR in Special Education. *International Journal of Recent Contributions from Engineering Science & IT (IJES)*, 9(4), 4-17. doi:[10.3991/ijes.v9i4.26147](https://doi.org/10.3991/ijes.v9i4.26147)
- Ekman, M., Fiebach, C. J., Melzer, C., Tittgemeyer, M., & Derrfuss, J. (2016). Different roles of direct and indirect frontoparietal pathways for individual working memory capacity. *Journal of Neuroscience*, 36(10), 2894-2903. doi:[10.1523/JNEUROSCI.1376-14.2016](https://doi.org/10.1523/JNEUROSCI.1376-14.2016)
- Ellis, K. A., & Nathan, P. J. (2001). The pharmacology of human working memory. *International Journal of Neuropsychopharmacology*, 4(3), 299-313. doi:[10.1017/S1461145701002541](https://doi.org/10.1017/S1461145701002541)
- Elliott, J. G., & Grigorenko, E. L. (2014). *The dyslexia debate* (No. 14). Cambridge University Press. Ανακτήθηκε από [The Dyslexia Debate - Julian G. Elliott, Elena L. Grigorenko - Βιβλία Google](#)
- Gathercole, S. E. (2008). "Working Memory". In J. H. Byrne (Ed.), *Concise Learning and Memory*, (pp. 149-164). Academic Press. Ανακτήθηκε από: [Concise Learning and Memory: The Editor's Selection - Βιβλία Google](#)
- Gathercole, S., & Alloway, T. (2007). *Understanding working memory: A classroom guide*. London: Harcourt Assessment Procter House. Ανακτήθηκε από [Memoryclassroom guide 1.pdf \(yesataretelearningtrust.net\)](#)

- Gathercole, S. E., & Pickering, S. J. (2000a). Assessment of working memory in six- and seven-year-old children. *Journal of Educational Psychology*, 92(2), 377–390. doi:[10.1037/0022-0663.92.2.377](https://doi.org/10.1037/0022-0663.92.2.377)
- Gathercole, S. E., & Pickering, S. J. (2000b). Working memory deficits in children with low achievements in the national curriculum at 7 years of age. *British Journal of Educational Psychology*, 70(2), 177-194. doi:[10.1348/000709900158047](https://doi.org/10.1348/000709900158047)
- Gibbs, S. J., & Elliott, J. G. (2020). The dyslexia debate: life without the label. *Oxford Review of Education*, 46(4), 487-500. doi:[10.1080/03054985.2020.1747419](https://doi.org/10.1080/03054985.2020.1747419)
- Hitch, G. J., & McAuley, E. (1991). Working memory in children with specific arithmetical learning difficulties. *British Journal of Psychology*, 82(3), 375-386. doi:[10.1111/j.2044-8295.1991.tb02406.x](https://doi.org/10.1111/j.2044-8295.1991.tb02406.x)
- Hulme, C., & Snowling, M. J. (2016). Reading disorders and dyslexia. *Current opinion in pediatrics*, 28(6), 731. doi:[10.1097/MOP.0000000000000411](https://doi.org/10.1097/MOP.0000000000000411)
- Irak, M., Turan, G., Güler, B., & Orgun, Z. (2019). Investigating memory functions in dyslexia and other specific learning disorders. *Life Span and Disability*, 22, 223-253. Ανακτήθηκε από: [\(PDF\) Investigating memory functions in dyslexia and other specific learning disorders \(researchgate.net\)](#)
- Jones, M. W., Kuipers, J. R., Nugent, S., Miley, A., & Oppenheim, G. (2018). Episodic traces and statistical regularities: Paired associate learning in typical and dyslexic readers, *Cognition*, 177, 214-225. doi:[10.1016/j.cognition.2018.04.010](https://doi.org/10.1016/j.cognition.2018.04.010)
- Kapsi, S., Katsantoni, S., & Drigas, A. (2020). The Role of Sleep and Impact on Brain and Learning. *Int. J. Recent Contributions Eng. Sci. IT*, 8(3), 59-68. doi:[10.3991/ijes.v8i3.17099](https://doi.org/10.3991/ijes.v8i3.17099)

- Kefalis, C., Kontostavlou, E. Z., & Drigas, A. (2020). The Effects of Video Games in Memory and Attention. *Int. J. Eng. Pedagog.*, 10(1), 51-61. doi:[10.3991/ijep.v10i1.11290](https://doi.org/10.3991/ijep.v10i1.11290)
- Kokkalia, G. K., & Drigas, A. S. (2015). Working Memory and ADHD in Preschool Education. The Role of ICT'S as a Diagnostic and Intervention Tool: An Overview. *International Journal of Emerging Technologies in Learning*, 10(5). doi:[10.3991/ijet.v10i5.4359](https://doi.org/10.3991/ijet.v10i5.4359)
- Κολιάδης, Ε. Α. (2002). *Θεωρίες μάθησης και εκπαιδευτική πράξη*. Γνωστική ψυχολογία, γνωστική νευροεπιστήμη και εκπαιδευτική πράξη: μοντέλο επεξεργασίας πληροφοριών (τόμ. Δ'). Αθήνα: Ιδιωτική
- Lacroix, L. G., Constantinescu, I., Cousineau, D., de Almeida, R. G., Segalowitz, N., & von Grüнау, M. (2005). Attentional blink differences between adolescent dyslexic and normal readers, *Brain and Cognition*, 57(2), 115-119. doi:[10.1016/j.bandc.2004.08.030](https://doi.org/10.1016/j.bandc.2004.08.030)
- Macfarlane, A., Albrair, A., Marshall, C., & Buchanan, G. (August, 2012). Phonological working memory impacts on information searching: An investigation of dyslexia. *IIIX 2012- Proceedings 4th Information Interaction in Context Symposium*, 27-34. doi:[10.1145/2362724.2362734](https://doi.org/10.1145/2362724.2362734)
- Masoura, E. (2007). Δυσλειτουργία της εργαζόμενης μνήμης και ειδικές μαθησιακές δυσκολίες: Υπάρχει αιτιώδης σύνδεση; *Επιστημονική Επετηρίδα του Τμήματος Ψυχολογίας*, 413-442. Ανακτήθηκε από: [\(PDF\) Δυσλειτουργία της εργαζόμενης μνήμης και ειδικές μαθησιακές δυσκολίες: Υπάρχει αιτιώδης σύνδεση \(researchgate.net\)](#)
- Μασούρα, Ε. (2010). Εργαζόμενη Μνήμη. Μπορεί να Εργαστεί πιο Σκληρά; Ανακτήθηκε από [Microsoft Word - SELIDES 321-344 KEF 013.doc \(researchgate.net\)](#)
- Menghini, D., Finzi, A., Carlesimo, G., & Vicari, S. (2011). Working Memory Impairment in Children With Developmental Dyslexia: Is it Just a Phonological Deficity?,

Developmental Neuropsychology, 36(2), 199-213,
[doi:10.1080/87565641.2010.549868](https://doi.org/10.1080/87565641.2010.549868)

Morrison, A. B., & Jha, A. P. (2015). Mindfulness, attention, and working memory. In B. Ostafin, M. Robinson, B. Meier (eds), *Handbook of mindfulness and self-regulation* (pp. 33-45). Springer, New York, NY. [doi:10.1007/978-1-4939-2263-5_4](https://doi.org/10.1007/978-1-4939-2263-5_4)

Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological science*, 24(5), 776-781.
[doi:10.1177/0956797612459659](https://doi.org/10.1177/0956797612459659)

Nelson, H. E., & Warrington, E. K. (1980). An investigation of memory functions in dyslexic children. *British Journal of Psychology*, 71(4), 487-503. [doi:10.1111/j.2044-8295.1980.tb01762.x](https://doi.org/10.1111/j.2044-8295.1980.tb01762.x)

Papagno, C., Comi, A., Riva, M., Bizzi, A., Vernice, M., Casarotti, A., ... & Bello, L. (2017). Mapping the brain network of the phonological loop. *Human brain mapping*, 38(6), 3011-3024. [doi:10.1002/hbm.23569](https://doi.org/10.1002/hbm.23569)

Papanastasiou, G., Drigas, A., Skianis, C., & Lytras, M. D. (2017). Serious games in K-12 education: Benefits and impacts on students with attention, memory and developmental disabilities. *Program*, 51(4), 424-440. [doi:10.1108/PROG-02-2016-0020](https://doi.org/10.1108/PROG-02-2016-0020)

Pickering, S. J., & Gathercole, S. E. (2004). Distinctive working memory profiles in children with special educational needs. *Educational psychology*, 24(3), 393-408.
[doi:10.1080/0144341042000211715](https://doi.org/10.1080/0144341042000211715)

Poblano, A., Valadéz-Tepec, T., de Lourdes Arias M., García-Pedroza, F. (2000). Phonological and visuo-spatial working memory alterations in dyslexic children. *Archives of medical research*, 31(5), 493-496. [doi:10.3389/fnhum.2014.00120](https://doi.org/10.3389/fnhum.2014.00120)

- Rahul, D. R., & Ponniah, R. J. (2021). The Modularity of Dyslexia. *Pediatrics & Neonatology*, 62(3), 240-248. doi:[10.1016/j.pedneo.2021.03.001](https://doi.org/10.1016/j.pedneo.2021.03.001)
- Roitsch, J., & Watson, S. (2019). An overview of dyslexia: definition, characteristics, assessment, identification, and intervention. *Science Journal of Education*, 7(4), 81-86. doi:[10.11648/j.sjedu.20190704.11](https://doi.org/10.11648/j.sjedu.20190704.11)
- Salmon, E., Van der Linden, M., Collette, F., Delfiore, G., Maquet, P., Degueldre, C., ..., & Franck, G. (1996). Regional brain activity during working memory tasks. *Brain*, 119(5), 1617-1625. doi:[10.1093/brain/119.5.1617](https://doi.org/10.1093/brain/119.5.1617)
- Sela, I., Izzetoglu, M., Izzetoglu, K., Onaral, B. (2012). A Working Memory Deficit among Dyslexic Readers with No Phonological Impairment as Measured Using the N-Back Task: An fNIR Study. *PLOS One*, 7(11): e46527. doi:[10.1371/journal.pone.0046527](https://doi.org/10.1371/journal.pone.0046527)
- Shah, P., & Miyake, A. (1996). The separability of working memory resources for spatial thinking and language processing: an individual differences approach. *Journal of experimental psychology: General*, 125(1), 4. doi:[10.1037/0096-3445.125.1.4](https://doi.org/10.1037/0096-3445.125.1.4)
- Shaywitz, S. E. (1998). Dyslexia. *New England Journal of Medicine*, 338(5), 307-312. doi:[10.1056/NEJM199801293380507](https://doi.org/10.1056/NEJM199801293380507)
- Shaywitz, S. E., & Shaywitz, B. A. (2003). Dyslexia (specific reading disability). *Pediatrics in Review*, 24(5), 147-153. Ανακτήθηκε από [download \(psu.edu\)](https://psu.edu)
- Smith-Spark, J.H., & Fisk J.E. (2007). Working memory functioning in developmental dyslexia, *Memory*, 15(1), 34-56, doi:[10.1080/09658210601043384](https://doi.org/10.1080/09658210601043384)
- Snowling, M. J., Hulme, C., & Nation, K. (2020). Defining and understanding dyslexia: past, present and future. *Oxford Review of Education*, 46(4), 501-513. doi:[10.1080/03054985.2020.1765756](https://doi.org/10.1080/03054985.2020.1765756)

- St Clair-Thompson, H. L. (2010). Backwards digit recall: A measure of short-term memory or working memory?. *European Journal of Cognitive Psychology*, 22(2), 286-296. doi:[10.1080/09541440902771299](https://doi.org/10.1080/09541440902771299)
- Vhavle, S. P., Rao, R. M., & Manjunath, N. K. (2019). Comparison of yoga versus physical exercise on executive function, attention, and working memory in adolescent schoolchildren: A randomized controlled trial. *International Journal of Yoga*, 12(2), 172. doi:[10.4103/ijoy.IJOY_61_18](https://doi.org/10.4103/ijoy.IJOY_61_18)
- Wilson, B. A. (1994). Syndromes of acquired dyslexia and patterns of recovery: A 6-to 10-year follow-up study of seven brain-injured people. *Journal of Clinical and Experimental Neuropsychology*, 16(3), 354-371. doi:[10.1080/01688639408402646](https://doi.org/10.1080/01688639408402646)
- World Health Organization. (2016). International statistical classification of diseases and related health problems (10th ed.). Ανακτήθηκε από <https://icd.who.int/browse10/2016/en>
- Χαλμπέ, Μ., Βλάχος, Φ., Αβραμίδης, Η., & Τζιβνίκου, Σ. (Ιούλιος, 2020). Οπτικοχωρικές ικανότητες και οπτική μνήμη σε μαθητές με δυσλεξία. *Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης*, 9, 890-901. doi:[10.12681/edusc.3185](https://doi.org/10.12681/edusc.3185)
- Xu, M., Yang, J., Siok, W. T., & Tan, L. H. (2015). Atypical lateralization of phonological working memory in developmental dyslexia. *Journal of Neurolinguistics*, 33, 67-77. doi:[10.1016/j.jneuroling.2014.07.004](https://doi.org/10.1016/j.jneuroling.2014.07.004)
- Yang, J., Peng, J., Zhang, D., Zheng, L., & Mo, L. (2017). Specific effects of working memory training on the reading skills of Chinese children with developmental dyslexia. *PLoS one*, 12(11), e0186114. doi:[10.1371/journal.pone.0186114](https://doi.org/10.1371/journal.pone.0186114)
- Zavitsanou, A. M., & Drigas, A. (2021). Attention and Working Memory. *Int. J. Recent Contributions Eng. Sci. IT*, 9(1), 81-91. doi:[10.3991/ijesKary.v9i1.19933](https://doi.org/10.3991/ijesKary.v9i1.19933)