

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

ΣΥΝΑΙΣΘΗΜΑΤΙΚΗ ΝΟΗΜΟΥΝΗ ΚΑΙ ΤΕΧΝΕΣ
ΜΕΣΩ Τ.Π.Ε. ΣΤΗΝ ΕΙΔΙΚΗ ΑΓΩΓΗ

EMOTIONAL INTELLIGENCE AND ARTS
IN SPECIAL EDUCATION WITH THE USE OF THE ICTS

της

Βακάλη Ελένης

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 Επικοινωνιών
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της
ένταξης»

Εγκεκριμένο από την τριμελή επιτροπή:

ΑΘΑΝΑΣΙΟΣ ΔΡΙΓΚΑΣ, Ερευνητής Α' Βαθμίδας Ι.Π.Τ. Ε.Κ.Ε.Φ.Ε. «ΔΗΜΟΚΡΙΤΟΣ»
ΑΝΑΣΤΑΣΙΑ ΑΛΕΥΡΙΑΔΟΥ, Καθηγήτρια, Πανεπιστήμιο Δυτικής Μακεδονίας
ΠΑΝΑΓΙΩΤΗΣ ΜΑΝΤΑΣ, Συνεργαζόμενος Ερευνητής, Ι.Π.Τ.Ε.Κ.Ε.Φ.Ε.
«ΔΗΜΟΚΡΙΤΟΣ»

Αθήνα 2020

ΠΕΡΙΛΗΨΗ

Η συναισθηματική νοημοσύνη αποτελεί ένα από τα σημαντικότερα χαρακτηριστικά που καθορίζουν την ποιότητα ζωής του ανθρώπου, χαρακτηριστικό το οποίο θα πρέπει να καλλιεργείται και στα παιδιά με δυσκολίες στη μάθηση. Οι εικαστικές τέχνες μπορούν να καλλιεργήσουν τη συναισθηματική νοημοσύνη και με τη βοήθεια των Τ.Π.Ε. να είναι προσβάσιμες από παιδιά με δυσκολίες στη μάθηση, δίνοντάς τους την ευκαιρία να εκφραστούν και να αλληλεπιδράσουν. Η συγκεκριμένη μελέτη, μέσα από βιβλιογραφική ανασκόπηση αναλύει θεωρητικά τις παραπάνω έννοιες και παραθέτει έρευνες νέων τεχνολογιών στις εικαστικές τέχνες για παιδιά με κινητικές αναπηρίες, αναπτυξιακές διαταραχές, νοητικές και αισθητηριακές ανεπάρκειες. Τα συμπεράσματα δείχνουν ότι οι νέες τεχνολογίες μπορούν να εντάξουν στην εκπαιδευτική διαδικασία το παιδί με δυσκολίες στην μάθηση και να το βοηθήσουν να αναπτύξει στοιχεία της συναισθηματικής του νοημοσύνης. Περαιτέρω έρευνες είναι αναγκαίες για μία πιο στοχευμένη μελέτη.

Λέξεις Κλειδιά: Ειδική αγωγή, ένταξη, Τ.Π.Ε., εικαστικές τέχνες, συναισθηματική νοημοσύνη

BIBΛΙΟΓΡΑΦΙΑ

- Adams, K., & Markham, R. (1991). Recognition of affective facial expressions by children and adolescents with and without mental retardation. *American Journal on Mental Retardation*, 96(1), 21–28
- Adzhiev, V., Comninos, P., Kazakov, M., & Pasko, A. (2005). Functionally based augmented sculpting. *Computer Animation and Virtual Worlds*, 16(1), 25–39. <https://doi.org/10.1002/cav.54>
- Aigner, R., Wigdor, D., Benko, H., Haller, M., Lindbauer, D., Ion, A., Zhao, S., & Koh, J. T. K. V. (2012). Understanding Mid-Air Hand Gestures: A study of Human Preferences in Usage of Gesture Types for HCI. *Microsoft Research Tech Report MSR-TR-2012-111*, 2, 30. https://www.researchgate.net/profile/Jeffrey_Koh3/publication/267776883_Understanding_Mid-Air_Hand_Gestures_A_Study_of_Human_Preferences_in_Usage_of_Gesture_Types_for_HCI/links/5788fc7108ae7a588ee855a6.pdf
- Altman, B. M. (2014). Definitions, concepts, and measures of disability. *Annals of Epidemiology*, 24(1), 2-7. <https://doi.org/10.1016/j.annepidem.2013.05.018>
- APA. (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*. American Psychological Association.
- APA. (2020). *APA History and Archives*. <https://www.apa.org/about/apa/archives/>

- Art in Action. (2020). About art in action. <https://artinaction.org/about-art-in-action/>
- Arvanitis, T. N., Petrou, A., Knight, J. F., Savas, S., Sotiriou, S., Gargalakos, M., & Gialouri, E. (2007). Human factors and qualitative pedagogical evaluation of a mobile augmented reality system for science education used by learners with physical disabilities. *Personal and Ubiquitous Computing*, 13(3), 243–250. <https://doi.org/10.1007/s00779-007-0187-7>
- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia scale- I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, 38(1), 23-32. [https://doi.org/10.1016/0022-3999\(94\)90005-1](https://doi.org/10.1016/0022-3999(94)90005-1)
- Bain, A. (1984). *Review of the Senses and the Intellect*. Thoemmes Press
- Bakopoulou, I., & Dockrell, J. E. (2016). The role of social cognition and prosocial behaviour in relation to the socio-emotional functioning of primary aged children with specific language impairment. *Research in Developmental Disabilities*, 49-50, 354–370. <https://doi.org/10.1016/j.ridd.2015.12.013>
- Bar-On, R. (1997). *BarOn Emotional Quotient Inventory (EQ-i): Technical manual*. Multi-Health Systems.
- Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema*, 18, 13-25. http://www.eiconsortium.org/reprints/bar-on_model_of_emotional-social_intelligence.htm
- Bauminger, N. (2002). The facilitation of social-emotional understanding and social interaction in high-functioning children with autism: Intervention outcomes. *Journal of autism and developmental disorders*, 32(4), 283-298. <https://link.springer.com/content/pdf/10.1023/A:1016378718278.pdf>
- Betke, M., Gips, J., & Fleming, P. (2002). The Camera Mouse: visual tracking of body features to provide computer access for people with severe disabilities. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 10(1), 1–10. <https://doi.org/10.1109/tnsre.2002.1021581>
- Boyatzis, R.E., Goleman, D., & Rhee, K. (1999). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory (ECI). In R. Bar-On, & J. D. A. Parker (Eds.), *Handbook of Emotional Intelligence* (pp. 343-362). Jossey-Bass. http://www.eiconsortium.org/pdf/eci_article.pdf

- Brouillette, L. (2010). How the arts help children to create healthy social scripts: Exploring the perceptions of elementary teachers. *Arts Education Policy Review*, 111(1), 16-24. <https://doi.org/10.1080/10632910903228116>
- Buskirk-Cohen, A. A. (2015). Effectiveness of a Creative Arts Summer Camp: Benefits of a Short-Term, Intensive Program on Children's Social Behaviors and Relationships. *Journal of Creativity in Mental Health*, 10(1), 34-45. <https://doi.org/10.1080/15401383.2014.946637>
- Cabreira, A. T., & Hwang, F. (2015, July 13-17). *An analysis of mid-air gestures used across three platforms* [Paper presentation]. British HCI 2015 Conference, Lincoln, United Kingdom. <http://dx.doi.org/10.1145/2783446.2783599>
- Caligari, M., Godi, M., Guglielmetti, S., Franchignoni, F., & Nardone, A. (2013). Eye tracking communication devices in amyotrophic lateral sclerosis: Impact on disability and quality of life. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*, 14(7-8), 546-552. <https://doi.org/10.3109/21678421.2013.803576>
- Camera Mouse. (2018). *About Camera Mouse*. <http://cameramouse.org/about.html>
- Cariad Interactive. (2020a). *Cariad Interactive: About*. <http://cariadinteractive.com/about/>
- Cariad Interactive. (2020b). *Cariad Interactive: ReacTickles Magic*. <http://cariadinteractive.com/reactickles-magic/>
- Cariad Interactive. (2020c). *Cariad Interactive: Somantics*. <http://cariadinteractive.com/somantics/>
- Cariad Interactive. (2020d). *Cariad Interactive: Somability*. <http://cariadinteractive.com/somability/>
- CASEL. (2019). *Core SEL Competencies*. <https://casel.org/core-competencies/>
- Chen, Y.-H., & Chang, P.-L. (2018, April 13-17). *3D printing assisted in art education: Study on the effectiveness of visually impaired students in space learning* [Paper presentation]. 2018 IEEE International Conference on Applied System Invention, Chiba, Japan. <https://doi.org/10.1109/icasi.2018.8394384>
- Choe, S. (2014). An exploration of the qualities and features of art apps for art therapy. *The Arts in psychotherapy*, 41(2), 145-154. <https://doi.org/10.1016/j.aip.2014.01.002>

- Cohen, J., Onunaku, N., Clothier, S., & Poppe, J. (2005). *Helping young children succeed: Strategies to promote early childhood social and emotional development*. National Conference of State Legislatures. <https://www.zerotothree.org/resources/136-helping-young-children-succeed-strategies-to-promote-early-childhood-social-and-emotional-development>
- Cooper, R. K., & Sawaf, A. (1998). *Executive EQ: Emotional intelligence in leadership and organizations*. Penguin.
- Creed, C., Beale, R., & Dower, P. (2014, October 20-22). *Digital tools for physically impaired visual artists* [Paper presentation]. 16th International ACM SIGACCESS Conference on Computers & Accessibility - ASSETS '14. Rochester, NY, USA <https://doi.org/10.1145/2661334.2661386>
- Derboven, J., Huyghe, J., & De Grooff, D. (2014, October 26 - 30). *Designing voice interaction for people with physical and speech impairments* [Paper presentation]. 8th Nordic Conference on Human-Computer Interaction Fun, Fast, Foundational - NordiCHI '14, Helsinki, Finland. <https://doi.org/10.1145/2639189.2639252>
- Dewey, J. & Dewey, E. (1915). *Schools of tomorrow*. E.P. Dutton.
- Dewey, J. (1925). *Human nature and conduct: An introduction to social psychology*. Modern Library.
- Dewey, J. (1934). *Art as experience*. Perigee.
- Dewey, J. (1938). *Logic: The theory of inquiry*. Henry Holt.
- Diment, L. & Hobbs, D. (2014). A gesture-based virtual art program for children with severe motor impairments - development and pilot study. *Journal of Assistive, Rehabilitative & Therapeutic Technologies*, 2(1), 1-9. <https://doi.org/10.3402/jartt.v2.23206>
- Donnari, S., Canonico, V., Fatuzzo, G., Bedetti, C., Marchiafava, M., Menna, M., & Elisei, S. (2019). New technologies for art therapy interventions tailored to severe disabilities. *Psychiatria Danubina*, 31(3), 462-466. http://www.psychiatria-danubina.com/UserDocsImages/pdf/dnb_vol31_noSuppl%203/dnb_vol31_noSuppl%203_462.pdf
- Drigas, A., & Ioannidou, R. E. (2013). Special Education and ICTs. *International Journal of Emerging Technologies in Learning*, 8(2), 41-47. <https://doi.org/10.3991/ijet.v8i2.2514>

- Drigas, A., & Karyotaki, M. (2019). A Layered Model of Human Consciousness. *International Journal of Recent Contributions from Engineering, Science & IT*, 7(3), 41-50. <https://doi.org/10.3991/ijes.v7i3.11117>
- Drigas, A., & Kokkalia, G. (2016). Mobile Learning for Special Preschool Education. *International Journal of Recent Contributions from Engineering, Science & IT*, 10(1), 67-74. <http://dx.doi.org/10.3991/ijim.v10i1.5288>
- Drigas, A., & Mitsea, E. (2020). The Triangle of Spiritual Intelligence, Metacognition and Consciousness. *International Journal of Recent Contributions from Engineering, Science & IT*, 8(1), 4-23. <https://doi.org/10.3991/ijes.v8i1.12503>
- Drigas, A., & Papoutsi, C. (2018). A New Layered Model on Emotional Intelligence. *Behavioral Sciences*, 8(5), 45. <https://doi.org/10.3390/bs8050045>
- Drigas, A., & Pappas, M. (2017). The Consciousness-Intelligence-Knowledge Pyramid: An 8x8 Layer Model. *International Journal of Recent Contributions from Engineering, Science & IT*, 5(3), 14-25. <https://doi.org/10.3991/ijes.v5i3.7680>
- Drigas, A., & Vlachou, J. (2016). Information and Communication Technologies (ICTs) and Autistic Spectrum Disorders (ASD). *International Journal of Recent Contributions from Engineering, Science & IT*, 4(1), 4-10. <https://doi.org/10.3991/ijes.v4i1.5352>
- Drigas, A., & Vlachou, J. (2017). Mobile Technology for Students & Adults with Autistic Spectrum Disorders (ASD). *International Journal of Recent Contributions from Engineering, Science & IT*, 11(1), 5-17. <https://doi.org/10.3991/ijim.v11i1.5922>
- Dunleavy, M., Dede, C. & Mitchell, R. (2009). Affordances and Limitations of Immersive Participatory Augmented Reality Simulations for Teaching and Learning. *J Sci Educ Technol* 18(1), 7–22. <https://doi.org/10.1007/s10956-008-9119-1>
- Dyck, M. J., Farrugia, C., Shochet, I. M., & Holmes-Brown, M. (2004). Emotion recognition/understanding ability in hearing or vision-impaired children: do sounds, sights, or words make the difference? *Journal of Child Psychology and Psychiatry*, 45(4), 789–800. <https://doi.org/10.1111/j.1469-7610.2004.00272.x>
- ETICA. (2020). *ETICA Project-Home*. <http://www.etica-project.eu/home>
- Farb, N. A., Chapman, H. A., & Anderson, A. K. (2013). Emotions: form follows function. *Current Opinion in Neurobiology*, 23(3), 393–398. <https://doi.org/10.1016/j.conb.2013.01.015>

- Florian, L. (2004). Uses of technology that support pupils with special educational needs. In L. Florian & J. Hegarty (Eds). *ICT and special educational needs: A tool for inclusion* (pp. 7-20). Open University Press
- Gardner H. (1999). *Intelligence reframed: Multiple Intelligence for the 21th century*. Basic
- Goldblatt, P. F. (2006). How John Dewey's theories underpin art and art education. *Education and Culture*, 22(1), 17-34. <https://doi.org/10.1353/eac.2006.0001>
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam.
- Gottman, J. (1998). *Raising an emotionally intelligent child*. Simon & Schuster.
- Grenier, A. (2004). Emotional intelligence as a field of research: A comparative study between scientific theory and practice. University of Toronto. *Masters Abstracts International*, 42(06), 1930A.
- Harada, S., Wobbrock, J. O., & Landay, J. A. (2007, October 15-17). *VoiceDraw: A hands-free voice-driven drawing application for people with motor impairments* [Paper Presentation]. 9th International ACM SIGACCESS Conference on Computers and Accessibility - Assets '07, Tempe, Arizona, USA. <https://doi.org/10.1145/1296843.1296850>
- Henderson, J. M. (2012). *INS: Motor Impairment*. <https://www.neuromodulation.com/motor-impairment>
- Henderson, S. R. (2018). *Effects of a Preschool Arts Curriculum on Social and Emotional Competence*. (Master's Theses). Available from SJSU Scholar Work Digital Theses database. (Record No. 4905). <https://doi.org/10.31979/etd.69x5-gua5>
- Hightower, A. D. (1986). The Teacher-Child Rating Scale: A Brief Objective Measure of Elementary Children's School Problem Behaviors and Competencies. *School Psychology Review*, 15(3), 393-409. https://www.researchgate.net/publication/232586838_The_Teacher-Child_Rating_Scale_A_brief_objective_measure_of_elementary_children's_school_problem_behaviors_and_competencies
- Hornof, A. J., & Cavender, A. (2005, April 2-7). *EyeDraw: Enabling Children with Severe Motor Impairments to Draw with Their Eyes* [Paper Presentation]. SIGCHI Conference on Human Factors in Computing Systems - CHI '05, Portland, Oregon, USA. <https://doi.org/10.1145/1054972.1054995>

- Izard, C. E. (1993). Four systems for emotion activation: Cognitive and noncognitive processes. *Psychological Review*, *100*(1), 68–90. <https://doi.org/10.1037/0033-295X.100.1.68>
- Keay-Bright, W. (2007). The Reactive Colours Project: Demonstrating Participatory and Collaborative Design Methods for the Creation of Software for Autistic Children. *Design Principles & Practices: An International Journal*, *1*(2), 5-15. https://repository.cardiffmet.ac.uk/bitstream/handle/10369/158/Design%20Principles_%20Practices.pdf?sequence=1&isAllowed=y
- Keay-Bright, W. (2012). Designing Interaction Through Sound and Movement with Children on the Autistic Spectrum. In A.L. Brooks (Eds.), *ArtsIT 2011* (pp. 1-9). Springer. <https://doi.org/10.1007/978-3-642-33329-3>
- Keay-Bright, W. (2018, January 25-26). Somability: Explorations with digital media, movement and space within adult disability services [Paper presentation]. In M. Jones, L. Rice & F. Meraz (Eds.), *AMPS Proceedings Series 11. Health: The Design, Planning and Politics of How and Where We Live* (pp. 64-72). University of the West of England, Bristol, UK. <http://architecturemps.com/wp-content/uploads/2018/12/AMPS-Proceedings-11-Health-The-Design-Planning-and-Politics-of-How-and-Where-We-Live.pdf>
- Kellogg, R. (1970). *Analyzing Children's Art*. Mayfield Publishing
- Kendall, K. E. (1997). The Significance of Information Systems Research on Emerging Technologies: Seven Information Technologies that Promise to Improve Managerial Effectiveness. *Decision Sciences*, *28*(4), 775–792. <https://doi.org/10.1111/j.1540-5915.1997.tb01331.x>
- Kontogeorgakopoulos, A., Wechsler, R., & Keay-Bright, W. (2014). Camera-Based Motion Tracking and Performing Arts for Persons with Motor Disabilities and Autism. In G. Kouroupetroglou (Eds.), *Disability Informatics and Web Accessibility for Motor Limitations* (pp. 294-322). IGI Global. <https://doi.org/10.4018/978-1-4666-4442-7.ch009>
- Kostakis, V., Niaros, V., & Giotitsas, C. (2014). Open source 3D printing as a means of learning: An educational experiment in two high schools in Greece. *Telematics and Informatics*, *32*(1), 118–128. <https://doi.org/10.1016/j.tele.2014.05.001>
- Kumar, S. (2012). Emotional Intelligence for Children with Special Needs. *International journal of scientific research*, *2*, 101-104. <https://doi.org/10.15373/22778179/APR2013/24>

- Kwan, C., & Betke, M. (2011) Camera Canvas: Image Editing Software for People with Disabilities. In Stephanidis C. (Eds), *UAHCI 2011: Universal Access in Human-Computer Interaction. Applications and Services* (pp. 146-154). Springer. https://doi.org/10.1007/978-3-642-21657-2_16
- Kwan, C., Betke, M., Kim, W. B., & Fedyuk, I. (2008). *Camera canvas: Image editor for people with severe disabilities*. Boston University Computer Science Technical Report BUCS-TR-2008-010 <http://www.cs.bu.edu/~betke/papers/2008-010-camera-canvas.pdf>
- Kwan, C., Ngo, T., & Magee, J. (2017) Camera Canvas: Photo Editing and Sharing App for People with Disabilities. In: Antona M., Stephanidis C. (eds) *Universal Access in Human-Computer Interaction. Human and Technological Environments. UAHCI 2017. Lecture Notes in Computer Science*, vol 10279. Springer, Cham
- Lexico Powered by Oxford. (2020). *Main definitions of art in English*. <https://www.lexico.com/en/definition/art>
- Matarazzo, J. D. (1972). *Wechsler's Measurement and Appraisal of Adult Intelligence (5th ed)*. Oxford University Press.
- Matsumoto, D., Keltner, D., Shiota, M.N., O'Sullivan, M., & Frank, M. (2008). Facial expressions of emotion. In M. Lewis, J. M. Haviland-Jones, & L.F. Barrett (Eds.), *Handbook of Emotions* (pp. 211–234). Guilford. <http://125.22.40.134:8080/jspui/bitstream/123456789/4296/1/handbook%20of%20Emotions.pdf#page=227>
- Mattson, D. C. (2015). Usability assessment of a mobile app for art therapy. *The Arts in Psychotherapy*, 43, 1–6. <https://doi.org/10.1016/j.aip.2015.02.005>
- Mayer, J., Salovey, P., & Caruso, R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197-215. https://doi.org/10.1207/s15327965pli1503_02
- Mayer, J., Salovey, P., & Caruso, R. (2002). *The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT): User's manual*. Toronto: Multi-Health Systems.
- McLoughlin, L., Fryazinov, O., Moseley, M., Sanchez, M., Adzhiev, V., Comminos, P. & Pasko, A. (2014, November 30-December 4). *SHIVA: Virtual sculpting and 3D printing for disabled children* [Paper presentation]. 22nd International Conference on Computers in Education (ICCE 2014), Nara, Japan. 665 - 670.

<http://eprints.bournemouth.ac.uk/31977/1/SHIVA%20-%20Virtual%20sculpting%20and%203D%20printing%20for%20disabled%20children.pdf>

MDA ΕΛΛΑΣ. (2020). *Αρθρογρύπωση (AMC – Πολλαπλή Συγγενής)*. Retrieved April 21, 2020, from <https://mdahellas.gr/arthrogryposi-amc-pollapli-syggenis/>

Moore, D. G. (2001). Reassessing Emotion Recognition Performance in People With Mental Retardation: A Review. *American Journal on Mental Retardation*, 106(6), 481. [https://doi.org/10.1352/0895-8017\(2001\)106<0481:rerpip>2.0.co;2](https://doi.org/10.1352/0895-8017(2001)106<0481:rerpip>2.0.co;2)

Mynarikova, L. (2012). Art-Based Program for Social and Emotional Development of Children. *US-China Education Review* 8, 720-726. <https://files.eric.ed.gov/fulltext/ED536463.pdf>

Namatame, M., & Matsuda, N. (2012, March 27-30). *An Application of Peer Review for Art Education: A Tablet PC Becomes a Language for Students Who are Hard of Hearing* [Paper presentation]. 2012 IEEE Seventh International Conference on Wireless, Mobile and Ubiquitous Technology in Education, Takamatsu, Japan. <https://doi.org/10.1109/WMUTE.2012.43>

Ngo, T. D., Kashani, A., Imbalzano, G., Nguyen, K. T. Q., & Hui, D. (2018). Additive manufacturing (3D printing): A review of materials, methods, applications and challenges. *Composites Part B: Engineering*, 143, 172–196. <https://doi.org/10.1016/j.compositesb.2018.02.012>

Novartis. (2020). Σκλήρυνση κατά Πλάκα. Retrieved April 21, 2020, from <https://www.novartis.gr/our-work/therapeutic-areas/multiple-sclerosis>

Pazzagli, C., Fatuzzo, G., Donnari, S., Canonico, V., Balboni, G., & Mazzeschi, C. (2018). Assistive Technologies for Children with Autism Spectrum Disorder. In S. Federici, & M. Scherer (Eds.), *Assistive Technology Assessment Handbook second edition* (pp. 435-456). CRC Press, <https://doi.org/10.1201/9781351228411>

Perera, D., Jim Eales, R. T., & Blashki, K. (2009). Supporting the creative drive: investigating paralinguistic voice as a mode of interaction for artists with upper limb disabilities. *Universal Access in the Information Society*, 8(2), 77–88. <https://doi.org/10.1007/s10209-008-0130-3>

- Petrides, K. V. (2009). Psychometric Properties of the Trait Emotional Intelligence Questionnaire (TEIQue). *The Springer Series on Human Exceptionality*, 85–101. https://doi.org/10.1007/978-0-387-88370-0_5
- Petrides, K. V. (2010). Trait Emotional Intelligence Theory. *Industrial and Organizational Psychology*, 3(02), 136–139. <https://doi.org/10.1111/j.1754-9434.2010.01213.x>
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15(6), 425–448. <https://doi.org/10.1002/per.416>
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology*, 98(2), 273–289. <https://doi.org/10.1348/000712606x120618>
- Rubin, J. A. (2001). *Approaches to art therapy: Theory and technique*. Brunner-Routledge
- Rubin, J. A. (2016). *Approaches to art therapy: theory and technique*. Brunner-Routledge.
- Salovey, P. & Pizarro, D. A. (2003). The value of emotional intelligence. In R.J. Sternberg, J. Lautrey, & T.I. Lubart (Eds.), *Models of intelligence: International perspectives* (pp. 263-278). American Psychological Association.
- Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211. <https://doi.org/10.2190/dugg-p24e-52wk-6cdg>
- Scotch, R. K., & Schriener, K. (1997). Disability as Human Variation: Implications for Policy, *The Annals of the American Academy of Political and Social Science*, 549(1), 148–159. <https://doi.org/10.1177/0002716297549001011>
- Sifneos, P. E. (1972). *Short-term psychotherapy and emotional crisis*. Harvard University Press.
- Stahl, B. C. (2011). IT for a better future: how to integrate ethics, politics and innovation. *Journal of Information, Communication and Ethics in Society*, 9(3), 140–156. <https://doi.org/10.1108/147799611111167630>
- Stahl, B. C., Timmermans, J., & Flick, C. (2016). Ethics of emerging Information and Communication Technologies On the implementation of responsible research and innovation. *Science and Public Policy*, 44(3), 1-13. <https://doi.org/10.1093/scipol/scw069>

- Stecker, R. (2009). *Definition of Art*. Oxford Handbooks Online. <https://doi.org/10.1093/oxfordhb/9780199279456.003.0007>
- Stevens, C. (2004). Information and communication technology, special educational needs and schools: a historical perspective of UK government initiatives, in L. Florian & J. Hegarty (Eds). *ICT and special educational needs: A tool for inclusion* (pp. 21-34). Open University Press
- Tolstoy, L. & Maude, A. (1899). *What is Art*. Walter Scott Publishing Co.
- Turner-Cmuchal, M., & Aitken, S. (2016). ICT as a Tool for Supporting Inclusive Learning Opportunities. *International Perspectives on Inclusive Education*, 159–180. <https://doi.org/10.1108/s1479-363620160000008010>
- Ultraleap. (2020). *Ultraleap: About*. Retrieved April 11, 2020, from <https://www.ultraleap.com/company/about/>
- Warnock Report. (1978). *Report of the Committee of Enquiry into the Education of Handicapped Children and Young People*. Her Majesty's Stationery Office. <http://www.educationengland.org.uk/documents/warnock/warnock1978.html>
- Wasserman, D., Asch, A., Blustein, J., & Putnam, D. (2011). *Disability: Definitions, models, experience*. The Stanford Encyclopedia of Philosophy. <https://plato.stanford.edu/entries/disability/>
- WHO. (2002). *Towards a Common Language for Functioning, Disability and Health-ICF*. World Health Organization Geneva. <https://www.who.int/classifications/icf/icfbeginnersguide.pdf?ua=1>
- WHO. (2018). *International Classification of Functioning, Disability and Health*. <https://www.who.int/classifications/icf/en/>
- Wilkinson, K. M., & Mitchell, T. (2014). Eye Tracking Research to Answer Questions about Augmentative and Alternative Communication Assessment and Intervention. *Augmentative and Alternative Communication*, 30(2), 106–119. <https://doi.org/10.3109/07434618.2014.904435>
- Williams, P., Jamali, H. R., & Nicholas, D. (2006). Using ICT with people with special education needs: what the literature tells us. *Aslib Proceedings*, 58(4), 330–345. <https://doi.org/10.1108/00012530610687704>

- Wood, P. M., & Kroese, B. S. (2007). Enhancing the Emotion Recognition Skills of Individuals With Learning Disabilities: A Review of the Literature. *Journal of Applied Research in Intellectual Disabilities*, 20(6), 576–579. <https://doi.org/10.1111/j.1468-3148.2006.00355.x>
- WPS. (2018). *Assessment Area - Child Clinical: Adaptive Behavior*. <https://www.wpspublish.com/scbe-social-competence-and-behavior-evaluation-preschool-edition>
- Yusoff, M.S. (2012). Stability of Usmeq-I In Measuring Emotional Intelligence in Medical Students. *ASEAN Journal of Psychiatry*, 13(1), 49-54. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.675.8686&rep=rep1&type=pdf#page=54>
- Zhang, Z. (2012). Microsoft Kinect Sensor and Its Effect. *IEEE Multimedia*, 19(2), 4–10. <https://doi.org/10.1109/mmul.2012.24>
- Zins, J. E., & Elias, M. J. (2007). Social and Emotional Learning: Promoting the Development of All Students. *Journal of Educational and Psychological Consultation*, 17(2-3), 233–255. <https://doi.org/10.1080/10474410701413152>
- Ζιάβρα, Ν. & Σκεύας, Α. (2009). *Ωτορινολαρυγγολογία: Στοιχεία ανατομίας, φυσιολογίας και παθολογίας*. University Studio Press
- Ζώνιου-Σιδέρη, Α. (1998). *Οι ανάπηροι και η εκπαίδευσή τους- Μια ψυχοπαιδαγωγική προσέγγιση της ένταξης* (1^η Εκδ.). Ελληνικά Γράμματα.
- Ιωαννίδη, Β. & Καρβέλας, Μ. (2018). Αισθητηριακές αναπηρίες: η περίπτωση διαταραχών όρασης. Καλές πρακτικές ειδικής αγωγής και ενταξιακής εκπαίδευσης. *e-Journal of Science & Technology (e-JST)*. 13(2). 61-70. http://e-jst.teiath.gr/issues/issue_55/loannidi_55.pdf
- Κατσούλης, Φ. & Χαλικιά, Ι. (2007). *Διαναπηρικός οδηγός επιμόρφωσης: Εισαγωγή στην εκπαίδευση των μαθητών με μερική ή ολική απώλεια όρασης*. Πάντειο Πανεπιστήμιο. <http://prosvasimo.iep.edu.gr/docs/pdf/epimorfwtiko-uliko-tuflwsh/Tuflwsh.pdf>
- Μιχαηλίδου, & Πετρά (2015, Ιούνιος 19-21). *Η Τέχνη διδάσκει και διδάσκεται* [Paper presentation]. 5^ο Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης, Αθήνα, Ελλάδα. <http://dx.doi.org/10.12681/edusc.178>
- Παπαφράγκου, Κ. Γ. (1996). *Ακοολογία*. Παρισιάνου.

Πολυχρονοπούλου, Σ. (2013). *Παιδιά και έφηβοι με ειδικές ανάγκες και δυνατότητες*.

Αυτοέκδοση.

Στασινός, Δ.Π. (2013). *Η ειδική εκπαίδευση 2020*. Παπαζήση

ΝΟΜΟΘΕΣΙΑ

Ν. 4488/2017. άρθρο 60. «Συνταξιοδοτικές ρυθμίσεις Δημοσίου και λοιπές ασφαλιστικές διατάξεις, ενίσχυση της προστασίας των εργαζομένων, δικαιώματα ατόμων με αναπηρίες και άλλες διατάξεις»