

**‘Specialization in ICTs and Special Education: Psychopedagogy of Integration’
Postgraduate Program
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NCSR DEMOKRITOS Informatics and Telecommunications Institute**

**ATTITUDES OF PRIMARY SCHOOL TEACHERS REGARDING THE USE OF
ICT IN EDUCATIONAL SUPPORT OF CHILDREN WITH ATTENTION
DEFICIT HYPERACTIVITY DISORDER (ADHD)**

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ABSTRACT

This study was intended to explore the attitudes of Primary Education teachers in relation to the use of Information and Communication Technologies (ICT) in the teaching support of children with ADHD as they are the most important factor promoting or halting the use of ICT in the classroom. A questionnaire adapted to the needs of the survey was used, while the survey sample consisted of 92 Primary Education teachers (20 men and 72 women). Factors related to teachers' attitudes to the use of technology, such as the usefulness and ease of use of ICT, the level of self-confidence, which enhances teachers' teaching "prestige" and how or not teachers' image-satisfaction is affected by the use of ICT in the teaching support of children with ADHD. The above factors were statistically significant dependent variables and contributed decisively to the overall attitude of teachers, while they were associated with independent variables such as gender, age group, educational service, qualifications and computer-handling knowledge-ability. The above-mentioned independent variables in the process of recording and interpreting the results also had a statistically significant effect. Finally, the results confirmed the basic hypothesis of the research, that the overall attitude of Primary Education teachers regarding the use of Information and Communication Technologies to support children with ADHD in the classroom is positive.

References

Ανδρέου, Γ., Ρήγα, Α. (2016). Προβλήματα Συγκέντρωσης Προσοχής στο Γνωστικό Έργο και Τρόποι Αντιμετώπισής τους με την Παιδαγωγική Αξιοποίηση των ΤΠΕ. *Θέματα Ειδικής Αγωγής*, 71, 11-16.

Αθανασίου, Λ. (2007). *ΜΕΘΟΔΟΙ ΚΑΙ ΤΕΧΝΙΚΕΣ ΕΡΕΥΝΑΣ ΣΤΙΣ ΕΠΙΣΤΗΜΕΣ ΤΗΣ ΑΓΩΓΗΣ* ποσοτικές και ποιοτικές προσεγγίσεις. Ιωάννινα: ΕΦΥΡΑ.

Abbitt, J.T. & Klett, M.D. (2007). Identifying influences on attitudes and self-efficacy beliefs towards technology integration among pre-service educators. *Electronic Journal for the integration of technology in Education*, 6(1), 28-42.

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). Washington, DC: APA.

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: APA.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. Rev.). Washington, DC: APA

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: A.P.A.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association. (2013) *Diagnostic and statistical manual of mental disorders (DSM-5)*, 5th edition, Washington, D.C.

Anderson, J. & Van Weert, T. (2002). *Information and Communication Technologies in teacher education: A curriculum for schools and Programme of teacher development*, UNESCO, Paris. Ανακτήθηκε Φεβρουάριος 2, 2020, από <http://unesdoc.unesco.org/images/0012/001295/129538e.pdf>

Baron, R., & Byrne, D. (1984). *Social Psychology Understanding Human Interaction*. Boston: Allyn & Bacon.

Barkley, R.A. (1998). Attention-deficit/hyperactivity disorder. In E.J. Mash & R.A. Barkley (Eds.), *Treatment of Childhood Disorders*, 55-110. New York: Guilford Press.

Barkley, R.A. (2006). The relevance of the Still lectures to attention-deficit/hyperactivity disorder: a commentary. *Journal of Attention Disorders*, 10(2), 137-140.

Barkley, R.A. (2006a). *Attention Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment* (3rd ed.). New York: Guilford Press.

BECTA ICT Research (2004). A review of the research literature on barriers to the uptake of ICT by teachers. Ανακτήθηκε Φεβρουάριος 7, 2020, από http://dera.ioe.ac.uk/1603/1/becta_2004_barrierstouptake_litrev.pdf

Blurton, C. (1999). New directions in education. In: UNESCO's World communication and information 1999-2000, 46-61, Paris: UNESCO Ανακτήθηκε Φεβρουάριος 8, 2020, από <https://unesdoc.unesco.org/ark:/48223/pf0000119191>

Bradley, C. (1937). The behavior of children receiving benzedrine. *The American Journal of Psychiatry* 94, 577–585.

Burd, L., & Kerbeshian, J. (1988). Historical roots of ADHD. *Journal of the American Academy of Child Adolescent Psychiatry* 27:262

Γεώργας, Δ. (1995). *Κοινωνική ψυχολογία. Τόμος Α΄*. Αθήνα: Ελληνικά Γράμματα.
Γιαννούλας, Α., Καραμπατζάκη, Ζ., Κουτσούμπας, Χ., Λουκέρης, Δ. (2008). Αξιολόγηση εκπαιδευτικών αναγκών νεοδιοριστων εκπαιδευτικών πρωτοβάθμιας εκπαίδευσης στις τεχνολογίες της πληροφορίας και των επικοινωνιών. Πρακτικά του 6^{ου} Πανελληνίου Συνεδρίου της Ελληνικής Επιστημονικής Ένωσης Τεχνολογιών Πληροφορίας και Επικοινωνιών στην Εκπαίδευση (ΕΤΠΕ), σελ. 379-386. Λεμεσός, Σεπτέμβριος 2008.

Γκαραγκούνη- Αραιού, Φ., Σολομωνίδου, Χ. & Ζαφειροπούλου, Μ. (2003). Απόψεις και στάσεις εκπαιδευτικών για την αντιμετώπιση παιδιών με στοιχεία διάσπασης της προσοχής ή/και υπερκινητικότητα. *Παιδαγωγική Επιθεώρηση*, 35, 77-96.

Carey, D. & Sale, P. (1997). Technology use benefits for learners with attention deficits. In J. Willis J. D. Price, S. Mc Neil, B. Robin & D.A. Willis (Eds). *Technology and Teacher Education Annual*, 1997. Charlottesville, VA: Association for the Advancement of Computing in Education, 1037-1041.

Clarfield, J., & Stoner, G. (2005). Research Brief: The Effects of Computerized Reading Instruction on the Academic Performance of Students Identified with ADHD. *School Psychology Review* 34(2), 246-254.

Conners, C. (2000). Attention-deficit/hyperactivity disorder: historical development and overview. *Journal of Attention Disorders* 3(4), 173–191.

Douglas, V. (1972). Stop, look and listen: The problem of sustained attention and impulse control in hyperactive and normal children. *Canadian Journal of Behavioural Science/ Revue canadienne des sciences du comportement* 4(4), 259–282.

Ανακτήθηκε Ιανουάριος 7, 2020, από <https://doi.org/10.1037/h0082313> Douglas, V., & Parry, P. (1994). Effects of reward and non-reward on attention and frustration in attention deficit disorder. *Journal of Abnormal Child Psychology*, 22(3), 281- 302.

Drigas, A.S., Ioannidou, R.E., Kokkalia, G., & Lytras, M.D. (2014). ICTs, Mobile Learning and Social Media to Enhance Learning for Attention Difficulties. *Journal of Universal Computer Science* 20(10), 1499-1510.

Drigas, A.S., & Papanastasiou, G. (2014). Interactive White Boards in Preschool and Primary Education. *International Journal of Online and Biomedical Engineering* 10(4), 46-51.

Drigas, A.S., & Kokkalia, G. (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* 10(5), 4-9.

Drigas, A.S., & Tourimpampa, A. (2014). Processes and ICT Tools for ADHD Assessment, Intervention and Attention Training. *International Journal of Emerging Technologies in Learning* 9(6), 20-25.

Drigas, A.S., Gkeka, E., Mertsioti, L., & Gougoudi, A. (2018). Intervention for ADHD using the Montessori Method and ICTs. *International Journal of Recent Contributions from Engineering Science & IT* 6(2), 4-13.

Drigas, A.S., Alexopoulou, A. & Batsou, A. (2019). Effectiveness of Assessment, Diagnostic and Intervention ICT Tools for Children and Adolescents with ADHD. *International Journal of Recent Contributions from Engineering Science & IT* 7(3), 51-63.

Drigas, A.S., & Driga, A.M. (2019). ADHD in the Early Years: Pre-Natal and Early Causes and Alternative Ways of Dealing. *International Journal of Online Engineering* 15(13), 95-102.

Dupagne, M., & Krendl, K. (1992). Teacher's attitudes toward computers: A review of the literature. *Journal of Research on Computing in Education* 24(3), 420-429.

ΕΠΙΜΟΡΦΩΤΙΚΟ ΥΛΙΚΟ «Αξιοποίηση των ΤΠΕ στην εκπαίδευση» Επιχειρησιακό Πρόγραμμα: «ΕΚΠΑΙΔΕΥΣΗ ΚΑΙ ΔΙΑ ΒΙΟΥ ΜΑΘΗΣΗ» Πράξη: «Μείζον Πρόγραμμα Επιμόρφωσης Εκπαιδευτικών-Α΄ φάση, Άξονες Προτεραιότητας 1,2,3 - MIS 298330, MIS 298347, MIS 298349» (σ.125)

Ευρωπαϊκός Φορέας Ειδικής Αγωγής, (2003), με την συνεργασία του Δικτύου Πληροφόρησης για την Εκπαίδευση στην Ευρώπη ΕΥΡΥΔΙΚΗ, Θεματική έκδοση Ιανουάριος 2003
Ανακτήθηκε Φεβρουάριος 15, 2020, από
https://www.european-agency.org/sites/default/files/special-needs-education-in-europe_sne_europe_el.pdf

Farrace-Di Zinno, A.M., Douglas, G., Houghton, S., Lawrence, V., West, J., & Whiting, K. (2001). Body movements of boys with Attention Deficit Hyperactivity Disorder (ADHD) during computer video game play. *British Journal of Educational Technology* 32(5), 607-618. Hecker, L., Burns, L., Elkind, J., Elkind, K., Katz, L. (2002). Benefits of Assistive Reading Software for Students with Attention Disorders. *Annals of Dyslexia* 52, 3-31.

Ανακτήθηκε Φεβρουάριος 27, 2020, από
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.554.2954&rep=rep1&type=pdf>

ICD-10: Διεθνής Στατιστική Ταξινόμηση Νόσων και Συναφών Προβλημάτων Υγείας Δέκατη Αναθεώρηση, Έκδοση 2008 Τόμος 1: Κατάλογος Κωδικών, Τεύχος Α Επιστημονική ευθύνη και επιμέλεια μετάφρασης και προσαρμογής στην Ελληνική γλώσσα: ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

Κάκουρος, Ε. & Μανιαδάκη, Κ. (2005). *Διαταραχή Ελλειμματικής Προσοχής - Υπερκινητικότητα*. Αθήνα: Ελληνικά Γράμματα.

Κάκουρος, Ε. & Μανιαδάκη, Κ. (2012). *Διαταραχή Ελλειμματικής Προσοχής Υπερκινητικότητα: Θεωρητικές προσεγγίσεις και θεραπευτική αντιμετώπιση*. Αθήνα: Gutenberg.

Καραμπατζάκη-Δημητρίου, Ζ. (2010). *Θέματα Ειδικής Αγωγής και Εκπαίδευσης*. Αθήνα: Πάραλος.

Κουμούλα, Α. (2012). Η εξέλιξη της διαταραχής ελλειμματικής προσοχής-υπερκινητικότητας στον χρόνο. *Ψυχιατρική* 23(1), 49-59. Ανακτήθηκε Ιανουάριος 5, 2020, από <http://www.psychiatriki-journal.gr/documents/psychiatry/23.2-GR-2012- SUP-49.pdf>

Keith, J., Herrington, D., & Kritsonis, W. (2008). The Persistence of Teacher Under-Utilization of Computer Technologies in the Classroom. *National Forum of Teacher Education Journal* 18(3), 1-5.

Kerns, K. A., Eso, K., & Thomson, J. (1999). Investigation of a direct intervention for improving attention in young children with ADHD. *Developmental Psychology*, 16(2), 273- 295.

Kleiman, G., Humphrey, M. & Lindsay, P. (1981). Microcomputers and hyperactivity children. *Creative Computing*, 7(3), 93-94.

Kopcha T. J. (2012). Teacher's perceptions of the barriers to technology integration and practices with technology under situated professional development. *Computers & Education* 59(2012), 1109-1121.

Lange, K., Lange K., Reichl, S., & Tucha, L. (2010). The history of attention deficit hyperactivity disorder. *ADHD Attention Deficit and Hyperactivity Disorders* 2(4), 241-255.

Μανιαδάκη, Κ. (2001). Η επίδραση της ΔΕΠ/Υ στη μάθηση και στη συμπεριφορά. *Το υπερκινητικό παιδί και οι δυσκολίες του στη μάθηση και τη συμπεριφορά*. Αθήνα: Ελληνικά Γράμματα.

Maniadaki, K. (2019). Attention-Deficit/Hyperactivity Disorder: A real disorder throughout the lifespan. *JSM Pediatrics and Child Health*, 4(3), 1-3.

Mueller, D. (1986). *A Handbook for Researchers and Practitioners*. New York: Teachers College Press.

Murchison C. (1935). Ed., *Handbook of Social Psychology*, Clark University Press, Worcester, MA, 798-844.

Ota, K., & DuPaul, G. (2002). Task engagement and mathematics performance in children with Attention Deficit Hyperactivity Disorder: Effects of supplemental computer instruction. *School Psychology Quarterly* 17(3), 242-253.

Παππάς, Θ. (2002). *Η μεθοδολογία της επιστημονικής έρευνας στις ανθρωπιστικές επιστήμες*. Αθήνα: Καρδαμίτσα.

Pavlou, V. & Vryonides, M. (2009). Understanding Factors that influence Teachers' Acceptance of Technology and Actual Computer Use for Teaching: The case of Greece. *Mediterranean Journal of Educational Studies*, 14(2), 5-25.

Pope, A. & Bogard, E. (1996). Extended Attention Span Training System: Video Game for Attention Deficit Disorder. 368-374. Ανακτήθηκε Μάρτιος 7, 2020, από

https://www.researchgate.net/publication/234773926_Extended_Attention_Span_Training_System_Video_Game_Neurotherapy_for_Attention_Deficit_Disorder

Ράπτης, Α. & Ράπτη, Α. (1998). *Πληροφορική και Εκπαίδευση. Συνολική Προσέγγιση*. Αθήνα. Εκδόσεις: Α. Ράπτης.

Ρίζος, Σ. (2018). Χαρισματικά Παιδιά και Εκπαιδευτική Πράξη. *Θέματα Ειδικής Αγωγής* 81, 31-38.

Ropp, M. (1999). Exploring individual characteristics associated with learning to use computers in pre service teacher preparation. *Journal of Research on Computing in Education*, 31(4), 402–423.

Roussos, P. (2007). The Greek computer attitudes scale: construction and assessment of psychometric properties. *Computers in Human Behavior* 23(2007), 578-590.

Shalev, L., Tsal, Y., & Mevorach, C. (2007). Computerized Progressive Attentional Training (CPAT) Program: Effective Direct Intervention for Children with ADHD. *Child Neuropsychology*, 13(4), 382–388.

Shirvani, H. (2014). Pre-service teachers' attitudes toward using technology in schools *Journal of Literacy and Technology* 15(1) 33-53.

Shuenn, T. & Cheung, W. (2008). Effects of computer collaborative group work on peer acceptance of a junior pupil with attention deficit hyperactivity disorder (ADHD). *Computers & Education*, 50(3), 725–741.

Still, G. (1902). The Goulstonian lectures on some abnormal psychical conditions in children. *Lancet*, 1, 1008-1012 (lect.I), 1077-1082 (lect.II), 1163-1168 (lect. III).

Τζιμογιάννης, Α. (2002). Προετοιμασία του Σχολείου της Κοινωνίας της Πληροφορίας. Προς ένα Ολοκληρωμένο Μοντέλο Ένταξης των ΤΠΕ στο Ελληνικό Εκπαιδευτικό Σύστημα. *Σύγχρονη Εκπαίδευση*, 122, 55-65.

Jimoyiannis, A. & Komis, V. (2007). Examining teacher's beliefs about ICT in education: implications of a teacher preparation programme. *Teacher Development* 11(2), 149-173.

Yildirim, S. (2000). Effects of an educational computing course on preservice and inservice teachers: a discussion and analysis of attitudes and use. *Journal of Research on Computing in Education* 32(4), 479–496.

[Volkmar, F. \(2003\). Changing perspectives on ADHD. *American Journal of Psychiatry* 160\(6\), 1025–1027.](https://ajp.psychiatryonline.org/doi/pdf/10.1176/appi.ajp.160.6.1025)

Ανακτήθηκε Μάρτιος 3, 2020, από <https://ajp.psychiatryonline.org/doi/pdf/10.1176/appi.ajp.160.6.1025>