

**‘Specialization in ICTs and Special Education: Psychopedagogy of Integration’
Postgraduate Program
DEMOCRITUS UNIVERSITY OF THRACE Department of Greek Philology
in collaboration with
NCSR DEMOKRITOS Informatics and Telecommunications Institute**

**MUSIC, MENTAL IMAGERY AND ICT. CORRELATION WITH
COGNITIVE FUNCTION, IN CHILDREN WITH DOWN SYNDROME**

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Abstract

It is widely known that persons with Down syndrome as well as individuals with learning disabilities are coping with problems in their overall learning experiences. Down syndrome (DS) is one of the most usual chromosome disturbances that appears in one of every 700-1000 births and its most common symptom is mental retardation. The impact of music, imaging and ICT has been bibliographically proven to have a positive impact on people with Down syndrome and people with learning disabilities in general. The combination of these fields can help the improvement of cognitive function of these individuals. This research was based on articles in scientific journals to explore the effectiveness of the above-mentioned scientific fields. The results showed that blending music, imaging and ICT can successfully contribute to the improvement and development of cognitive functions in people with Down syndrome and in a broader context in people with learning disabilities. In conclusion, each of the three thematic fields and the interaction of these three thematic fields leads us to the conclusion that it is possible to improve and develop cognitive function.

Key words: Down Syndrome, Music, Mental Imagery, ICT

Δεύτερον, η παρούσα έρευνα συμπεριέλαβε βιβλιογραφία (επτακοσίων περίπου άρθρων) δημοσιευμένη τα τελευταία δέκα χρόνια και συμπεριέλαβε επιπλέον ελάχιστες αλλά όμως σημαντικές παρελθοντικές βιβλιογραφικές αναφορές. Εντέλει θα πρέπει να προστεθεί και η αδυναμία έντονης συγκριτικής μελέτης των ευρημάτων διότι τα ευρήματα των περισσότερων ερευνών που επιλέχθηκαν καταλήγουν σε παρεμφερή συμπεράσματα.

ΠΡΟΤΑΣΕΙΣ ΓΙΑ ΜΕΛΛΟΝΤΙΚΗ ΕΡΕΥΝΑ

Αρχικά ερευνώντας το μεγαλύτερο μέρος της ερευνητικών άρθρων σε διάστημα των τελευταίων δέκα ετών παρατηρήθηκε ότι αφενός η μουσική, η νοερή απεικόνιση και οι ΤΠΕ ξεχωριστά το κάθε ένα θεματικό πεδίο έχει ευεργετική επίδραση στη γνωστική και όχι μόνο λειτουργία των παιδιών με μαθησιακές δυσκολίες και συγκεκριμένα στα παιδιά με σύνδρομο down. Όμως παρατηρήθηκε επιστημονικό κενό όσον αφορά το συγκερασμό και την ένωση των συγκεκριμένων θεματικών πεδίων που θα οδηγήσει στην βελτίωση των γνωστικών λειτουργιών των παιδιών με μαθησιακές δυσκολίες και συγκεκριμένα παιδιών με σύνδρομο Down.

Ακόμα θα είχε κοινωνικό και ταυτόχρονα επιστημονικό ενδιαφέρον να γίνει προσπάθεια επιμόρφωσης και των γονέων/κηδεμόνων αυτών των παιδιών σε δεξιότητες μουσικής, νοερής απεικόνισης και ΤΠΕ και να εξεταστεί στη συνέχεια η σχέση που θα αναπτύξουν ύστερα από αυτήν την εμπειρία.

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