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KNIŽICA SAŽETAKA
BOOK OF ABSTRACTS

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Utjecaj glazbe na razvoj rane pismenosti

Istraživanja kognitivne neuroznanosti posljednjih desetak godina dovela su u vezu razvoj glazbenih kompetencija s razvojem pismenosti u djece predškolske i mlade školske dobi. Ljudski mozak koristi iste dijelove mozga pri čitanju i pisanju i pri bavljenu glazbom. Čak i pasivno slušanje glazbe dovodi do aktivacije dijelova mozga odgovornih za čitanje i pisanje. Osim toga, bavljenje glazbom, a naročito pjevanje, pomaže boljem izgovoru pri čitanju te može pomoći u prevladavanju disleksije. Ovaj rad istražuje mogućnosti uključivanja različitih glazbenih aktivnosti u svakodnevnou razrednu nastavu i predškolski odgoj u svrhu bržeg opismenjavanja učenika. Također se bavi problematikom osposobljavanja učitelja i odgojitelja za navedene aktivnosti u nastavi.

Ključne riječi: kognitivna neuroznanost, glazbene kompetencije, razvoj pismenosti, razvoj izgovora, disleksija, glazbene aktivnosti razrednou nastavu.

The Influence of Music on Early Literacy Development

In the last decade, various studies in the field of cognitive neuroscience have shown a connection between the development of musical competencies and literacy among preschool and early age children. Same parts of the brain are used by humans in reading and writing as well as in practicing music. Even passive listening to music leads to the activation of brain parts responsible for reading and writing. In addition, music making, especially singing, helps with pronunciation, while reading can help overcome dyslexia. This paper explores the possibilities of incorporating various music activities into day-to-day teaching practices in the first few classes of elementary school and in pre-school education to help develop literacy skills. This paper also responds to the issue of training teachers and educators for such activities in teaching.

Keywords: cognitive neuroscience, music competence, literacy development, speech development, dyslexia, music activities in primary school teaching
The influence of music on early literacy development

Ana Popović

Osijek (Croatia), 1-2 December 2017
The concept of literacy has evolved from basic reading, writing and numeracy skills to broader notions such as functional literacy and a foundation for lifelong learning - UNESCO
• Neuroscience
• Neurodidactics
• Brain-based learning
Neurodidactics, brain-based learning

- Rudolf Steiner
- Maria Montessori
- Celestin Freinet
- John Dewey
- Peter Petersen
- Jean Piaget
- Lev Vygotsky

- Emile Jacques-Dalcroze
- Carl Orff
- Zoltan Kodaly
- Elly Bašić
Language
• Communication
• Rythm
• Tempo
• Dinamics
• Intonation
• Melody
• Notation

Music
• Communication
• Rythm
• Tempo
• Dinamics
• Intonation
• Melody
• Notation
Brain and Language

Hearing Words  Speaking Words  Seeing Words  Thinking about Words

Motor plans for handwriting: e.g., Exner's area

Auditory representations of phonemes:
  e.g., Planum Temporale
  [b] ≠ [d]

Lower-level visual areas

Motor plans for vocalisations:
  e.g., part of Broca's area
  [b] ≠ [d]

Visual representations of letters:
  e.g., Visual Word Form Area (VWFA)
  b ≠ d
Brain and Music

Music and the brain

Corpus callosum:
Connects both sides of the brain

Sensory cortex:
Controls tactile feedback while playing instruments or dancing

Motor cortex:
Involved in movement while dancing or playing an instrument

Auditory cortex:
Listens to sounds; perceives and analyzes tones

Prefrontal cortex:
Controls behavior, expression and decision-making

Hippocampus:
Involved in music memories, experiences and context

Nucleus accumbens and amygdala:
Involved with emotional reactions to music

Visual cortex:
Involved in reading music or looking at your own dance moves

Cerebellum:
Involved in movement while dancing or playing an instrument, as well as emotional reactions

SOURCE: Music for Young Children

DESERET NEWS GRAPHIC
The Benefits of Early Music Education

• Brain plasticity - improved anatomical and functional organization
• Mozart effect
• Increased reading and writing ability
• Encourages structural development of the auditory cortex
• It helps with better pronunciation
• Improves motor skills
• Helps socialization
• Positive psychological effects
What can a teacher do?

• Music – 35 lessons per year
• Extracurricular activities
• **Music activities during other lessons**
Rhymes

- sung rhymes
- spoken rhymes
Rhymes

- Rythm
- Pronunciation
- Motor abilities
Theme songs
Body percussion

- Different parts of the body and different sounds of voice are used
- BAPNE Method (Biomechanics, Anatomy, Psychology, Neurology, Ethnomusicology)
- No words – organization, repetition
• Cooperation with music teacher
• Reading music
• Playing an instrument
Conclusions:

• Neurodidactics confirm the theses of the movements and projects of reform pedagogy from past century
• There are vast benefits of early music education, few of them can be linked to development of literacy
• In class teaching, music can be practiced during music lessons and extracurricular activities, but also as an additional activity during other lessons
• There are music activities that don’t require specialized teaching skills
"The fact that children can make beautiful music is less significant than the fact that music can make beautiful children."
- Cheryl Lavender

Thank you!