

BAB V

PENUTUP

5.1. Kesimpulan

Berdasarkan hasil pengujian hipotesis penelitian, kreativitas musikal dalam penelitian ini terbukti mendukung kinerja memori kerja anak dengan gangguan pendengaran (nilai Sig. (2-tailed) = 0,003 < 0,05). Perlakuan yang diberikan juga terbukti cukup efektif untuk mendukung kinerja memori kerja anak dengan gangguan pendengaran (*N-gain score* 60,2083 atau 60%).

Proses kreatif dalam pelatihan musikal penelitian ini menghasilkan improvisasi dan komposisi irama yang melibatkan kemampuan anak untuk mengingat serta memproses informasi musikal menjadi sebuah ide baru. Kemampuan anak dengan gangguan pendengaran dalam mempersepsikan irama musikal ini didukung oleh kemampuan mereka dalam berpikir serta menyerap informasi melalui indera visual. Informasi tersebut disimpan dan diolah dengan mengandalkan kemampuan figural. Hal ini menjadi bukti bahwa anak dengan gangguan pendengaran dapat memperoleh persepsi musikal melalui indera visual dan kemampuan figural.

5.2. Saran

1. Besarnya manfaat aktivitas kreativitas musikal terhadap memori kerja anak dengan gangguan pendengaran membutuhkan perhatian dan perencanaan jangka panjang. Hendaknya para pelaku bidang edukasi musik dan peneliti dapat meneliti hubungan aktivitas musikal dan fungsi kognitif lainnya bagi anak berkebutuhan khusus, terkhusus anak dengan gangguan pendengaran.

2. Bagi penelitian selanjutnya yang hendak membahas topik serupa diharapkan dapat melakukan eksplorasi manfaat musik untuk kemampuan lainnya bagi anak dengan gangguan pendengaran maupun anak berkebutuhan khusus lainnya. Metode pembelajaran musik yang semakin berkembang juga patut diberi perhatian sehingga menemukan metode yang efektif dalam memberikan pendekatan musikal bagi anak berkebutuhan khusus.
3. Karakteristik tugas eksperimental mempengaruhi hasil penelitian, sehingga perlakuan musikal yang diberikan pada penelitian selanjutnya dapat memberikan hasil yang berbeda. Penulis merekomendasikan perlakuan musikal yang diberikan pada penelitian selanjutnya mungkin dapat mempengaruhi persepsi melodi anak dengan gangguan pendengaran.

DAFTAR PUSTAKA

- Aben, B., Stapert, S., & Blokland, A. (2012). About the distinction between working memory and short-term memory. *Frontiers in psychology*, 3, 301.
- Alodokter.com. (2021, April 14). Memahami dan Mendampingi Anak Berkebutuhan Khusus. Retrieved from <https://www.alodokter.com/memahami-dan-mendampingi-anak-berkebutuhan-khusus>
- Alodokter.com. (2021, Juni 30). Kenali Gejala Gangguan Pendengaran Pada Anak dan Cara Mengatasinya. Retrieved from <https://www.alodokter.com/jangan-anggap-sepele-kenali-gejala-gangguan-pendengaran-pada-anak>
- Archibald, L. M. (2016). Working memory and language learning: A Review. *Child Language Teaching and Therapy*, 33(1), 5–17.
- Asmawati, L. (2017). Peningkatan Kreativitas Anak Usia Dini melalui Pembelajaran Terpadu Berbasis Kecerdasan Jamak. *JPUD - Jurnal Pendidikan Usia Dini*, 11(1), 145–164. <https://doi.org/10.21009/JPUD.111.10>
- Azwar. (2013). Deteksi Dini Gangguan Pendengaran Pada Anak. *Jurnal Kedokteran Syiah Kuala* 13(1)
- Baddeley, A. (2003). Working memory: Looking back and looking forward. *Nature Reviews Neuroscience*, 4, 829-839.
- Baddeley, A. D. (2007). *Working Memory, Thought, and Action*. New York, NY: Oxford University Press.
- Baddeley, A. D., & Hitch, G. J. (1974). Working memory. In G. A. Bower (Ed.). *The Psychology of Learning and Motivation*, 8(00), 47-90.
- Baddeley, A. D., Allen, R. J., & Hitch, G. J. (2011). Binding in Visual Working Memory: The Role of The Episodic Buffer. *Neuropsychologia*, 49, 1393-1400.
- Bailes, F., Dean, R. T., and Pearce, M. T. (2013). Music Cognition As Mental Time Travel. *Sci. Reports* 3, 1–4. doi: 10.1038/srep02690
- Bashwiner, D. (2018). The Neuroscience of Musical Creativity. *The Cambridge Handbook of the Neuroscience of Creativity*, 495-516.

- Bayliss, D. M., Jarrold, C., Baddeley, A. D., & Gunn, D. M. (2005). The Relationship Between Short-Term Memory And Working Memory: Complex Span Made Simple? *Memory*, *13*, 414– 421.
- Benedek, M., Jauk, E., Fink, A., Koschutnig, K., Reishofer, G., Ebner, F., and Neubauer, A. C. (2014). To Create Or To Recall? Neural Mechanisms Underlying The Generation Of Creative New Ideas. *Neuroimage* *88*, 125–133. doi: 10.1016/j.neuroimage.2013.11.021
- Bishop, L. (2018). Collaborative Musical Creativity: How Ensembles Coordinate Spontaneity. *Front. Psychol.* *9*:1285. doi: 10.3389/fpsyg.2018.01285
- Boasen, J., Takeshita, Y., Kuriki, S., Yokosawda, K. (2018). Spectral-spatial Differentiation of Brain Activity During Mental Imagery of Improvisational Music Performance using MEG. *Front Hum Neurosci*, *12*: 1-12.
- Boltz, M. G., Ebendorf, B., & Field, B. (2009). Audiovisual Interactions: the Impact of Visual Information on Music Perception and Memory. *Music Perception*, *27*(1), 43–59.
- Brascia, K. E. (1987). *Improvisational models of music therapy*. Springfield, IL: Charles C. Thomas Publications.
- Campbell, P. S. (1991). *Lessons From The World: A Cross-Cultural Guide To Music Teaching And Learning*. New York: Schirmer Books.
- Carr, A. (2006). *The Handbook Of Child And Adolescent Clinical Psychology. A Contextual Approach*. London, UK and New York, NY: Routledge.
- Clarke, E. F. (2002). *Creativity in performance*. Paper presented at the ESCOM 10th anniversary conference on musical creativity, Liège, Belgium.
- Copeland, N. E. (2019). Inmi And Its Potential Originality–Musical Creativity In Composers’ Minds. *Interdisciplinary Studies in Musicology*, (19), 41-52.
- Cresswell, John W. (2016). *RESEARCH DESIGN: Pendekatan Metode Kualitatif, Kuantitatif, dan Campuran*. Yogyakarta: Pustaka Pelajar.
- De Manzano, O., Ullen, F. (2012). Goal-independent Mechanisms for Free Response Generation: Creative and Pseudo-random Performance Share Neural Substrates. *Neuroimage*, *59*: 772-780.
- Debeturu, B., & Wijayaningsih, E. L. (2019). Meningkatkan Kreativitas Anak Usia 5-6 Tahun melalui Media Magic Puffer Ball. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *3*(1), 233.

- Dehn, M. J. (2008). *Working Memory And Academic Learning: Assessment And Intervention*. New Jersey: John Wiley & Sons.
- Deliege, Irene & Wiggins, Geraint A. (2006). *Musical Creativity: Multidisciplinary Research in Theory and Practice*. NY: Psychology Press.
- Diedrich, J., Jauk, E., Silvia, P. J., Gredlein, J. M., Neubauer, A. C., & Benedek, M. (2017). Assessment of Real-Life Creativity: The Inventory of Creative Activities and Achievements (ICAA). *Psychology of Aesthetics, Creativity, and the Arts*. Advance Online Publication.
- Dietrich, A. (2004). The Cognitive Neuroscience Of Creativity. *Psychon. Bull. Rev.* 11, 1011–1026. doi: 10.3758/BF03196731
- Disabled-world.com. (2020, Juli 04). Definition, Types, and Models of Disability. Retrieved from <https://www.disabled-world.com/disability/types/>
- Djohan. (2009). Kemampuan Musikalitas Sebagai Sarana Pengembangan Keterampilan Sosial. *Jurnal Penelitian dan Evaluasi Pendidikan*, Vol. 12. No. 1.
- Dosenpsikologi.com. (2018, Januari 30). 5 Masalah Psikologis pada Anak Tunarungu. Retrieved from <https://dosenpsikologi.com/masalah-psikologis-pada-anak-tunarungu>
- Frontiersin.org. (2016, Juli 07). Working Memory in Deaf Children is Explained by the Developmental Ease of Language Understanding (D-ELU) Model. Retrieved from <https://www.frontiersin.org/articles/10.3389/fpsyg.2016.01047/full>
- Gathercole, S. E. (2008). Working memory in the classroom. *The Psychologist*, 21, 382–385.
- Göktürk Cary, D. (2012). Kodály And Orff: A Comparison Of Two Approaches In Early Music Education . *Uluslararası Yönetim İktisat Ve İşletme Dergisi* , 8 (15) , 179-194.
- Hallahan, D. P. & Kauffman, J. M. (1991). *Exceptionality Childern Introduction to Special Education* (fifth ed.). New Jersey: Prentice Hall International, Inc..
- Jaswal, Snehlata. (2015). “Creativity and Working Memory”. Submitted as a chapter in the book *Cognition, Experience, and Creativity*. Hyderabad: *Orient Blackswan*.
- Jauhari. (2020). Deteksi Gangguan Pendengaran Pada Anak Usia Dini. *Genius*, Vol. 1, No. 1. 61-71.

- Kane, M. J., Hambrick, D. Z., Tuholski, S. W., Wilhelm, O., Payne, T. W., & Engle, R. W. (2004). The Generality Of Working Memory Capacity: A Latent-Variable Approach To Verbal And Visuospatial Memory Span And Reasoning. *Journal of Experimental Psychology: General*, 133, 189.
- Klikdokter.com. (2018, November 01). Manfaat Bermain Musik untuk Kemampuan Bicara Anak. Retrieved from <https://www.klikdokter.com/info-sehat/read/3617335/manfaat-bermain-musik-untuk-kemampuan-bicara-anak>
- Kubovy, M. & Valkenburg, D. (2001). Auditory and Visual Objects. *Cognition*, Vol. 80, Issues 1-2:97-126.
- Law J., Garret Z., Nye C. (2003). Speech and Language Therapy Interventions for Children with Primary Speech and Language Delay or Disorder. *Cochrane Database Syst Rev*.3: CD004110.
- Lec.org. The Power of Creative Thinking to Improve Your Memory. Retrieved from <https://lec.org/blog/the-power-of-creative-thinking-to-improve-your-memory/>
- Lee, C. S., & Therriault, D. J. (2013). The Cognitive Underpinnings Of Creative Thought: A Latent Variable Analysis Exploring The Roles Of Intelligence And Working Memory In Three Creative Thinking Processes. *Intelligence*, 41(5), 306-320.
- Lopata, J. A., Nowicki, E. A., Joanisse, M. F. (2017). Creativity as a Distinct Trainable Mental State: an EEG Study of Musical Improvisation. *Neuropsychologia*, 99: 246-258.
- Mednick, S. A. (1962). The Associative Basis Of The Creative Process. *Psychological Review*, 69, 220–232.
- Mitchell, T., & Quittner, A. (1996). Multimethod Study Of Attention And Behavior Problems In Hearing-Impaired Children. *Journal of Clinical Child Psychology*, 25, 83-96.
- Nainggolan, O. T. P. & Martin, V. A. (2019). Pembelajaran Musik Kreatif dalam Sudut Pandang Pembelajaran Abad ke-21. *Promusika*, Vol. 7, No. 2, 85-92.
- Ndcs.org.uk. (2022, Agustus). Working Memory Booklet. Retrieved from <https://www.ndcs.org.uk/media/3142/working-memory-booklet.pdf>
- Nunes, T., Barros, R., Evans, D., & Burman, D. (2011, October). A Game-Based Working Memory Intervention For Deaf Children. In *Joint Conference on Serious Games* (pp. 31-39). Springer, Berlin, Heidelberg.

- Nunes, Terezinha & Barros, Rossana. (2014). Improving Deaf Children's Working Memory through Training. *International Journal of Speech & Language Pathology and Audiology*, 2, 51-66. doi: 10.12970/2311-1917.2014.02.02.1
- Oberauer, K. (2019). Working Memory And Attention—A Conceptual Analysis And Review. *Journal of Cognition*, 2(1), Article 36.
- Òdena Caballol, O. (2003). Creativity In Music Education With Particular Reference To The Perceptions Of Teachers In English Secondary Schools. *Thesis. Institute of Education, University of London.*
- Oshin Vartanian. (2019). *Fluid Intelligence, Working Memory, and Creativity: A Componential View*. In: *Secrets of Creativity: What Neuroscience, the Arts, and Our Minds Reveal*. Edited by Suzanne Nalbantian and Paul M. Matthews. Oxford University Press.
- Perlmutter, Adam. (2009). Orff-Schulwerk With And Without Orff Instruments. *Teaching Music*, vol. 16, no. 5, Feb. 2009, p. 48. *Gale Academic OneFile*, link.gale.com/apps/doc/A193735112/AONE?u=anon~3fee02dd&sid=googleScholar&xid=bc2602b9. Accessed 29 Mar. 2022.
- Phye, G. D., & Pickering, S. J. (2006). *Working memory and education*. Elsevier. 203-204.
- Pickering, S., & Gathercole, S. (2001). *Working Memory Test Battery For Children (Wmtb-C) Manual*. London: The Psychological Corporation.
- Pisoni, D. B., Conway, C. M., Kronenberger, W., Henning, S., & Anaya, E. (2010). Executive Function, Cognitive Control, And Sequence Learning In Deaf Children With Cochlear Implants. In M. Marschark & P. E. Spencer (Eds.), *The Oxford handbook of deaf studies, language, and education*. Vol. 2, 439–457. New York, NY: Oxford University Press.
- Pisoni, D. D., & Geers, A. E. (2000). Working Memory In Deaf Children With Cochlear Implants: Correlations Between Digit Span And Measures Of Spoken Language Processing. *The Annals of otology, rhinology & laryngology. Supplement*, 185, 92.
- Pretty-Norbury, G., & Pontarini, L. (2018). Kodály or Orff? Why Not Both?. *The Canadian Music Educator*, 60(1), 9-14.
- Remoli, T. C., & Santos, F. H. (2017). Interactions between working memory and creativity: A systematic review. *Psicologia em Estudo*, 22(1), 53–65. <https://doi.org/10.4025/psicoestud.v22i1.32518>

- Riadi, E. (2014). *Metode Statistika: Parametrik & Non-Parametrik*. Tangerang: Pustaka Mandiri.
- Rudner, Mary. (2018). Working Memory for Linguistic and Non-linguistic Manual Gestures: Evidence, Theory, and Application. *Front. Psychol.* 9:679.
- Saggar, M., Quintin, EM., Kienitz, E. et al. (2015). Pictionary-based fMRI Paradigm to Study the Neural Correlates of Spontaneous Improvisation and Figural Creativity.” *Sci Rep* 5, 10894.
- Santoso, Singgih. (2014). *Panduan Lengkap SPSS versi 20 Edisi Revisi*. Jakarta: Elex Media Komputindo
- Sarrazin, Natalie. (2016). *Music and the Child*. Geneso: Open SUNY Textbooks.
- Shouthard, Elizabeth M. (2014). Examining the Relationships Among Working Memory, Creativity, and Intelligence. *UNF Graduate Theses and Dissertations*. P.548
- Siegler, R., Deloacher, J., & Eisenberg, N. (2011). *How Children Develop*. New York, NY: Worth Publishers.
- Smelser, N. J., & Baltes, P. B. (Eds.). (2001). *International Encyclopedia of the Social and Behavioral Sciences (Vol. 5)*. Amsterdam: Elsevier.
- Smeltzer, S.C & Bare. (2014). *Bruuner & Suddarth's textbook of Medcal-Surgical Nursing*. Philadelphia: Lippicoot-raven Publishers.
- Somad, P. dan Hernawati, T. (1995). *Ortopedagogik Anak Tunarungu*. Jakarta: DEPDIBUD DIRJEN DIKTI.
- Stenberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York, NY: The Free Press.
- Tang, Yulong, Paul L. Harris, Hong Zou, Juan Wang & Zhinuo Zhang. (2021). The Relationship Between Emotion Understanding And Social Skills In Preschoolers: The Mediating Role Of Verbal Ability And The Moderating Role Of Working Memory. *European Journal of Developmental Psychology*, 18:4, 593-609, DOI: 10.1080/17405629.2020.1854217
- Utomo, M. Ridhlo al Qodri Sri Utomo. (2015). Mempertimbangkan Euritmika Emile Jaques-Dalcroze Pada Pengajaran Seni Musik Anak Usia Dini. *TA'ALUM*, Vol. 03, No. 01.
- Webster, P. (1990). Creativity as Creative Thinking. *Music Educators Journal*, 76, 22-28. doi:10.2307/3401073

Webster, P. R. (1979). "Relationship Between Creative Behavior in Music and Selected Variables as Measured in High School Students". *Journal of Research in Music Education*, 27(4), 227–242

Zatorre, R. J. (2005). Music, The Food Of Neuroscience? *Nature* 434, 312–315.
doi: 10.1038/434312a

