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## Morphological Knowledge and Decoding Skills of Deaf Readers

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### ABSTRACT

Many studies have reported the necessity of phonological awareness to become a skilled reader, citing barriers to phonological information as the cause for reading difficulties experienced by deaf individuals. In contrast, other research suggests that phonological awareness is not necessary for reading acquisition, citing the importance of higher levels of syntactic and semantic knowledge. To determine if deaf students with higher language skills have better word decoding strategies, students responded to a morphological test, where monomorphemic words and multimorphemic words were matched to their definitions. Two studies are reported, one focusing on English placement levels and a second with formal measures of both ASL and English language proficiency. Results indicated that performance on the morphological decoding test was related to language proficiency scores, but not to phonological awareness scores.

### KEYWORDS

Deaf, Reading, Morphology

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### References

- [1] Allen, T. (1986). Patterns of academic achievement among hearing impaired students: 1974-1983. In A. Schildroth & M. Karchmer (Eds.), *Deaf Children in America* (pp. 161-206). San Diego, CA: Little, Brown.
- [2] Allen, T. E., Clark, M. D., del Giudice, A., Koo, D., Lieberman, A., Mayberry, R., & Miller, P. (2009). Phonology and reading: A response to Wang, Trezek, Luckner, and Paul. *American Annals of the Deaf*, 145, 338-345. doi: 10.1353/aad.0.0109
- [3] Allen, T. E., Hwang, Y., & Stansky, A. (2009). Measuring factors that predict deaf students' reading abilities: The VL2 Toolkit-Project design and early findings. Annual Meeting of the Association of College Educators of the Deaf and Hard of Hearing, New Orleans.
- [4] Charlier, B. L., & Leybaert, J. (2000). The rhyming skills of deaf children educated with phonetically augmented speechreading. *The Quarterly Journal of Experimental Psychology*, 53, 349-375. doi: 10.1080/027249800390529
- [5] Colin, S., Magnan, A., Ecalle, J., & Leybaert, J. (2007). Relation between deaf children' s phonological skills in kindergarten and word recognition performance in first grade. *The Journal of Child Psychology and Psychiatry*, 48, 139-146. doi: 10.1111/j.1469-7610.2006.01700.x
- [6] Conrad, R. (1979). *The deaf school child: Language and cognitive function*. London: Harper Row.
- [7] Department of Program Services – Student Assessment Office. (2003). Degrees of reading power (DRP) interpretation guide. Retrieved from www.schoolimprovement.ocps.net/studentassessment/docs/DRP%20Interpretation%20Guide.doc
- [8] Dyer, A., MacSweeney, M., Szczerbinski, M., Green, L., & Campbell, R. (2003). Predictors of reading delay in Deaf adolescents: The relative contributions of rapid automatized naming speed and

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- [9] Ehri, L. (1992). Reconceptualizing the development of sight word reading and its relationship to recoding. In P. Gough, L. Ehri, & R. Treiman (Eds.), *Reading acquisition* (pp. 107-143). Hillsdale, NJ: Lawrence Erlbaum.
- [10] Ehri, L., Nunes, R. S., Stahl, S., & Willows, D. (2001b). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta-analysis. *Review of Educational Research*, 71, 393-447. doi:10.3102/00346543071003393
- [11] Freel, B. L., Clark, M. D., Anderson, M. L., Gilbert, G. L., Musyoka, M. M., & Hauser, P. C. (2011). Deaf individuals' bilingual abilities: American Sign Language proficiency, reading skills, and family characteristics. *Psychology*, 2, 18-23. doi:10.4236/psych.2011.21003
- [12] Frith, U. (1985). Beneath the surface of developmental dyslexia. In K. Patterson, J. Marshall, & M. Coltheart (Eds.), *Surface dyslexia: Neurological and cognitive studies of phonological reading* (pp. 301-330). Hillsdale, NJ: Lawrence Erlbaum.
- [13] Frost, R. (1998). Toward a strong phonological theory of visual word recognition: True issues and false trails. *Psychological Bulletin*, 123, 71-99. doi:10.1037/0033-2909.123.1.71
- [14] Gaustad, M. (2000). Morphographic analysis as a word identification strategy for deaf readers. *Journal of Deaf Studies and Deaf Education*, 5, 61-80. doi:10.1093/deafed/5.1.60
- [15] Hanson, V. L. (1982). Short-term recall by deaf signers of American Sign Language: Implications for order recall. *Journal of Experimental Psychology: Learning, Memory, and Recognition*, 8, 572-583. doi:10.1037/0278-7393.8.6.572
- [16] Hanson, V. L., & Fowler, C. A. (1987). Phonological coding in word reading: Evidence from hearing and deaf readers. *Memory and Cognition*, 15, 199-207. doi:10.3758/BF03197717
- [17] Hanson, V. L., Liberman, I. Y., & Shankweiler, D. (1984). Linguistic coding by deaf children in relation to beginning reading success. *Journal of Experimental Child Psychology*, 37, 378-393. doi:10.1016/0022-0965(84)90010-9
- [18] Hanson, V. L., & Lichtenstein, E. H. (1990). Short-term memory coding by deaf signers: The primary language coding hypothesis reconsidered. *Cognitive Psychology*, 22, 211-224. doi:10.1016/0010-0285(90)90016-W
- [19] Hanson, V. L., & McGarr, N. S. (1989). Rhyme generation by deaf adults. *Journal of Speech and Hearing Research*, 32, 2-11.
- [20] Harris, M., & Moreno, C. (2006). Speech reading and learning to read: A comparison of 8-year-old profoundly Deaf children with good and poor reading ability. *Journal of Deaf Studies and Deaf Education*, 11, 189-201. doi:10.1093/deafed/enj021
- [21] Hauser, P., Paludnevičienė, R., Supalla, T., & Bavelier, D. (2008). American Sign Language—Sentence Reproduction Test: Development & implications. In R.M. de Quadros (Ed.), *Sign languages: Spinning and unraveling the past, present and future* (pp. 160-172). Petrópolis, Brazil: Editora Arara Azul.
- [22] Hulme, C., Snowling, M., Caravolas, M., & Carroll, J. (2005). Phonological skills are (probably) one cause of success in learning to read: A comment on Castles and Coltheart. *Scientific Studies of Reading*, 9, 351-365. doi:10.1207/s1532799xssr0904\_2
- [23] Izzo, A. (2002). Phonemic awareness and reading ability: An investigation with young readers who are deaf. *American Annals of the Deaf*, 147, 18-28.
- [24] Kelly, L. P., & Barac-Cikoja, D. (2007). The comprehension of skilled deaf readers: The roles of word recognition and other potentially critical aspects of competence. In K. Cain & J. Oakhill (Eds.), *Children's comprehension problems in oral and written language* (pp. 244-280). New York: The Guilford Press.
- [25] Koo, D., Crain, K., LaSasso, C., & Eden, G. (2008). Phonological awareness and short-term memory in hearing and deaf individuals of deaf individuals of different communication backgrounds. *Annals of the New York Academy of Science*, 1145, 83-99. doi:10.1196/annals.1416.025
- [26] Krakow, R. A., & Hanson, V. L. (1985). Deaf signers and serial recall for visual modality: Memory for signs, fingerspelling, and print. *Memory and Cognition*, 13, 265-272. doi:10.3758/BF03197689

- [27] Leybaert, J., & Alegria, J. (1993). Is word processing involuntary in deaf children? *British Journal of Developmental Psychology*, 11, 1-29.
- [28] Luetke-Stahlman, B., & Nielsen, D. C. (2003). The contribution of phonological awareness and receptive and expressive English to the reading ability of deaf students with varying degrees of exposure to accurate English. *Journal of Deaf Studies and Deaf Education*, 8, 464-484. doi:10.1093/deafed/eng028
- [29] Marschark, M., & Harris, M. (1996). Success and failure in learning to read: The special case of deaf children. In C. Coronoldi & J. Oakhill (Eds.), *Reading comprehension difficulties: Process and intervention* (pp. 279-300). Hillsdale, NJ: Lawrence Erlbaum.
- [30] Marslen-Wilson, W., Komisarjevsky, T., Waksler, R., & Older, L. (1994). Morphology and meaning in the English mental lexicon. *Psychology Review*, 101, 3-33. doi:10.1037/0033-295X.101.1.3
- [31] Mayberry, R. I., del Giudice, A. A., & Lieberman, A. M. (2011). Reading achievement in relation to phonological coding and awareness in deaf readers: A meta-analysis. *Journal of Deaf Studies and Deaf Education*, 16, 164-188. doi:10.1093/deafed/enq049
- [32] Miller, P. (1997). The effect of communication mode on the development of phonemic awareness in prelingually deaf students. *Journal of Speech, Language & Hearing Research*, 40, 1151-1163.
- [33] Miller, P. (2005a). Reading comprehension and its relation to the quality of functional hearing: Evidence from readers with different functional hearing abilities. *American Annals of the Deaf*, 150, 305-323. doi:10.1353/aad.2005.0031
- [34] Miller, P. (2006a). What the word recognition skills of prelingually deafened readers tell about their reading comprehension problems. *Journal of Development and Physical Disabilities*, 18, 91-121. doi:10.1007/s10882-006-9002-z
- [35] Miller, P. (2006b). What the processing of real words and pseudo-homophones tell about the development of orthographic knowledge in prelingually deafened individuals. *Journal of Deaf Studies and Deaf Education*, 11, 21-38. doi:10.1093/deafed/enj001
- [36] Miller, P. (2007a). The role of phonology in the word decoding skills of poor readers: Evidence from individuals with prelingual deafness or diagnosed dyslexia. *Journal of Developmental and Physical Disabilities*, 19, 385-408. doi:10.1007/s10882-007-9057-5
- [37] Miller, P., & Clark, M. D. (in press). *Journal of Developmental and Physical Disabilities*.
- [38] Morford, J. P., Wilkinson, E., Villwock, A., Pinar, P., & Kroll, J. F. (2011). When deaf signers read English: Do written words activate their sign translations? *Cognition*, 118, 286-292. doi:10.1016/j.cognition.2010.11.006
- [39] Musselman, C. (2000). How do deaf children who can't hear learn to read an alphabetic script? A review of the literature on reading and deafness. *Journal of Deaf Studies and Deaf Education*, 5, 11-31. doi:10.1093/deafed/5.1.9
- [40] Narr, R. F. (2008). Phonological awareness and decoding in deaf/hard-of-hearing students who use Visual Phonics. *Journal of Deaf Studies and Deaf Education*, 13, 405-416. doi:10.1093/deafed/enm064
- [41] Paul, P. V., Wang, Y., Trezek, B. J., & Luckner, J. L. (2009). Phonology is necessary, but not sufficient: A rejoinder. *American Annals of the Deaf*, 154, 346-356. doi:10.1353/aad.0.0110
- [42] Perfetti, C. A., & Sandak, R. (2000). Reading optimally builds on spoken language: Implications for deaf readers. *Journal of Deaf Studies and Deaf Education*, 5, 32-50. doi:10.1093/deafed/5.1.32
- [43] Report of the National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- [44] Schirmer, B. R., & Williams, C. (2003). Approaches to teaching reading. In M. Marschark & P.E. Spencer (Eds.), *Oxford handbook of deaf studies, language, and education* (pp. 110-122). New York: Oxford University Press.
- [45] Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition*, 55, 151-218. doi:10.1016/0010-0277(94)00645-2
- [46] Share, D. L. (2004). Orthographic learning at a glance: On the time course and developmental onset

- [47] Share, D. L. (2008). On the anglocentricities of current reading research and practice: The perils of overreliance on an "outlier" orthography. *Psychological Bulletin*, 134, 584-615. doi:10.1037/0033-2909.134.4.584
- [48] Shaywitz, S. E., & Shaywitz B. A. (2005). Dyslexia (specific reading disability). *Biological Psychiatry*, 57, 1301-1309. doi:10.1016/j.biopsych.2005.01.043
- [49] Snow, C. E., Burns, M. S., & Griffin, P. (1998). Preventing reading difficulties in young children. Washington, DC: National Academic Press.