

视觉语言与视觉学习

VISUAL LANGUAGE & VISUAL LEARNING

研究简报:

RESEARCH BRIEF:



早期视觉语言的优势 ADVANTAGES OF EARLY VISUAL LANGUAGE



从研究中学习 第二册

#2

关于早期视觉语言的优势的主要发现:

Key Findings on the Advantages of Early Visual Language:

- 在儿童发育的早期"敏感时期",大脑最容易接受语言学习。
- •接受早期干预服务的耳聋和重听儿童已发现有更好的语言成果,并一直持续到五岁。
- 高度的家庭参与已发现对耳聋和重听儿童产生较大的语言发展成果。
- 在早期儿童时代获得完整的第一语言是日后阅读理解的关键。
- 学习两种语言 [即美国手语 (ASL) 和英语] 对耳聋和重听儿童有利。
- 一位母亲的手语技能预测耳聋和重听儿童日后的语言发展。
- 语言基础是口语发展的一个重要因素。

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早期听力检测和干预

Early Hearing Detection and Intervention

将近二十五年来,自从在1986年通过了 PL99-457,年轻的耳聋和重听儿童和他们的家庭 得到了早期干预服务。识别的年龄已被发现是一 个重要因素,因此早期识别和干预服务的提供者 计划在儿童6个月大之前筛检,诊断,并提供服 务。^{1,2,3,4}然而,早期的语言获得不必是一个医 疗事件。早期语言干预需要对视觉语言和口语发 展知识渊博的专家。他们与家庭合作来进行明智 的沟通和做教育的决定。

在过去的20年,许多研究不断发现,听力损失识别得越早和干预服务启动得越早,语言发展的成果越正面。1,2,3,4,5,6,7最近的一项研究发现,在三个月大之前得到早期干预服务的耳聋和重听儿童有更好的语言结果。8当然,在婴儿期和幼儿期,语言习得的敏感时期与大脑的发育有关。9此外,已发现早期识别可以缓和以前对语言发展有负面影响的因素:例如,社会经济地位,家庭种族和额外残疾的存在。1,3,7

语言学习的多个途径

Multiple Pathways to Language Learning

每个耳聋儿童以他或她自己独特的方式获得语言。听力损失的程度,听力损失的原因,听力损失发生时的年龄,受益于听力技术的程度,其他残疾的存在,和家庭道德力量,从儿童到儿童各不相同。语言习得的多感官方法确保当一种途径不太有效时,另一种途径可作为语言学习的渠道。对双语教育的早期研究发现了学习两种语言获得的认知益处;据报道,双语儿童比单语儿童有更好的认知灵活性和对语意更高的灵敏度。10,11,12耳聋儿童可以,通过适时地以写和听和说学习美国手语和口语,体验类似的认知益处。13

耳聋和重听学生的学业表现

Academic Performance of Deaf and Hard of Hearing Students

早期语言影响学术成就。耳聋和重听儿童比同龄的听力正常儿童表现较差,在多数的领域,特别是在阅读领域。^{14,15,16}这是一个长期的趋势,不管使用各种沟通方法和发明新的听力技术,它都没有改变。¹⁷ 尽管有不平衡的结果,¹⁸一些人工耳蜗植入团队现在劝说植入儿童的家庭只参加听觉-言语治疗,这样做,忽略了通过视觉途径学习的巨大潜力。¹⁹ 缺乏早期和全面的视觉语言接触,可能是耳聋人群低水平的阅读成绩的一个促成因素。^{13,14,15,16,20,21,22}

语言习得的延迟,会在认知,学术成就,及社交和情绪健康上有负面结果。^{13, 17, 18, 23, 24, 25}

相比于使用听觉-言语治疗的儿童,大多数聋人家庭的孩子进入学校时已准备好学习,因为作为婴儿和幼儿,他们通过与ASL流利的家庭成员沟通已获得了完整的第一语言。²⁶ 这些儿童往往表现类似于对同龄的听力正常儿童所期望的。⁸ 给于手语成人语言模式,有听力正常父母的聋童也可以获得视觉语言能力,并成为会读书和写字的人。^{13, 27}

早期视觉语言的优势

The Advantage of Early Visual Language

延迟获得第一语言产生较差的语言表现,^{28, 29, 30, 31}无论选择的语言是手语或口语。⁹ 此外,在早期发育过程中没有接触完整的语言符号,耳聋和重听儿童的语言习得很难与听力正常儿童并行。³²

幸运的是,大脑的语言区没有对语言输入的偏好。^{24,33,34}对许多聋童来说,完全接触语言信息的最可能的途径是通过视觉。¹³视觉语言,如美国手语,是自然语言系统。^{9,20}视觉语言不只是代表口语的符号;它们独立于口语而运作,并有充分发展的语法系统。³⁵

一些创新的早期干预方案认识到接受植入的儿童需要早期的视觉语言学习。在一个这样的计划中,一项研究表明,在等待人工耳蜗植入时接触了手语的儿童,发展了易于接受的语言:他们明白评论,问题,解释,命令,并且他们用手语作简单的短语。36 在这些计划中,达到最有效的语言成果的儿童在早期使用手语,这表明有机会接触早期语言,不管什么方式,可以提供一个基础,供不同的语言方式的技能可以建立其上。36,37耳蜗植入后,这些儿童发展了口语。儿童在植入前获得的手语词汇最可能协助讲话的快速映射。36,37,38

手语和口语的发展

Signed Language and Spoken Language Development

早期的语言经验,不管沟通的方式,形成了终生学习的能力。⁹手语有时被拒绝给予聋童,因为相信它会干扰讲话的发展。¹⁹然而,没有证据表明,与耳聋和重听儿童使用手语会阻碍口语的发展。^{19,39}而是,当孩子学习更多的手势和手语时,口语技能会增强。^{25,40,41} ASL的流利已经显示出可以正面影响耳聋学生口语的发展和英语读写的发展。^{16,42,43,44}是语言有助于口语,而不是沟通的模式。⁴⁵

双语的好处

Benefits of Bilingualism

学习两种语言(例如,美国手语和口头/书面英语),有语言和教育的好处。46当成人的语言模式遵循语言分配策略,且一旦孩子获得第一语言能力,口头/书面语言的接触量增加时,耳聋儿童可以同时掌握两种语言。47ASL,在许多情况下,作为第一语言或(L1)发挥功能,它协助掌握作为第二语言(L2)的口头/书面英语。从总体上看,双语研究表明,第一语言的流利是第二语言技能的强有力的预测;第二语言的能力是第一语言流畅的功能。48,49

家庭参与

Family Involvement

家庭参与是耳聋和重听儿童语言发展的一个关键 因素,特别是对那些有听力正常父母的儿童。²重 要的是要注意高层度的家庭参与产生较好的语言 成果。²此外,母亲的手语技能似乎是另一个有力 的指标,它导致耳聋和重听儿童更好的语言表 现。^{6,18}进一步来讲,这些因素被发现可以缓冲 晚进入早期干预计划的负面影响。²

把研究融入教学

Integration of Research in Education

VL2发布研究简报作为教育工作者和家长的资源。我们的目标是告知教育社区研究成果,总结相关的奖学金,并且提出建议,供教育工作者和家长用于应对教育耳聋和重听儿童时所面临的多方挑战。

在这个简报中提供的信息试图澄清早期视觉语言发展对耳聋和重听婴幼儿的重要性。

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参考文献

References

- 1. Apuzzo, M., & Yoshinaga-Itano, C. (1995). Early identification of infants with significant hearing loss and the Minnesota Child Development Inventory. Seminars in Hearing, 16(2), 124–139.
- Moeller, M. P. (2000). Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics*, 106(3), e43. Retrieved Nov. 20, 2010, from http://www.pediatrics.org/cgi/content/full/106/3/e43
- Yoshinaga-Itano, C., Sedey, A., Coulter, D., & Mehl, A. (1998). Language of early- and later-identified children with hearing loss. *Pediatrics*, 102(5), 1161– 1171.
- 4. Calderon, R., & Naidu, S. (2000). Further support for the benefits of early identification and intervention for children with hearing loss. *The Volta Review, 100*(5), 53–84.
- 5. Snyder, L. &Yoshinaga-Itano, C. (1998). Specific play behaviors and the development of communication in children with hearing loss. *The Volta Review, 100*(3), 165-185.
- Calderon, R. (2000). Parental involvement in deaf children's education programs as a predictor of child's language, early reading, and social-emotional development. *Journal of Deaf Studies and Deaf Education*, 5(2), 140-155.
- 7. Yoshinaga-Itano, C. (2003). From screening to early identification and intervention: Discovering predictors to successful outcomes for children with significant hearing loss. *Journal of Deaf Studies and Deaf Education*, 8(1), 11-30.
- Vohr, B., Moore, P., & Tucker, R. (2002). Impact of family health insurance and other environmental factors on universal hearing screen program effectiveness. *Journal of Perinatology*, 22(5), 380–385. Retrieved Nov. 20, 2010, from http://www.nature.com/jp/journal/v22/n5/pdf/7210750a.pdf
- Mayberry, R. & Lock, E. (2003). Age constraints on first versus second language acquisition: Evidence for linguistic plasticity and epigenesis. *Brain and Language*, 87(3), 369-384. Retrieved Nov. 20, 2010, from http://idiom.ucsd.edu/~rmayberry/pubs/Mayberry-Lock-03.pdf
- 10. Cummins, J. (2001). Negotiating identities: Education for empowerment in a diverse society. (2nd ed.) Los

- Angeles: California Association for Bilingual Education.
- 11. Hakuta, K. (1986). *Mirror of language: The debate on bilingualism.* New York: Basic Books.
- 12. Hakuta, K. & Diaz, R. (1985). The relationship between degree of bilingualism and cognitive ability: A critical discussion and some new longitudinal data. In K. E. Nelson (Ed.), *Children's Language* (pp. 319-344). Hillsdale, N. J.: Lawrence Erlbaum Associates.
- 13. Easterbrooks, S. & Baker, S. (2002). Language learning in children who are deaf and hard of hearing: Multiple pathways. Boston: Allyn & Bacon.
- 14. Andrews, J., Leigh, I., & Weiner, M. (2004). *Deaf people: Evolving perspectives from psychology, education, and sociology.* Boston: Pearson.
- Chamberlain, C. & Mayberry, R. (2000). Theorizing about the relationship between American Sign Language and reading. In C. Chamberlain, J. Morford, & R. Mayberry (Eds.), Language acquisition by eye (pp. 221-260). Mahwah, NJ: Lawrence Erlbaum Associates.
- 16. Goldin-Meadow, S. & Mayberry, R. (2001). How do profoundly deaf children learn to read? *Learning Disabilities Research and Practice*, 16(4), 222-229.
- Allen, T. (1986). Patterns of academic achievement among hearing impaired students: 1974 and 1983. In A. Schildroth & M. Karchmer (Eds.), *Deaf children in America* (pp. 161–206). San Diego: College Hill Press.
- Meadow-Orlans, K., Spencer, P., Koester, L. & Steinberg, A. (2004). Implications for intervention with infants and families. In K. Meadow-Orlans, P. Spencer, & L. Koester (Eds.), *The world of deaf* infants: A longitudinal study (pp. 218-228). New York: Oxford University Press.
- 19. Snodden, K. (2008). American Sign Language and early intervention. *The Canadian Modern Language Review, 64*(4), 581-604.
- 20. Hoffmeister, R. (2000). A piece of the puzzle: ASL and reading comprehension in deaf children. In C. Chamberlain, J. Morford, & R. Mayberry (Eds.), Language acquisition by eye (pp. 143–163). Mahwah, NJ: Lawrence Erlbaum Associates.
- 21. Erting, C., Prezioso, C., O'Grady-Hynes, M. (1990). The interactional context of deaf mother-infant communication. In V. Volterra & C. Erting (Eds.), *From gesture to language in hearing and deaf children* (pp.

- 97-106). Berlin: Springer-Verlag.
- Anderson, D. (2006). Lexical development of deaf children acquiring signed languages. In B. Schick, M. Marschark & P. Spencer (Eds.), Advances in the sign language development of deaf children (pp. 135-160). New York: Oxford University Press.
- 23. Marschark, M., Lang, H. & Albertini, J. (2002). Educating deaf students: From research to practice. New York: Oxford University Press.
- 24. Meier, R. (1991). Language acquisition by deaf children. *American Scientist*, 79, 60-70.
- Schlesinger, H. & Meadow, K. (1972). Sound and sign: Childhood deafness and mental health. Berkeley, CA: University of California Press.
- Marschark, M, Schick, B., & Spencer, P. (2006).
 Understanding sign language development of deaf children. In B. Schick, M. Marschark & P. Spencer (Eds.), Advances in the sign language development of deaf children (pp. 3-18). New York: Oxford University Press.
- Singleton, J., Supalla, S., Litchfield, S., & Schley, S., (1998). From sign to word: Considering modality constraints in ASL/English bilingual education. *Topics in Language Disorders*, 18(4), 16-29.
- Boudreault, P. (1999). Grammatical processing in American sign language: Effects of age of acquisition and syntactic complexity. Unpublished masters thesis, McGill University.
- Mayberry, R. (1993). First-language acquisition after childhood differs from second-language acquisition: The case of American Sign Language. *Journal of Speech and Hearing Research*, 36, 1258-1270.
- 30. Mayberry R. & Eichen, E. (1991). The long-lasting advantage of learning sign language in childhood: Another look at the critical period for language acquisition. *Journal of Memory and Language*, 30(4), 486-512.
- Mayberry, R. & Fischer, S. (1989). Looking through phonological shape to lexical meaning: The bottleneck of non-native sign language processing. *Memory & Cognition*, 17(6), 740-754.
- 32. Lederberg, A.R. & Everhart, V.S. (1998).
 Communication between deaf children and their hearing mothers: The role of language gesture, and vocalizations. *Journal of Speech, Language, and Hearing Research, 41*, 887-899.
- 33. Newport, E. & Meier, R. (1985). The acquisition of American Sign Language. In D. Slobin (Ed.), *The*

- cross linguistic study of language acquisition, Volume One: the Data (pp. 881-938). Hillsdale, NJ: Lawrence Erlbaum Associates.
- 34. Petitto, L.A. (2000). On the biological foundations of human language. In K. Emmorey & H. Lane (Eds.), The signs of language revisited: An anthology in honor of Ursula Bellugi and Edward Klima (pp. 449-471). Mahwah, NJ: Lawrence Erlbaum Associates.
- 35. Emmorey, K. (2002). Language, cognition and the brain: Insights from sign language research. Mahwah, NJ: Lawrence Erlbaum Associates.
- Yoshinaga-Itano, C. (2008). Lessons learned from universal newborn hearing screening. Paper presented at the annual meeting of the Conference of Educational Administrators of Schools for the Deaf, Great Falls, MT.
- 37. Yoshinaga-Itano, C. (2006). Early identification, communication modality, and the development of speech and spoken language skills: Patterns and considerations. In P.E. Spencer & M. Marschark (Eds.), Advances in the spoken language development of deaf and hard-of-hearing children (pp. 298-327). New York: Oxford University Press.
- 38. Yoshinaga-Itano, C. (2005). From Sign language to spoken language: Evidence of a lexical piggyback in the language of children with cochlear implants. Paper presented at the annual meeting of the Symposium of Research in Child Language Disorders, Madison, WI.
- 39. Marschark, M. & Hauser, P. (2008). *Deaf cognition:* Foundations and outcomes. New York: Oxford University Press.
- Crittenden, J., Ritterman, S., & Wilcox, E. (1986). Communication mode as a factor in the performance of hearing impaired children on a standardized receptive vocabulary test. *American Annals of the Deaf*, 131, 356-360.
- 41. Volterra, V., Iverson, J., & Castrataro, M. (2006). The development of gesture in hearing and deaf children. In B. Schick, M. Marschark, & P. Spencer (Eds.), Advances in the sign language development of deaf children (pp. 46–70). New York: Oxford University Press.
- 42. Padden, C., & Ramsey, C. (1998). Reading ability in signing deaf children. *Topics in Language Disorders*, 18(4), 30–46.
- 43. Padden, C., & Ramsey, C. (2000). American Sign Language and reading ability in deaf children. In C.

- Chamberlain, J. Morford, & R. Mayberry (Eds.), Language acquisition by eye (pp. 165–189). Mahwah, NJ: Lawrence Erlbaum Associates.
- 44. Prinz, P., & Strong, M. (1998). ASL proficiency and English literacy within a bilingual deaf education model of instruction. *Topics in Language Disorders*, 18(4), 47–60.
- 45. Yoshinaga-Itano, C., & Sedey, A. (2000). Speech development of deaf and hard of hearing children in early childhood: Interrelationships with language and hearing. *The Volta Review, 100*(5), 181–211.
- Nover, S., Christensen, K., & Chen, L. (1998).
 Development of ASL and English competence for learners who are deaf. *Topics in Language Disorders*, 18(4), 61-72.
- 47. Nover, S., Andrews, J., Baker, S., Everhart, V., Bradford, M. (2002). Staff development in ASL/English bilingual instruction for deaf students: Evaluation and impact study. Center for ASL/English Bilingual Education and Research: New Mexico School for the Deaf.
- 48. Cummins, J. (2000). Language, power, and pedagogy: Bilingual children in the crossfire. Buffalo, NY: Multilingual Matters, Ltd.
- 49. Dickinson, D., Golinkoff, R., & Hirsh-Pasek, K. (2010). Speaking out for language: Why language is central to reading development. *Educational Researcher*, 39(4), 305-310. *Data* (pp. 881-938). Hillsdale, NJ: Lawrence Erlbaum Associates.Research in Child Language Disorders, Madison, WI.

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Mission

The Clerc Center, a federally funded national deaf education center, ensures that the diverse population of deaf and hard of hearing students (birth through age 21) in the nation are educated and empowered and have the linguistic competence to maximize their potential as productive and contributing members of society. This is accomplished through early access to and acquisition of language, excellence in teaching, family involvement, research, identification and implementation of best practices, collaboration, and information sharing among schools and programs





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