



Literacy as an Outcome of Language Development and its Impact on Children's Psychosocial and Emotional Development

BRUCE TOMBLIN, PhD

University of Iowa, USA

(Published online March 14, 2005)

Topic

Language development and literacy

Introduction

One of the most striking accomplishments of the preschool years is the child's effortless development of speech and language. With respect to spoken language development, the preschool years represent a period of learning language. As children enter school, they are expected to use these newly developed language skills as tools for learning and increasingly for social negotiation. The important role of spoken and written communication in school-aged children's lives suggests that individual differences in these skills may entail risks in terms of broader academic and psychosocial competence.

Subject

Spoken language competence involves several systems. Children must master a system for representing the meaning of things in their world. Children must also acquire a facility with the forms of language, ranging from the sound structure of words to the grammatical structure of sentences. Additionally, this knowledge must be joined with their social competence. Mastery of these skills, which occurs during the preschool years, will allow the child to function as a successful listener and speaker in many communication contexts. Much of this learning is accomplished without formal instruction, and what is known is largely tacit in nature. As preschoolers, children begin to develop an awareness of some of this knowledge. They will make words rhyme and they can manipulate parts of words, such as taking "baby" apart into two syllables, /ba/ and /be/. This ability to think about the properties of words is called phonological processing. There exists a substantial literature showing that early reading development in alphabetic languages such as English is dependent upon the integrity of phonological processing abilities.¹

Learning to read also requires several skills. It is common to differentiate between two main aspects of reading – word recognition and reading comprehension. Word recognition consists of knowing how a word is pronounced. Good readers can do this by using multiple cues, but importantly they are able to use the conventions concerning the relationship between letter sequences and their pronunciation (decoding). Phonological processing abilities appear to play an important role in the development of this

knowledge and the individual's ability to recognize words. Decoding printed words, however, is not sufficient for reading competence. The reader also needs to be able to interpret the meanings of the printed text in a manner very similar to how utterances are interpreted when heard. The skills involved in this act of reading comprehension are very similar or the same as those used in listening comprehension.

Problems

Children may enter school with poor skills in listening, speaking and/or phonological processing. Children with poor listening and speaking skills are referred to as having a language impairment (LI) and most of them will also have poor phonological processing abilities. Current estimates are that about 12% of children entering schools in the U.S. and Canada have LI.^{2,3} There are other children who are sufficiently competent in listening and talking to be viewed as normal in this regard, but for whom phonological processing performance remains poor. At school entry, these children may be viewed as being at risk for reading disorder (RD). Reading disorder is customarily defined as poor reading achievement occurring after sufficient opportunity to learn to read. Thus, RD is often diagnosed after two or three years of reading instruction. Estimates of the prevalence of RD among school-aged children typically range between 10 and 18%.^{4,5} Behaviour problems such as Attention Deficit Hyperactivity Disorder (ADHD) and internalizing problems such as shyness and anxiety have been found to be common among children with RD and likewise among children with LI.⁶

Research Context

The relationships between spoken language development, reading development and social development have been explored by several researchers in an effort to determine the extent to which these problems are associated with each other and the bases for these relationships.

Key Research Questions

The prominent research questions have been concerned with the extent to which aspects of early language status are predictive of later reading and behaviour problems and what the possible bases might be for these relationships. Specifically, two hypotheses have figured prominently in the literature. One hypothesis is that the associations between spoken language and later outcomes are causal. Alternatively, the association of language and reading problems with behaviour problems may rest on a common underlying condition such as a neuromaturational delay that results in poor achievement in both domains.

Recent Research Results

Several investigators have examined the reading and psychosocial outcomes of children with LI in the early school years. Several studies have reported poorer reading achievement and higher rates of RD in children with language impairment.⁷⁻¹² In these studies, the prevalence of RD in children with LI ranged from 25%⁸ to 90%.¹¹ The strong relationship between RD and LI has been shown to be attributable to the limitations these children have in both their ability to understand language and their phonological awareness.^{13,14} The phonological-awareness deficits place them at risk for difficulties in

learning decoding skills and the comprehension problems place them at risk for reading comprehension problems.

Several studies have shown elevated rates of behaviour problems among children with LI.^{2,15-20} The most common behavioural problem reported in these studies has been ADHD; however, internalizing problems such as anxiety disorder have also been reported. Some research has shown that these behaviour problems appear to vary with the setting in which the child is observed and in particular are reported by the children's teachers to a greater degree than their parents.²¹ This has been interpreted as evidence that these behaviour problems may arise more in the classroom situation than at home and are therefore reactions to classroom stress. Further support for this view arises from data showing that the excess of behaviour problems in children with RD and/or LI is found in those children with both conditions.⁶ Thus, these studies support the notion that LI in conjunction with RD results in the child facing excessive failure, particularly within the classroom, which in turn results in reactive behaviour problems. These conclusions, however, fail to explain why behaviour problems seem to be reported in preschool children with LI.²² These findings could be used to argue for an underlying factor such as neurodevelopmental delay that contributes to all these conditions.

Conclusions

The existence of a strong relationship between spoken language skills and subsequent reading and behaviour development is generally supported in the literature. This evidence comes principally from research done with children who have LI at school entry. The basis of the relationship between early spoken language and later reading development is generally thought to be causal in nature, such that spoken language skills are fundamental precursors to later successful reading. This influence of language on reading primarily involves two aspects of language ability – phonological processing and listening comprehension. Children with limitations in phonological process are at risk for early decoding problems, which can then lead to problems of reading comprehension. Children with problems of listening comprehension are at risk for reading comprehension problems even if they can decode words. The common profile of children with LI is that both aspects of language are impaired and thus the resulting reading problems encompass both aspects of reading (decoding and comprehension). The basis of the relationship between spoken language and later behaviour problems is less clear. The behaviour problems may arise from the spoken and written communication demands of the classroom. Thus, communication failure serves as a stressor and behaviour problems are maladaptive responses to this stressor. Alternatively, the spoken and written language impairment may have a shared underlying etiology with the behaviour problems.

Implications

The evidence is compelling that a foundation in spoken language competence is important for the successful achievement of academic and social competence. Children with poor language skills who are therefore at risk for reading and psychosocial problems can be identified efficiently at school entry. Interventions are available for promoting language growth, and in particular numerous programs exist that are designed to promote the development of phonological processing skills. Likewise, listening comprehension

can be improved in the early school years. These methods focus on strengthening language skills. Additionally, intervention efforts need to consider approaches that provide adapted and supportive educational environments for these children to reduce the potential stressors that may result in maladaptive behaviours. In the future, research efforts focusing on the particular mechanisms that produce this complex of spoken, written and behaviour problems are also needed. Classroom-based studies of how children respond to communication demands and failure would be particularly relevant.

To learn more on this topic, consult the following sections of the Encyclopedia:

- [How important is it?](#)
- [What do we know?](#)
- [What can be done?](#)
- [According to experts](#)
- [Key messages](#)

REFERENCES

1. Snow CE, Burns MS, Griffin P, eds. *Preventing reading difficulties in young children*. Washington, DC: National Academy Press; 1998.
2. Beitchman JH, Nair R, Clegg M, Patel PG, Ferguson B, Pressman E, Smith A. Prevalence of speech and language disorders in 5-year-old kindergarten children in the Ottawa-Carleton region. *Journal of Speech and Hearing Disorders* 1986;51(2):98-110.
3. Tomblin JB, Records NL, Buckwalter P, Zhang X, Smith E, O'Brien M. Prevalence of specific language impairment in kindergarten children. *Journal of Speech Language and Hearing Research* 1997;40(6):1245-1260.
4. Shaywitz SE, Shaywitz BA. Unlocking learning disabilities: The neurological basis. In: Cramer SC, Ellis W, eds. *Learning disabilities: Lifelong issues*. Baltimore, Md: P.H. Brooks Publishing; 1996:255-260.
5. Commission on Emotional and Learning Disorders in Children. *One million children: A national study of Canadian children with emotional and learning disorders*. Toronto, Ontario: Leonard Crainford; 1970.
6. Tomblin JB, Zhang X, Buckwalter P, Catts H. The association of reading disability, behavioral disorders, and language impairment among second-grade children. *Journal of Child Psychology and Psychiatry and Allied Disciplines* 2000;41(4):473-482.
7. Aram DM, Ekelman BL, Nation JE. Preschoolers with language disorders: 10 years later. *Journal of Speech and Hearing Research* 1984;27(2):232-244.

8. Bishop DV, Adams C. A prospective study of the relationship between specific language impairment, phonological disorders and reading retardation. *Journal of Child Psychology and Psychiatry and Allied Disciplines* 1990;31(7):1027-1050.
9. Catts HW. The relationship between speech-language impairments and reading disabilities. *Journal of Speech & Hearing Research* 1993;36(5):948-958.
10. Silva PA, Williams S, McGee R. A longitudinal study of children with developmental language delay at age 3: Later intelligence, reading and behavior problems. *Developmental Medicine and Child Neurology* 1987;29(5):630-640.
11. Stark RE, Bernstein LE, Condino R, Bender M, Tallal P, Catts H. 4-year follow-up-study of language impaired children. *Annals of Dyslexia* 1984;34:49-68.
12. Stark RE, Tallal P. *Language, speech, and reading disorders in children: neuropsychological studies*. Boston, Mass: Little, Brown and Co.; 1988.
13. Catts HW, Fey ME, Zhang XY, Tomblin JB. Estimating the risk of future reading difficulties in kindergarten children: A research-based model and its clinical implementation. *Language Speech and Hearing Services in Schools* 2001;32(1):38-50.
14. Catts HW, Fey ME, Zhang X, Tomblin JB. Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading* 1999;3(4):331-362.
15. Beitchman JH, Hood J, Inglis A. Psychiatric risk in children with speech and language disorders. *Journal of Abnormal Child Psychology* 1990;18(3):283-296.
16. Beitchman JH, Hood J, Rochon J, Peterson M. Empirical classification of speech/language impairment in children: II. Behavioral characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry* 1989;28(1):118-123.
17. Beitchman JH, Tuckett M, Bath S. Language delay and hyperactivity in preschoolers: Evidence for a distinct subgroup of hyperactives. *Canadian Journal of Psychiatry* 1987;32(8):683-687.
18. Beitchman JH, Brownlie EB, Wilson B. Linguistic impairment and psychiatric disorder: pathways to outcome. In: Beitchman JH, Cohen NJ, Konstantareas M, Tannock R, eds. *Language, learning, and behavior disorders: Developmental, biological, and clinical perspectives*. New York, NY: Cambridge University Press; 1996:493-514.
19. Stevenson J, Richman N, Graham PJ. Behaviour problems and language abilities at three years and behavioural deviance at eight years. *Journal of Child Psychology and Psychiatry and Allied Disciplines* 1985;26(2):215-230.
20. Benasich AA, Curtiss S, Tallal P. Language, learning, and behavioral disturbances in childhood: A longitudinal perspective. *Journal of the American Academy of Child and Adolescent Psychiatry* 1993;32(3):585-594.
21. Redmond SM, Rice ML. The socioemotional behaviors of children with SLI: Social adaptation or social deviance? *Journal of Speech, Language, and Hearing Research* 1998;41(3):688-689.
22. Beitchman JH, Nair R, Clegg M, Ferguson B, Patel PG. Prevalence of psychiatric disorders in children with speech and language disorders. *Journal of the American Academy of Child Psychiatry* 1986;25(4):528-535.

To cite this document:

Tomblin B. Literacy as an outcome of language development and its impact on children's psychosocial and emotional development. In: Tremblay RE, Barr RG, Peters RDeV, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2005:1-6. Available at: <http://www.child-encyclopedia.com/documents/TomblinANGxp.pdf>. Accessed [insert date].

Copyright © 2005