Journal of Child Language (2026), 1–21
doi:10.1017/S0305000926100658

CAMBRIDGE UNIVERSITY PRESS

INVITED COMMENTARY

Research in Later Language Development: A Historical Perspective

Marilyn Nippold

Communication Disorders and Sciences, University of Oregon, Eugene, OR, USA
Email: nippold@uoregon.edu

(Received 26 November 2025; revised 26 March 2026; accepted 27 March 2026)

Abstract

Researchers have investigated later language development for more than 80 years. As a result, a great deal of information has been learned about the nature and substance of language development beyond the preschool years. This article highlights topics that were studied each decade, beginning with the 1940s and continuing to the present. Understanding the history of research in this area is essential for current investigators who seek to contribute new information to the discipline and for clinicians and teachers who seek to apply the information that has already been learned in their daily work with school-age children, adolescents, or young adults.

Keywords: later language development; school-age children and adolescents; young adults

> "A journey of a thousand miles begins with a single step" – Laozi (Chinese philosopher, 6th century BC)

Research in later language development investigates age-related advancements that occur in the spoken and written communication skills of school-age children, adolescents, and young adults (ages 5–25 years). This contrasts with studies of early language development which focus on the acquisition of pre-verbal and verbal communication skills in infants, toddlers, and preschool children (ages 0–5 years). Research in later language development began in the 1940s with the publication of a single study (Watts, 1944). It has continued to the present, spanning at least nine decades, and an enormous number of studies have been published.

This article provides a historical overview of research in later language development, highlighting topics that were studied during the past 80+ years. Given the large number of studies that have been published, only a portion of them can be included in this article. However, many of the studies were discussed in detail elsewhere (Nippold, 1988, 1998, 2007, 2016b, in press). Understanding the history of this research is essential for current investigators who seek to contribute new information to the discipline and for clinicians and teachers who seek to apply what has already been learned in their daily work with children, adolescents, or adults.

© The Author(s), 2026. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Although much has been learned about later language development, historically, greater emphasis has been placed on early language development. Although early language development serves as the foundation for later language development and is obviously essential for all aspects of human well-being, the language attainments that occur beyond the preschool years are just as critical as they contribute substantially to an individual's ability to achieve personal satisfaction, in addition to social, academic, and vocational success throughout the lifespan. Given the significance of later language development, it is somewhat surprising that it has received relatively less emphasis in research compared to early language development.

A variety of factors have contributed to this discrepancy but one in particular is the *critical period hypothesis*. This was the influential theory of Lenneberg (1967) who proposed that children are maximally ready to acquire language between the ages of 2 and 12 years and that with the onset of puberty, the capacity for language acquisition is diminished. To support this claim, he argued that biological processes, including brain maturation, regulated the onset and timing of language learning and that once the brain was fully developed at around age 12, neural plasticity was no longer present. More recent research, however, has shown that the brain continues to develop throughout the adolescent years and into adulthood (Giedd, 2004; Giedd et al., 1999; Gogtay et al., 2004), that the grammar learning capacity remains active well beyond puberty (Hartshorne et al., 2018), and that refinements in the use of language to explain complex phenomena (expository discourse) continue at least into the 20s (Nippold, Hesketh, et al., 2005). Although the critical period hypothesis may have cast a discouraging shadow on the viability of conducting studies of later language development, many researchers persisted, nonetheless.

1. What is known about later language development?

1.1. The 1940s and 1950s

During the 1940s and 1950s, researchers in later language development published innovative studies that generated new information. They also paved the way for future studies on topics such as proverb understanding, word knowledge, and the word learning process.

Proverbs are figurative expressions that can serve a variety of pragmatic functions. Examples include offering encouragement (e.g., Every cloud has a silver lining), warning a person of danger (e.g., Look before you leap), or commenting on a situation (e.g., When the cat's away, the mice will play). To fully understand a proverb, an individual must be able to relate the expression to events in the broader context, a process of metaphorical mapping that requires analogical reasoning. For example, to interpret "Every cloud has a silver lining," uttered by a parent to a disappointed child, it is essential to know that in this case, the "cloud" refers to a cancelled birthday party and that the "silver lining" refers to a joyful replacement activity.

Watts (1944) conducted the first known study in this area. Children who were ages 11 through 14 years old completed a written multiple-choice task that examined their comprehension of proverbs. Each proverb (e.g., Empty vessels make the most noise) was accompanied by four interpretations, only one of which was correct (e.g., The people who talk the most often know the least). Each child read the proverb and the answer choices and selected the best interpretation. Although accuracy improved in relation to age, even the oldest children struggled with the task, perhaps because of the absence of supportive contextual information.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Gorham (1956) later conducted a large-scale study to examine the understanding of proverbs using a written multiple-choice task that consisted of 40 questions. The participants in his study were children, adolescents, and young adults (n = 651) who were ages 10 through 21+ years old. Although the youngest group had difficulty with the task (mean accuracy = 33%), age-related improvements occurred during adolescence and into adulthood (mean accuracy = 81%).

Similar findings were reported by Richardson and Church (1959) who asked a group of 9- to 12-year-old children (n = 47) and a group of adolescents and young adults (n = 30) to explain in writing the meanings of seven proverbs (e.g., You cannot teach an old dog new tricks). Although the youngest participants often interpreted the proverbs literally (e.g., "It means it's hard for the dog because he's so old"), gradual age-related gains occurred in the participants' ability to interpret the proverbs figuratively (e.g., "It means it's futile to try to change old habits"). Together, these three studies provide evidence of quantitative and qualitative advancements in the understanding of proverbs between late childhood and early adulthood.

Regarding the development of word knowledge, Feifel and Lorge (1950) conducted a large-scale investigation in children who were ages 9 through 14 years old (n = 600). Each child was asked to explain the meanings of 45 words. The study revealed age-related improvements in the number of words that were accurately defined ("*Skill* means you can do something well"), a *quantitative* change, and in the ability to define words using their superordinate category term (e.g., "An orange is a *fruit*"), a *qualitative* change that reflects higher-order reasoning.

In a study that examined development of the word learning process, Werner and Kaplan (1952) tested the ability of children ages 8 through 13 years old (n = 125) to infer the meanings of unfamiliar words that occurred in sentences, using a multiple-choice task. Those researchers found that during this age range, children's understanding of the words gradually improved as they learned to use context clues to infer meaning, a strategy called *contextual abstraction*. When language is analyzed in this way to discern meaning, this reflects metalinguistic competence.

Metalinguistic competence, the ability to step back, reflect, and examine language as an entity itself (Gombert, 1992), is a driving force in all aspects of later language development. That is, as children grow older, their expanding analytical skills enable them to make sense of the smaller components of language – including its phonology, morphology, syntax, semantics, and pragmatics – leading to greater insight into the structure, function, and meaning of language.

1.2. The 1960s

Studies of lexical development continued into the 1960s with researchers examining the understanding of different types of words. Asch and Nerlove (1960), for example, examined children's understanding of *double function terms*. These are polysemous words that have both a concrete physical meaning and a related abstract psychological meaning (e.g., sweet, cold, bright). In their study, children ages 3 through 12 years old (n = 50) were interviewed individually and asked to explain the meanings of some common double function terms. The results showed that the physical meanings were well understood even by the youngest children but that an understanding of the more difficult psychological meanings developed more slowly. Moreover, only the oldest group of children could explain the relationship between the physical and psychological meanings of the terms (e.g., "Bright stars and bright people both stand out").

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Other types of words that were studied during the 1960s included different types of connectives. Robertson (1968), for example, examined the development of coordinating (e.g., but, and, for) and subordinating (e.g., because, if, when, although) conjunctions drawn from textbooks written for upper elementary grade students. An experimenter-designed task was administered to students from grades 4, 5, and 6 (ages 9–12 years old; n = 402). The task consisted of 150 multiple-choice items where an incomplete sentence that contained a conjunction was presented (e.g., The man held the rod and…) and the student was asked to select from four options the best way to complete the sentence (e.g., the horse jumped over it). Results indicated a pattern of gradually increasing accuracy on the task, with mean scores of 57%, 66%, and 75% earned by the fourth-, fifth-, and sixth-grade groups, respectively. Hence, not even the oldest students showed mastery of the conjunctions. The study also showed that accuracy on the task was associated with students' scores on measures of reading, writing, and listening. This led the author to conclude that mastering conjunctions is important for literacy attainment.

Related to the use of coordinating and subordinating conjunctions is the development of syntax, which focuses on growth that occurs in the length and complexity of sentences. Early studies of syntactic development beyond the preschool years were conducted during the 1960s by researchers such as Hunt (1965), Loban (1963), and O'Donnell et al. (1967). Collectively, those researchers documented the existence of gradual age-related increases in the length and complexity of sentences produced in spoken and written language during the school-age and adolescent years. Hunt, for example, studied the development of syntax by examining essays written by students from grades 4, 8, and 12 (ages 9–18 years; n = 54). In the course of his research, he designed a metric called the terminable unit (T-unit) which consists of an independent clause and any subordinate clauses that are attached to it. A writer's mean length of T-unit (MLTU) is therefore calculated by dividing the total number of words produced in an essay by the total number of T-units it contains. A related metric, the communication unit (or C-unit), was later designed by Loban (1976) to examine syntactic development in spoken language produced during a conversation or other genre (e.g., explanation, narration). Unlike the T-unit, the C-unit may include utterances that are less than an independent clause; otherwise, it is identical to the T-unit. Both MLTU and mean length of C-unit (MLCU) continue to be widely used by researchers and clinicians to chart age-related increases that occur in the use of complex syntax in the written or spoken language, respectively, of school-age children, adolescents, and adults. They are also used to measure the level of syntactic competence of individual students.

During the 1960s, researchers also began to study the development of persuasive discourse (e.g., Flavell et al., 1968; Wood et al., 1967). Flavell et al., for example, examined the persuasive strategies used by children and adolescents ages 8, 13, and 16 years (n = 20 per group) to convince another person to perform some action (to purchase an item or to give them a gift), using hypothetical role-playing tasks. Results showed that the 13- and 16-year-olds generated a greater number of different arguments to convince the listener than the 8-year-olds, a quantitative change, and that the older participants presented their arguments in a more organized fashion, a qualitative change. Another qualitative change that occurred was an age-related increase in the use of arguments that appealed to the listener's perceived needs, interests, and values, reflecting growth in social perspective-taking, the ability to infer others' viewpoints.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

1.3. The 1970s

Studies of spoken and written persuasion continued during the 1970s (e.g., Clark & Delia, 1976; Crowhurst & Piche, 1979; Delia et al., 1979; Finley & Humphreys, 1974; Piche et al., 1978; Rubin & Piche, 1979), with researchers documenting age-related advancements in various persuasive skills in school-age children and adolescents, including social perspective-taking. Researchers also began to study another genre, narrative discourse (i.e., storytelling), and the concept of *story grammar* was introduced (Mandler & Johnson, 1977; Stein & Glenn, 1979). A story grammar is an organizational framework that a storyteller can use when generating or retelling a narrative coherently. Typically, it contains seven essential elements: the setting, characters, episodes, initiating events, attempts, outcomes, and internal responses.

Using that framework, Stein and Glenn (1979) examined the development of narrative speaking in children who were ages 6 and 10 years old ($n = 48$). Each child listened to and retold an unfamiliar folktale that contained the basic story grammar elements. Results indicated that the 10-year-olds included more information in their retells and were more likely to mention the characters' internal responses than the 6-year-olds. However, both groups mentioned all other story grammar elements in their retells and retold the events of the story in the proper sequence.

During the 1970s, researchers also began to study the development of linguistic ambiguity, the ability to detect the double meanings of words, phrases, and sentences. In an early study, Kessel (1970) examined how well children ages 6 through 11 years old ($n = 50$) understood sentences that represented different types of ambiguity, including lexical (e.g., The boy picked up the bat) and syntactic (e.g., The chicken is ready to eat). With a lexical ambiguity, the double meaning stems from the presence of a word that has two meanings (a baseball bat or an animal bat). With a syntactic ambiguity, the subject of the sentence (chicken) is either an agent (the chicken will eat its dinner) or an object (the children will eat the roasted chicken). Kessel designed a task that consisted of four pictures on a page, two of which illustrated the correct meanings of an ambiguous sentence and two of which were foils. The examiner read each sentence aloud and asked the child to point to the picture(s) that matched the sentence. Following this, the examiner asked the child to explain why each picture was chosen. Results showed that most of the 6- and 7-year-olds understood both meanings of the lexical ambiguities but that the syntactic ambiguities were more difficult and not well understood until age 10 or 11 years.

Following Kessel's (1970) study, Shultz and Horibe (1974) examined the ability of children ages 6 through 12 years old ($n = 120$) to explain what was funny about jokes that were based on different types of linguistic ambiguity: phonological, lexical, and syntactic. With a phonological ambiguity, the humor stems from different ways in which words can be pronounced (e.g., Diner: "What's this?" Waiter: "It's bean soup." Diner: "I'm not asking what it's been, I want to know what it is!"). Gradual age-related improvements occurred, with jokes based on phonological ambiguity easier to understand than those based on lexical or syntactic ambiguity.

During the 1970s, adolescents' use of slang terms was also investigated (Leona, 1978; Nelsen & Rosenbaum, 1972). Nelsen and Rosenbaum, for example, examined the ability of small groups of adolescents ages 12–18 years old, working together, to generate as many slang terms as possible when given a particular topic (e.g., cars, smoking, boys, girls). Results demonstrated substantial age-related increases in the number of different terms they could generate. In another study, Leona, who observed students in a large urban high school, reported that adolescents tended to form various "cliques" (e.g., motorheads,

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

fleabags, preppies) and that each clique made up its own slang terms that helped to distinguish their group from the outsiders.

The 1970s also saw the publication of numerous studies of figurative language development in children, adolescents, and adults. Collectively, those studies documented gradual age-related advancements in the understanding of metaphors, similes, idioms, and proverbs (e.g., Billow, 1975; Boswell, 1979; Douglas & Peel, 1979; Holden, 1978; Honeck et al., 1978; Lodge & Leach, 1975; Malgady, 1977; Ortony et al., 1978; Pollio & Pollio, 1979; Strand & Fraser, 1979).

Lodge and Leach (1975), for example, examined idiom understanding in students who were ages 6, 9, 12, and 21 years old ($n = 80$). Those researchers designed a picture-pointing task that contained 10 idiomatic sentences (e.g., He spilled the beans). With four pictures presented on a page, one illustrated the literal interpretation of the idiom (e.g., a boy spilling beans on the floor), one illustrated the figurative meaning (e.g., a boy giving away a secret), and the remaining two were foils. After the examiner read each sentence aloud, the student was asked to select the two pictures that correctly illustrated its meaning. The results showed that all four age groups understood the literal meanings of the idioms, that the figurative meanings were more challenging, and that only the 21-year-olds demonstrated a full understanding of both meanings.

Douglas and Peel (1979), however, questioned those results. They constructed a task in which six idiomatic sentences (e.g., Billy jumped the gun) were presented, each in the context of a supportive story (a boy who was excited to race his toy car started too soon) rather than in isolation. Students who were ages 7, 9, 11, and 13 years old ($n = 120$) listened to each story and explained the figurative meaning of the idiomatic sentence. Results showed that even the 7-year-olds understood some of the idioms, that the 9- and 11-year-olds understood more of them, and that the 13-year-olds understood most of the idioms. Hence, the provision of relevant contextual information assisted the students to correctly interpret the figurative meanings of the idioms.

Most studies of later language development have been cross-sectional in design where researchers compared groups of participants of different ages on one or more measures rather than tracking the development of the same participants over time, as in a longitudinal design. A notable exception was a 13-year longitudinal study conducted by Loban (1976). Loban examined the development of syntax in a diverse group of students ($n = 211$), starting when they were in kindergarten (age 5) and continuing every year through Grade 12 (age 18). Based on a random subgroup ($n = 35$) that represented high, average, and low levels of language proficiency, Loban reported that sentence length gradually increased during these years. For example, at Grades 1, 6, and 12, respectively, the average MLCU for spoken language was 6.88, 9.82, and 11.70 words. He also reported that as sentence length increased, so did the use of all types of subordinate clauses, including relative, adverbial, and nominal. Loban suggested that education was a significant factor driving these changes such that, as students' knowledge of a wide range of complex topics increased, so did their need to use complex language to explain what they knew.

1.4. The 1980s

Studies of syntactic development continued during the 1980s, with researchers documenting age-related advancements at the clausal, sentential, and discourse levels (e.g., Crowhurst, 1980; Karmiloff-Smith, 1986; Klecan-Aker & Hedrick, 1985; Morris &

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Crump, 1982; Perera, 1986; Scott, 1988). Scott, for example, provided detailed descriptions of the subtle and nuanced developments that occurred in the use of low-frequency syntactic structures during the school-age and adolescent years. These included noun phrase post modification through the use of prepositional phrases (e.g., The visitors rang the bell *at the top of the stairs*), nonfinite clauses (e.g., The visitors sat on a bench, *waiting for their host*), and appositives (e.g., Their host, *a gourmet chef*, was often late), structures that enhanced the clarity and precision of sentences.

Throughout the 1980s, studies of figurative language development also continued, with researchers seeking to identify factors that made those expressions easier or more difficult for students of different ages to understand. Regarding metaphors, similes, and proverbs, studies found that when the expressions conveyed physical or perceptual concepts, they were easier to understand than those that conveyed mental or psychological meanings; that knowledge of the relevant semantic features of the keywords contained in an expression was essential to students' understanding; that comprehension improved when the expressions were presented in supportive story contexts rather than in isolation, a finding that was consistent with research on idioms; and that performance was higher on receptive than on expressive language tasks (e.g., Baldwin et al., 1982; Douglas & Peel, 1979; Evans & Gamble, 1988; Nippold et al., 1984, 1988; Resnick, 1982; Reynolds & Ortony, 1980; Siltanen, 1989; Waggoner & Palermo, 1989; Winner et al., 1980).

Regarding idioms, Gibbs (1987) made an important distinction between transparent and opaque expressions. With *transparent* idioms (e.g., go by the book, skating on thin ice), the figurative meaning (i.e., to follow the rules carefully, to place oneself in a dangerous situation) is a metaphorical extension of the literal meaning; however, with *opaque* idioms (e.g., beat around the bush, paint the town red), the two meanings have little overlap (i.e., to avoid discussing a topic; to go out and celebrate wildly). In a study of children ages 5–9 years (n = 80), Gibbs found that transparent idioms were easier to understand than opaque, and that both types were easier to understand when presented in supportive story contexts rather than in isolation.

Relatedly, researchers during the 1980s continued to examine the development of *contextual abstraction* (e.g., Carnine et al., 1984; Nagy & Herman, 1987; Sternberg, 1987; Wysocki & Jenkins, 1987), a word learning strategy that had been introduced decades earlier (Werner & Kaplan, 1952). Once students have learned to read fluently, they are able to gain exposure to challenging new words that occur more often in print than in daily conversations. This affords them the opportunity to learn thousands of new words each year, especially when they frequently read complex academic material. The learning process begins when the reader attends closely to linguistic clues surrounding an unfamiliar word. In the following sentence, for example, the medical term *vertigo* is explained by the appositive construction that immediately follows it: The lecturer experienced vertigo, a sudden sensation of dizziness, and had to sit down. Contextual abstraction is an efficient strategy for expanding one's knowledge of words.

During the 1980s, researchers also initiated studies of the development of metalinguistic and metacognitive verbs (e.g., Astington & Olson, 1987). Whereas metalinguistic verbs refer to acts of *speaking* (e.g., argue, assert, predict), metacognitive verbs refer to acts of *thinking* (e.g., analyze, infer, remember). Also called meta-verbs, they reflect an awareness that verbal and mental events of the self and others can be analyzed. As students advance through middle school, high school, and college, they encounter these words with increasing frequency, particularly when reading books and other materials that focus on academically rigorous topics (e.g., science, history, literature). Research has

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

shown that comprehension of meta-verbs improves during these years but that some verbs (e.g., extrapolate, renounce) may remain challenging well into adulthood.

During the 1980s, researchers also examined the development of derivational morphology (e.g., Templeton & Scarborough-Franks, 1985; Tyler & Nagy, 1989; Wysocki & Jenkins, 1987), the understanding of sarcasm (e.g., Ackerman, 1982, 1986; Demorest et al., 1983; Winner, 1988), and the interpretation of ambiguity found in advertisements (Nippold et al., 1988). Each of these areas also requires metalinguistic competence to discern the intended meaning of words, phrases, and sentences.

1.5. The 1990s

Developmental studies of derivational morphology in relation to metalinguistic competence continued during the 1990s, with researchers learning more about the substantial contribution it makes to word learning, spelling, decoding, and reading comprehension during the school-age and adolescent years (e.g., Carlisle & Nomanbhoy, 1993; N. Jones, 1991; Nagy et al., 1993; Windsor, 1994). Indeed, the contribution of metalinguistic competence to later language development became a prominent theme during the 1990s. As mentioned earlier, metalinguistic competence is the ability of an individual to step back and reflect upon or analyze various aspects of language. Different types of metalinguistic competence include meta-phonology, meta-morphology, meta-semantics, meta-syntax, and meta-pragmatics (Gombert, 1997), activities that focus on the use and understanding of speech sounds, word parts, meaningful units, sentential structures, and social skills, respectively. Age-related improvements in the ability to engage in these activities promote all aspects of later language development.

Illustrating this phenomenon, Anglin (1993) examined children's ability to learn the meanings of words through morphological analysis. Children who were ages 6–10 years old ($n = 96$) were individually interviewed and asked to explain the meanings of some unfamiliar words. Performance improved during this age range in the ability to determine the meanings of compound words (e.g., firesafe) and derived adjectives (e.g., workable) by attending to the meanings of the lexical (e.g., fire, safe, work) and derivational (e.g., −able) morphemes contained within the words and then putting them together to determine the larger meaning.

Progress also occurred in clarifying the linguistic nature of reading and writing, debunking the once-prominent view that these activities were primarily a function of visual, auditory, kinesthetic, and tactile perceptual processes (Fernald, 1943). Research conducted in the 1990s showed that reading and writing were language-based skills, and in particular, that a child's level of phonological and morphological awareness contributed substantially to the acquisition of early literacy skills (Moats, 1994; Vellutino, 1991). Accordingly, researchers advocated for teaching these skills to young children who were just learning to read and to older children who had not yet mastered them.

Reading and writing are critical to later language development. As children progress through school, their ability to read and write promotes their acquisition of more sophisticated words, syntactic structures, and figurative expressions. This, in turn, enhances their comprehension and production of complex materials they may read or write and allows them to engage in more sophisticated forms of discourse (e.g., expository). As the acquisition of advanced language skills feeds back into their expanding literacy skills, a symbiotic relationship develops, which supports continued growth in both areas into adulthood.

Thus, it is not surprising that studies published during the 1990s documented age-related advancements in the ability of school-age children, adolescents, and adults to

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

define abstract nouns such as *freedom*, *humility*, and *compassion* (McGhee-Bidlack, 1991; Nippold et al., 1999); to use and understand adverbial conjuncts such as *consequently*, *furthermore*, and *nevertheless* (Nippold et al., 1992); to interpret sarcastic remarks (e.g., Capelli et al., 1990; Dews et al., 1996; Keenan & Quigley, 1999); and to comprehend idioms and proverbs (e.g., Nippold et al., 1996, 1997; Nippold & Haq, 1996; Nippold & Rudzinski, 1993; Nippold & Taylor, 1995; Spector, 1996).

Studies of syntactic development also continued, with researchers examining the influence of genre. Leadholm and Miller (1992), for example, elicited conversational and narrative language samples from children who were ages 3–13 years (n = 266). Although age-related increases occurred in mean length of utterance (MLU) in both genres, syntactic complexity was greater in narrative than in conversational speaking. Similarly, Gutierrez-Clellen and Hofstetter (l994) examined the development of narrative speaking in children ages 5–8 years old (n = 77). Their participants who were native Spanish speakers viewed a silent movie and retold the story. Age-related increases occurred in MLU and in the use of relative clauses.

1.6. 2000–2009

Studies of syntactic development and the influence of genre continued during the early 2000s. In addition to conversational and narrative discourse, researchers examined expository and persuasive discourse. Expository discourse is the ability to explain complex phenomena (e.g., the steps, stages, and materials needed to build a plastics recovery system), whereas persuasive discourse is the ability to convince other people to perform some action (e.g., to volunteer at a plastics recovery program at a local beach). Both genres tend to elicit greater syntactic complexity than conversational discourse by requiring more precise and detailed topic knowledge and verbal expression that is accurate, clear, and efficient. Thus, it has been argued that with syntactic development, "Complex talk reflects complex thought" (Nippold, 2014).

Studies involving different languages (e.g., Dutch, English, French, Hebrew, Spanish) have shown that syntax continues to develop during the school-age years, adolescence, and into adulthood, with gains most apparent in narrative, expository, and persuasive discourse (e.g., Berman & Verhoeven, 2002; Nippold, Hesketh, et al., 2005; Nippold, Ward-Lonergan, & Fanning, 2005; Ravid & Berman, 2006; Scott & Windsor, 2000; Verhoeven et al., 2002). During these years, utterances become longer and more complex as the number of clauses (main and subordinate) increases, a phenomenon known as *clause packaging*. Moreover, as the level of syntactic complexity expands, speakers and writers tend to use a greater number and variety of difficult words in their sentences. These may include, for example, low-frequency meta-verbs (postulate, conceptualize), derivational nouns (inaccessibility, conservancy), derivational adjectives (inspirational, pervasive), and morphologically complex adverbs (considerably, substantially) – words that a student is likely to encounter when reading high-level academic materials such as textbooks in history classes. In this way, lexical and syntactic development work together to enhance each other, reflecting the *lexicon–syntax interface* (Ravid, 2004).

During the early 2000s, researchers also studied the development of derivational morphology, revealing its close association to the development of literacy skills. These include, for example, the ability to decode, spell, and learn the meanings of words, and to comprehend written material (e.g., Carlisle, 2000; Carlisle & Katz, 2006; Deacon & Bryant, 2006; Larsen & Nippold, 2007; Mahony et al., 2000; Singson et al., 2000).

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Other topics studied during this decade included the development of word definition, with studies confirming earlier findings that the ability to explain the meanings of words gradually improved during the school-age years, adolescence, and into adulthood; that nouns were increasingly defined in terms of their superordinate category terms (e.g., A car is a type of *vehicle*); and that abstract and low-frequency words were especially difficult to define. Studies also showed that verbs and adjectives were defined differently from nouns (e.g., Marinellie & Chan, 2006; Marinellie & Johnson, 2003, 2004). Whereas verbs were defined by stating the key activity involved (e.g., To run means to go forward by moving your legs quickly), adjectives were defined by offering a synonym of the target word (e.g., Beautiful means gorgeous).

Additional studies of figurative language were also conducted during the early 2000s, showing that, as the understanding of idioms and proverbs improves during the school-age years, adolescence, and into adulthood, so does the ability to describe relevant mental images of the expressions (Duthie et al., 2008; Nippold & Duthie, 2003). For example, Duthie et al. reported that for the proverb "One bad apple spoils the whole barrel," an 11-year-old child described an image of seeing a large barrel of apples covered with worms. In contrast, a 21-year-old adult described an image of an unpleasant person disrupting a group of peers who were enjoying a conversation. The authors suggested that having a clear mental image of a proverb or idiom is associated with having a deeper understanding of its figurative meaning.

1.7. 2010–2019

Numerous studies published between 2010 and 2019 focused on the development of discourse, including conversational, narrative, and expository. Often, the goal was to determine the levels of performance that could be expected of children, adolescents, or adults of different ages (e.g., Frizelle et al., 2018; Heilmann et al., 2010; Heilmann & Malone, 2014; Nippold et al., 2015; Nippold, Cramond, & Hayward-Mayhew, 2014; Nippold, Frantz-Kaspar, et al., 2014; Nippold & Sun, 2010; Nippold, Vigeland, et al., 2017; Sun & Nippold, 2012; Westerveld & Moran, 2011, 2013; Westerveld & Vidler, 2016).

For example, Nippold, Frantz-Kaspar, et al. (2014) compared the level of syntactic complexity used in conversational versus narrative speaking in a group of 14-year-old adolescents ($n = 40$). To begin, the examiner engaged each participant in a conversation about topics of general interest (e.g., friends, school, sports). Then, to elicit narrative discourse, the participant was asked to listen to two fables from Aesop (*The Mice in Council*, *The Monkey and the Dolphin*) and then to retell each one. Results indicated that the narrative task elicited greater syntactic complexity than the conversational task as measured by MLCU and CD.

Subsequently, Nippold, Frantz-Kaspar, and Vigeland (2017) administered the same conversational and narrative tasks to a group of 22-year-old adults ($n = 40$). Once again, the narrative task elicited greater syntactic complexity than the conversational task on both measures (MLCU, CD). In this study, the researchers also compared the performance of the adults to that of the adolescents who had participated in the previous study (Nippold, Frantz-Kaspar, et al., 2014). Results showed that on the conversational task, the adults outperformed the adolescents on both measures of syntactic complexity (MLCU, CD). On the narrative task, however, the groups did not differ with both groups using high levels of syntactic complexity.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Regarding expository discourse, Westerveld and Moran (2011) elicited spoken language samples from two groups of children, one younger (ages 6 and 7 years; $n = 66$) and one older (age 11 years; $n = 20$), using the Favorite Game or Sport (FGS) task. This task required the participant to explain the basic rules and strategies associated with a FGS (e.g., chess, checkers, football, soccer). The results showed that the FGS task was effective in eliciting expository discourse even from the younger group; that the older group outperformed the younger group on verbal productivity (total T-units produced), verbal fluency (fewer mazes), and grammatical accuracy; but that the two groups did not differ on syntactic complexity (MLTU).

Heilmann and Malone (2014) also used the FGS task to elicit expository language samples. The participants in their study were children and adolescents who were ages 10 through 15 years old ($n = 235$). The results indicated age-related increases in syntactic complexity (MLCU) and in lexical diversity (number of different words produced) during this age range.

Researchers also examined other topics during this decade, documenting gradual age-related improvements in a variety of areas. These included, for example, the development of word definition, humor, sarcasm, proverb and idiom understanding, reading comprehension, written expression, metalinguistic competence, and pragmatics (e.g., Apel et al., 2012; Baines & Howe, 2010; Berman & Ravid, 2010; Cameron et al., 2010; Garcia & Cain, 2014; Glenwright et al., 2014; Glenwright & Pexman, 2010; Hung & Nippold, 2014; Matloubi et al., 2015; Nation, 2019; Wagner et al., 2011; Yoon et al., 2016).

1.8. 2020–2025

Since 2020, research in later language development has continued unabated. Areas of investigation have included persuasive and narrative discourse, past tense counterfactual (PTCF) sentences, and critical thinking (e.g., Heilmann et al., 2020; Nippold, LaFavre, & Shinham, 2020; Nippold, Nehls-Lowe, & Lee, 2020; Nippold, Shinham, & LaFavre, 2021; Wallis et al., 2021; Wallis & Westerveld, 2024).

Heilmann et al. (2020), for example, examined the development of persuasive speaking in adolescents who were enrolled in Grades 8, 9, 10, 11, and 12 (ages 13–18 years; $n = 179$). Each participant was asked to try to convince an adult authority figure to change a specific policy or rule. A planning sheet with topic headings (e.g., What do you believe? What are your reasons?) was provided to assist the participant to think about the topic and organize a response before speaking. Although no age-related differences were found, even the youngest adolescents produced high levels of syntactic complexity and persuasive effectiveness on this task.

To examine different types of narrative speaking, Wallis and Westerveld (2024) elicited language samples from adolescents who were ages 12–18 years old ($n = 44$). Each participant was asked to listen to and retell a fable (*The Mice in Council*); to generate a fictional story from a wordless picture book (*One Frog Too Many*); and to tell a personal story about an emotional experience (e.g., encountering a bully, feeling excited, having a problem). Results indicated that the fable retell elicited the highest level of syntactic complexity (MLCU = 13.45 words) and that the personal story elicited the highest verbal productivity (mean number of C-units = 85.57). However, no age-related differences were found on any of the narrative speaking measures.

A PTCF sentence (e.g., If the coach had supervised the workout, the athletes would have completed the drills) consists of a subordinate clause that contains the past perfect

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

verb form (*had supervised*) and a main clause that contains the present perfect verb form (*would have completed*). A type of low-frequency complex sentence, the PTCF expresses conditions that, in reality, did not happen (i.e., the coach did *not* supervise the workout; the athletes did *not* complete the drills), hence the term *counterfactual.* These sentences are a late linguistic attainment. Although accuracy in producing and comprehending PTCF sentences gradually improves during the school-age and adolescent years, they remain challenging even for many young adults (Nippold, LaFavre, & Shinham, 2020; Nippold, Nehls-Lowe, & Lee, 2020).

Critical thinking is the ability to analyze an argument or claim and then decide for oneself what to believe or do, based on having clear reasons and solid evidence. This is a higher-order cognitive skill that requires advanced levels of language ability in all areas (syntax, morphology, semantics, pragmatics) and a strong foundation in literacy, including speaking, listening, reading, and writing. In the current era of widespread disinformation and misinformation, often espoused through social media, critical thinking is an essential skill for people of all ages to cultivate.

Nippold, LaFavre, and Shinham (2020) examined the development of critical thinking in adolescents who were ages 13 and 16 years old (n = 40 per group). Participants completed a written language task that involved four fables by Aesop (*the Fox and the Grapes*, *the Crow and the Pitcher, the Ant and the Grasshopper, the Rooster and the Fox*), each of which ended in a moral message (It is easy to despise what you cannot get, Necessity is the mother of invention, It is best to prepare for the days of necessity, Beware of the sudden offers of friendship, respectively). After reading a fable, participants were asked to indicate if they agreed or disagreed with the moral message or were unsure, and to explain their answer in writing. A 4-point scoring system was used to evaluate the quality of critical thinking that was expressed. The explanations were also evaluated for linguistic sophistication. The results indicated that the 16-year-olds outperformed the 13-year-olds in providing explanations that reflected independent thinking and application to real-life situations, showing that critical thinking improved during adolescence. However, not even the older group showed mastery of the task. Linguistic analyses also revealed age-related advancements in verbal productivity and metacognitive verb use, but not in syntactic complexity, with both groups already using high levels of syntactic complexity.

2. Summary

For more than 80 years, researchers have examined the development of spoken and written language in school-age children, adolescents, and young adults. With studies addressing a broad array of topics, a considerable amount of information has been learned. For example, there is evidence that later language development is heavily influenced by cognitive, social, and emotional development, metalinguistic competence, educational opportunity, literacy exposure, and a supportive environment. It is also known that later language development differs from early language development in its speed, salience, and substance. That is, development beyond the preschool years is a gradual, protracted process marked by subtle changes in the use and understanding of language. Moreover, to document these changes, it is often necessary to compare children from widely separated age groups (e.g., 6-year-olds versus 10-year-olds) performing academically oriented language tasks (e.g., defining abstract nouns). There is evidence also that growth in later language development may not be obvious unless tasks are presented that prompt individuals to tap into their own cognitive and linguistic resources

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

more fully. For example, in a casual conversational setting, the level of syntactic complexity used by a 15-year-old adolescent may not be much higher than that of a 10-year-old child. However, upon asking each speaker to explain how an interpersonal conflict could best be resolved, the superior syntactic competence of the adolescent will be revealed. The subtle nature of later language development may contribute to the misconception that little growth occurs beyond puberty.

Although most studies have focused on discrete areas of development (e.g., idiom understanding, word learning, the use of complex sentences), the manner in which the smaller parts work together to create a larger operating system is becoming clear, and it is now possible to visualize how the whole is bigger than the sum of its parts. This phenomenon is apparent in the study of critical thinking, which requires a strong foundation in all aspects of spoken and written language, as well as competence in analogical and syllogistic reasoning (Nippold, 2024).

3. Implications

At least 10% of school-age children, adolescents, and young adults have substantial delays or disorders in language development that restrict their ability to achieve their goals in a host of academic, social, and vocational endeavors (e.g., McGregor, 2020; Nippold, 2016a; Tomblin & Nippold, 2014). However, most of these young people are not identified or given a full assessment of their language skills that would justify receiving services from a speech-language therapist (SLT). One factor contributing to this problem is that most SLTs have only a general understanding of later language development, particularly in the area of complex syntax. Thus, they are unsure of what levels of language competence to expect of older students. Relatedly, SLTs are often challenged to identify different types of words, phrases, clauses, and sentences or to state how they function, and often cannot explain what develops at what ages, how this process occurs, or what can be done to facilitate age-appropriate language skills in older students. For this reason, only those students who have more obvious problems in spoken language production (e.g., errors in the use of speech sounds or grammatical morphemes) come to the attention of the SLT. Unfortunately, most training programs for pre-professionals who plan to work with students in kindergarten through Grade 12 do not require extensive coursework in later language development. Although early language development is usually well covered, equal or greater emphasis on later language development should be incorporated into those programs and into the continuing educational coursework required for professionals to maintain licensure.

Once this happens, SLTs will be able to advocate confidently for older students who require treatment for subtle but nonetheless troublesome language deficits. They will also be able to apply their knowledge and understanding of later language development in flexible ways that can address the needs of a wide variety of students of different ages who struggle on a daily basis with spoken and written language tasks at school, in the community, and at work. In this way, greater knowledge of later language development could empower professionals to assist all students to fulfill their potential as effective communicators in the classroom and beyond.

4. Future research

Although much has been learned about later language development, future studies on this topic will always be needed. Currently, however, there is an even greater need for studies

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

that strive to implement what has already been learned into the design of instructional programs for students in kindergarten through college. Known as *implementation science*, such studies could be carried out in ways that apply the relevant findings on later language development for the purpose of building students' spoken and written language skills as a means to promote their success in real-world settings (Nippold, 2015), including schools, communities, and job sites.

For example, older students with weak or disordered language skills often require explicit and systematic instruction in how and when to use the metalinguistic word learning strategies of contextual abstraction and morphological analysis upon encountering unfamiliar words (Nippold, 2018). Studies designed to teach these and other strategies could be quite beneficial, especially if implemented within classrooms (Nippold, 2010). Similarly, many students continue to struggle with the use complex syntax for the purpose of expressing themselves with accuracy, clarity, and efficiency, as when giving an oral report in history class or explaining how to operate an electronic microscope in biology class. Given that topic knowledge is a primary driver of the use of complex syntax (Nippold, 2014), it is reasonable that SLTs, collaborating with classroom teachers, evaluate students' understanding of the subject matter before expecting them to produce complex sentences. It is essential also that SLTs be familiar with the components of complex syntax and can identify, for example, different types of words (e.g., adjectives, adverbs, prepositions), phrases (noun phrases, verb phrases, adjective phrases), clauses (finite, nonfinite, main, subordinate), and sentences (simple, complex, compound, compound-complex). Although detailed information on complex syntax and other aspects of later language development is available (Nippold, 2023, in press), it is often omitted from SLT training programs. Advocacy for implementation science, carried out with older students, could help to address these issues.

Competing interests. This single-authored manuscript is entirely the work of Marilyn A. Nippold. There are no co-authors or other contributors to this manuscript.

References

Ackerman, B. P. (1982). Contextual integration and utterance interpretation: The ability of children and adults to interpret sarcastic utterances. *Child Development*, **53**, 1075–1083. https://doi.org/10.2307/1129149.

Ackerman, B. P. (1986). Children's sensitivity to comprehension failure in interpreting a non-literal use of an utterance. *Child Development*, **57**, 485–497. https://doi.org/10.2307/1130603.

Anglin, J. M. (1993). Vocabulary development: A morphological analysis. *Monographs of the Society for Research in Child Development*, **58**(10). https://doi.org/10.2307/1166112.

Apel, K., **Wilson-Fowler, E. B.**, **Brimo, D.**, & **Perrin, N. A.** (2012). Metalinguistic contributions to reading and spelling in second and third grade students. *Reading and Writing*, **25**, 1283–1305. https://doi.org/10.1007/s11145-011-9317-8.

Asch, S. E., & **Nerlove, H.** (1960). The development of double-function terms in children: An exploratory investigation. In B. Kaplan & S. Wapner (Eds.), *Perspectives in psychological theory: Essays in honor of Heinz Werner* (pp. 47–60). International Universities Press.

Astington, J. W., & **Olson, D. R.** (1987). Literacy and schooling: Learning to talk about thought. In *Paper presented at the annual meeting of the American Educational Research Association*.

Baines, E., & **Howe, C.** (2010). Discourse topic management and discussion skills in middle childhood: The effects of age and task. *First Language*, **30**(3/4), 508–534. https://doi.org/10.1177/0142723710370538.

Baldwin, R. S., **Luce, T. S.**, & **Readence, J. E.** (1982). The impact of subschemata on metaphorical processing. *Reading Research Quarterly*, **17**, 528–543. https://doi.org/10.2307/747569.

Berman, R. A., & **Ravid, D.** (2010). Interpretation and recall of proverbs in three school-age populations. *First Language*, **30**(2), 155–173. https://doi.org/10.1177/0142723709359246.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Berman, R. A., & **Verhoeven, L.** (2002). Cross-linguistic perspectives on the development of text-production abilities: Speech and writing. *Written Language and Literacy*, **5**(1), 1–43. https://doi.org/10.1075/wll.5.1.02ber.

Billow, R. M. (1975). A cognitive developmental study of metaphor comprehension. *Developmental Psychology*, **11**, 415–423.

Boswell, D. A. (1979). Metaphor processing in the mature years. *Human Development*, **22**, 373–384.

Cameron, E. L., **Fox, J. D.**, **Anderson, M. S.**, & **Cameron, C. A.** (2010). Resilient youths use humor to enhance socioemotional functioning during a day in the life. *Journal of Adolescent Research*, **25**(5), 716–742. https://doi.org/10.1177/0743558410366595.

Capelli, C. A., **Nakagawa, N.**, & **Madden, C. M.** (1990). How children understand sarcasm: The role of context and intonation. *Child Development*, **61**, 1824–1841. https://doi.org/10.2307/1130840.

Carlisle, J. (2000). Awareness of the structure and meaning of morphologically complex words: Impact on reading. *Reading and Writing*, **12**, 169–190. https://doi.org/10.1023/A:1008131926604.

Carlisle, J., & **Nomanbhoy, D.** (1993). Phonological and morphological awareness in first graders. *Applied PsychoLinguistics*, **14**, 177–195.

Carlisle, J. F., & **Katz, L. A.** (2006). Effects of word and morpheme familiarity on reading of derived words. *Reading and Writing*, **19**, 669–693. https://doi.org/10.1007/s11145-005-5766-2.

Carnine, D., **Kame'enui, E. J.**, & **Coyle, G.** (1984). Utilization of contextual information in determining the meaning of unfamiliar words. *Reading Research Quarterly*, **19**, 188–204. https://doi.org/10.2307/747362.

Clark, R. A., & **Delia, J. G.** (1976). The development of functional persuasive skills in childhood and early adolescence. *Child Development*, **47**, 1008–1014. https://doi.org/10.2307/1128437.

Crowhurst, M. (1980). Syntactic complexity in narration and argument at three grade levels. *Canadian Journal of Education*, **5**, 6–13. https://doi.org/10.2307/1494634.

Crowhurst, M., & **Piche, G. L.** (1979). Audience and mode of discourse effects on syntactic complexity in writing at two grade levels. *Research in the Teaching of English*, **13**, 101–109. https://doi.org/10.58680/rte197917847.

Deacon, S. H., & **Bryant, P.** (2006). Getting to the root: Young writers' sensitivity to the role of root morphemes in the spelling of inflected and derived words. *Journal of Child Language*, **33**, 401–417. https://doi.org/10.1017/S0305000906007409.

Delia, J. G., **Kline, S. L.**, & **Burleson, B. R.** (1979). The development of persuasive communication strategies in kindergartners through twelfth-graders. *Communication Monographs*, **46**, 241–256. https://doi.org/10.1080/03637757909376010.

Demorest, A., **Silberstein, L.**, **Gardner, H.**, & **Winner, E.** (1983). Telling it as it isn't: Children's understanding of figurative language. *British Journal of Developmental Psychology*, **1**, 121–134. https://doi.org/10.1111/j.2044-835X.1983.tb00550.x.

Dews, S., **Winner, E.**, **Kaplan, J.**, **Rosenblatt, E.**, **Hunt, M.**, **Lim, K.**, … **Smarsh, B.** (1996). Children's understanding of the meaning and functions of verbal irony. *Child Development*, **67**, 3071–3085. https://doi.org/10.1111/j.1467-8624.1996.tb01903.x.

Douglas, J. D., & **Peel, B.** (1979). The development of metaphor and proverb translation in children grades 1 through 7. *Journal of Educational Research*, **73**, 116–119.

Duthie, J. K., **Nippold, M. A.**, **Billow, J. L.**, & **Mansfield, T. C.** (2008). Mental imagery of concrete proverbs: A developmental study of children, adolescents, and adults. *Applied PsychoLinguistics*, **29**, 151–173. https://doi.org/10.1017/S0142716408080077.

Evans, M. A., & **Gamble, D. L.** (1988). Attribute saliency and metaphor interpretation in school-age children. *Journal of Child Language*, **15**, 435–449. https://doi.org/10.1017/S0305000900012447.

Feifel, H., & **Lorge, I.** (1950). Qualitative differences in the vocabulary responses of children. *Journal of Educational Psychology*, **41**, 1–18.

Fernald, G. M. (1943). *Remedial techniques in basic school subjects*. McGraw-Hill.

Finley, G. E., & **Humphreys, C. A.** (1974). Naive psychology and the development of persuasive appeals in girls. *Canadian Journal of Behavioral Science*, **6**, 75–80. https://doi.org/10.1037/h0081857.

Flavell, J. H., **Botkin, P. T.**, **Fry, C. L.**, **Wright, J. W.**, & **Jarvis, P. E.** (1968). *The development of role-taking and communication skills in children*. Wiley.

Frizelle, P., **Thompson, P. A.**, **McDonald, D.**, & **Bishop, D. V. M.** (2018). Growth in syntactic complexity between four years and adulthood: Evidence from a narrative task. *Journal of Child Language*, **45**, 1174–1197. https://doi.org/10.1017/S0305000918000144.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Garcia, J. R., & **Cain, K.** (2014). Decoding and reading comprehension: A meta-analysis to identify which reader and assessment characteristics influence the strength of the relationship in English. *Review of Educational Research*, **84**(1), 74–111. https://doi.org/10.3102/0034654313499616.

Gibbs, R. W. (1987). Linguistic factors in children's understanding of idioms. *Journal of Child Language*, **14**, 569–586. https://doi.org/10.1017/S0305000900010291.

Giedd, J. N. (2004). Structural magnetic resonance imaging of the adolescent brain. *Annals of the New York Academy of Sciences*, **1021**, 77–85.

Giedd, J. N., **Blumenthal, J.**, **Jeffries, N. O.**, **Castellanos, F. X.**, **Liu, H.**, **Zijdenbos, A.**, … **Rapoport, J. L.** (1999). Brain development during childhood and adolescence: A longitudinal MRI study. *Nature*, **2**, 861–863.

Glenwright, M., **Parackel, J. M.**, **Cheung, K. R. J.**, & **Nilsen, E. S.** (2014). Intonation influences how children and adults interpret sarcasm. *Journal of Child Language*, **41**, 472–484. https://doi.org/10.1017/S0305000912000773.

Glenwright, M., & **Pexman, P. M.** (2010). Development of children's ability to distinguish sarcasm and verbal irony. *Journal of Child Language*, **37**, 429–451. https://doi.org/10.1017/S0305000909009520.

Gogtay, N., **Giedd, J. N.**, **Lusk, L.**, **Hayashi, K. M.**, **Greenstein, D.**, **Vaituzis, A. C.**, … **Tompson, P. M.** (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, **101**(21), 8174–8179.

Gombert, J. E. (1992). *Metalinguistic development*. University of Chicago Press.

Gombert, J. E. (1997). Metalinguistic development in first-language acquisition. In L. Van Lier & D. Corson (Eds.), *Encyclopedia of language and education. Encyclopedia of language and education* (Vol. **6**). Springer. https://doi.org/10.1007/978-94-011-4533-6_5.

Gorham, D. R. (1956). A proverbs test for clinical and experimental use. *Psychological Reports*, **2**, 1–12.

Gutierrez-Clellen, V. F., & **Hofstetter, R.** (1994). Syntactic complexity in Spanish narratives: A developmental study. *Journal of Speech and Hearing Research*, **37**, 645–654. https://doi.org/10.1044/jshr.3703.645.

Hartshorne, J. K., **Tenenbaum, J. B.**, & **Pinker, S.** (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, **177**, 263–277. https://doi.org/10.1016/j.cognition.2018.04.007.

Heilmann, J., & **Malone, T. O.** (2014). The rules of the game: Properties of a database of expository language samples. *Language, Speech, and Hearing Services in Schools*, **45**(4), 277–290. https://doi.org/10.1044/2014_LSHSS-13-0050.

Heilmann, J., **Malone, T. O.**, & **Westerfeld**. (2020). Properties of spoken persuasive language samples from typically developing adolescents. *Language, Speech, and Hearing Services in Schools*, **51**, 441–456. https://doi.org/10.1044/2019_LSHSS-19-00078.

Heilmann, J., **Miller, J. F.**, **Nockerts, A.**, & **Dunaway, C.** (2010). Properties of the narrative scoring scheme using narrative retells in young school-age children. *American Journal of Speech-Language Pathology*, **19**, 154–166.

Holden, M. H. (1978). *Proverbs, proportions, and Piaget. Paper presented at the annual international interdisciplinary conference on Piagetian theory and the helping professions*.

Honeck, R. P., **Sowry, B. M.**, & **Voegtle, K.** (1978). Proverbial understanding in a pictorial context. *Child Development*, **49**, 327–331. https://doi.org/10.2307/1128694.

Hung, P.-F., & **Nippold, M. A.** (2014). Idiom understanding in adulthood: Examining age-related differences. *Clinical Linguistics & Phonetics*, **28**(3), 208–221. https://doi.org/10.3109/02699206.2013.850117.

Hunt, K. W. (1965). *Grammatical structures written at three grade levels*. National Council of Teachers of English.

Jones, N. (1991). Development of morphophonemic segments in children's mental representations of words. *Applied PsychoLinguistics*, **12**, 217–239.

Karmiloff-Smith, A. (1986). Some fundamental aspects of language development after age 5. In P. Fletcher & M. Garman (Eds.), *Language acquisition: Studies in first language development* (2nd ed., pp. 455–474). Cambridge University Press.

Keenan, T. R., & **Quigley, K.** (1999). Do young children use echoic information in their comprehension of sarcastic speech? A test of echoic mention theory. *British Journal of Developmental Psychology*, **17**, 83–96. https://doi.org/10.1348/026151099165168.

Kessel, F. S. (1970). The role of syntax in children's comprehension from ages six to twelve. *Monographs of the Society for Research in Child Development*, **35**(6). https://doi.org/10.2307/1165662.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Klecan-Aker, J. S., & **Hedrick, D. L.** (1985). A study of the syntactic skills of normal school-age children. *Language, Speech, and Hearing Services in Schools*, **16**, 187–198.

Larsen, J. A., & **Nippold, M. A.** (2007). Morphological analysis in school-age children: Dynamic assessment of a word-learning strategy. *Language, Speech, and Hearing Services in Schools*, **38**, 201–212. https://doi.org/10.1044/0161-1461(2007/021).

Leadholm, B. J., & **Miller, J. F.** (1992). *Language sample analysis: The Wisconsin guide*. Wisconsin Department of Public Instruction.

Lenneberg, E. H. (1967). *Biological foundations of language*. John Wiley.

Leona, M. H. (1978). An examination of adolescent clique language in a suburban secondary school. *Adolescence*, **13**, 495–502.

Loban, W. (1963). *The language of elementary school children*. (Research Report No. 1). Champaign, IL: National Council of Teachers of English.

Loban, W. (1976). *Language development: Kindergarten through grade twelve* (Research Report No. 18). Urbana, IL: National Council of Teachers of English.

Lodge, D. N., & **Leach, E. A.** (1975). Children's acquisition of idioms in the English language. *Journal of Speech and Hearing Research*, **18**, 521–529. https://doi.org/10.1044/jshr.1803.521.

Mahony, D., **Singson, M.**, & **Mann, V.** (2000). Reading ability and sensitivity to morphological relations. *Reading and Writing*, **12**, 191–218. https://doi.org/10.1023/A:1008136012492.

Malgady, R. G. (1977). Children's interpretation and appreciation of similes. *Child Development*, **48**, 1734–1738.

Mandler, J. M., & **Johnson, N. S.** (1977). Remembrance of things parsed: Story structure and recall. *Cognitive Psychology*, **9**, 111–151. https://doi.org/10.1016/0010-0285(77)90006-8.

Marinellie, S. A., & **Chan, Y.** (2006). The effect of word frequency on noun and verb definitions: A developmental study. *Journal of Speech, Language, and Hearing Research*, **49**(5), 1001–1021. https://doi.org/10.1044/1092-4388(2006/072).

Marinellie, S. A., & **Johnson, C. J.** (2003). Adjective definitions and the influence of word frequency. *Journal of Speech, Language, and Hearing Research*, **46**, 1061–1076. https://doi.org/10.1044/1092-4388(2003/084).

Marinellie, S. A., & **Johnson, C. J.** (2004). Nouns and verbs: A comparison of definitional style. *Journal of Psycholinguistic Research*, **33**(3), 217–235. https://doi.org/10.1023/B:JOPR.0000027963.80639.88.

Matloubi, S., **Zarifian, T.**, **Shirazi, T.S.**, & **Bakhshi, E.** (2015). Word definitional skill in school age Persian speaking children: A developmental study on form. *Iranian Rehabilitation Journal*, **13**(3), 103–108. https://sid.ir/paper/325357/en

McGhee-Bidlack, B. (1991). The development of noun definitions: A metalinguistic analysis. *Journal of Child Language*, **18**, 417–434. https://doi.org/10.1017/S0305000900011132.

McGregor, K. K. (2020). How we fail children with developmental language disorder. *Language, Speech, and Hearing Services in Schools*, **51**(4), 981–992. https://doi.org/10.1044/2020_LSHSS-20-00003.

Moats, L.C. (1994). The missing foundation in teacher education: Knowledge of the structure of spoken and written language. *Annals of Dyslexia* **44**, 81–102. https://doi.org/10.1007/BF02648156

Morris, N. T., & **Crump, W. D.** (1982). Syntactic and vocabulary development in the written language of learning disabled and non-disabled students at four age levels. *Learning Disability Quarterly*, **5**, 163–172.

Nagy, W., **Diakidoy, I.**, & **Anderson, R.** (1993). The acquisition of morphology: Learning the contribution of suffixes to the meanings of derivatives. *Journal of Reading Behavior*, **25**(2), 155–171. https://doi.org/10.1080/10862969309547808.

Nagy, W. E., & **Herman, P. A.** (1987). Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction. In M. G. McKeown & M. E. Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 19–35). Hillsdale, NJ: Erlbaum.

Nation, K. (2019). Children's reading difficulties, language, and reflections on the simple view of reading. *Australian Journal of Learning Difficulties*, **24**(1), 47–73. https://doi.org/10.1080/19404158.2019.1609272.

Nelsen, E. A., & **Rosenbaum, E.** (1972). Language patterns within the youth subculture: Development of slang vocabularies. *Merrill-Palmer Quarterly*, **18**, 273–285. http://www.jstor.org/stable/23084611.

Nippold, M. A. (1988). *Later language development: Ages nine through nineteen*. Pro-Ed.

Nippold, M. A. (1998). *Later language development: The school-age and adolescent years (*2nd ed.). Pro-Ed.

Nippold, M. A. (2007). *Later language development: School-age children, adolescents, and young adults* (3rd ed.). Austin, TX: Pro-Ed.

Nippold, M. A. (2010). Back to school: Why the speech-language pathologist belongs in the classroom. *Language, Speech, and Hearing Services in Schools*, **41**, 377–378.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Nippold, M. A. (2014). Language intervention at the middle school: Complex talk reflects complex thought. *Language, Speech, and Hearing Services in Schools*, **45**(2), 153–156.

Nippold, M. A. (2015). Call for studies in implementation science: Improving reading comprehension in school-age children [from the editor]. *Language, Speech, and Hearing Services in Schools*, **46**, 65–67.

Nippold, M. A. (2016a). Language disorders in adolescents: Current needs and future directions. *Seminars in Speech and Language*, **37**(4), 274–279.

Nippold, M. A. (2016b). *Later language development: School-age children, adolescents, and young adults* (4th ed.). Pro-Ed.

Nippold, M. A. (2018). The literate lexicon in adolescents: Monitoring the use and understanding of morphologically complex words. *Perspectives of the ASHA special interest groups*, *SIG 1*, *Language Learning and Education*, **3** (4), 211–221.

Nippold, M.A. (2023). *Grammar guide for speech-language pathologists: Steps to analyzing complex syntax*. San Diego, CA: Plural. https://www.pluralpublishing.com/publications/grammar-guide-for-speech-language-pathologists-steps-to-analyzing-complex-syntax.

Nippold, M. A. (2024). Unlocking logical fallacies: A key to building critical thinking skills in adolescents. *Perspectives of the ASHA special interest groups, SIG 1. Language Learning and Education*, **9**, 1–13. https://doi.org/10.1044/2023_PERSP-23-00108.

Nippold, M. A. (in press). *Later language development: Ages 5–25* (5th ed.). Pro-Ed.

Nippold, M. A., **Cramond, P. M.**, & **Hayward-Mayhew, C.** (2014). Spoken language production in adults: Examining age-related differences in syntactic complexity. *Clinical Linguistics & Phonetics*, **28**(3), 195–207. https://doi.org/10.3109/02699206.2013.841292.

Nippold, M. A., **Cuyler, J. S.**, & **Braunbeck-Price, R.** (1988). Explanation of ambiguous advertisements: A developmental study with children and adolescents. *Journal of Speech and Hearing Research*, **31**, 466–474. https://doi.org/10.1044/jshr.3103.466.

Nippold, M. A., & **Duthie, J. K.** (2003). Mental imagery and idiom comprehension: A comparison of school-age children and adults. *Journal of Speech, Language, and Hearing Research*, **46**, 788–799. https://doi.org/10.1044/1092-4388(2003/062).

Nippold, M. A., **Frantz-Kaspar, M. W.**, **Cramond, P.**, **Kirk, C.**, **Hayward-Mayhew, C.**, & **MacKinnon, M.** (2014). Conversational and narrative speaking in adolescents: Examining the use of complex syntax. *Journal of Speech, Language, and Hearing Research*, **57**, 876–886. https://doi.org/10.1044/1092-4388(2013/13-0097.

Nippold, M. A., **Frantz-Kaspar, M. W.**, **Cramond, P. M.**, **Kirk, C.**, **Hayward-Mayhew, C.**, & **MacKinnon, M.** (2015). Critical thinking about fables: Examining language production and comprehension in adolescents. *Journal of Speech, Language, and Hearing Research*, **58**(2), 325–335. https://doi.org/10.1044/2015_JSLHR-L-14-0129.

Nippold, M. A., **Frantz-Kaspar, M. W.**, & **Vigeland, L. M.** (2017). Spoken language production in young adults: Examining syntactic complexity. *Journal of Speech, Language, and Hearing Research*, **60**, 1339–1347. https://doi.org/10.1044/2016_JSLHR-L-16-0124.

Nippold, M. A., & **Haq, F. S.** (1996). Proverb comprehension in youth: The role of concreteness and familiarity. *Journal of Speech and Hearing Research*, **39**, 166–176. https://doi.org/10.1044/jshr.3901.166.

Nippold, M. A., **Hegel, S. L.**, **Sohlberg, M. M.**, & **Schwarz, I. E.** (1999). Defining abstract entities: Development in pre-adolescents, adolescents, and young adults. *Journal of Speech, Language, and Hearing Research*, **41**, 473–481. https://doi.org/10.1044/jslhr.4202.473.

Nippold, M. A., **Hesketh, L. J.**, **Duthie, J. K.**, & **Mansfield, T. C.** (2005). Conversational versus expository discourse: A study of syntactic development in children, adolescents, and adults. *Journal of Speech, Language, and Hearing Research*, **48**, 1048–1064. https://doi.org/10.1044/1092-4388(2005/073).

Nippold, M. A., **LaFavre, S.**, & **Shinham, K.** (2020). How adolescents interpret the moral messages of fables: Examining the development of critical thinking. *Journal of Speech, Language, and Hearing Research*, **63**(4), 1212–1226. https://doi.org/10.1044/2019_JSLHR-19-00168.

Nippold, M. A., **Leonard, L. B.**, & **Kail, R.** (1984). Syntactic and conceptual factors in children's understanding of metaphors. *Journal of Speech and Hearing Research*, **27**, 197–205. https://doi.org/10.1044/jshr.2702.197.

Nippold, M. A., **Martin, S. A.**, & **Erskine, B. J.** (1988). Proverb comprehension in context: A developmental study with children and adolescents. *Journal of Speech and Hearing Research*, **31**, 19–28. https://doi.org/10.1044/jshr.3101.19.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Nippold, M. A., **Nehls-Lowe, A.**, & **Lee, D.** (2020). Development of past tense counterfactual sentences: Examining production and comprehension in adolescents and adults. *Journal of Speech, Language, and Hearing Research*, **63**(3), 764–773. https://doi.org/10.1044/2019_JSLHR-19-00036.

Nippold, M. A., & **Rudzinski, M.** (1993). Familiarity and transparency in idiom explanation: A developmental study of children and adolescents. *Journal of Speech and Hearing Research*, **36**, 728–737. https://doi.org/10.1044/jshr.3604.728.

Nippold, M. A., **Schwarz, I. E.**, & **Undlin, R. A.** (1992). Use and understanding of adverbial conjuncts: A developmental study of adolescents and young adults. *Journal of Speech and Hearing Research*, **35**, 108–118. https://doi.org/10.1044/jshr.3501.108.

Nippold, M. A., **Shinham, K.**, & **LaFavre, S.** (2021). Mastering the grammar of past tense counterfactual sentences: A pilot study of adolescents attending low-income schools. *Folia Phoniatrica et Logopaedica*, **73** (6), 455–464. https://doi.org/10.1159/000511902.

Nippold, M. A., & **Sun, L.** (2010). Expository writing in children and adolescents: A classroom assessment tool. *Perspectives on Language Learning and Education: Adolescent Language*, **17**, 100–107. https://doi.org/10.1044/lle17.3.100.

Nippold, M. A., & **Taylor, C. L.** (1995). Idiom understanding in youth: Further examination of familiarity and transparency. *Journal of Speech and Hearing Research*, **38**, 426–433. https://doi.org/10.1044/jshr.3802.426.

Nippold, M. A., **Taylor, C. L.**, & **Baker, J. M.** (1996). Idiom understanding in Australian youth: A cross-cultural comparison. *Journal of Speech and Hearing Research*, **39**, 442–447. https://doi.org/10.1044/jshr.3902.442.

Nippold, M. A., **Uhden, L. D.**, & **Schwarz, I. E.** (1997). Proverb explanation through the lifespan: A developmental study of adolescents and adults. *Journal of Speech, Language, and Hearing Research*, **40**, 245–253. https://doi.org/10.1044/jslhr.4002.245.

Nippold, M. A., **Vigeland, L. M.**, **Frantz-Kaspar, M. W.**, & **Ward-Lonergan, J.** (2017). Language sampling with adolescents: Building a normative database with fables. *American Journal of Speech-Language Pathology*, **26**, 908–920. https://doi.org/10.1044/2017_AJSLP-16-0181.

Nippold, M. A., **Ward-Lonergan, J. M.**, & **Fanning, J. L.** (2005). Persuasive writing in children, adolescents, and adults: A study of syntactic, semantic, and pragmatic development. *Language, Speech, and Hearing Services in Schools*, **36**, 125–138. https://doi.org/10.1044/0161-1461(2005/012).

O'Donnell, R. C., **Griffin, W. J.**, & **Norris, R. D.** (1967). *Syntax of kindergarten and elementary school children: A transformational analysis*. National Council of Teachers of English.

Ortony, A., **Schallert, D. L.**, **Reynolds, R. E.**, & **Antos, S. J.** (1978). Interpreting metaphors and idioms: Some effects of context on comprehension. *Journal of Verbal Learning and Verbal Behavior*, **7**, 465–477. https://doi.org/10.1016/S0022-5371(78)90283-9.

Perera, K. (1986). Language acquisition and writing. In P. Fletcher & M. Garman (Eds.), *Language acquisition: Studies in first language acquisition* (2nd ed., pp. 494–519). Cambridge University Press.

Piche, G. L., **Rubin, D. L.**, & **Michlin, M. L.** (1978). Age and social class in children's use of persuasive communicative appeals. *Child Development*, **49**, 773–780. https://doi.org/10.2307/1128247.

Pollio, M. R., & **Pollio, H. R.** (1979). A test of metaphoric comprehension and some preliminary data. *Journal of Child Language*, **6**, 111–120.

Ravid, D. (2004). Derivational morphology revisited: Later lexical development in Hebrew. In R. A. Berman (Ed.), *Language development across childhood and adolescence* (pp. 53–81). John Benjamins.

Ravid, D., & **Berman, R. A.** (2006). Information density in the development of spoken and written narratives in English and Hebrew. *Discourse Processes*, **41**(2), 117–149. https://doi.org/10.1207/s15326950dp4102_2.

Resnick, D. A. (1982). A developmental study of proverb comprehension. *Journal of Psycholinguistic Research*, **11**, 521–538. https://doi.org/10.1007/BF01067497.

Reynolds, R. E., & **Ortony, A.** (1980). Some issues in the measurement of children's comprehension of metaphoric language. *Child Development*, **51**, 1110–1119.

Richardson, C., & **Church, J.** (1959). A developmental analysis of proverb interpretations. *Journal of Genetic Psychology*, **94**, 169–179.

Robertson, J. E. (1968). Pupil understanding of connectives in reading. *Reading Research Quarterly*, **3**, 387–417.

Rubin, D. L., & **Piche, G. L.** (1979). Development in syntactic and strategic aspects of audience adaptation skills in written persuasive communication. *Research in the Teaching of English*, **13**, 293–316.

Scott, C. M. (1988). Spoken and written syntax. In M. A. Nippold (Ed.), *Later language development: Ages nine through nineteen* (pp. 49–95). College-Hill Press.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Scott, C. M., & **Windsor, J.** (2000). General language performance measures in spoken and written narrative and expository discourse of school-age children with language learning disabilities. *Journal of Speech, Language, and Hearing Research*, **43**, 324–339. https://doi.org/10.1044/jslhr.4302.324.

Shultz, T. R., & **Horibe, F.** (1974). Development of the appreciation of verbal jokes. *Developmental Psychology*, **10**, 13–20. https://doi.org/10.1037/h0035549.

Siltanen, S. A. (1989). Effects of three levels of context on children's metaphor comprehension. *Journal of Genetic Psychology*, **150**, 197–215. https://doi.org/10.1080/00221325.1989.9914591.

Singson, M., **Mahony, D.**, & **Mann, V.** (2000). The relation between reading ability and morphological skills: Evidence from derivational suffixes. *Reading and Writing*, **12**, 219–252. https://doi.org/10.1023/A:1008196330239.

Spector, C. C. (1996). Children's comprehension of idioms in the context of humor. *Language, Speech, and Hearing Services in Schools*, **27**, 307–313. https://doi.org/10.1044/0161-1461.2704.307.

Stein, N. L., & **Glenn, C. G.** (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *New directions in discourse processing* (Vol. **2**, pp. 53–120). Ablex.

Sternberg, R. J. (1987). Most vocabulary is learned from context. In M. G. McKeown & M. E. Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 89–105). Erlbaum.

Strand, K. E., & **Fraser, B.** (1979). *The comprehension of verbal idioms by young children*. Boston University.

Sun, L., & **Nippold, M. A.** (2012). Narrative writing in children and adolescents: Examining the literate lexicon. *Language, Speech, and Hearing Services in Schools*, **43**, 2–13. https://doi.org/10.1044/0161-1461(2011/10-0099).

Templeton, S., & **Scarborough-Franks, L.** (1985). The spelling's the thing: Knowledge of derivational morphology in orthography and phonology among older students. *Applied PsychoLinguistics*, **6**, 371–390.

Tomblin, J. B., & **Nippold, M. A.** (2014). *Understanding individual differences in language development across the school years*. Psychology Press/Taylor & Francis.

Tyler, A., & **Nagy, W.** (1989). The acquisition of English derivational morphology. *Journal of Memory and Language*, **28**, 649–667.

Vellutino, F. R. (1991). Introduction to three studies on reading acquisition: Convergent findings on theoretical foundations of code-oriented versus whole-language approaches to reading instruction. *Journal of Educational Psychology*, **83**(4), 437–443.

Verhoeven, L., **Aparici, M.**, **Cahana-Amitay, D.**, **van Hell, J.**, **Kriz, S.**, & **Viguié-Simon, A.** (2002). Clause packaging in writing and speech: A cross-linguistic developmental analysis. *Written Language & Literacy*, **5**(2), 135–162. https://doi.org/10.1075/wll.5.2.02ver.

Waggoner, J. E., & **Palermo, D. S.** (1989). Betty is a bouncing bubble: Children's comprehension of emotion-descriptive metaphors. *Developmental Psychology*, **25**, 152–163. https://doi.org/10.1037/0012-1649.25.1.152.

Wagner, R. K., **Puranik, C. S.**, **Foorman, B.**, **Foster, E.**, **Wilson, L. G.**, **Tschinkel, E.**, & **Kantor, P. T.** (2011). Modeling the development of written language. *Reading and Writing*, **24**, 203–220. https://doi.org/10.1007/s11145-010-9266-7.

Wallis, A. K., & **Westerveld, M. F.** (2024). Examining adolescent language performance in discourse production across four elicitation tasks. *Language, Speech, and Hearing Services in Schools*, **55**(3), 838–852. https://doi.org/10.1044/2024_LSHSS-23-00163.

Wallis, A. K., **Westerveld, M. F.**, **Waters, A. M.**, & **Snow, P. C.** (2021). Investigating adolescent discourse in critical thinking: Monologic responses to stories containing a moral dilemma. *Language, Speech, and Hearing Services in Schools*, **52**, 630–643. https://doi.org/10.1044/2020_LSHSS-20-00134.

Watts, A. R. (1944). *The language and mental development of children* (pp. 195–217).

Werner, H., & **Kaplan, E.** (1952). *The acquisition of word meanings: A developmental study*. Child Development Publications of the Society for Research in Child Development.

Westerveld, M. F., & **Moran, C. A.** (2011). Expository language skills of young school-age children. *Language, Speech, and Hearing Services in Schools*, **42**(92), 182–193.

Westerveld, M. F., & **Moran, C. A.** (2013). Spoken expository discourse of children and adolescents: Retelling versus generation. *Clinical Linguistics and Phonetics*, **27**(9), 720–734.

Westerveld, M. F., & **Vidler, K.** (2016). Spoken language samples of Australian children in conversation, narration and exposition. *International Journal of Speech-Language Pathology*, **18**(3), 288–298. https://doi.org/10.3109/17549507.2016.1159332.

Windsor, J. (1994). Children's comprehension and production of derivational suffixes. *Journal of Speech and Hearing Research*, **37**, 408–417.

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press

Winner, E. (1988). *The point of words: Children's understanding of metaphor and irony*. Cambridge, MA: Harvard University Press.

Winner, E., **Engel, M.**, & **Gardner, H.** (1980). Misunderstanding metaphor: What's the problem? *Journal of Experimental Child Psychology*, **30**, 22–32.

Wood, J. R., **Weinstein, E. A.**, & **Parker, R.** (1967). Children's interpersonal tactics. *Sociological Inquiry*, **37**, 129–138. 10.1111/j.1475-682X.1967.tb00644.x.

Wysocki, K., & **Jenkins, J. R.** (1987). Deriving word meanings through morphological generalization. *Reading Research Quarterly*, **22**, 66–81. https://doi.org/10.2307/747721.

Yoon, H., **Schwarz, I.**, & **Nippold, M. A.** (2016). Comparing proverb comprehension in Korean and American youth. *Speech, Language and Hearing*, **19**(3), 161–170. https://doi.org/10.1080/2050571X.2016.1164938.

Cite this article: Nippold, M. (2026). Research in Later Language Development: A Historical Perspective. *Journal of Child Language* 1–21, https://doi.org/10.1017/S0305000926100658

https://doi.org/10.1017/S0305000926100658 Published online by Cambridge University Press