Milestones of Early Communication Development

Typical Age	Pragmatics	Semantics
0-8 mo	Perlocutionary: caregivers attribute intent to child's actions	
8-12 mo	Illocutionary intents expressed with gestures and vocalizations: • Requesting objects and actions • Refusing • Commenting • Communicative games Frequency of communicative acts: 2.5/min of free play	Understanding of 3-50 words First words used for names of familiar people and objects; communicative games and routines; to talk about appearance, disappearance, recurrence
12-18 mo	Locutionary intents express same functions with words that were expressed before with preverbal means Frequency of communicative acts: 5/min of free play	Average expressive vocabulary size: 50-100 words at 18 mo Semantic roles expressed in one-word speech include the followng: • Agent • Action • Object • Location • Possession • Rejection • Disappearance • Nonexistence • Denial Words are understood outside of routine games; still need contextual support for lexical comprehension
18-24 mo	Frequency of word use increases over preverbal communication New intents include the following: • Requesting information • Answering questions • Acknowledging Frequency of communicative acts: 7.5/min of free play	Average expressive vocabulary size: 200-300 words at 24 mo Understand single words for objects out of sight Understand two-word relations similar to those expressed Prevalent relations expressed as follows: • Agent-action • Agent-object • Action-object • Action-location • Entity-location • Possessor-possession • Demonstrative-entity • Attribute-entity
24-30 mo	Frequency of topic continuations increase, mostly through repitition "Please" used for polite requests New intents include the following: • Symbolic play • Talk about absent objects • Misrepresenting reality (lies, teases) Narratives are "heap stories," primarily labels and descriptions	Understanding and use of questions about object (what?), people (who?), basic events [what (x) doing? Where (X) going?]
30-36 mo	Topic continuation nears 50% Topics are continued by adding new information Some requests for clarification provided Use of language in play increases Narratives are "sequences," with theme but no plot	Use and understanding of "why" questions Understanding and use of basic spatial terms (*in, on, under,* etc.)
36-42 mo	More flexibility in requesting, including the following: • Permission directives (Can you . . .?) • Indirect requests (Would you . . .?) Direct requests decrease in frequency, as indirect requests increase Narratives are "primitive," with theme and some temporal organization	Semantic relations between adjacent and conjoined sentences include the following: • Additive • Temporal • Causal • Contrastive Understanding of basic color words Use and understanding of basic kinship terms
42-48 mo	New functions emerge, including the following: • Reporting on past events • Reasoning • Predicting • Expressing empathy • Creating imaginary roles and props • Maintaining interactions	Use and understanding of "when" and "how" questions Understanding of words for basic shapes (circle, square, triangle) Use and understanding of basic size vocabulary (big, small) Use of conjunctions *and, because* to conjoin sentences
48-60 mo	Hints that do not mention the intention in the request ("Those smell good!") emerge Ability to address specific requests for clarification increases Narratives are "chains" with some plot, but no high point or resolution	Knowledge of letter names and sounds emerges Knowledge of numbers and counting emerges Use of conjunctions *when, so, because, if*

Data from Chapman, R. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry*, 41, 33-54; Miller, J. (1981). *Assessing language production in children*. Boston, MA: Allyn & Bacon; Weiss, C., Gordon, M., & Lillywhite, H. (1987). *Clinical management of articulatory and phonological disorders* (ed. 2). Baltimore, MD: Williams & Wilkins.

Syntax	Phonology
	0-2 mo—vegetative sounds 2-4 mo—cooing, laughing 4-6 mo—quasi-resonant nuclei, vocal play 6-10 mo—canonical, reduplicated babbling-CV syllables
	Jargon babble with intonation contours of language being learned
	First 50 words • Most often have CV shape • Use same consonants used in early babbling • Use of reduplication, syllable deletion, assimilation, and final consonant deletion is common • Words are selected or avoided for expression based on favored and avoided sounds
Brown's Stage I: Basic Semantic Roles and Relations Two-word utterances emerge Word order is consistent Utterances are "telegraphic" with few grammatical markers	By 24 mo, 9-10 initial and 5-6 final consonants are used Speech is 50% intelligible 70% of consonants are correct CVC and two-syllable words emerge
Brown's Stage II: Grammatical Morphemes Early emerging acquisition: *-ing* in, on, plural /s/ Use of *no*, *not*, *can't*, *don't* as negation between subject and verb Questions formed with rising intonation only Sentences with semi-auxiliaries *gonna*, *wanna*, *gotta*, *hafta* appear	Awareness of rhyme emerges
Brown's Stage III: Modulation of Simple Sentences Present tense auxiliaries appear (*can, will*) Be verbs used inconsistently Overgeneralized past-tense forms appear	Speech is 75% intelligible at 36 mo Ability to produce rhyme emerges
Brown's Stage IV: Emergence of Embedded Sentences First complex sentence forms appear Auxiliary verbs are placed correctly in questions and negatives Irregular past tense, articles (*a, the*), possessive ('s) acquired	Use of reduplication, syllable deletion, assimilation, and final consonant deletion is less common Use of stopping, fronting, cluster reduction, and liquid simplification continues
Brown's Stage Late IV–Early V Early emerging complex sentence types, including the following: • Full prepositional clauses • *Wh-* clauses • Simple infinitives • Conjoined	Use of cluster reduction decreases
Brown's Stage V Later developing morphemes acquired, including the following: • *Be* verbs • Regular past • Third person /s/ Past-tense auxiliaries used • Relative clauses (right branching) • Infinitive clauses with different subjects • Gerund clauses • *Wh-* infinitive clauses Basic sentence forms acquired	Speech is 100% intelligible Ability to segment words into syllables emerges Use of most simplification processes stops; errors on /s/, /r/, /l/, *th* may persist

Milestones of Later Communication Development

Typical Age	Pragmatics	Semantics
5-7 yr	Narratives are true "stories" with central focus, high point, and resolution	Reorganization of lexical knowledge from syntagmatic (episodic) to paradigmatic (semantic) networks Average expressive vocabulary size is 3000-5000 words
7-9 yr	Stories contain complete episodes with internal goals, motivations, and reactions of characters; some multiple-episode stories appear Language is used to establish and maintain social status Increased perspective-taking allows for more successful persuasion Provide conversational repairs by defining terms or giving background information Can perform successfully in simple referential communication tasks	School and reading experience introduce new words not encountered in conversation Pronouns used anaphorically to refer to nouns previously named Word definitions include synonyms and categories Some words understood to have multiple meanings Capacity for production of figurative language increases
9-12 yr	Stories include complex, embedded, and interactive episodes Understand jokes and riddles based on lexical ambiguity	Vocabulary used in school texts is more abstract and specific than that used in conversation Students are expected to acquire new information from written texts Can explain relationships between meanings of multiple-meaning words Begin using adverbial conjuncts (4% of utterances contain them) Most common idioms understood
12-14 yr	Expository texts used in school-sponsored writing Most information is presented in expository formats Understand jokes and riddles based on deep structure ambiguity	Abstract, dictionary definitions given for words Use of Adverbial conjuncts increases to 85% of utterances Can explain meaning of proverbs in context
15-18 yr	Language is used to maintain social bounds ("just talking") Persuasive and argumentative skills reach near-adult levels	Average vocabulary of high school graduate is 10,000 words

Data from Chapman, R. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry*, 41, 33-54; Nippold, M. (1998). *Later language development: The school-age and adolescent years*. Austin, TX: Pro-Ed; Westby, C. (1999). Assessing and facilitating text comprehension problems. In H. Catts and A. Kahmi (Eds.), *Language and reading disabilities* (pp. 154-223). Boston, MA: Allyn & Bacon.

Milestones of Literacy Development

Typical Age	Literacy Socialization	Phonological Awareness	Print Knowledge
0-2 yr	Enjoys joint book-reading Learns to hold book right-side up Learns to turn pages Answers questions about pictures, characters	Exposure to rhyme initiates rhyme awareness	Learns to distinguish print from pictures
2-5 yr	Learns the need to turn page to get to next part of story Learns left-right progression of print Learns print is stable; anyone reading a book reads the same words	Can segment sentences into words Can segment words into syllables Can recognize/produce rhymes Can recognize/produce words with same beginning sound Can segment/blend words by onset/rime (s + un = sun)	Learns alphabet song Learns to recognize and name letters Learns letters "have" sounds Learns clusters of letters separated by space form words
5-7 yr	Reads picture books for pleasure, with assistance (e.g., audio-taped book) Reads picture books for pleasure, independently	Can identify (name) first sound in word Can list words that start w/same sound Can count sounds in words Can blend 3-4 sounds to make a word (/h/ + /ᵃ/ + /n/ + /d/ = *hand*) Can segment words into 3-4 phonemes (*hand* = /h/ + /ᵃ/ + /n/ + /d/) Can manipulate sounds in words (What's hop without /p/? [/ha/])	Learns alphabetic principle: Words are made up of sounds; sounds can be represented by letters Learns all letter names, letter sounds for consonants Learns sounds for vowels Can match letters to sounds
7-9 yr	Reads "chapter books" for pleasure, independently May read non-fiction for pleasure, as well	Can play with sounds in words, as in pig latin and other secret codes	Begins to learn conventions for punctuation, capitalization, other conventions of print
9-12 yr	Reads for information as well as pleasure		Continues improving knowledge of writing conventions Errors in these decrease
12-18 yr	Develops study skills to retain material read		Masters basic rules for punctuation, capitalization, etc.

Data from Kadervek, J., & Justice, L. (2004). Embedded-explicit emergent literacy intervention II: Goal selection and implementation in the early childhood classroom. *Language, Speech, and Hearing Services in Schools*, 35, 212-228; Kamhi, A. & Catts, H. (2005). *Reading development*. In H. Catts & A. Kamhi (Eds.), *Language and Reading Disabilities*. 2nd Ed. (pp. 26-49). Boston: Allyn & Bacon.

Syntax	Phonology/Metalinguistics
Use and understanding of passive sentences emerges Mastery of exceptions to basic grammatical rules begins	Last residual speech errors overcome Ability to segment words into phonemes emerges Understand concept of "Word" separate from its referent
Literate language syntax needed for academic participation develops A few errors in noun phrases ("much bricks") persist	Articulation is mostly error-free Some difficulty with complex words may persist (*aluminum*) Phonological knowledge is used in spelling Sound manipulation in activities such as pig latin is seen
Syntax used in school texts is more complex than that used in oral language Use of word order variations increases in writing ("Around the house we put a fence?")	Morphophonological knowledge develops and is used in spelling Metacognitive skills emerge
Use of perfect aspect (*have/had* + [verb]) increases Syntax used in writing is more complex than that used in speech	Knowledge of stress rules (*yellow*jacket vs. yellow *jacket*) is acquired
Sentence length and complexity in written language is greater than in spoken Rate of modal auxiliary use increases Full adult range of syntactic constructions reached	Knowledge of morphophonological rules reaches adult level

Reading	Writing
May pretend to read when others are reading	Learns to hold crayon, scribble
Learns to recognize name in print May recognize environmental print (reads "McDonald's" sign)	Begins representational drawing Learns to write name Distinguished drawing from writing Learns to write some letters May use invented spelling to label drawings
Learns to decode by identifying sounds for printed letters and synthesizing sounds across letters to form words Learns some words by sight	Learns conventional spelling for some words Learns to spell by segmenting words into sounds and writing letters for sounds Makes errors based on phonetic correspondences Writing is simpler than speech Writing begins to be more common than drawing
More words recognized by "sight" More phonic patterns are recognized to increase automaticity of decoding (e.g., "silent *e* rule") As reading becomes more automatic, more attention is focused on comprehension Reading moves toward fluency	Learns spelling patterns (e.g., *ight* pattern words) Increases vocabulary of known spellings Makes fewer spelling errors Uses writing to send messages Begins school-sponsored writing, such as book reports Writing resembles level of complexity in speech Oral and literate styles are mixed in writing Narrative writing predominates
Reading is fluent Decoding is efficient and automatic Comprehension is focus; reads to learn	Learns morphophonological rules and patterns in spelling (e.g., *photograph* has two 'o's, you can hear them both in *photography*) Writing has a more consistently literate style; more subordinate clauses Persuasive and expository writing is introduced in the school curriculum
Begins to develop critical reading/thinking skills Learns to distinguish fact from opinion in writing Can construct knowledge from print sources using reasoning, analysis, synthesis and judgment	Level of complexity in writing begins to be greater than in speech More low frequency syntactic forms appear in writing than in speech Persuasive and expository writing continue to improve beyond high school, given adequate experience and opportunity