

Early Morphological Development

Morphology is the aspect of language concerned with the rules governing change in word meaning. Morphological development is analyzed by computing a child's Mean Length of Utterance (MLU). Usually, a sample of 50 to 100 utterances is analyzed to draw conclusions about the child's overall production. Each word a child produces is broken down into morphemes. A morpheme is the smallest, indivisible unit of meaning. For example, the word "walk" is one morpheme, while "walked" is two morphemes: "Walk" carries its own meaning and "ed" signifies past tense. Young children often combine words to convey one meaning or idea. Consequently, words such as "gonna" count as one morpheme. As adults, we understand that "gonna" really consists of both "going" and "to", each having meaning. After counting the morphemes for each of the child's utterances, they are totaled and divided by the total number of utterances. The formula is as follows:

$$\text{MLU} = \frac{\text{Total number of morphemes}}{\text{Total number of utterances}}$$

A child's MLU typically corresponds closely to their age. Roger Brown described five stages of language development based on MLU. The following table outlines typical MLU development:

Stage	MLU	Approximate Age (In Months)
I	1.0-2.0	12-26
II	2.0-2.5	27-30
III	2.5-3.0	31-34
IV	3.0-3.75	35-40
V	3.75-4.5	41-46
V+	4.5+	47+

Source: Compiled from Brown (1973)

Morphological acquisition is best outlined by Brown's Fourteen Grammatical Morphemes. The chart below details at what age each morpheme typically emerges.

Morpheme	Example	Age of Mastery* (In Months)
Present Progressive – <i>ing</i>	Mommy driving	19-28
In	Ball in cup	27-30
On	Doggie on sofa	27-33
Regular plural -s	Kitties eat my ice cream. Forms: /s/, /z/ and /iz/ Cats, Dogs, Classes, Wishes	27-33
Irregular past	Came, fell, broke, sat, went	25-46
Possessive 's	Mommy's balloon broke Forms: /s/, /s/ and /iz/ as in regular plural	26-40
Uncontractible copula (Verb <i>to be</i> as main verb)	He is. (Response to "Who is sick?")	28-46
Articles	I see <i>a</i> kitty.	28-46
Regular past -ed	Mommy pulled the wagon Forms: /d/, /t/, /Id/ Pulled, Walked, Glided	26-48
Regular third person -s	Kathy hits Forms: /s/, /z/, and /iz/	28-50
Irregular third person	Does, has	28-50
Uncontractible auxiliary	He is. (Response to "Who is wearing your hat?")	29-48
Contractible copula	Man's big Man <i>is</i> big	29-49
Contractible auxiliary	Daddy's eating Daddy <i>is</i> eating	30-50

*Used correctly 90% of the time in obligatory contexts. Adapted from Bellugi & Brown (1964); R. Brown (1973); and J. Miller (1981).

Sentence forms begin to develop as early as 12 months of age. Sentences can take on several different forms, including declarative, negative, interrogative, embedded and conjoined. The following table details the development of each:

Stage	Age (In Months)	Declarative	Negative	Interrogative	Embedding	Conjoining
Early I (MLU: 1-1.5)	12-22	Agent + Action; Action+ object	Single word-no, all gone, gone	Yes/no questions asked with rising intonation on a single word; what and where		Serial naming without <i>and</i>
Late I (MLU: 1.5-2)	22-26	Subj. + Verb + Obj.	No and Not used interchangeably	What doing?	Prepositions in and on appear	And appears
Early II (MLU: 2-2.25)	27-28	Subj. + Copula + Compl.		Where going?	Gonna, wanna, gotta etc. appear	
Late II (MLU:2.25-2.5)	28-30	Basic subject-verb-object used by most children	No, not, don't, and can't used interchangeably; negative element placed between subject and predicate.	Earliest inversion appears with copula in what/where + copula +subj		
Early III (MLU:2.5-2.75)	31-32	Subj. + aux. + verb + objet. Appears; auxiliary verb forms <i>can, do have will and be</i> appear		Auxiliary verbs do, can and will begin to appear in questions; inversion of subject and aux. verbs appears in yes/no questions		But, so, or and if appear
Late III (MLU:2.75-3)	33-34	Auxiliary verb appears with copula in subj. + aux. + copula + X	Won't appears	Aux. Verbs do, can, and will appear in questions		

Stage	Age (In Months)	Declarative	Negative	Interrogative	Embedding	Conjoining
Early IV (MLU:3-3.5)	35-37		Negative appears with auxiliary verbs	Inversion of auxiliary verb and subject in wh- questions	Object noun-phrase complements appear with verbs such as think, guess and show; embedded wh-questions	Clausal conjoining with and appears, because appears
Late IV (MLU: 3-3.75)	38-40	Double auxiliary verbs appear in subj. + aux. + aux.+ verb + X	Adds isn't, aren't doesn't and didn't	Inversion of copula and subject in yes/no questions; adds when and how	Infinitive phrases appear at the ends of sentences	
V (MLU:3.75-4.5)	41-46	Indirect object appears in subj. + aux. + verb + ind. obj. + obj.	Adds wasn't, wouldn't, couldn't, and shouldn't	Some adult like tag questions appear	Relative Clauses appear	Clausal Conjoining with if appears; three clause declaratives appear
Post V (MLU:4.5+)	47+		Adds indefinite forms nobody, no one, none and nothing. Has difficulty with double negatives.	Questions other than one-word why questions appear.	Gerunds appear. Relative clauses attached to subject, embedding and conjoining appear within the same sentence above an MLU of 5.0	Clausal conjoining with because appears with when, but and so beyond an MLU of 5.0

By age five, a child is able to use most of the major variations of the English language. The order that these varieties are acquired indicates a pattern of cognitive, social and learning growth. Language continues to develop into early adulthood to include more sophisticated usage. For more on language development, consult the following resources:

Adrian , A. (Ed.). (1995). *Linguistics: an introduction to language and communication*. 4th ed. Cambridge, MA: MIT Press.

Owens, R. (2001). *Language development: an introduction*. 5th ed. Needham Heights, MA: Allyn and Bacon.

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