

A shortened title in all capital letters is used as a running head in the upper left corner of each page; on the title page, it is preceded by the label "Running head" and a colon. Page numbers appear in the upper right corner.

• Running head: EARLY WORD PRODUCTION

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The title is centered on the page, with your name and the school name below.

• Early Word Production: A Study of One Child's Word Productions

Katryn Sheppard

Portland State University

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Abstract

Early word production, one of the initial stages of language development in children, plays an important role in the development of later language skills. This study identifies the word classes and number of words spoken in a recorded interaction (Bloom, 1973) by one normally developing child of sixteen months and analyzes aspects of the child's speech, with the goal of noting if the characteristics observed were supported by the existing research on early word production or if they deviated from those findings. The words that I analyzed fell into six categories: nouns, spatial terms, adjectives, negatives, social phrases, and verbs. Although the frequency with which the child used words from some of these categories reflected the expectations established by previous research, her use of words in other categories was less predictable. Noting word usage in the six categories led to an analysis of the functions that those categories served in the child's semantic communication at this early stage of language development.

Abstract begins on a new page. Heading is centered.

Abstract text does not need a paragraph indent.

Use two letter spaces after each sentence.

250 words or fewer.

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Title is centered.

• Early Word Production: A Study of One Child's Word Productions

First-level headings are centered, bold, and capitalized.

• Introduction

Essay is double-spaced.

Each step in the course of language development and acquisition in children provides a foundation for later skills and eventual mastery of the language. Early word production, a stage of language development in which children have only a few words in their vocabularies, provides the foundation for later vocabulary building and language production and has been shown to be closely linked to later language performance skills

Because this source has fewer than six authors, all authors are included in its first citation; subsequent references name only the first author, followed by et al. The year of publication is included in the reference.

• (Walker, Greenwood, Hart, & Carta, 1994). The early word production stage is therefore worthy of examination, as it “signals that children have a new tool that will enable them to learn about and participate more fully in their society” (Uccelli & Pan, 2013, p. 95).

Because this source has more than six authors, the signal phrase gives the first author's name followed by et al. The signal phrase uses past tense, and the year of publication is given in parentheses.

Because so few words are produced by children in this early stage, the analysis of their word production focuses on the particular word classes and how frequently each class of words appears in speech. When examining typically developing English-speaking children who have few words in their productive vocabulary, Bates et al. (1994) found that the words produced were most often nouns, while other categories more seldom appeared. These less frequent categories included verbs and closed-class words. *Closed-class* words are function words, which include the categories of articles, conjunctions, numbers, pronouns, and prepositions; they are called closed-class words because new members cannot be added to these categories.

Indent each paragraph ½" (5-7 spaces).

• Reporting on the most common kinds of the nouns uttered in early vocabularies, Nelson (1973) found that children “began by naming

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objects exhibiting salient properties of change whether as the result of the child's own action . . . or independent of it" (p. 1). In other words, nouns that point to consistent, concrete objects are most prevalent in early speech, because "children learn to name and understand categories that are functionally relevant to them" (Anglin, 1995, p. 165)—they learn to name the objects they see and interact with day to day.

Although nouns make up the largest percentage of the words produced by children in the earlier stages of language acquisition, other word classes like verbs and adjectives also appear. While they do occur in children's first fifty words, "verbs, adjectives, and function words each account for less than 10 percent" of total utterances (Uccelli & Pan, 2013, p. 96). Infrequent use of these categories supports the idea that, while all word classes are represented, nouns are still expected to occur most often.

Other lexical items that can be found in the speech of children with limited vocabulary are words indicating spatial relationships, how things relate to one another in physical space. According to Bowerman (2007), "children's earliest spatial words are topological forms like 'in' and 'on'" (p. 177). This observation supports the hypothesis that those prepositions are among the first lexical items children acquire (Brown, 1973; Zukowski, 2013).

Overall, the research on early word production in children who are just beginning to acquire their first language has found that the majority of words produced will be nouns that refer to concrete objects. According to Pine (1992), children frequently use their early words to describe or

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Because the authors are not named in a signal phrase, their names are given in parentheses, with an ampersand rather than and between them. A page number is provided for a direct quotation.

The page number is provided in parentheses for a direct quotation when the author and year of the work are given earlier in the signal phrase.

Multiple sources cited in the same parentheses are ordered alphabetically and separated by a semicolon.

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label, or to do both. Pine concluded that “children are making referential statements about the world with the kind of vocabulary items which they happen to have available to them” (p. 53). That is, children try to comment on referents (the things that words stand for) in various ways using just the limited language skills that they possess in their early stage of development.

Taking into account prior research on the early words children produce, I analyzed the classes and categories of words that appear in a transcript of a young child speaking. I wanted to compare this particular child’s speech with what is expected during this early stage of language development, knowing that research predicts a higher number of nouns than other word classes in the data. I was interested to know whether nouns would occur as frequently as the literature would have me believe, and whether or not spatial terms would appear in such early speech. Furthermore, I wanted to note whether verbs occur as infrequently as expected and, if so, what words the child used instead of verbs to convey action.

Method

The transcript that I chose to analyze is one sample from a series of six recordings by Bloom (1973) of her daughter, Allison, a normally developing, English-speaking child. Allison’s age in the samples ranged from 1 year 4 months and 21 days to 2 years and 10 months. The transcript that I analyzed was the earliest of these. Information about the socioeconomic status of Allison and her family was not available in the transcript or the North American English manual of the CHILDES

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database (MacWhinney, 2000), from which the transcript came. However, we can assume the family was from the professional class, as Bloom was a professor at Columbia University.

According to information in the CHILDES manual, the recordings took place in the Audio-Visual Studio at Teachers College, Columbia University, in a room that contained some furniture and toys. The sessions were conducted with audio-recording devices alone; as a result, no videos were available through the CHILDES database. Each recording session lasted 40 minutes, for a total of four hours of recording. Bloom (1973) describes her role in the interaction as “more investigator than mother” (p. 11), but the interactions seem to have been more relaxed than one associates with investigators and not structured according to a test or other prearranged activity. Rather, the interactions were led by the child’s actions in relation to her mother and objects in the room.

The data are organized in six separate transcripts, arranged chronologically. They contain the actual utterances and morphological notation indicating the parts of speech being used. Bloom initially transcribed the recordings, and later Lois Hood, a fellow researcher, revised the transcript, which was revised again by a larger group of researchers that also included Hood. Each time, the researchers added notes to provide situational context. Each line of the transcript is numbered, and there was an attempt to divide the data in a way that reflected where there was “a shift in topic or focus” (Bloom, 1973, p. 11).

The date is placed right after the author’s name; the page number in parentheses is as close to the quotation as possible.

Results

During the 40-minute exchange between Bloom and Allison, Allison produced a total of 362 occurrences of identifiable words. I did not distinguish between single- and multi-word utterances because that distinction was not relevant to the purpose of this study. Not all of Allison's turns in the conversation were intelligible; only intelligible words were included in my analysis. Altogether, I identified 27 different words (types) used by the subject, although there were many repetitions (tokens) of words. I assigned the 27 words to six categories: nouns, spatial terms, adjectives, negatives, social phrases, and verbs.

The category of nouns contained the largest number of distinct words or types as well as the largest number of instances or tokens, as shown in Figure 1. Allison used a total of 12 nouns, and all reflected concrete concepts. These included household objects, nouns that referenced people, and the names of animals referring to toys present at the time of recording. The most frequently used noun was "baby" (n=25); "chair" was second (n= 24). The total number of nouns represented 122 occurrences, or 34% of the total words uttered.

The second most frequent category of words found in Allison's utterances was spatial terms. Five different spatial terms, or types, occurred, with "up" being the most common (n= 48). All of the spatial terms Allison used referred to her immediate surroundings—for example, the chair that she wanted to climb "up" or "down" from. Altogether, 120 of Allison's words were spatial words, accounting for 33% of her speech by word count.

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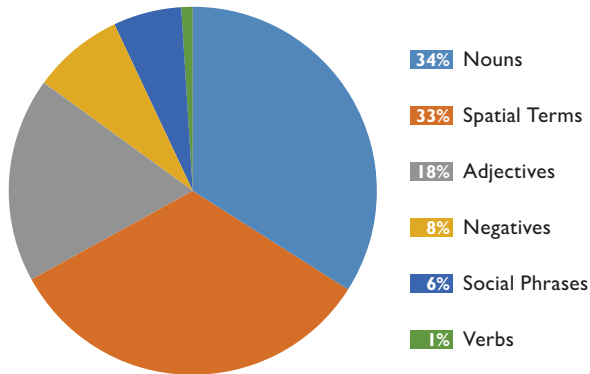


Figure 1. Words uttered by the subject, by word category (n=362). Data recorded in transcripts by L. Bloom (1973), accessed through the CHILDES database (MacWhinney, 2000).

Figure is numbered, and a description and source information are given.

The third most frequently used category of words in the data was adjectives, of which there were three types. Although “more” was the most frequently occurring adjective, “gone” was also often repeated. I will elaborate on the special role that adjectives played in Allison’s speech in the discussion and conclusion section.

Negatives also appeared with some frequency in Allison’s speech, although the category comprised only one type: “no.” The word occurred 28 times (n=28), sometimes referring back to and negating other words that she had previously spoken, at other times negating the word or words that followed. The level of emphasis Allison placed on the word varied: sometimes her utterance was transcribed as “no”; other times, it

was transcribed more emphatically, with an exclamation point, as “no!” This negative term accounted for 8% of her total words.

The remaining categories, social phrases and verbs, occurred less frequently. Social phrases—terms or utterances that are appropriately used in specific social contexts—were present in the transcript in two different words: “uhoh” (n= 20), and “oh” (n= 3). Together, these add up to a total of 23 words in the transcript that were social phrases.

The category of verbs was by far the least common in the subject’s production. Four different verbs were used, three of which occurred only a single time. “Stop” was used twice, while “turn,” “climb,” and “sit” were each used once. A total of five words (n=5) were identified as verbs.

Discussion and Conclusion

Allison’s single-word utterances fell into six identifiable categories, the frequency of which varied considerably. Some categories contained only a few items that were not repeated often, while other words and categories of words showed up repeatedly. Allison’s tendency to use words in certain categories matches the findings of the existing research literature on child language production. In other instances, Allison’s use of words differed slightly from what might be expected.

As predicted, nouns made up a large portion of Allison’s speech. Since researchers have found the majority of early words to be nouns, it was not surprising that Allison used the greatest number of different words within the noun category and likewise showed the greatest number of repeated tokens in this category. Furthermore, the kinds of nouns Allison used are also in line with the finding that children in

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the early stages of language acquisition focus on concrete concepts. All of the nouns that Allison used referred to things in the room where the recording took place, mostly common objects that she could draw attention to. For instance, Allison used the noun “baby” when she wanted to communicate something to her mother about a baby doll she wanted to play with.

The category of spatial terms also accounted for a large percentage of the words Allison produced. The most frequent utterance of any word in any category in the transcript was of the word “up.” That word, like other spatial terms, was often repeated and sometimes took the place of a more complex construction, as when the subject said “up” as she was struggling to get up onto the chair and “down” when she wished to get back down. Allison’s choice of words fits with Bowerman’s (2007) descriptions of children’s first spatial terms: “early acquired spatial words revolve around relationships of . . . verticality (up, down)” (p. 180). This use of spatial terms contrasts with more complex spatial terms that appear in later development. However, the fact that Allison used five different words within the spatial word category could suggest that those terms play several important roles in her communication at this early stage.

As previously noted, adjectives like “gone” and “more” were words that played important roles in Allison’s speech when she wanted to convey something to her mother, as when she finished eating a cookie and repeatedly told her mother “more.” This single word seemed to stand in for a more elaborate question or request Allison could not produce

at this stage, such as “Give me more.” “Gone” was also used repeatedly in the same context to refer to the cookie. The use of “gone” to describe what had happened to the cookie might be seen as evidence of Pine’s (1992) observation that children’s early words are used to label and describe objects around them.

While the category of adjectives did not form as large a portion of Allison’s speech as either nouns or spatial words, it was somewhat surprising that adjectives composed 18% of total words in this transcript. Generally, adjectives and other word classes that are not nouns are expected to account for a much smaller percentage of words spoken in early word production (Bates et al., 1994).

One feature of Allison’s utterances that did adhere to what is expected for a typical child at this age was her use of negatives. Although she used only one negative word—“no”—the word was repeated frequently enough to be the fourth most common category in the transcript. Her use of “no” rather than any other negative conformed to Brown’s (1973) finding that other forms of negation like “not” and “don’t” appear only in later stages of linguistic development. In this very early stage, Allison’s reliance on “no” alone seems typical.

There were varied contexts in which Allison used “no.” In some cases, the word seemed to convey a lack of something, as when she uttered “cookie,” looked around for the cookies, and then said “no.” This sequence of events might indicate that Allison was conveying the lack of cookies to her mother. A similar exchange revolved around a picture of a girl, when Allison turned the picture over and, upon finding the

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other side was blank, said “no,” evidently trying to convey that there was nothing on that side of the picture. On other occasions, “no” was produced as an answer to a question. In one example, Bloom asked Allison if the cup was for her (i.e., Bloom), to which the girl replied “no” and took the cup back from her mother. While adhering to the use of the single, simple form of negation that might be expected, Allison’s utterances of “no” were varied in purpose and effective in communicating a range of ideas.

The remaining categories, social phrases and verbs, made up only a small percentage of Allison’s words. Social words appeared infrequently and sometimes were attached to other words, as when the subject said “uhoh there.” The infrequency of social phrases in Allison’s early speech reflects typical aspects of early vocabulary development. As Santelmann (2014) explained, at this stage in a child’s linguistic development, nearly all lexical items will be nouns and adjectives, with a limited number of social phrases.

True to previous research findings, verbs formed the least frequently used category in Allison’s speech. Allison used the four different verbs to describe what something was in the act of doing or what she intended to do. For example, she used “stop” to describe a toy car coming to a stop. The remaining three verbs were produced when Allison was performing an action herself, as when she said “turn” when she was turning the pages of a book, “climb” when she was trying to climb up onto the chair, and “sit” when she was going to sit on the chair. Although four different verbs showed up in Allison’s speech, the total

number of tokens from the verb category was significantly lower than for any of the other word categories. This follows what researchers generally expect of children's early speech, which includes only a small percentage of verbs (Uccelli & Pan, 2013).

While Allison used these four verbs to communicate action, she often used other words to convey the same meaning. For example, Allison used "up" in two different contexts. The first was in narrating an action she was performing, as when she said "up" while attempting to get up onto the chair. The second was as a request to Bloom to help her up. Allison also used the spatial term "down" to indicate similar intentions.

When not using spatial terms in place of more specific verbs, Allison used nouns to communicate intention and action. For example, one instance of her uttering the word "cookie" was to tell to her mother that she wanted a cookie, indicating this intention without using any verb. This pattern occurred in other contexts, as when she used the concrete noun "chair" but not the verb "sit" to indicate that she wanted to get onto the chair. The use of nouns instead of verbs when communicating certain concepts is perhaps expected, given the established preponderance of nouns in early word production. It also supports the idea that children communicate using the tools at hand (Pine, 1992): since Allison frequently employed nouns and spatial terms, it would seem that those are the tools that she had to rely on to convey whole hosts of meaning.

The results of my analysis of the transcript of Allison interacting

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with Bloom revealed aspects of the child's speech that were mostly in line with the established features of early word production. The frequency of the use of different word classes conformed to previous findings that concrete nouns are most common, but other categories varied from the expected patterns. Her choice of the spatial terms "up" and "down" and the simple negative "no" is typical of children at this age. However, the uncommon frequency of adjectives in her speech indicates that they are important to how she communicated certain meanings; like spatial terms, they often filled in for verbs in cases where the actual verb was beyond her vocabulary. Her use of verbs, while predictably limited, showed how she employed the few verbs that she had and how she conveyed meaning when she did not have the precise verbs available to her. Overall, Allison used a somewhat varied set of words to communicate a wide range of meanings even though she had only a limited vocabulary to work with.

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References

List of references begins on a new page. Heading is centered.

Entries are arranged alphabetically.

All lines except the first are indented ½" (5-7 spaces).

URL given for an article accessed through a database. Do not add a period at the end of a URL.

Entries for a work found in an edited collection includes the editors' names, first initial followed by last name.

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When the source type is unconventional, unclear, or important to point out, indicate the medium in brackets.