

Language development multi- disciplinary

[Linguistics](#), [Language](#)



Language development is a multi-disciplinary field containing inputs from psychology, academics, behavioral science, neurology and speech development. It's marked by the culmination of a series of processes, which begin early in human life where an infant goes through imbibing primary language skills from the environments surrounding him, starts remembering words and phrases without the need for understanding their meaning, slowly build connections and visual imagery to understand patterns in language, and finally, as the child grows older, new meanings and new associations are created and his vocabulary increases as more words are learned.

Language development as a term, should not be confused with “ language acquisition” of which it is only a subset. The latter also deals with second language learning ability. Linguists and researchers like Noam Chomsky, Elizabeth Bates and Catherine Snow have developed hypotheses, that recognize and measure the specific learning results from general cognitive abilities and the interactions between learners, and their surrounding language environments.

Language development contains several discussion points. In this paper, we shall look into the following points, based on past research done in relevant area. The main objective of our research is to infer the importance of each and every building block, in facilitating the language learning ability of children. Understanding these concepts have special significance to the case studies of dyslexics (slow learners), auditory and visually challenged kids, children with a stammering problem and kids of immigrant parents for whom English is not a spoken language at home. The articles selected for this

purpose have one theme in common: they offer tips and suggestions, and also the roadmap for applications within a children learning environment.

Transduction: Having worked in the field of cognitive development among children, Jean Piaget, a famous Swiss development psychologist, has described “transduction” as the first logic of reference in the primary form of reasoning used by children during the preoperational stages of development (2-7 years). The logic here is: if A causes B today, then A always causes B.

The basic definition of transduction is “reasoning” without the reversible nestings of a hierarchy of classes and relations (Mathcs. edu, p. 12). Accordingly, the first verbal reasoning is identified as practical and somewhat, based on perception or imagination. It is one step advancement of something known as “preconcepts”, identified by early language specialists wherein a child merely learns to associate certain “semi-concepts” which fit into the notion of what the child observes from surroundings (p. 10). An example might be, “Is worm an animal?” It basically means that at the preconceptual level, the child identifies words with “shapes” and “patterns” (p. 11), rather than actual denominators of valid reasoning.

In contrast, Piaget identified transduction as an advanced stage of cognitive learning, because the child’s thinking pattern carries less of an egocentric point-of-view, and it is more oriented toward finding the meaning to a desired end (p. 12). However, even at this stage, the child doesn’t think of representation based on logic at most times, and can distort reality to suit his own “perception” about the world (p. 12). Transduction, has been

identified as the “ discovery of lying”, and also the “ dawn of reasoning” (p. 12). The essential prerequisites of a study on transduction in language development for children, would consist of in the preconceptual stage: 1)a symbolic thought, 2)representations derived frommotivation, individual perception, daydreaming, and logical reasoning. In the transduction stage, it matures into a vivid construction of the image, and this constitutes the child’s first grasp with reasoning, and intellect (p. 12).

Concept formation: There is a close relationship between language and concept forming ability (Xu, p. 2). Fei Xu, at the University of British Columbia contends in her research on cross-linguistic behavior patterns, that concept forming abilities reflect certain correlations between aspects of language, and the guiding blocks of reasoning that present a state-of-the-fact reality for the child, slowly whetting his appetite for gaining knowledge on words, based on situations (p. 3).

The first feature of this concept forming ability starting with infants began, in “ count nouns” and categorization. Quoting from relevant research, Xu points out that children first learn to differentiate between countable and uncountable nouns, as the object is displayed before them. A familiarization tone might be: “ a rabbit”, “ a pig”, and also “ wheat”, “ sugar” (p. 5). There is a natural propensity to learn “ novel nouns” (p. 6), which are basically words, that are amusing and pleasant to hear. Studies have shown kids can be unusually brilliant in their intuitive ability to grasp new words, to attach their meaning with words they already know. E. g. “ engineer”, “ medicine” and “ President” (p. 7).

Once the foundation for nouns are clear, Xu offers examples in which children learned differences between adjectives and nouns, which come “immediately” after learning nouns. E. g. “good” boy, “red” apple (p. 7). For infants, conceptual ability at an early stage is not a complete process by itself, as they lack understanding of other signposts of intelligence (p. 11). In an experiment suggested in the article, small children faced trouble in counting objects of similar shape. To them, articles of different shapes and sizes offers more intrigue and curiosity into counting. Also, many couldn’t tell if a toy train moving in a circular path was indeed “one” train (p. 12). However, the start of concept-forming ability is the dawn of wisdom for infants.

Imagery: Imagery refers to any word that creates a “picture” in the head of children. For older kids (3-4 years and above), imagery using similes, metaphors, personifications (mainly) and other audio-visual tools are a crucial ingredient in learning language (Savich, 1984). Not only do these methods facilitate an increase in handy vocabulary, but they also develop spatial learning abilities in children. Imagery is recommended for older children, because by then their brain cells in the cerebral hemisphere, are divided enough to allow such functions (Savich, 1984).

Some of the methods used are: “the Big, Black barn”, “Snow White with pink feathers and velvet hands”. For children, the intuitive ability to render strong associations with these image vocabulary, is so powerful that many of them are able to visualize elements that many adults might ignore; e. g. the differences in colors in mosaic tiles; any object (and that includes human beings) readily start getting associated with the child’s cultivated

imagination. Also, unlike the early concept-forming stage, this time children have lesser tendency to face problems in identifying different words and expressions for similar shapes.

Patricia Savich, at the University of Los Angeles, in her research on language-disabled children, has contended that they are facing problems in retaining a strong anticipatory imagery ability (Savich, 1984), compared to other children. In an experiment described, she assigned five spatial tasks to two groups of children based on age, sex, native language and background. In all assignments specified, language-disabled children lagged behind their counterparts in identifying words, from the assortment of visual imagery at their disposition (Savich, 1984).

Memory: Memory has several study areas in the field of language development: recall memory, visual recognition memory (VRM), socialcommunication, and the emergence of language skills. According to Heimann et al (2006), recall memory involves the technique called “deferred imitation” or DI as the most scientific method of enabling words, to stick in the memory of children. A lot of research in this field, has successfully established the cosmopolitan reach of the method to enable children to learn new words, sentence structures and also intonations of language. DI basically involves showing a picture to the child, make him repeat the word after the instructor, pursue a delay for 10 to 24 minutes, and come back with the picture again, to retain the word in the child’s sphere of imagination, “permanently”. There is plenty of flexibility, in how and why DI must be conditioned, for specific child-learning initiatives.

VRM is applied to children, 3 years and above, and deals with providing close attention for familiar pools of information. VRM is a close indicator of receptive language skills, and along with imagery, helps the child associate connections between different visual stimulus to form an idea of the world where he's living in. Social communications consist of two aspects: 1) Joint Attention (JA) where the child learns words by studying the gaze patterns of other children in the creche or play group, and 2) Turn-taking skills (TT), which is the beginning of the first steady "conversation" between the child and the instructor/parent. The parent familiarizes the child with a situation, and it is his responsibility to come back with an answer. Heimann et al (2006), have contended that the onset of a steady conversation, even though in incorrect grammar, is the first milestone for children's language development program.

Environmental influence: Finally, apart from the four techniques discussed in our framework, the most pivotal influence kids could derive for learning language programs, lies in the influence laid out by the environment in which they live. According to a cognitive behavior study, by Janelle Huttenlocher, a William S Gray Professor in psychology at the University of Chicago, the language environment in which children live, influences considerably their command over individual differences in syntax acquisition (Harms, 2002). There are dramatic differences between 3- and 4- year olds speech and comprehension, depending upon the "way" teachers and parents spoke to them.

The study was based on 305 children across 40 classrooms in 17 preschool areas comprising people of all income-levels. Sentences used for testing

were very descriptive, vivid and tested all aspects of grammar retention ability: “ the boy is looking for the girl behind a chair, but she is sitting under the table”, and “ the baby is holding the big block and a small ball”. Naturally, in classrooms that were extremely exposed to complicated sentences, children were more easily capable of using the correct “ syntax” in language tests, compared to under-privileged downtown Chicago neighborhood schools, that are often under-staffed and children come from much less-privileged backgrounds. Even for lower-income background children, those who came to classrooms with qualified language instructors, the curiosity to learn the proper syntax of conversations, was much higher (Harms, 2002).

According to Huttenlocher, the foundations of speech due to environment in childhood sticks for life. Children who grow up listening to “ full” sentence syntaxes, are much more likely to use them comfortably when they grow up, compared to many American adults who really enjoy “ skipping” words and have limited vocabulary for use, even though they might know the meaning of several words (Harms, 2002).

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