

Preschooler's Lexical Trajectory: The Impact of Parental Input and Linguistic Environment at Home

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Abstract: Children's English vocabulary acquisition is a process of dynamic and fluid emergence as a result of various stimuli in communicative settings. The paper identifies 5 family variables related to child's lexical trajectory, namely, the linguistic environment at home, children's relative exposure to the input, quality of child-directed speech (CDS), frequency of parental input and parent-child interaction. Each family variable contributes uniquely to children's words learning, among which a highly supportive linguistic learning environment is fundamental for children to accumulate more vocabularies and has a significantly positive impact on children's vocabulary ability. This paper highlights the importance of targeting children's learning environment in early years as children's vocabulary acquisition is a strong predictor of later emergent literacy.

Keywords: Child-directed Speech (CDS), Linguistic Exposure, Parental Input, Parent-child Interaction, Lexical Development

1. Introduction

Linguistic environment, innate linguistic mechanism and cognitive process are considered as the three major variables in child vocabulary acquisition (Carroll, 2000)^[1]. Previous studies mainly focus on the theoretical explanations and questions arise concerning how children acquire vocabulary effectively at home from their parents or caregivers in early development, which call for more empirical research. Social-pragmatic theory (Bruner, 1983) emphasizes the role of social and linguistic environment on the child language acquisition^[2]. Bronfenbrenner's (1986) Bioecological Systems Theory puts value on the interplay of multiple contexts in shaping children's development. At a proximal level, parents enhance children's learning and cognitive development by structuring multiple aspects of environment, like actively participating in routine literacy activities, providing age-appropriate learning materials, highly supportive and engaging in daily activities (Rodriguez et al., 2009)^{[3][4]}.

Therefore, this paper will draw upon some recent empirical studies and strive to explore children's vocabulary growth from the family variables, namely, children's relative exposure to the input, quality of child-directed speech(CDS), frequency of parental input and parent-child interaction, aiming to identify the most critical factor at home in children's acquisition of Chinese vocabulary as L1 in early development. In particular, parents, who are an undertapped resource, are children's most critical and important teachers and are considered more knowledgeable and skilled to scaffold children's vocabulary learning.

2. Five Family Variables Related to Child's Lexical Trajectory

2.1 Linguistic Environment

Linguistic environment is fundamental in promoting children's lexical development. Home literacy environment, home literacy resources and home literacy activities are three vital factors that comprise the linguistic environment at home (Rodriguez & Tamis-LeMonda, 2011)^[5].

To begin with, good home literacy environment where parents have high proportion of parent-child reading activities and supportive leaning resources is a strong predictor of children's early vocabulary acquisition (Davidse et al, 2011)^[6]. In particular, parent-child reading facilitates children's comprehension of stories and better understanding of vocabulary while at the same time helps children to associate their daily experiences with the stories in books, which in return scaffolds children's

vocabulary output.

Also, the number of children's books at home, the availability of learning materials, storytelling, and singing nursery rhymes (Rodriguez & Tamis-LeMonda, 2011), are the other factors that have positive correlation with children's vocabulary understanding and oral expression because to a great extent book volume is an important part of home literacy resources^[4].

Further, a rich variety of home literacy activities provides children with numerous opportunities to build up successful literacy learning experiences since children develop their early language abilities and gradually acquire vocabulary from the home literacy activities, such as frequent visits to libraries, museums, various learning centers (Stuber & Patrick, 2010)^[7].

Against this backdrop, with the increasing awareness of the impact of the environment on children's early vocabulary development (Newman et al. 2016), Chinese parents at present attach great significance to the linguistic environment at home that supports children's language skills and invest more endeavors to the ecosystem of their children's growth^[8].

2.2 Children's Relative Exposure to The Input

With supportive linguistic environment at home, children's relative exposure in the input is indispensable in order to master more words. Exposure to both narrative talk and explanatory talk, with the former focus on talks about past and future events and the latter emphasizes on the talks that reflected or made logical connections between objects, event and concepts, has strong correlation with children's ability to offer word definitions (Beals, 2001)^[9]. In particular, exposure time is correlated to the children's first words acquisition (David & Li, 2008)^[10]. Children benefit greatly from frequent, varied and complex language exposure especially when both parents are responsive to children's initiatives. It is notable that the relative exposure time to language is closely related to the proportion of words that children acquire. Diversity of input and the role of exposure during joint attention is vital for children's productive vocabulary acquisition and exposure time correlates with bilingual children's first 50 words (Chan & Nicoladis, 2010)^[11].

Moreover, children's receptive-expressive modality varies greatly in weaker language (Mandarin) compared to their strong language (English) with rapid growth in English vocabulary, specifically, rapid lexical development in English along with rather stable growth of Mandarin vocabulary even though children receive considerable Mandarin input in everyday life (Sheng, Lu, & Kan, 2011)^[12].

Nevertheless, examination of extra-linguistic variables, like non-verbal cues, children's learning styles and caregivers' usage of language and acculturation style should be further investigated and analyzed in order to depict the fluid and dynamic nature of children's lexical vocabulary learning (Chan & Nicoladis, 2010)^[11].

2.3 Quality of Child-Directed Speech (CDS)

High quality of child-directed speech is inductive to enhance children's vocabulary comprehension and information processing, which is crucial when the language input is beyond their cognitive development. Simply put, children's relative exposure to the input should be comprehensible input from child-directed speech. Child-directed speech (CDS) is characterized by high pitch, more repetition, simplified vocabulary and exaggerated intonation patterns when adults interact with children (Gordon & Watson, 2015), which can enhance children's learning of word meaning (Foursha-Stevenson et al. 2017)^{[13][14]}.

Children are not able to take in all the parental input even when they are exposed to certain language for significant time as not all the input are comprehensible input to them. Hence, the quality of child-directed speech is vital for children to actively process information and provides stimuli to children's lexical development. Parents know how to facilitate the parent-child conversation by using words that they know the child knows how to say and modify their parental input. In this way, children would effectively imitate or mimic parents' words, or employ some strategies such as simplification or even take the initiatives to create their own words based on their own experience and cognitive development, thus reinforce their vocabulary acquisition.

Newman et al. (2016) proposes that child-directed speech from mothers is a critical underpinning for children's lexical outcomes, likewise, Foursha-Stevenson et al. (2017) claims that child-directed speech is vital at the beginning of vocabulary acquisition and syntactic comprehension^{[8][14]}. Studies from Rowe

(2012) reveal that incorporation of diverse and sophisticated vocabulary and decontextualized language with preschoolers correlates strongly with their lexical growth^[15]. Specifically, decontextualized language is defined by Peterson & McCabe (1994) that by removing events in time and space, children could comprehend the spoken word and to “distance” themselves from the language^[16]. Sequentially, children acquire vocabulary rather quickly when parents use higher pitch and exaggerated prosody (Gordon & Watson, 2015) and child-addressed input (Weisleder & Fernald, 2013) to assist children in language learning^{[13][17]}.

What is more, children are active learners and thinkers instead of passive receivers, child-directed speech reinforces children’s conscious and unconscious vocabulary learning. Parents’ increasing use of child-directed speech predicts children’s increasing word count, especially when parents are responsive to children’s utterances and are able to give appropriate feedback to children by restating, paraphrasing, repeating and expanding upon the children’s utterances, amplifying and simplifying their speech, encouraging children to elaborate upon their comments.

As can be seen from the discussions above, children benefit from child-directed speech to enlarge their vocabulary size and production by asking for clarifications or explanations to actively process parental input and thus further enhance their syntactic and semantic knowledge as well as their understanding of narrative discourse.

2.4 Frequency of Parental Input

With high quality of child-directed speech, the frequency of parental input should not be ignored. Children acquire vocabulary rather quickly when being exposed to high frequency of parental input, the more frequently a word is heard, the earlier it is learnt, hence children’s vocabulary acquisition significantly correlates with the input frequency from parents. The more frequently presented words are more likely to be learned. Therefore, the frequency of parents input serves as essential stimulus to increase children’s overall vocabulary count especially when parents are more aware of children’s communicative intentions.

Previous study from Goodman et al. (2008) predicts a positive correlation between the effect of parental input frequency and earlier acquisition of vocabulary with regard to lexical category, modality and various developmental stages^[18]. Additionally, it is worth noting that parents providing more input would greatly facilitate children’s early vocabulary growth (Hart & Risley, 1995) while at the same time three aspects of parental input frequency need to be taken into consideration^[19]. The first aspect is the role of specific semantic-syntactic categories, within which, namely, common nouns, verbs, adjectives, closed class, others, higher frequency of parental input leads to earlier vocabulary acquisition. Also, the correlation between the frequency and age of acquisition differ greatly across these six categories. Age of acquisition serves as a second aspect. Thirdly, comprehension and production of children’s vocabulary vary greatly with regard to the role of parental input frequency, which is a stronger predictor for production than for comprehension (Goodman, Dale & Li, 2008)^[18].

What’s more, younger children acquire more composite vocabulary than single-language vocabulary while older children show similarity in both Chinese and English. Studies revealed age-related growth in English instead of Mandarin (Sheng, Lu & Kan, 2011)^[12]. A longitudinal case study of a mandarin-speaking child from of age 6 -20 months from Chen & Meng (2009), which briefly focus on three contexts in the naturalistic setting, namely, book reading, feeding and playing, find that despite the relatively higher frequency of verbs in the book reading, verbs are more frequent in both the feeding and playing contexts, sequentially, child comprehend and produce larger number of verbs rather than nouns^[20]. Again, this finding, to some extent, echoes the preceding discussions that children’s early word composition is hugely influenced by the dominance of verbs in Chinese adults’ speech, with more verbs instead of nouns in both comprehension and production. In short, frequency of parental input plays an important role in facilitating children’s lexical development.

2.5 Parent-Child Interaction

Parent-child interaction, which is the basis for the attachment between parents and children, should not be something separated from the frequency of parental input, it should be incorporated into daily activities because the quality of parents’ engagement matters as parents could potentially introduce novel words. Parents’ active participation in children’s routine activities promotes children’s cognitive development and language acquisition.

Moreover, it is commonly accepted by most researchers that children are active learners and thinkers. Language activities are believed to be a mutually interactive process in which children attempt to use words they know to articulate their feelings and thoughts meanwhile respond to their parents based on the information received, thus gradually internalize the input and establish their own language systems. It is within such interactions that children reinforce their desire to communicate with other people by using the words they learned from their parents, among which parent-child book reading is regarded as the most representative activity in home settings as it strengthens the bond between parents and children. The quality and quantity of parents shared reading, the quality of mothers' engagement with their children (Rodriguez & Tamis-LeMonda, 2011), the way that parents interact with their children and response to children's needs improve children's vocabulary development particularly when it includes open-ended questions and encourages children's responding^[5].

A sound claim from Rowe (2012) is that children are more engaged in interactions and more attentive and focused to stay on topics if parents provide their children with experience engaging in conversations with various narrative styles^[15]. Children have more chances to get exposure to complex conversation through shared reading with parents and experience a variety of word choices in their ongoing attempts to use appropriate words to make themselves understood.

Reese, Sparks, Leyva (2010) demonstrate that parents as unique resource can enhance children's language development and early literacy from parent-child conversation, parent-child writing and parent-child book reading, which is closely related to the lexical development of children compared with exposure to watch television (Patterson, 2002)^{[21][22]}. In particular, mothers' perception about shared book reading strategies (Bojczyk et al., 2015) and beliefs about children's readiness to learn and to read help to enlarge children's vocabulary size and vocabulary development (Bojczyk, Davis, & Rana, 2016)^{[23][24]}. Parent-child book reading improves children's story production, comprehension, recall and knowledge of print concepts.

Hence, it can be seen that parents' sensitivity to children's initiatives and supportiveness to children's needs are fundamental in children's early vocabulary learning and the significance of high quality parent-child interaction motivates children to acquire more words, among which parents' reminiscing with children is another key factor to facilitate children's vocabulary acquisition. Reminiscing refers to conversations between parents or caregivers and children about past events they have experience together (Paola & Laura, 2019)^[25]. Specifically, it has significantly positive implications for children's cognitive and social-emotional functioning while helping children to develop an elaborative style of remembering and reporting personal experiences by maximizing children's involvement through "wh" questions (Wareham & Salmon, 2006)^[26].

Therefore, elaborative reminiscing which attends to the children's interests and engages children in decontextualized language, improves children's narrative ability and facilitates child language, effectively helping children understand words and consolidating children's mastery of vocabulary particularly with parents of highly elaborative reminiscing styles. Notably, lexically rich, naturally occurring conversations which involve extended and connected discourse are crucial for children's receptive and productive vocabulary. It not only stimulates the conversations between parents and children but also increase the number of conversational terms, the back and forth of the talking between the parents and children. More high quality of parent-child interactions helps children to master social words, increase children's word count, enhance children's story comprehension as well as narrative skills.

3. Conclusions

In sum, vocabulary acquisition is a process of dynamic and fluid emergence as a result of various stimuli in communicative settings where children attempt to internalize the input they receive. Learning and using vocabulary inevitably involve dealing with dynamically intertwined layers of linguistic environment.

It is important that parents are armed with the knowledge so that they can make a difference to children's vocabulary development from very early on and provide more intrinsic and extrinsic stimuli to set the foundation in the early years. Parents as the most important caregivers should create a supportive and child-friendly environment which contains a number of vital features, including children's exposure in high quality of child-directed speech (CDS), frequent and varied parental input with vocabulary sophistication and diversity and active parent-child interaction, motivating children to actively engage in daily activities, maximizing the language resources and children's language potential.

Each family variable contributes uniquely to children's words learning, among which a highly supportive linguistic learning environment is fundamental for children to accumulate more vocabularies and has a significantly positive impact on children's vocabulary ability. This paper highlights the importance of targeting children's learning environment in early years as children's vocabulary acquisition is a strong predictor of later emergent literacy. Future endeavors could investigate more regarding to parenting styles and parenting practice on children's lexical development.

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