



## Cognitive and Linguistic Development in the Learning and Teaching Process

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### Abstract

This article discusses the influence of family and environment on the development of an individual's personality and communication, with a focus on relevant educational theories. Through a constructivist approach, the article explains how knowledge is built through social experiences and interactions. Family plays an important role in shaping an individual's character and values, while a calm environment supports effective communication skills. In addition, this article integrates the concepts of student-centered learning, individual differences and special education needs to create an inclusive learning environment. Theories such as behaviorism, cognitivism, humanism, information processing and social learning are also explored to understand the dynamics of the learning process. The results show that cognitive and linguistic development is influenced by these factors, with an emphasis on the importance of creating supportive conditions for students to reach their full potential. As such, this article provides insights for educators and parents in supporting optimal child development.

**Keywords:** Family, Environment, Constructivism, Student-Centered Learning, Cognitive and Linguistic Development.

### 1. Introduction

Cognitive and linguistic development are two important aspects that shape a child's growth and learning. They are interrelated, but have different focuses. Cognitive development relates to how children think, understand the world, and solve problems. Linguistic development, on the other hand, relates to how children learn to use language to communicate and understand the world around them. Both aspects play a crucial role in shaping how children learn, interact, and develop as they grow.

Cognitive development refers to the process by which children learn to understand their environment, solve problems, and organize information in their minds. This process involves skills such as attention, memory, and the ability to make informed decisions. Children begin to develop their cognitive abilities from a very early age, starting with recognizing objects and remembering specific events, and progressing to abstract and logical thinking as they grow older.

Meanwhile, linguistic development focuses on how children learn language, which is the primary tool for communicating and understanding the world around them. Language is not just a tool for speaking, but also a means of structuring thoughts, conveying ideas, and understanding more complex concepts. This linguistic development begins when babies learn to make sounds and progresses to the ability to pronounce words, form sentences, and ultimately master language completely.

These two developments support and influence each other. As children develop their cognitive skills, they also learn to use language in more complex ways. Conversely, the more

language children learn, the easier it is for them to express ideas and understand abstract concepts. This relationship between cognitive and linguistic development creates a solid foundation for children's ability to communicate effectively, solve problems, and interact with their social and academic world.

In this article, we will delve deeper into what is meant by cognitive and linguistic development, how these two aspects develop with age, and how they interrelate to shape a child's learning and development patterns. A better understanding of cognitive and linguistic development will provide parents, educators, and professionals working with children with greater insight into how to support them in reaching their full potential. This way, we can create an environment that supports children's learning and development to their fullest potential.

Cognitive and linguistic development influence each other. As a person's thinking skills (cognitive) develop, they will be better able to use language. Conversely, the more they learn language, the better they can understand and express their thoughts. For example, when children learn the concepts of "more" or "bigger," they will use language to explain these thoughts. As their cognitive abilities develop, they will be able to use language in more complex and detailed ways. Thus, these two skills complement each other in helping children communicate and understand the world better.

The problem in this research is that many students are still less active in class, even though the educational process in higher education should encourage active participation and direct involvement in learning activities. This is evident in the minimal interaction between students and lecturers and fellow students, the lack of questions asked, and the low level of discussion that occurs during the learning process. Several factors influencing this phenomenon include a lack of motivation to learn, a lack of self-confidence, and an inability to see the relevance of the material to their daily lives. Furthermore, teaching methods that are too one-way, such as long lectures that don't directly involve students, also contribute to the lack of active participation in class. Many students feel more comfortable sitting and listening without engaging in discussions or answering questions because they are afraid of making mistakes or are embarrassed to speak in front of the class. This condition can certainly hinder the development of critical thinking and communication skills, which should develop along with the learning process. Therefore, changes are needed in the teaching approach so that students feel more encouraged to participate actively and feel more valued in the teaching and learning process.

The solution to this problem is to use interactive teaching methods. Lecturers can adopt techniques such as group discussions, simulations, or project-based learning methods. This will make students more directly involved in the learning process. Use technology, such as online polls or interactive quizzes, to engage students who may be more comfortable with digital media. Create a safe and inclusive environment and support students to speak up without fear of judgment. For example, lecturers can acknowledge every contribution, no matter how small, and start with simple questions to build their confidence. Increase motivation and relevance by connecting learning topics to real-world situations or areas of student interest. This can help them see the practical benefits of the material. Invite guest speakers from industry or successful alumni to share their experiences. Establish a reward system: reward active students, such as extra points, in-class recognition, or direct praise. This can encourage other students to become more active.

Assigning after-class assignments, such as reading or pre-class assignments, will help students be better prepared for discussions. This can also boost their confidence because they already have a basic understanding. Encourage collaboration and involve students in group work activities, where they become more comfortable speaking in small groups before speaking in front of the class. Evaluate and provide feedback: Regularly solicit students' input on your teaching methods and areas for improvement. By involving them in the learning process, they feel more valued and are more likely to participate actively.

The purpose of this article is to identify and understand the problems currently occurring in the teaching and learning process. This article aims to identify the challenges faced by students and lecturers, so that ways can be found to improve and enhance the quality of classroom learning activities. This is expected to make the learning process more effective and motivate students to be more actively involved.

The theoretical study underlying this article covers cognitive and linguistic issues. According to Vygotsky, L. S. (1978), he emphasized the importance of social interaction in cognitive development. He argued that cognitive problems can occur if a child lacks support from their social environment. Siegler, R. S. (1996), also focused on an information-based approach to cognitive development. Siegler examined how cognitive processes can be disrupted by factors such as memory capacity and thinking strategies. Chomsky, N. (1965) introduced the theory of Universal Grammar, which states that humans have an innate ability to learn language. Linguistic problems can arise if there is a disruption in the internalization of this grammar.

This article will outline various aspects that are the focus of linguistic and cognitive development, ranging from learning methods and thinking development to the impacts of these methods. It is hoped that this article will provide an understanding and address the problems encountered in the learning process.

## 2. Method

This study uses a descriptive quantitative survey method to describe the characteristics of a phenomenon or population. For example, distributing questionnaires to students to determine their level of activity in classroom learning activities. Respondents are asked to answer questions or provide information related to a specific topic, which is then analyzed to describe patterns or trends within the population. The results of this survey are more descriptive in nature and provide a general overview of how something occurs in a population or sample. This approach was chosen because it allows for an in-depth description of the phenomenon based on data collected through the distributed survey.

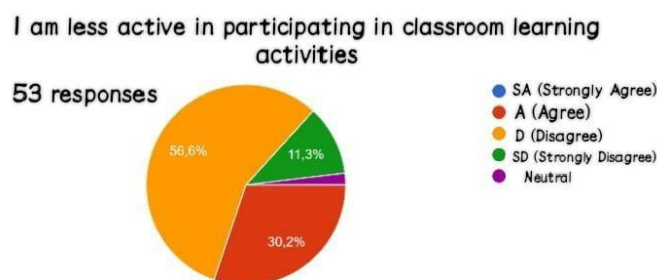
This study was designed to determine the percentage of our survey and to identify what causes some respondents to have the same issues, such as a lack of active participation in classroom learning activities. The main subjects of this study are undergraduate students in the Non-Formal Education program at the Faculty of Education, University of Malang. Additionally, some students from other programs within the Faculty of Education are also included. Several data collection techniques were also employed, including the distribution of questionnaires via Google Forms. Questionnaires are the primary instrument for collecting quantitative data. This

technique involves distributing a list of questions to respondents to obtain information that can be measured numerically.

Questionnaires can be designed with closed or open questions, although closed questions are more commonly used to facilitate statistical analysis. The advantages of using questionnaires are time efficiency and the ability to collect data from many respondents simultaneously. The research was conducted online, and it took two days to collect the questionnaire data to meet the minimum number of respondents. This research focused on respondents' answers that were relevant to the issues in their respective learning activities. With this method, the research is expected to provide an in-depth and documented overview of the cognitive and linguistic issues faced by students and educators.

### 3. Results and Discussion

#### 3.1 Result



The results of the research diagram show that 56.6% of students disagreed with the lack of active participation in classroom learning activities, 30.2% still disagreed, and 11.3% strongly disagreed with the lack of active participation in classroom learning activities. The data is presented as a percentage for each satisfaction category and provides a clear picture of student perceptions of educational services.

#### 3.2 Discussion

This research addresses cognitive and linguistic development. The survey results reveal the following:

1. My family influences my personality development.
2. The environment I currently live in influences my communication skills.
3. I tend to feel comfortable in quiet, less crowded environments.
4. When faced with a problem, I tend to immediately seek a solution without dwelling on it for too long.

So, a person's cognitive and linguistic development is influenced by family, environment, and personal preferences. Family plays a crucial role in shaping personality by teaching values and norms that influence how we interact with others. The living environment also influences communication skills, as a lively environment or one that encourages social interaction fosters speaking and listening skills. Furthermore, a preference for a quiet environment can help a person think more clearly and focus. Finally, a person's approach to problems, such as seeking quick solutions, reflects a practical mindset influenced by life experiences and the surrounding environment. All of these factors are interconnected in an individual's development.

The family is the first environment that shapes a child's personality. Positive parenting, such as teaching the values of empathy and cooperation, helps children develop effective interaction skills. Conversely, less supportive parenting can hinder a child's emotional and cognitive development. The living environment also has a significant influence. An environment rich in social interaction, such as an active community, can improve speaking and listening skills. On the other hand, a quiet environment can foster a more cautious and introspective way of communicating.

An individual's personal preferences for certain environments also play a significant role. Those who prefer quiet environments tend to have clearer thinking and are able to analyze situations better. Creating conditions that align with these preferences can help improve the quality of their thinking. The way individuals approach problems often reflects their life experiences. Many people tend to seek quick solutions, reflecting a practical mindset influenced by the social context around them.

This aligns with Cognitivism theory, which focuses on the mental processes involved in understanding and organizing information, with an emphasis on students' prior experiences and cognitive developmental stages. Humanism theory emphasizes the development of students' potential to achieve self-actualization, with educators acting as facilitators who create a safe and supportive environment. Information Processing theory views the brain as a computer that processes and stores information, increasing student engagement. Social Learning theory focuses on learning through observing and imitating the behavior of others. Nativism theory, on the other hand, argues that individual development is determined by innate factors, with education focusing on developing students' natural talents. All of these theories provide insight into how learning and development occur.

No.	Statement	SA	A	D
1	The major I chose is in line with my abilities.	15,1%	67%	13,2%
2	I understand the material better when it's explained theoretically.	7,5%	56,6%	34%
3	I understand the material more easily through hands-on practice.	47,2%	45,3%	
4	My family influences my personality development.	54,7%	41,5%	
5	The environment I live in now influences my communication skills.	52,8%	41,5%	
6	I actively participate in classroom learning activities	11,3%	73,6%	13,2%
7	I don't actively participate in learning activities in class.	30,2%	56,6%	11,3%
8	I prefer to listen to the lecturer's explanation rather than reading the material myself.	28,3%	58,5%	11,3%

9	I think educators/lecturers always provide opportunities for effective discussions.	32.1%	62.3%	
10	I tend to feel comfortable in a quiet and less noisy environment.	50.9%	47.2%	
11	I am able to work with groups from different backgrounds (race, culture, and ethnicity).	35.8%	62.3%	
12	When faced with a problem, I tend to immediately find a solution without dwelling on the issue for too long.	11.3%	64.2%	
13	Family and social environments play an important role in shaping a person's character and personal values.	67.9%	30.2%	
14	I can manage my emotions and deal with stress in a healthy way.	13.2%	66%	
15	I have the freedom to make decisions	13.2%	77.4%	7.5%
16	I am able to adapt to the environment and gain new knowledge	20.8%	71.7%	
17	I believe that direct experience in learning and the relationship between education and daily life are very important	13.2%	77.4%	7.5%
18	My development is driven more by my own thoughts or inner drive than by external influences	26.4%	62.3%	9.4%
19	I am able to understand several languages (regional languages, Indonesian, and English)	17%	77.4%	
20	I am only able to understand multiple languages (regional languages, Indonesian, English, and other foreign languages)	57%	49.1%	41.5%

#### 4. Conclusion

This study shows that an individual's cognitive and linguistic development is influenced by various factors, including family, environment, and personal preferences. The family plays a role as the first environment that shapes a child's personality, where positive parenting can help children develop good social interaction skills. Conversely, unsupportive parenting can hinder emotional and cognitive development.

The living environment also has a significant impact on communication skills. An environment rich in social interaction can improve speaking and listening skills, while a quiet environment can help individuals think more clearly and introspectively. Personal preferences for certain atmospheres contribute to how individuals analyze situations and deal with problems. Individuals who tend to seek quick solutions reflect a practical mindset formed from life experiences and social contexts.

Furthermore, this research aligns with various psychological theories, such as Cognitivism, Humanism, Information Processing, Social Learning, and Nativism. These theories provide insights into how learning and development processes occur, emphasizing the importance of prior experiences, innate potential, and environmental influences in shaping individuals.

Overall, all these factors are interconnected and contribute to an individual's cognitive and linguistic development. Understanding the relationship between family, environment, and personal preferences is crucial for supporting holistic individual development.

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