

Cognitive development and its impact on learning motivation among preschoolers

Irma Darmawati & Dinar Setiawan
Universitas Pendidikan Indonesia, Indonesia

Corresponding author: irmadarmawati@upi.edu

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ABSTRACT

The relationship between children's cognitive development and their motivation to learn is not as straightforward as previously thought. This study aims to elucidate the intricacies of this relationship, thereby questioning the prevailing notion that these two elements are inseparably connected. By examining the domain of early childhood education, this study endeavors to dissect the intricacies of cognitive development and motivational influences within the educational context. This correlational study sample are 70 preschoolers. Cognitive development data were collected using a pre-screening questionnaire for development and observation forms that comprise four elements: the drive for achievement, discipline in learning, readiness to overcome challenges, and curiosity. No significant relationship was found between cognitive development and learning motivation (p -value $0,349 > 0,05$). The research outcomes offer a new perspective, prompting a reassessment of educational frameworks. They emphasize the necessity of a comprehensive approach that takes into account multiple factors affecting children's engagement and learning progress. These findings stress the importance of examining various influences beyond cognitive development to foster a holistic understanding that shapes children's motivation and educational experiences.

Keywords: Cognitive Development, Motivation, Preschool

INTRODUCTION

Motivation is an effort that can cause someone to do something. Because they want to achieve the goals they want or get satisfaction with their actions, motivation also encourages someone to study hard in order to achieve the goals they have set. There are 5 indicators of motivation to learn, namely, encouragement and need for learning, hopes and aspirations for the future, appreciation in learning, interesting activities in learning, a conducive learning environment (Veraksa, 2022). Motivation has an important function in learning because motivation will determine the intensity of a person's learning effort, if someone who has high motivation learns better than one who has low learning motivation, motivation functions to encourage people to make motivation the driving force of every activity to be carried out, motivation can give direction to goals to be achieved and activities to be carried out in accordance with their goals, determining what actions to do that are appropriate in achieving goals by setting aside actions that are not beneficial to that goal (Rojas, 2020).

Learning motivation is very important for someone to have, especially for children who are currently studying at school, the level of children's learning motivation determines the quality of children's behavior in carrying out a given task. This can be seen from the quality of behavior shown when completing the task, which is shown by the attitude of sincerity, perseverance, attention and fortitude. The existence of children's learning motivation will encourage these children to be more enthusiastic in learning and doing assignments given by the teacher, in order to produce positive results

and children's interest in learning will increase resulting in an active learning process in class which has an impact on the achievements that children get at school (Andrew, 2024).

Learning motivation in children can determine whether or not they are good at achieving goals so that the amount of motivation will increase the success of learning, children who have motivation to learn are children who are active in trying to appear persistent and do not want to give up, actively read books to improve their achievements and to solve problems, On the other hand, children whose motivation is weak seem indifferent and easily discouraged, attention is not focused on the lesson, likes to disturb class, and often leaves class so they experience learning difficulties (Barentien, 2020; Huang, 2022).

Strong learning motivation in children can encourage children to be more enthusiastic about learning, so that children can more easily master learning material to increase motivation in children. It is necessary to provide encouragement from the outside, namely by giving awards to outstanding children such as scholarships, charters, prizes or holding the selection of exemplary and outstanding students. With things like this, children can be encouraged to study more actively. So that having good achievements for children who have not received prizes they will compete or compete in learning to get awards from the school, one of the things that underlies children's motivation at school is that it can be seen from the level of attendance in teaching and learning activities, the activeness of children in participating learning activities, according to their responsibilities as students (Barentien, 2020; Gizzonio, 2022).

Pre-school children are part of early childhood children who are in the age range of 3 – 5 years. At this age, children have a strong motivation to get to know their natural environment and social environment better. They are individuals who have a great curiosity to explore their surrounding environment, children want to always try new things to gain experience, children enjoy interacting with other people, both those who are younger, their peers and adults. (Kvintova, 2022). Providing education to early childhood is something that according to many experts is mandatory. According to RI Law No. 20 of 2003, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and the skills they need. society, nation and state. Meanwhile, early childhood education in the national education system is a coaching effort aimed at children from birth to six years of age which is carried out through providing educational stimuli to help physical and spiritual growth and development so that children are ready to enter further education.

Preschool education and basic education for children are also designed in accordance with children's developmental tasks, so that children are able to achieve their developmental tasks optimally. Early childhood aged 0-6 years is the early childhood period which concludes infancy and enters the pre-school period. At this stage there is a period which is usually referred to as the golden age. This is usually called a critical period where a child needs the right stimuli to reach perfect maturity. In order to take advantage of the golden age, it is hoped that preschool education can be used as a preparation for entering the next school, namely elementary school and preparation for entering the reading and writing stage. The preparation takes the form of an initial introduction to letters and writing, which preparation is called emergent literacy or basic literacy (Kyle, 2019).

Pre-school age children need stimulation as a factor that is directly related to cognitive development because stimulation has a positive effect. The existence of early childhood education institutions in Indonesia is very important in order to optimize developmental stimulation, especially motor, cognitive and language development from an early age so that children can grow and develop optimally. A preschool institution is an institution that provides care, education and development services for children aged 0 - 72 months (Sawyer, 2021). Early childhood cognitive development is at the pre-operational stage, which means the period when children are able to think using symbols, their way of thinking is still limited by focused perception. A child's thinking process is always linked to what is captured by the five senses, such as what is seen, heard, tasted, touched, smelled and is always followed by the question why. Naturally, children learn best in real life by seeing, feeling and doing with their hands. So this concept may be taught by seeing, holding and playing, this real experience of doing it will really help children understand the learning process (Lassassi, 2021).

Based on research conducted by Setyaningrum in Talagamulya Village, cognitive development is an aspect of development that emerges and develops rapidly during early childhood because 50% of cognitive potential is formed in the first four years of life. Cognitive development is related to the quality of human life. The aim of this research is to determine the dominant factors related to cognitive development. The research was conducted in April 2013. The research design was cross-sectional with

a sampling technique using proportional random sampling. The research sample was 128 young children aged 24-72 months who attended early childhood education (PAUD) or did not participate in PAUD in Talagamulya village, Karawang district. The research results showed that 61.7% of young children had good cognitive abilities. The chi-square test shows that factors related to cognitive development are vitamin A intake, zinc intake, maternal knowledge, and learning in pre-school. The dominant factor related to cognitive development in this research is learning in pre-school (Tamtama, 2020).

Cognitive development In line with the preschool curriculum, the intellectual development characteristics of children aged 3-5 years are classified as being able to do many things, including naming and counting, recognizing number symbols, connecting concepts with numbers, recognizing the concepts of the same, more, less, recognizing addition with object. Thus, based on the developmental characteristics that have been achieved, children aged 3-5 years are able to communicate simple mathematical relationships, especially addition and subtraction, using concrete objects or pictures (Veziroglu-Celik, 2020). Cognitive development develops well depending on intellectual abilities. These stages, sensorimotor stage, preoperational stage, concrete operational stage, and formal operational stage, are always experienced by every child, and nothing will ever be missed even though the child's ability level is different. This stage becomes more complex than the initial period and cognitive abilities increase. (Herentina, 2012).

Background and purpose

The study investigates the utilization of Narrative Analysis principles to examine storytelling among a cancer society member on a chat group during COVID-19. Specifically, it seeks to inquire into, 1. How Cerita Kami was carried out guided by Narrative Analysis framework, and 2. Determine the benefit of storytelling to the narrators.

METHODOLOGY

The type of research used is quantitative research with a correlational design. The data collection time approach used in this research is cross sectional. The sample size in this study was 70 kindergarten students using total sampling. Data analysis used univariate (central tendency) and bivariate analysis (Spearman Rank correlation test). Data collection is carried out through questionnaires of motivation to learn using observation sheets. The indicators measured for learning motivation are: persistence in learning, tenacity in facing difficulties, sharp interest and attention in learning, achievement in learning, independence in learning. Cognitive development was assessed using the KPSP Indonesian children development standard. This study was approved with the ethics number No. III/009/KEPK-SLE/STIKEP/PPNI/JABAR/II/2021.

RESULT

The characteristics of respondents studied in this research include gender, age of respondents, cognitive development, and motivation to learn.

Table 1. Demographic characteristics

Gender	Frekuensi (n)	Persentase (%)
Boy	32	45.7
Girl	38	54.3
Age		
4 years	21	30
5 years	49	70
Cognitive Development		
Good	55	78.6
Not enough	15	21.4
Motivation to learn		
High	60	85.7
Low	10	14.3

The results of data analysis in table 1 illustrate that in this study more than half of the respondents, namely 38 people (54.3%) were girl, 49 people (70%) are 5 years old, have a good cognitive developments (78.6%), and high motivation to learn (85.7%).

Table 2. Association of cognitive development and motivation

	Motivation		
	R	R ²	p-value
Cognitive Development	0.188	.042	.349

For bivariate data from the Spearman Rank (Rho) test results, the ρ -value obtained was $0.349 > 0.05$. This shows that H_0 is accepted, so it is concluded that there is no relationship between cognitive development and children's learning motivation at preschool.

DISCUSSION

In this research, it is known that there are differences in the proportion of cognitive development results and learning motivation between boys and girls. There were more good cognitive development in female respondents, namely 25 people, and more or less cognitive development in male respondents, namely 10 people, and high learning motivation was more in female respondents, namely 27 people, and low learning motivation was more in male respondents. 6 people This difference is because the number of female respondents obtained was greater than male. Cognitive differences between boys and girls do exist, although the proportions are only small, girls show better performance in the areas of language arts, reading comprehension, and written and oral communication, while boys appear to be slightly superior in the areas of mathematics and reasoning. mathematically, the differences between personality and physical forms between men and women are more real and more consistent. Men are more assertive and have a higher self-system than women.

Children Aged 3-6 years, they are usually able to take part in a preschool or kindergarten program. In the development of preschool children, there are stages, children are ready to learn, especially at the age of around 4-6 years, they have a sensitivity for writing and have a good sensitivity for reading. The cognitive development of preschool children differs from the preoperational stage. In development there are several stages, namely, from birth to 3 years of age, children have sensory sensitivity and thinking power that has begun to be able to absorb experiences through their sensors, from the age of half a year to approximately three years old, begins to have language sensitivity and is very appropriate for developing his language. At the age of 2-4 years, muscle movements begin to be coordinated well, for walking and many semi-routine and routine movements, interested in small objects, and begin to realize the existence of a time sequence (morning, afternoon, evening, night).

Another research showing that almost half of Alkhairaat Tavanjuka students (53.3%) had good cognitive development and those who had less cognitive development (46.7%) Based on the results of this study and previous research It can be said that pre-school age children have a good level of cognitive development (Tamtama, 2020). Early childhood cognitive development is at the pre-operational stage, which means the period when children are able to think using symbols, their way of thinking is still limited by focused perception. The child's thinking process is always linked to what is captured by the five senses such as what is seen, heard, tasted, touched, smelled and is always followed by the question why. Naturally, children learn best in real life by seeing, feeling and doing with their hands. So this concept may be taught by seeing, holding and playing, this real experience of doing it will really help children understand the learning process. Good and poor cognitive development can be seen from the instrument that uses the developmental pre-screening questionnaire (KPSP). By using KPSP researchers can see the good and lack of cognitive development in Permata Bunda Kindergarten. Good cognitive development of children is able to show colors correctly, children are able to describe short and long lines, children are able to show red, yellow, blue, green rectangles and poor cognitive development children cannot fully dress themselves without help.

The results of data analysis in table 1 illustrate that the majority of respondents were in the high category of learning motivation. Based on another research, it is known that there was a decrease in learning motivation in children of 30% of 28 children in class A in 2016, data collected through observation techniques, observations were carried out on learning to obtain data on learning activities and children's learning motivation (Yafie, 2020). The research method used is Kemmis and Mc model

classroom action research, from this it can be concluded that there is a decrease in learning motivation in class a child. Strong learning motivation in children can encourage children to be more enthusiastic about learning, so that children can more easily master learning material to increase motivation in children. There needs to be encouragement from outside, namely, by giving awards to children who excel, such as giving scholarships, certificates, prizes or holding the selection of exemplary and outstanding students. With things like this, children can be encouraged to study more actively. So that children who have not received a prize have good achievements, they will compete or compete in learning to get awards from the kindergarten. One of the things that underlies children's motivation at school can be seen from the level of attendance in teaching and learning activities, children's activeness in participating. learning activities (Zee, 2021).

In learning motivation, researchers used observation sheets to see the high and low levels of learning motivation. The high learning motivation of children at preschool can be seen from the observation sheet. Children always come to school on time, children never miss school on Monday-Friday, children always ask questions. to the teacher regarding material that is not yet understood, children are happy to receive praise from the teacher if they complete assignments, children always do the tasks given by the teacher, children are able to distinguish colors, children are able to understand letters or numbers. The low learning motivation of children can be seen from the observation sheet, children do not pay attention in the learning process for 3 minutes without any interruptions, children do not ask friends about material they do not understand, with this the researcher can see the high and low levels of children's learning motivation in preschoolers.

The results of no relationship obtained in this study are due to the possibility that there are other factors that influence children's cognitive development and learning motivation. Based on research conducted by Nia Satrian (2013), regarding "the influence of motivation and family support on learning achievement" results were obtained on factors that influence cognitive development and learning motivation. The results show that there is a significant relationship (ρ -value <0.05). The results of this research analysis show that there is an influence of motivation on student learning achievement with a P-Value = 0.000 ($P < 0.05$) and there is an influence of family support on learning achievement with PV value = 0.000 ($P < 0.05$). Based on another research results show that there is a significant relationship (ρ -value <0.05). The results of this analytical research. The results of data analysis carried out using product moment correlation show that there is a significant relationship between family social support and students' learning motivation with a significance value of 0.000 (significance value <0.05). The product moment correlation value from the research was 0.535, illustrating that the contribution given by the family social support variable to learning motivation was 53.5%, while the remaining 46.5% was influenced by other variables not measured in this research (Rakhman, 2022).

Based on research about relationship between parenting styles and the cognitive development of children aged 3-4 years, results were obtained regarding factors that influence cognitive development (Bjorklund, 2022). The results show that there is a significant relationship (ρ -value <0.05). Data analysis uses the product moment correlation test with the point biserial correlation category. Hypothesis testing shows r -count $>$ r -table, r count = 0.439 while r -table (0.374), so there is a significant relationship between parenting patterns and cognitive development, which means that parenting patterns greatly influence the level of children's cognitive development with test results. analysis with strong relationship results.

Based on research conducted by Roberts (2022)), regarding "the relationship between early childhood education and the cognitive development of preschool aged children" results were obtained regarding factors that influence cognitive development. The results show that there is a significant relationship (ρ -value <0.05). The sample was taken using a total sampling technique of 41 people. The research design used was an analytical survey using a cross sectional approach and data was collected using a questionnaire sheet. The results of the chi-square test research obtained $p = 0.000$. The conclusion is that there is a relationship between early childhood education and the cognitive development of preschool children.

Based on research conducted by Octaviani (2021), regarding "the relationship between learning motivation and student learning discipline" results were obtained regarding factors that influence learning motivation. The results show that there is a significant relationship (ρ -value <0.05). The sample was taken using a total sampling technique, namely 28 people. This type of research is correlational research with a quantitative approach. The instrument used was a questionnaire. Data were analyzed using Pearson Product Moment Correlation to obtain the correlation coefficient between learning motivation and learning discipline. The results of the analysis obtained a correlation coefficient of 0.731

which shows that there is a strong positive relationship between learning motivation and learning discipline.

Factors that influence motivation to learn, namely family support provided by the family, will enable children to know and understand themselves. Especially regarding their obligations as children in pursuing education at school, apart from that, the family environment is the most important social environment in a child's life, a place where he learns and expresses himself in his interactions with the family so that communication and a warm relationship between the family and the child will help the child in solving his problems. Especially for children in the learning process, positive family conditions contribute positively to children's perceptions in overcoming any problems they face, especially in the learning process at school.

Meanwhile, things that influence learning motivation are learning discipline, obedience and obedience which arise because of awareness and encouragement from within the person. Discipline in children is seen when the child has an understanding regarding the limits of freedom from actions that are permitted and that are not permitted, so that children with learning discipline will show attention and listen to the teacher's information, diligently follow lessons, carry out exercises or practices, as well as making an overview or summary, this will increase children's motivation to learn at school.

Another factor that may influence cognitive development is the parenting style of parents. Parents are the main teachers for their children, therefore parents are the central center that is put in the spotlight in physical and psychological development. Every parent must pay attention to this as an effort to develop a complete human being, including efforts to improve children's health as early as possible, namely while the child is in the womb up to the first five years of life. This can be seen in the way children maintain their survival while improving their quality of life so that they can grow and develop optimally both physically, emotionally, mentally and socially and have multiple intelligences in accordance with their genetic potential, with parenting patterns that teach them to read, count and know. colors, knowing shapes will help children's cognitive development develop more. When a child enters kindergarten, it will make it easier for the child to adapt to the lessons in kindergarten (Roberts, 2022).

Another factor that may influence cognitive development is early childhood education. Early Childhood Education is very important as an effort to help physical and spiritual growth and development so that children are ready to enter school. further level of education. Early age is a golden age that occurs once during a human's life. This period is the right time to lay the foundations for physical, language, social emotional development, self-concept, art, morals and religious values. Implementing effective early childhood education is beneficial for the development of the basics of natural knowledge, mathematics and language, both spoken language and reading and writing. Apart from that, implementing effective early childhood education can also motivate children to think about and put forward the correct answer to a conflict. Early childhood education also provides opportunities for children to carry out various activities so they can develop their cognitive abilities.

CONCLUSION

There is no significant relationship (p -value $0.349 > 0.05$) between cognitive development and learning motivation in children in kindergarten. There are many other factors that must be explored again to increase children's motivation to learn.

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