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## **THE INFLUENCE OF LEARNING AWARENESS AND COGNITIVE ABILITY ON STUDENT ACHIEVEMENT**

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### **ABSTRAC**

This article examines the effect of mediating student learning awareness on cognitive abilities in improving academic achievement. This article discusses the role of teacher-student relationship variables and learning evaluation in encouraging the emergence of student learning awareness at the elementary school level. The data used are primary data, collected from 135 grade 5 and 6 teachers in 17 elementary schools in the Medan Polonia area, Medan City, Indonesia. Data analysis of Structural Equation Modeling (SEM) shows that there is a positive influence on the relationship and evaluation of learning on student achievement through learning awareness and cognitive abilities with a significant correlation ( $p < 0.05$ ). This article's findings indicate that students' awareness of learning is a mediation that affects the improvement of cognitive abilities and academic achievement of students in the classroom.

**Keywords: Learning Awareness, Cognitive Abilities, Student Achievement, Relationship, Learning Evaluation**

### **ABSTRAK**

*Artikel ini mengkaji pengaruh mediasi kesadaran belajar siswa terhadap kemampuan kognitif dalam meningkatkan prestasi belajar. Artikel ini membahas tentang peran variabel hubungan guru-siswa dan evaluasi pembelajaran dalam mendorong munculnya kesadaran belajar siswa di tingkat sekolah dasar. Data yang digunakan adalah data primer, dikumpulkan dari 135 guru kelas 5 dan 6 di 17 SD di wilayah Polonia Medan, Kota Medan, Indonesia. Analisis data Structural Equation Modeling (SEM) menunjukkan bahwa terdapat pengaruh positif antara hubungan dan evaluasi pembelajaran terhadap prestasi belajar siswa melalui kesadaran belajar dan kemampuan kognitif dengan korelasi yang signifikan ( $p < 0,05$ ). Temuan artikel ini menunjukkan bahwa kesadaran belajar siswa merupakan mediasi yang berpengaruh terhadap peningkatan kemampuan kognitif dan prestasi belajar siswa di kelas.*

**Kata kunci: Kesadaran Belajar, Kemampuan Kognitif, Prestasi Belajar, Hubungan, Evaluasi Belajar**

### **INTRODUCTION**

Understanding child development is a must for parents, teachers, and older people. Hurlock (1978) says that a child will always consider parents, teachers, and peers as the most important people in his life. Therefore, the participation of all parties plays a role in shaping children's development. It is because, through the interactions that occur, children get to know something positive and negative.

Good or bad children's development is very dependent on meeting the needs obtained from other people, both from parents, family members, teachers, and other individuals. This support ultimately

affects children's cognitive abilities. Santrock (2011) states that the development experienced by a child starts from conception and continues throughout his life, which through biological, cognitive, and socio-emotional processes. Biological processes, relating to the formation of essential properties. Cognitive processes are related to the formation of thoughts, integrity, and language.

Meanwhile, the socio-emotional process forms the ability to build relationships with other people, emotional changes, and personality changes. The cognitive abilities of each child must be different. A child's ability to understand and capture the material conveyed by the teacher

at school will vary. L. W. Anderson and Bloom (2001) say that children's cognitive processes in school from their mental processes. Cognitive processes are related to the child's ability to remember and master lessons. This process then finally forms the cognitive abilities of children in understanding a lesson.

Forming cognitive abilities at the elementary school children's level, teachers in school need to understand and appreciate it. Elementary school is a golden time for intellectual development to children's creativity. Also, cognitive aspects at the level of elementary school children are the basis for forming psychological aspects.

The learning process organized by the teacher adapted to the child's cognitive development. It raises the child's ability to communicate, interact to support others, and maximize all sensory abilities such as seeing and hearing optimally. Darouich et al (2017) say that the cognitive system is a complex processing device in humans capable of obtaining, preserving, processing, and transmitting the information. During childhood, the increase in cognitive abilities occurs very quickly. This increase occurs where the child is faster to catch and remember something evident to him.

Cognitive structures, in general, affect the child's mind in understanding the reality at that time. A child usually plays an active role in his development by finding new experiences and trying to understand what he saw and heard. Besides, they seek to understand the difference between new information and what they previously believed to be true (R. C. Atkinson et al., 1968; Corbett & Anderson, 1994). Given, elementary-age children do not have maturity in thinking, and children have limitations in sorting out something positive or negative and which ones have a good or bad impact. One aspect that is very important to know and understand from the development of primary age children is the cognitive aspect. Cognitive development has an effect on children's mental and emotional development and language skills. The attitudes and actions of children are also related to children's thinking abilities.

Receiving a quality education is an essential foundation in the life of every individual. Being very important for students, have motivation and involvement in the learning process. For students, motivation is not always intrinsic. Therefore, it is the teacher's responsibility to guide students in improving cognitive abilities by obtaining a quality education. It is due to the role of the teacher to foster student tendencies in learning.

The process of improving students' cognitive abilities has been a matter of debate about the best way teachers should do it due to teachers' unequal ability to conduct teaching practices. The difference that occurs is that there are still quite a several teachers who use traditional methods in the teaching process (Cuban, 1993). As a result, the cognitive enhancement of children's students has not been optimal.

This article aims to examine and analyze the predictor factors of improving elementary school students' cognitive abilities. The factors analyzed include relationship, evaluation, and learning awareness towards increasing students' cognitive abilities in obtaining increased academic achievement. This article contributes to the academic achievement literature by testing (Figure 1) that shows the direct and indirect impact of the relationship, evaluation of learning on learning awareness, and cognitive abilities on student achievement.

Previous reevaluating that there is a relationship between teacher and student involvement as a predictor of improving students' cognitive abilities in obtaining learning achievement. This relationship plays a role in encouraging a conducive and positive student learning climate (Boynton & Boynton, 2005). Students who perceive their teachers as caring have better achievement outcomes (Boynton & Boynton, 2005; Gehlbach et al., 2012; Rimm-Kaufman & Sandilos, 2012; Skinner & Greene, 2008; Spilt et al., 2011).

Previous research findings stated that learning difficulties disorder is one of the obstacles that can hinder students from achieving maximum cognitive abilities. This

disorder is a psychological disorder that includes hearing loss, thinking, speaking, reading, writing, spelling, or mathematical calculations (Cortiella & Horowitz, 2014). Therefore, it is an integral part of teacher assessment in understanding the abilities of each student.

Gullo (2005) explains that a comprehensive assessment aims to determine weaknesses and strengths. This assessment can provide the educational services students need as a basis for compiling a learning design. In designing students' cognitive abilities, it is necessary to consider several things, including the learning environment and learning methods. Ley and Young (2001) states that consideration by adjusting the characteristics of students.

Lack of student learning achievement at school is a concern and often occurs everywhere. There are many reasons why students lose interest in learning in school, and about student involvement in learning is a key factor. Considering that students spend about twenty-five percent of the classroom time, it is essential that they be involved or not want an. During a typical school day, teachers often hear students complaining about assignments, classes, or even teachers. If students have a positive relationship with their teacher, they will be more involved and Teachers.

In addition, the relationship between students and teachers influences each other during a typical school day. When a student feels welcomed and wanted in class, it generates motivation to be actively involved in learning. Thus, the role of the teacher in the classroom influences students' perceptions of class relationships and environment, which contributes to the achievement of cognitive abilities and learning achievement. Students who feel that their teachers supporting have better achievement results on exams (Gehlbach et al., 2012).

Santrock (2011) states that motivation is a process of giving encouragement, direction, and behavior persistence. In other words, motivated behavior is behavior that is full of energy, purposeful, and enduring. Therefore, motivation as an internal process or psychological process occurs in a person

healthy influenced by external (environmental) factors and internal factors inherent in each person (innate), educational level, past experiences, future desires or hopes. Winkel (1996) says that learning is a mental/psychic activity that takes place in active interaction with the environment, which results in changes, knowledge, understanding, skills, and attitude values, and those changes are relatively constant and constant.

Meanwhile, what learning motivation is the desire that activates, moves, channels and directs individual attitudes and behavior to learn. Teaching is a creative act, where a teacher must coordinate his thoughts with actions. So the underlying psychological problem is to see that teaching improved through technology. It can secure the integration of teaching practice and the applicable educational principles on which the practice.

Gagne and Briggs (1974) suggests that three primary abilities a teacher in teaching and learning activities, including the ability to plan materials and teaching and learning activities, implement and manage teaching and learning activities, and assess student learning outcomes.

The principle of active learning is rooted in constructivism learning theory. The basic premise of constructivist learning principles is that individuals need to actively "build" their knowledge and skills. The information obtained in building a framework by students comes from an environment outside of themselves. According to constructivism theory, the center of learning is not the teacher but the students themselves. This learning strategy is called student-centered instruction (Slavin, 2011). This theory also holds that students are active organisms, and their efforts can create their meaning due to the learning process. This understanding sees students as subjects (actors) in the learning process, not as objects.

Students create knowledge while trying to understand their experiences (Hergenhahn & Olson, 2008). The success of an educational program can only know after measurement. Measurement is the activity of determining the number of an

object. Gronlund (1990) say formulated measurement as "Measurement is limited quantitative descriptions of pupil behavior, that is the results of measurement always disclosed in numbers." Nitko (1983)

measurement refers to quantitative aspects of describing characteristics or attributes of persons.

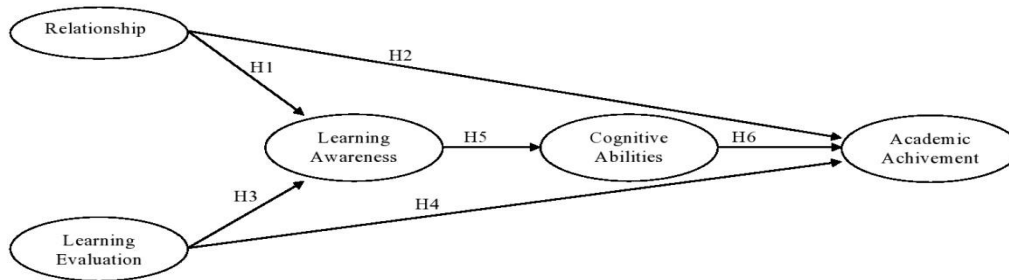


Figure 1. Structural Hypothesis Model

### BASIC OF THEORY AND HYPOTHESIS

When students feel in control and feel comfortable in the classroom, it engenders involvement in learning with enthusiasm and enthusiasm. Students play an active role in improving their cognitive abilities (Maulana et al., 2013; Skinner & Greene, 2008). The teacher took the first step to improve students' cognitive abilities by providing motivation and being involved in the learning process. Therefore, the need for teachers and students to build and maintain positive relationships.

Students' perceptions play an essential role in obtaining high learning outcomes. Previous research has shown that the strongest predictor of student motivation is controlling children's perceptions. Perceived control believes that a person can determine behavior and influence the appropriate environment to bring the desired result. Because previous students already have a history of experience with adults in line with their needs, the teacher's role is in building and developing that experience (Skinner & Greene, 2008). Therefore, students' perceptions of teacher behavior influence the relationship. Students who feel their teachers do not support them have less interest in learning in the classroom (Rimm-Kaufman & Sandilos, 2012).

As stated in the teacher-student relationship overview, perceived control

plays an essential role in shaping the relationship. Students need to develop a sense of control by having a structured classroom environment and experiencing a caring and trusting relationship with the teacher (Skinner & Greene, 2008). The effect of perceived control directly contributes to the formation of relationships with teachers and student education. When students do not feel in control or feel like their teacher does not care about them, there are many negative consequences. Students will avoid challenges and will not seek help from their teachers. These students will only complete the minimum and do enough to survive but will never really be involved in their education.

Feelings of being annoyed, anxious, depressed, and unmotivated are also consequences when students feel out of control. Unfortunately, these students will procrastinate, make excuses, and quit as soon as possible, resulting in low academic achievement scores. Spilt et al. (2011) stated that the teacher's motivation contributes to the learning achievement produced by students. Teachers can meet this need by building and maintaining relationships with their students. It is an important part where students experience emotional involvement with the teacher. This emotional connection arises because of the teacher's concern in providing support to students. Teachers can develop and maintain relationships by applying control,

attitude, familiarity, and good communication.

Hypothesis 1: The relationship has a positive and significant effect on learning awareness.

Hypothesis 2: The relationship has a positive and significant effect on academic achievement.

### **Learning Evaluation**

In education, there are two definitions of learning outcomes assessment—first, the meaning of assessment, and second, in the sense of evaluation. Assessment in the sense of assessment is collecting information on student learning outcomes obtained through measurements to explain or analyze student performance in doing assignments given by the teacher. Meanwhile, assessment in the sense of evaluation is an activity designed to measure learning effectiveness, which involves several components that determine learning success.

One of the aspects that must be present in the evaluation is knowing teaching as the expected target of the teaching and learning process and how the goals and teaching and learning processes can effectively. Then based on plans and objectives, learning activities are carried out. In the implementation of learning, the question always arises, whether the teaching activities are following the objectives, whether students have been able to master the material presented, and whether the learning process has been able to teach students effectively and efficiently. The evaluation has been interpreted by experts in different ways, even though the meaning is relatively the same. Guba and Lincoln (1981) put forward the definition of evaluation as "a process for describing an evaluand and judging its merit and worth."

Meanwhile, Sax (1997) argues that "evaluation is a process through which a value judgment or decision from various observations and the evaluator's background and training." Mardell-Czudnowski (1996) said that student evaluation collects student data that serves

to determine the abilities and difficulties faced. Besides, the assessment is also used as a material to determine what students need. Based on this information, the teacher will compile a learning program according to the circumstances.

Bernauer and Cress (1997) shows that assessment can encourage the success rate of education as a form of teacher accountability. Santrock and Santrock (2007) explains that the development process is cumulative. Thus, previous (cognitive) development will become the basis for further development. Likewise, vice versa, if there are obstacles in previous developments, further developments will experience obstacles.

Hypothesis 3: Evaluation has a positive and significant effect on learning awareness.

Hypothesis 4: Evaluation has a positive and significant effect on academic achievement.

### **Learning Awareness**

Fostering students' awareness of learning to improve their cognitive abilities is an essential task for teachers. The growing awareness of students to learn the teaching and learning process will run efficiently, following what a teacher wants to achieve. Rogers (1979) says that behavior arises because of one's awareness. M. Atkinson et al. (1997) said that consciousness includes three things: perceptions, thoughts, and feelings. As a form of student awareness in learning, students are growing motivated to be involved in learning activities.

Actively involving students in the learning process is considered a process of fostering student awareness and responsibility for learning (Faust & Paulson, 1998; Hartanto et al., 2002). In the process, this learning method does not only place students as passive listeners and take notes only, but includes involvement in discussions, role-playing, and designing projects. The purpose of the design of this method is to create students to care for their education. Research conducted by Claxton et al. (2005) states that cultivating elementary school students' creativity is

needed by cultivating the mental aspects first. As a result of this mental enhancement, it raises the creative abilities of students in the classroom.

Hypothesis 5: Learning awareness has a significant and positive effect on cognitive abilities.

### **Cognitive Ability**

Cognitive learning is not only concerned with understanding teaching materials but also with their analysis and application. Behavioral learning (skills) includes developing competencies in students' abilities to do assignments, solve problems, and express opinions. Affective (attitude) learning includes the assessment and explanation of feelings and preferences. Silberman (2004) divides into four categories that serve as a closing strategy for learning, including review strategies, self-assessment strategies, future planning, and farewell words. A child's cognitive enhancement focuses on the aspects of improving thinking skills. This ability ultimately impacts the aspects of learning, problem-solving, rational thinking, and the ability to remember.

Increased cognitive abilities are directly related to improving children's skills, including communication, motor, social, emotional, and adaptive skills. In other words, a child's cognitive abilities will increase gradually from birth through interaction with their environment (Darouich et al., 2017). Previous studies tried to describe the structure of cognitive abilities that impact academic achievement—this structure, built with a focus on explaining the differences experienced by each student.

Vernon (1983) states that each student's mental differences have played a role in increasing academic achievement in class. Vernon (1983) also states that individual speed in carrying out learning processing is a link between memory and cognitive abilities. This memory speed also explains the differences in students' cognitive abilities in achieving academic achievement (Fry & Hale, 1996).

Hypothesis 6: Cognitive abilities have a positive and significant effect on academic achievement.

### **Academic Achievement**

Academic achievement relates to students' skills and competencies in reading, arithmetic, writing, speaking, and thinking skills. The form of academic achievement is measured by the standardized test results conducted by students. Chaplin and Aldao (2013) defines academic achievement as the acquisition of teachers' results for learning outcomes given by students. Winkel (1996) states that academic achievement is a learning process that is felt by students to gain knowledge, understanding, analysis, and evaluation.

The academic achievement shows the level of achievement experienced by students for the efforts that already made. The cognitive factor that plays a role in academic achievement is intelligence, which is generally measured by a standardized intelligence test to obtain an IQ (Intelligence Quotient) score. Feldman et al. (2009) defines intelligence as the capacity to understand the world, reason, and use resources effectively when facing challenges. Apart from cognitive factors, academic achievement is also affected by noncognitive factors.

Ryan and Deci (2008), in self-determination theory, state that motivation as a noncognitive factor is a determinant of student academic achievement. Student motivation towards school activities is influenced by life at home and affected by experiences at school (Deci et al., 1991). Assumes that students' interactions with the classroom environment and home environment can serve as a support or a barrier to the process of achieving academic achievement (Ryan & Deci, 2000).

### **METHOD**

Research design is a framework required to prepare and resolve research problems (Aaker et al., 2008). The purpose of the research design is to ensure that the data obtained can solve research problems. The research approach used in this research is quantitative.

The data source of this research is the primary data source. Data collection was carried out by surveying the respondents. The application of survey activities aims to obtain data or information from the research samples (Creswell, 2012). Data collection, using a questionnaire or questionnaire as a research instrument. Survey activities in this study were conducted to produce explanatory research. Explanatory research aims to find a cause-and-effect relationship or causality between variables in data analysis (Sekaran, 2011).

Sampling is the process of selecting several parts of the population, based on an understanding of their characteristics and characteristics (Sekaran, 2006). Determination of the sample of this study was carried out with a non-probability sampling approach. Several sample selection types fall into the non-probability sampling category, one of which is

purposive sampling, which is the deliberate selection of samples based on criteria determined by the researcher (Sekaran & Bougie, 2013).

The criteria for determining the sample included teachers teaching in grades five and six (students aged 11-12 years), Masters's education, teaching length of more than five years, easy to find, and willing to be respondents. This study sample as many as 135 public and private elementary school teachers in the Medan Polonia area, Medan City, Indonesia. Based on the Regional Government data, 17 primary schools were obtained with 293 teachers (see Appendix Table 1). Based on the tabulation (Table 2), it shows that there are 26 male primary school teachers (46%), 30 female teachers (54%). Meanwhile, 30 private primary school teachers were male (38%) and 49 female (62%).

Table 2. Respondents Tabulation

Gender	School		Total Samples
	Public	Private	
Male	26	30	56
Women	30	49	79
<b>Total</b>	<b>56</b>	<b>79</b>	<b>135</b>

Source: primary data

This study uses five Likert scales for each respondent's answer. The scale measures start from one (totally disagree) to a scale of five (totally agree). The male private teacher's answers for the relationship variable averaged 3.38; for the evaluation variable, the average was 3.51; for the learning awareness variable, the average was 3.18; for the cognitive ability variable, the average was 3.36, and for the average academic achievement variable Average 3.28. While the results of the male state teacher answer, for the relationship variable an average of 3.34, for the evaluation variable an average of 3.48, for the learning awareness variable the average was 3.14, for the cognitive ability variable the average was 3.34, and for the average

academic achievement variable average 3.24.

The results of the female private teacher answer, for the relationship variable an average of 3.38, for the evaluation variable the average was 3.52, for the learning awareness variable the average was 3.17, for the cognitive ability variable the average was 3.36, and for the academic achievement variable the average was 3.28. While the results of the female state teacher answer, the relationship variable averaged 3.36, for the evaluation variable, the average was 3.49, for the learning awareness variable, the average was 3.16, for the cognitive ability variable, the average was 3.35, and for the academic achievement variable, the average was 3.25.

Table 3. Respondents' Answers Tabulation

Variable	Public School		Private school	
	Male	Women	Male	Women
Relationship	3.34	3.36	3.38	3.38
Learning Evaluation	3.48	3.49	3.51	3.52
Learning Awareness	3.14	3.16	3.18	3.17
Cognitive Ability	3.34	3.35	3.36	3.36
Academic Achievement	3.24	3.25	3.28	3.28

Source: primary data

## RESULTS

In this study, data analysis using Structural Equation Modeling (SEM) with AMOS 22.00. Structural Equation Modeling (SEM) aims to examine the relationship between variables in obtaining a comprehensive picture of the model (Bollen, 1989). In the Structural Equation Modeling (SEM), the model Goodness of fit meets the cut-off point, including Chi-Square value  $\leq 153,198$ , Significance probability  $\geq 0.05$ , Goodness of Fit Index (GFI) of  $\geq 0.90$ , Adjusted Goodness of Fit Index (AGFI) of  $\geq 0.90$ , Tucker-Lewis Index (TLI) / Non-Normed Fit Index (NNFI) of  $\geq 0.90$ , Normed Fit Index (NFI)  $\geq 0.90$ , Incremental Fit Index (IFI)  $\geq 0.90$ , Incremental Fit Index (IFI)  $\geq 0.90$ , CMIN / DF  $\leq 5$ , RMSEA  $\leq 0.8$  (Arbuckle, 2005; Hair et al., 2010; Sharma & Sharma, 1996; Wheaton et al., 1977).

Heise (1969) states that for research that focuses on determining variables' causality, it is necessary to fulfill the size model's empirical requirements for all variables to determine whether there are adequate construct validity and reliability. Meanwhile, Hair et al. (2006) state that all constructs have size errors, including variable indicators. Therefore, it is necessary to test the theoretical construction of each variable empirically. The

theoretical construct, confirmatory factor analysis was carried out. Confirmatory factor analysis aims to perform a variable dimensional analysis test.

This analysis examines the unidimensional variable indicator to see the indicator's impact in forming both exogenous and endogenous variables. Hair et al. (2006) stated that latent variables (constructs) have indicators that generally influence reliability. Thus, the confirmatory factor analysis is used to confirm the measurement model empirically. The measurement model is a measurement model to see the relationship between latent variables (constructs) and explanatory indicators for these variables (J. C. Anderson & Gerbing, 1988).

Determining this model is an essential part of doing before starting data analysis. For the uni-dimensional of the variable or construct understudy, a confirmatory factor analysis technique was used. To see the suitability of the confirmatory factor analysis test, the validity of the extract is  $> 0.5$ , the value of construct reliability (c.r)  $> 0.7$ , and the value of the extract's average variance (AVE)  $> 0.5$ . Following table 4, an explanation of the validity and reliability of the indicators for each variable.

Table 4. Construct Validity and Reliability

Variable	Construct Validity	Construct Reliability	Avarage Variance Extracted (AVE)
Relationship	0.82	0.90	0.70
Learning Evaluation	0.87	0.93	0.80
Learning Awareness	0.85	0.92	0.73
Cognitive Ability	0.89	0.93	0.80
Academic Achievement	0.89	0.94	0.80



In the Structural Equation Modeling (SEM) analysis, it is necessary to obtain a fit model first before testing the hypothesis. The results of the tests carried out show that the form of the model has met the predetermined goodness of fit requirements. The figure shows the values of the goodness of fit components, namely the absolute fit measure, incremental fit measure, and parsimonious fit measure. (see appendix fig. 2).

Hair et al. (2010) stated that the model is feasible and fit if it has 4-5 criteria for the goodness of fit. The model to be fit has the criteria of each component of the goodness of fit. The absolute fit measure is the absolute fit measure in determining the model's degree to the correlation and covariance matrices. The following will be explained in table 2. below, which results from testing the fit model.

Table 4. Model Fit Test Results

Measure	Cut-off Point	Model Fit	Criteria
Chi-Square (df=126, p= 0.05)	153.198	165.006	Not Fit
Significance probability	≥ 0.05	0.01	Not Fit
CMIN/DF	≤ 3	1.30	Fit
GFI	≥ 0.90	0.90	Fit
AGFI	≥ 0.90	0.83	Not Fit
CFI	≥ 0.90	0.99	Fit
TLI/NNFI	≥ 0.90	0.98	Fit
NFI	≥ 0.90	0.94	Fit
RMSEA	≤ 0.08	0.05	Fit
RMR	≤ 0.05	0.29	Not Fit

**Hypothesis**

In conducting hypothesis testing, two stages of influence testing were previously carried out, namely direct and indirect. First, testing the direct effect of relationship and evaluation on learning awareness, then learning awareness on cognitive abilities,

and finally testing the effect of cognitive abilities on academic achievement. Second, test the indirect effect of relationships and evaluation of cognitive abilities through learning awareness. In table 5 below, the results of the test for all pathways are described.

Table 5. Effect Test Results

	Effect	Estimate	S.E.	C.R.	P
LA	<--- RE	-0.44	0.22	-1.97	0.048
LA	<--- LEV	1.08	0.23	4.65	***
CA	<--- LA	1.47	0.12	12.13	***
AA	<--- RE	0.02	0.05	0.42	0.676
AA	<--- LEV	-0.08	0.06	-1.29	0.199
AA	<--- CA	0.67	0.08	8.42	***

Based on the test results of Table 5 paths' coefficient, RE to LA ( $\gamma = -0.44, p = 0.05$ ), RE to AA ( $\gamma = 0.02, p = 0.68$ ), LEV to LA ( $\gamma = 1.08, p = ***$ ), LEV to AA ( $\gamma = -0.08, p = 0.20$ ), LA to CA ( $\gamma = 1.47, p = ***$ ), CA to AA ( $\gamma = 0.67, p = ***$ ).

**DISCUSSION**

Based on the results of the tests carried out, the results show that the relationship between students' awareness is significant but negatively affects (H1). These results indicate that the teacher-student relationship's role has an impact on fostering student learning awareness in the classroom. These results are consistent with

Spilt et al. (2011) conducted research where students are motivated to learn in class if there is encouragement from the teacher. These results are also consistent with Skinner and Greene (2008) research, namely that with good relationships, students have confidence and confidence in the teaching guidance carried out by their teachers.

The results showed that there was no relationship effect on student academic achievement (H2). These results indicate that the teacher's closeness to the students in the classroom does not have an impact

on increasing student academic achievement. This study's results agree with Kim and Seo (2018). This result also rejects the opinion of Kimani et al. (2013), which states that the relationship affects students' academic achievement.

The results showed a positive and significant relationship in the evaluation of students' learning awareness (H3). The teacher uses the role of the results of student learning evaluation to assess students' weaknesses. So that from these results, the teacher can provide learning motivation to students. These results agree with the research conducted by Sax (1997), which states that evaluation is used as an observation of students' learning abilities.

Based on the results of the Structural Equation Modeling (SEM) test, it shows that evaluation has no effect on student academic achievement (H4). These results agree with the research of Cimermanová (2018), which states that learning styles and assessments do not have an impact on improving student academic achievement (McMillen, 2001).

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Hypothesis test results indicate that there is an effect of learning awareness on cognitive abilities (H5). These results explain that the students' behavior is formed because of the emergence of their awareness Rogers (1979). These results follow Claxton et al. (2005) that students' ability in lessons arises because of awareness. Hypothesis testing with Structural Equation Modeling (SEM) shows an effect of cognitive abilities on academic achievement (H6). These results agree with Diniz et al. (2011) stated that cognitive ability acts as a mediator that influences student academic achievement (Caemmerer et al., 2018; Feldman et al., 2009).

## CONCLUSION

This study indicates that the role of learning awareness has an impact on students' cognitive abilities in increasing their academic achievement. There are various ways to improve student academic achievement in class. However, based on this study's results, it shows that evaluating student learning outcomes is a significant aspect in improving student academic achievement. Also, the mediating role of learning awareness is positive in improving students' cognitive abilities. Based on this study's findings, it is essential for teachers to continually motivate students to learn, thus fostering focus and enthusiasm for learning. By involving students in the learning process, it is hoped that students will quickly find out, understand, and analyze the learning given. In other words, the teacher's role has a positive impact on improving a student's cognitive abilities in the classroom.

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