SCIENCE LEARNING ACHIEVEMENT ASSESSED FROM EMOTIONAL INTELLIGENCE OF STUDENTS IN ELEMENTARY SCHOOL

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Abstract
The purpose of this study is to describe the relationship between Emotional Intelligence and natural science learning achievement of fifth-grade students in elementary schools. The method used is descriptive qualitative. Data collection was carried out using a questionnaire to get a picture of how the emotional intelligence of fifth-grade elementary school students located in the Provincial City, Regency City, District City and remote areas, how the learning achievement of fifth-grade elementary school students in the even semester of 2019 located in the provincial city, Regency Cities, Sub-district Cities, and Remote Areas, how are the links between Emotional Intelligence and Natural Science learning achievements of Grade V students of Elementary Schools in the even semester of 2019 located in Provincial Cities, Regency Cities, District Cities, and Remote Areas. Obtained a picture there is a link between emotional intelligence with science learning achievement of fifth-grade elementary school students in the even semester of 2019 which is located in the Provincial City, Regency City, District City and Remote Areas which is stated through the results of data analysis that shows the contribution of emotional intelligence to students’ learning outcomes.

Keywords: Emotional Intelligence, Science Learning Achievement

Introduction
Humans are God’s most perfect and noble creatures in this world because it is perfect that humans are endowed with a variety of extraordinary potential, including intelligence potential. Human intelligence is one of the great gifts from God Almighty, making it one of the strengths of humans compared to other creatures. With intelligence, humans can continuously maintain and improve their quality of life, which is increasingly complex through a process of thinking and learning continually. Thanks to the intelligence he has up to now, humans can maintain the continuity and civilization of his life.

Along with the development of science and technology, people do not only talk about general intelligence, namely intelligence (Intelligence Quotient), but also emotional intelligence (Emotional Quotient) and spiritual intelligence (Spiritual Quotient). Lately, it is believed that the determinant of a child’s success lies not only in how high a child’s IQ (Intelligence Quotient) is but also how the child’s EQ (Emotional Quotient) is. High emotional intelligence (EQ) in individuals aroused his motivation to continue to excel. Emotional intelligence is needed when individuals face problems that can cause pressure for the individual so they can control their emotions so they can deal with problems well.

As a teaching and learning process, it can be seen from the teacher and student side. If seen in terms of students, student behavior that does not pay attention to the teacher’s explanation, chatting alone when the teacher explains, school assignments were given by the
teacher are not done, quarrels between students can also be things that also affect the learning outcomes achieved. The teaching and learning process still does not involve students actively, apart from teachers who have tried to apply but low student participation.

In the process of student learning, both intelligence is very necessary. IQ cannot function properly without the participation of emotional appreciation of the subjects delivered at school. Based on the description above, it can be assumed that emotional intelligence has a close relationship as a determinant of the success of one’s life, especially when they are still in the process of formal education, which is shown by the success of learning achievement.

Goleman in Iskandar (2009: 52) argues that "Emotional intelligence refers to the ability to recognize our feelings and the feelings of others, the ability to motivate ourselves and the ability to manage emotions properly in yourself and relationships with others."

Mayer and Salovey in Makmumn Mubayidh (2006: 15) defines that: Emotional intelligence as a social intelligence related to the ability of individuals to monitor both their emotions and the emotions of others, and also their ability to distinguish their emotions from other people emotions, where this ability is used to direct their thought patterns and behavior.

According to Ge Muzaik in Rohmalina Wahab (2015: 151) "Emotional intelligence is the ability to recognize, express, and manage emotions, both one's own emotions and the emotions of others, with constructive action, which seeks to work together as a team that refers to productivity and not to productivity conflict."

Johanes Pap in Rohmalina Wahab (2015: 151) states that emotional intelligence includes self-control, enthusiasm and perseverance, and ability to motivate yourself and endure frustration, the ability to control impulses and emotions, to regulate moods and to keep the burden of stress from paralyzing the ability to think to read the innermost feelings of others (empathy) and pray, to maintain relationships as well as possible, the ability to resolve conflicts and to lead.

Cooper & Sawaf in Aryan Ginanjar (2001: 44) revealed that "emotional intelligence is the ability to feel, understand and selectively apply emotional power and abilities as a source of energy and human influence. " Individuals who can understand the emotions of other individuals, an attitude, and make the right decision without causing adverse impacts on both parties. Emotions can arise whenever individuals get stimuli that can affect the condition of the soul and cause turmoil from within. Well-managed emotions can be used to support success in various fields because when emotions emerge, individuals have more energy and can influence other individuals. Everything that emotion produces when properly utilized can be applied as an energy source needed to complete tasks, influence others, and create new things. Where emotional intelligence is also the ability to use emotions effectively to achieve goals, build productivity, and achieve success.

There are several characteristics of children who have emotional intelligence, according to Rachman (2005: 43-75), which is as follows. 1) Self-aware, good at self-control, trustworthy, adaptable and creative, 2) able to empathize, understand other people's feelings, resolve conflicts and be able to work in teams, 3) can get along and build friendships, 4) can influence others, 5) dare to aspire,, 6) can communicate, 7) confident, 8) highly motivated, welcome challenges, have the drive to move forward, initiative and optimism, 9) can express and speak fluently, 10) likes pictures and stories, 11) likes new experiences, 12) is thorough and perfectionist, 13) likes to read without being pushed around 14) remembers events and experiences easily, 15) likes learning, 16) great curiosity, 17) high sense of humor.

Children who have the characteristics of emotional intelligence will be able to interact well in their social environment because they have self-awareness, are good at controlling themselves, can be trusted, can adapt, empathize, understand the feelings of others, can resolve conflicts, can work together with others and so forth. According to Lawrence Shapiro in
Hamzah, et al. (2010: 126), children’s emotional intelligence includes four aspects, namely: "1) tenacity, 2) optimism, 3) self-motivation, and 4) enthusiasm".

Emotional intelligence is divided into five components as expressed by Goleman, namely: (1) the ability to recognize self-emotions; (2) the ability to manage emotions; (3) ability to motivate themselves; (4) ability to recognize other people’s emotions; and (5) the ability to foster social relations. The ability to recognize one’s emotions is the ability to recognize one’s feelings when those feelings or emotions arise. It is often said to be the basis of emotional intelligence. Someone who can recognize his own emotions is when he has a sharp sensitivity to their true feelings and then steadily makes decisions.

Emotional intelligence is not determined from birth but can be done through a learning process. Several factors influence individual emotional intelligence, according to Goleman in Andoko and Dumora (2018: 13), namely: 1) Family Environment. Family life is the first school in studying emotions. This emotional intelligence can be taught when a child is a baby with examples of expressions. Emotional events that occur during childhood will be attached and settled permanently into adulthood, the emotional life that is fostered in the family is beneficial for children in the future. 2) Non-Family Environment. In this case, the community and education environment. This emotional intelligence develops in line with the physical and mental development of children. This learning is usually demonstrated in a role-playing activity. Children act as individuals outside themselves with the accompanying emotions so that children will begin to learn to understand the situation of others.

According to Le Doux in Andoko and Dumora (2018: 13) that the intelligence factor emotionally influenced by the emotional state of the individual brain, the emotional brain is influenced by the amygdala, neocortex, limbic system, prefrontal lobes, and other things that are in the emotional brain. Factors that influence emotional intelligence are external factors and internal factors. External factors are factors that come from outside the individual, for example, the family environment, society, and the mass media or print. This external factor helps individuals to recognize the emotions of others so that individuals can learn about the various emotions that others have, as well as helping individuals to feel the emotions of others with the circumstances that accompany them. Internal factors are factors that originate from within the individual, and these internal factors help individuals in managing, controlling, and controlling their emotions so that they can be well-coordinated and do not cause problems for themselves and others.

Emotional intelligence (EQ) grows as a person grows from birth to death. The growth of EQ is influenced by the environment, school, and family, and the examples that a person gets from birth from his parents. A parent is someone who must first teach emotional intelligence to their children by setting examples and good examples. Through emotional intelligence, it is expected that all elements involved in education and learning can understand themselves and their environment appropriately, have confidence, do not envy, do not worry, do not be afraid, are depressed, do not easily discouraged, and not easily angry.

According to Mulyasa in Kadeni (2014: 11), the benefits of emotional intelligence for students are as follows. 1) Honest, disciplined, sincere to yourself, build strength and self-awareness, listen to conscience, respect, and responsibility. 2) Strengthen yourself, move forward, be resilient, and build inspiration on an ongoing basis. 3) Build character and dignity, increase potential, and integrating learning goals into their life goals. 4) Make use of opportunities and create a brighter future.

Further stated ways to develop emotional intelligence in learning are: 1) Providing a conducive environment. 2) Creating a democratic learning climate. 3) Develop an attitude of empathy, and feel what is being felt by students. 4) Help students find a solution to every problem it faces. 5) Involving students optimally in learning, both physically, socially, and emotionally. 6) Respond to each student’s behavior positively and avoid negative responses.
Be a role model in enforcing rules and discipline in learning. According to Whittaker, "Learning is a process in which behavior is generated or changed through practice or experience." Winkel states learning is all mental or psychological activity that takes place in active interactions in the environment, which results in changes in understanding management. Meanwhile, according to Drs. Slameto, learning is a process of effort by individuals to obtain a new change in behavior as a whole, as a result of the experience of the individual itself in interaction with his environment. According to Lester D. Crow and Alice Crow, learning is the acquisition of habits, knowledge, and attitudes, including new ways to do things and one's efforts in overcoming obstacles or adjusting new situations. Learn to describe progressive change a person's behavior when reacting to the demands faced by him (Rohmalina Wahab, 2015: 17-18). While Hamalik in Ahmad Susanto (2016: 3) explains that "Learning is modifying or reinforcing behavior through experience." According to this understanding, learning is a process, an activity, and is not an outcome or goal. Thus, learning is not just remembering or memorizing, but broader than that is experiencing. Hamalik also stressed that learning is a process of changing the behavior of individuals or individuals through interaction with their environment. Changes in behavior include changes in habits (habits), attitudes (affective), and skills (psychomotor). Changes in behavior in learning activities are caused by experience or training. From some experts' opinions about the notion of learning stated above, it can be concluded that learning is a series of activities or activities carried out by individuals to obtain a change in behavior as a result of individual experiences in interactions with their environment involving cognitive, affective and psychomotor.

Learning is essentially an activity carried out consciously by someone who produces changes in behavior in himself, both in the form of new knowledge and skills, as well as in the form of attitudes and positive value. During learning activities, there is a process of interaction between people who carry out learning activities, namely students or students with learning resources, both in the form of humans who function as facilitators, namely teachers or lecturers, or in the form of non-humans. The factors that influence one’s learning, according to Rohmalina Wahab (2015: 26-31) is as follows.

1. Internal Factors
   a. Physiological factors
      1) State of physical tone
      2) State of physical/physiological functions
      b) Psychological factors
      3) Student intelligence / intelligence
      4) Interest Motivation
      5) Attitude
      6) Talent

2. External Factors
   a. Social environment
      1) The social environment of the community
      2) Family social environment
      b) School social environment
   b. Nonsocial environment
      1) Natural environment
      2) Instrumental factors

Physical conditions, in general, greatly affect a person's learning activities. A healthy and fit physical condition will have a positive influence on individual learning activities. Conversely, a weak or sick physical condition will prevent the achievement of maximum learning outcomes. Because physical tone greatly influences the learning process, efforts must be made to maintain physical health.

During the learning process, the role of physiological functions in the human body greatly affects learning outcomes, especially the five senses. A well-functioning sense will...
facilitate learning activities, as well. In the learning process, the senses are the entrance to all information received and captured by humans, so that humans can get to know the outside world.

Learning achievement is the success of a business that someone has achieved after gain a learning experience or learn something (Winkel, WS. 1987). In the Big Indonesian Dictionary explained that learning achievement is: mastery of knowledge or skills developed by subjects, usually indicated by test scores or grades given by the teacher. Hamalik (2001) states that learning achievement is a change in attitude and behavior after receiving a lesson or after learning something. In theory, if an activity can satisfy a need, then there is a high tendency to repeat it. Sources of learning reinforcement can be extrinsic (grades, recognition, rewards) and can be extrinsic (excitement to investigate, interpret situations). Besides that, students need and must receive direct feedback on the degree of success of the implementation of assignments in the form of report cards or test scores. (Achmadi and Supriyanto, 1990).

Learning achievement is the perfection of a student in thinking, feeling, and doing. Student learning achievement is said to be perfect if it meets three aspects, namely: cognitive aspects, affective aspects, and psychomotor aspects. Cognitive aspects are aspects related to thinking activities. This aspect is very closely related to the level of intelligence (IQ) or the ability to think of students since the first cognitive aspects have always been a significant concern in the formal education system. Schools today emphasize perfection in cognitive aspects. Affective aspects are aspects that are related to values and attitudes. Assessment of this aspect can be seen in discipline, respect for teachers, compliance, and so on. Affective aspects are closely related to emotional intelligence (EQ) of students. Psychomotor aspects, according to the big Indonesian dictionary, is everything associated with the ability of physical movement that affects mental attitude. So, this aspect shows the ability or skills (skills) of students after receiving knowledge.

Learning achievement is the mastery of knowledge, knowledge, and skills developed in a subject, generally shown by the grades or grades that satisfy the teacher. Achievement is the level of success obtained from activities or businesses that provide emotional satisfaction. Learning achievement is the result that is expected to be obtained after someone learns. In other words, learning achievement is the result of learning and a form of behavior change that will produce something learning targets and objectives which include three aspects namely, 1) knowing, 2) skilled in doing what he knows, and 3) doing what is known routinely and paying attention to the consequences there.

Method

Research conducted has the aim to reveal an event or phenomenon that is based on the facts that exist. To achieve these objectives before the research is carried out, it is necessary to establish a research method. In accordance with the needs and problems that exist, this study uses a qualitative descriptive method because this study was conducted to describe or describe the phenomena that occur. Information or data collected is not realized in the form of numbers, analysis with logical principles (Sugiyono, 2016: 283-300). Furthermore, Sugiyono (2002: 1) states that the research method is a scientific way to obtain data with the aim and specific uses. Based on these problems, the measurement, and analysis of the data, this study is in accordance with qualitative research methods.

This research was conducted at the State Elementary School located in the City of Province, Regency City, and District City. Each is represented by one class in one school and is held in the even semester of 2019, which is The subjects of the study were the 5th-grade students in the determined elementary school. The form of research used is a qualitative descriptive study. In every research besides the use of appropriate methods and media, it also requires the ability to choose and even arrange all the right data collection tools in a study that
will enable the achievement of solutions valid problems, which in turn will enable the formulation of objective research findings. The data captured in this study is the level of EQ that will be captured using the Questionnaire, and even semester report card values in 2019. The data collection techniques used in this study consisted of 1) Indirect Observation Techniques used to capture data about the EQ level of students. 2) Document Observation Technique, this technique is used to collect data relating to student achievement data. Data collection tools in this study are; 1) Questionnaire: to get data about student responses during the learning process. 2) Documents Report cards: used to get the value of learning achievement obtained in the even semester of 2019. Student EQ data obtained through the Questionnaire will score using a Likert scale (range 1 to 4), then the average of each student is calculated, then compared with the report card scores obtained in the even semester 2019 and will be described in accordance with predetermined criteria.

**Result and Discussion**

**Result**

Questionnaire data and learning outcomes data from each category of school groups, after analysis, can be seen as an average in the following graph:

![Graph showing Questionnaire Score Average vs. Learning Outcomes Score Average for SDN 66 Pontianak Kota and SDN 12 Pontianak Kota.](image-url)
Fig. 2 Regency City Elementary School Group

Fig. 3 Subdistrict City Elementary School Group
Fig. 4 Remote Area Elementary School Group

Discussion

Based on the results of the analysis of these data, schools are grouped according to school area categories, namely provincial cities, district cities, sub-districts, and cities' remote areas. Schools in the provincial city category are SDN 66 Pontianak Kota, and SDN 12 Pontianak Kota, while for the category of district city namely SDN 5 Singkawang, SDN 09 Sanggau, while schools in the subdistrict city category are SDN 62 Singkawang, SDN 7 Sepinggan Gelik, SDN 02 Batang Tarang, SDN 18 Sungai Kakap, and schools in remote areas namely SDN 85 Singkawang, SDN 01 Kedu kul, SDN 34 Mensere.

The percentage obtained from the emotional intelligence of fifth-grade students of State Elementary Schools 66 Pontianak City through a questionnaire, included in the category of "Good" that is equal to 77.98%. The percentage amount obtained from the emotional intelligence of fifth-grade students at the 12th Elementary School Pontianak City through questionnaires is included in the category "Good" that is equal to 81.29%.

The percentage obtained from the emotional intelligence of fifth-grade students of state elementary schools 5 Singkawang through a questionnaire, included in the category of "Good" that is equal to 80.45%. The percentage obtained from the emotional intelligence of fifth-grade students Sanggau 09 Public Elementary School through a questionnaire, included in the category of "Good" that is equal to 79.67% so that it can be said that the average emotional intelligence of schools included in the category of city propositions and district cities is included in the category of "Good."

School learning outcomes by province city category, namely SDN 66 Pontianak Kota obtained student learning outcomes data with an average of 76.97 so that if interpreted in the assessment category benchmarks, the average student learning outcomes class V 66 State Elementary School Pontianak City in natural science subjects included in the category of "Good (B)." And for SDN 12 Pontianak Kota data obtained student learning outcomes with an average of 77.9 so that if interpreted in the assessment category benchmarks, then the average student learning outcomes grade V 12 Elementary Schools in Pontianak City 12 subjects in natural science subjects included in the category "Good (B)." Thus, students' science learning outcomes for schools in the provincial city category are included in the "Good" category. Based on the data above, it can be assumed that emotional intelligence has a contribution to student learning outcomes for schools in the city category. SDN 5 obtained data on student learning outcomes
with an average of 72.88 so that if interpreted in the assessment category benchmarks, the average student learning outcomes grade 5 of Singkawang State Elementary School in natural science subjects included in the category of "Good." Student learning outcomes of Sanggau 09 State Elementary School with an average of 84.95 so that if interpreted in the assessment category benchmarks, the average student learning outcomes grade V 09 Elementary School in Natural Sciences is in the "Very Good" category.

Schools that are included in the sub-district category, namely SDN 62 Singkawang, with the percentage obtained from the emotional intelligence questionnaire for Grade V students included in the "Good" category, amounting to 76.85%. The percentage obtained from the emotional intelligence of fifth-grade students at Sepinggan Gelik 7 Public Elementary School through a questionnaire, included in the category of "Good" that is equal to 79.94%. The percentage obtained from the emotional intelligence of fifth-grade students at the State Elementary School 02 Batang Tarang through a questionnaire, included in the category of "Good" that is equal to 78.06%. The percentage obtained from the emotional intelligence of fifth-grade students at Sungai Kakap 18 Elementary School through a questionnaire, is included in the "Good" category of 77.43%. From the above data, it can be concluded that the average emotional intelligence of schools that fall into the sub-district category is included in the "Good" category. Then for student learning outcomes included in the district category namely SDN 62 Singkawang with an average of 67.88 so that if interpreted in the benchmarks for the assessment category, the average student learning outcomes of the fifth grade of Singkawang 62 Elementary School in natural science subjects fall into the category of "Enough (C)." The learning outcomes of Grade V students of Sepinggan Gelik State Elementary School 7 on natural science subjects were obtained on average by 73.27 so that if interpreted in the assessment category benchmarks, the average student learning outcomes fall into the category of "Good (B)." Student learning outcomes with an average of 70.76 so that if interpreted in the assessment category benchmarks, the average student learning outcomes grade V State Elementary Schools 02 Tarang Bar in natural science subjects fall into the "Good (B)" category.

Results of student learning grade V State Elementary School 18 Sungai Kakap in natural science subjects with an average of 75.84 so that if interpreted in the assessment category benchmarks, the average student learning outcomes fall into the category of "Good (B)." Thus, the science learning outcomes of students for schools by category districts included in the category of "Good." Based on the data above, it can be assumed that emotional intelligence has a contribution to student learning outcomes for schools in the sub-district category. Furthermore, for schools in remote areas, SDN 85 Singkawang, the percentage obtained from the emotional intelligence of fifth-grade students through a questionnaire was included in the "Good" category, which was 77.14%. Then the percentage obtained from the emotional intelligence of fifth-grade students of Elementary School 01 Kedukul through questionnaires included in the category of "Good" that is equal to 77.21%. The percentage obtained from the emotional intelligence of fifth-grade students at State Elementary School 34 Mensere through a questionnaire, included in the category of "Good" that is equal to 81.48%. Based on the data above, it can be said that the average emotional intelligence of schools that are included in the remote category included in the category of "Good." Furthermore, for science learning outcomes of students in remote school categories SDN 85, Singkawang obtained student learning outcomes with an average of 74.79 so that if interpreted in the assessment category benchmarks, the average class V student learning outcomes in natural science subjects included in the "Good (B)" category. The learning outcomes of Grade V students at Elementary School 01 Kedukul obtained an average of 76.46 so that if interpreted in the assessment category benchmarks, the average of student learning outcomes in natural science subjects fall into the "Good (B)" category. The learning outcomes of the fifth-grade students at the State Elementary School 34 Mensere obtained an average of 71 so that if
interpreted in the assessment category benchmarks, the average of student learning outcomes in natural science subjects fall into the "Good (B)" category. Based on the data above, it can be concluded that the average learning outcomes in schools in remote areas are included in both categories. So based on the data obtained above, it can be assumed that good emotional intelligence in students in the remote school category contributes to the learning outcomes obtained by these students. From the data exposure of the above research results, it can be seen that the emotional intelligence of students who fall into the category of city, sub-district, and remote school is the same or equivalent in each school, which means that these students can manage their emotional intelligence properly.

Conclusion and Suggestion

Conclusion

Emotional intelligence of fifth-grade students of elementary schools located in the city Provinces, Regency Cities, Subdistrict Cities, and Remote Areas are included in the "Good" category. With an average percentage yield in the range of 76% - 85%. Student achievement class V Elementary School in the even semester of 2019, which is located in the Province City, Regency City, District City, and Remote Areas included in the category of "Good." With an average in the range of 67-85. There is a link between emotional intelligence with students' science learning achievement class V Elementary School in the even semester of 2019 which is located in the Province City, Regency City, District City and Remote Areas which is stated through the results of data analysis that shows the contribution of emotional intelligence to student learning outcomes.

Suggestion

By knowing the emotional intelligence of students both located in the Provinical City, Regency City, District City, and Remote Areas, it is hoped that the teacher and the school can provide guidance and direct students to manage the potential emotional intelligence of students so that they can solve problems faced daily. Teachers and the school can pay more attention to aspects of emotional intelligence students have and other factors that can support student learning achievement optimally.

References


