

**ANALYSIS OF COGNITIVE ABILITIES OF 5TH GRADE ELEMENTARY
SCHOOL STUDENTS IN DOING SCHOOL ASSIGNMENTS USING
GOOGLE FORM APPLICATION**

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<p>Article Info</p> <hr/> <p>History: Submitted November 16th, 2021</p> <p>Revised November 23th, 2021</p> <p>Accepted December 7th, 2021</p>	<p>Abstract</p> <p>This research aims to analyze the cognitive abilities of 5th grade elementary school students in doing school assignments using the Google Form application. This research was conducted at SD Negeri Simpang Tiga Cilegon in the academic year of 2020/2021. This research uses a qualitative approach with the triangulation method. In this research, the triangulation used is the triangulation of data sources and the triangulation of theory. After the data is complete, then it is validated from various sources so it can be the basis for drawing conclusions. The instruments used are the teacher interview instruments, teacher observations instruments, and teacher interview and observations instruments. In this research, it was found that students in the level of remembering (C1) obtained 54.50% on the quiz results which include the medium category. The level of understanding (C2) obtains 79.38% on the quiz results that include the high category. The application level (C3) obtains a score of 0 because the results of the quiz scores are the same as the results of the evaluation scores. On the analysing level (C4) the quiz results obtain a score of -42.93% for negative results because the quiz score is bigger than the evaluation score of the analysing level. On the evaluation level (C5) the quiz results obtain a score of -70.67% for negative results because the quiz scores are bigger than the evaluation score of the evaluation level. In the creating level (C6) the quiz results obtain a score of 48.89% which includes the medium category. The results of the research conclude that studying from home during the Covid-19 pandemic can improve students' cognitive abilities by using the Google Form application.</p> <p>Keywords: Cognitive Ability, Google Form Application</p>
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A. Introduction

Education is a measure of a nation's progress. A developed nation is a nation that has a quality and intelligent generation. Developed countries have many problems that are solved through educational programs. Education that is applied properly and correctly will engender the next generation of a nation who are competent in the fields they mastered so the condition of the nation will improve from time to time.

According to Rulam Ahmadi (2014:32) Education has a broad meaning, where education does not only take place in an educational institution commonly referred to as a school. Education can be used as a learning experience that has various forms, atmospheres, and patterns. Education can be a learning experience formed by itself in life. The presence of education in life comes unintentionally or is formed intentionally, engineered, or programmed.

In line with the opinion of the Ministry of Education and Culture, Nadiem Makarim (2020) at the coordination meeting of heads of

education departments throughout Indonesia which take place in Jakarta, on 11 December 2019. Nadiem pointed to the policies in the field of higher education that he made. According to Nadiem, "Education in Indonesia has the concept of Freedom of Learning, can answer the challenges of the world that prioritizes creativity, has a high curiosity, resilience, empathy, critical thinking, problem-solving ability, self-confidence, cooperation, and a learner spirit". Nadiem Makarim explained that improving the direction of education policy is very important, so the learning process does not only focus on achieving academic grades but can be a fun experience for students and teachers. Learning is the teacher's effort to create a good climate and service to the very diverse abilities, potentials, interests, talents, and needs of students so the optimal interaction occurs between teachers and students as well as between students (Hamdani, 2011:72).

Currently, education in Indonesia is experiencing a shock where in early

March 2020, President of Indonesia, Joko Widodo announced directly that there were two people in Indonesia has tested positive for the coronavirus. Not long after Joko Widodo's announcement, on March 12, 2020, WHO (World Health Organization) announced that a new type of coronavirus with the name of Covid-19 had become a global pandemic outbreak. According to the Director-General of WHO, Tedros Adhanom Ghebreyesus, Covid-19 that started in Wuhan, China has now spread very quickly to several countries and has increased sharply, so all countries are preparing aggressive steps to control the spread of the coronavirus. After the WHO announced that Covid-19 had become a global pandemic, several countries had taken preventive measures, one of which was social distancing. In this case, Indonesia has also taken preventive measures by maintaining social distance. President of Indonesia, Joko Widodo expresses in his speech that Indonesian people should work, study, and worship from home. Even with the increasing cases number of the Covid-19 virus, WHO

recommends physical distancing (maintaining physical distance) as a way to avoid the wider spread of the Covid-19 virus.

In the end, due to the Covid-19 outbreak, Industrial Revolution Education 4.0 can be implemented as expected without ignoring other things that need to be considered, such as the impact and weaknesses. On the other hand, the role of students is expected to be able to bring positive changes in the midst of situations through the understanding provided by the teacher. Behind it all, there are still many obstacles faced by teachers and students in applying online methods. Such as the educational units that are still left behind, without an internet network connection, the online learning system will not be able to implement. In addition to education units, students whose families are underprivileged to have technological tools such as laptops, computers, and smartphones, then they will not be able to follow the online learning system and this affects students' cognitive abilities in doing school assignments. For students who are accustomed to learning directly

with the teacher in class and are not accustomed to using technological tools such as smartphones/laptops, of course, it will reduce students' cognitive abilities.

Based on what has been explained above in this research, the researchers appointed the title "Analysis of Cognitive Abilities of 5th Grade Students in Doing School Assignments Using the Google Form

B. Research Methodology

The research that will be conducted is research with a qualitative approach, the method of triangulation. Triangulation is qualitative research with multiple methods used to examine and determine validity in analyzing from various perspectives. In qualitative research, the validity can be seen based on an accurate tool for measuring it, the instrument. Qualitative research has validity which refers to the researcher's findings that are accurately reflected in the circumstances and supporting evidence.

Triangulation in this research is using triangulation of data sources and triangulation of theory. After

Application". This research aims to use the google form to analyze the students' cognitive level in doing the school assignments. During the research, there were research results that concluded that while studying from home during the Covid-19 pandemic, students' cognitive abilities could be improved by using the Google Form application.

completing the data, it can be validated from various sources to make a basis so a conclusion can be drawn. Triangulation is combined together through activities in the field, so researchers can record data thoroughly.

This research focused on the cognitive abilities of elementary school children in doing school assignments using the google form application. To make this research to be more focused on the subject matter, the researchers made several sub-focuses on three things, namely the cognitive abilities of students in doing school assignments by meeting directly with the teacher and by using the google form application, the

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obstacle and supporting factors of the teacher in giving explanations on the assignments given to 5th grade students at SDN Simpang Tiga Cilegon, and the results of the process of students doing assignments using the google form application.

The procedure of data collection is used so the data collected is adjusted to the arrangement of the research that makes the data obtained can be needed. According to Sugiyono (2012 : 224), the data collection is the most strategic step in

the research, because this research has the main objectives as the data collected. The data collected in this research uses the techniques of observation, interviews, questionnaires, and documentation studies.

As to make this research directed, the researchers first compiled the research instruments which were then used as a reference for interview and observation guidelines as follows.

Table 1
The Instruments of Students' Cognitive Abilities in Doing School Assignments Using the Google Form Application on the 5th Grade Students

Research Focus	Sub Focus	Teknik Pengumpulan Data	Interviewees
The cognitive abilities of 5 th grade students at SDN Simpang Tiga Cilegon in doing school assignments using the Google Form application	Continuity of Google Forms usage in the learning process of 5 th grade students at SDN Simpang Tiga	Direct Observation	Teacher
	The factors of obstacles and supports for teachers in giving assignments through Google Form	Interview	Teacher
	The Students' Individual Cognitive Abilities in Finishing Quizzes and Evaluations	Direct Observation and Interview	Teacher

The data analysis in qualitative research is conducted during the data collection and after the data collection

is completed within a certain period. Sugiyono (2013:91) for the data obtained through the data analysis

process, it can be arranged systematically through the way the data is organized into criteria, the units described, the implementation of the synthesis, the compiled pattern, the right selection to being understood, and draw conclusions that can facilitate self-understanding or others. In this research, the researcher used part of the data analysis process of the Miles and Huberman model.

Miles and Huberman (Sugiyono, 2016: 246) find that analytical activities on qualitative data are conducted actively and ongoing completion continuously so there is no boredom. Data analysis has activities, namely data reduction, data

display, and conclusion drawing/verification.

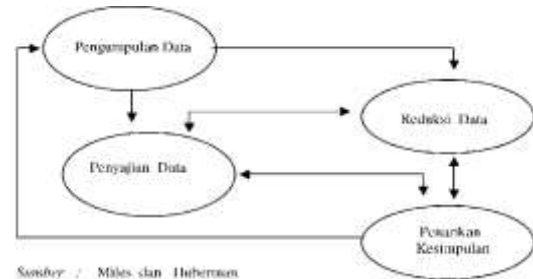


Figure 1 Miles and Huberman Model Data Analysis

According to Sugiyono (2016:270-277) explain that in the validity verification or research in the data validity with the implementation from the researcher, then the methods used are credibility test, transferability test, dependability test, confirmability test.

C. Result and Discussion

The research was carried out by researchers, by giving assignments to students with the aim to know the students' cognitive abilities through Google Form. According to researchers, this method is very effective and eases to assess the students' cognitive abilities. Cognitive ability is a process that occurs in the central nervous system

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when humans are thinking. Cognitive abilities develop gradually, in line with the physical development and the nerves in the central nervous system (Mulyono Abdurrahman, 2012). So cognitive ability is related to the intelligence level of a person with various interests, especially those aimed at learning ideas. Children will go through stages of

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cognitive development or developmental period. In each period of development, children try to find a balance between their cognitive structure and new experiences.

The cognitive aspect of elementary school children is one of the psychological aspects that need to be understood by an educator because basically learning must be adjusted to the children's cognitive development level. The cognitive system is a complex processing device in humans capable of obtaining, preserving, processing, and transmitting the information (Darouich dkk, 2017). The objects directly related to learning are students, so the intellectual development of students from their success in school can be determined. In line with the opinion of Zainiyati (2017:172), from the first, the cognitive taxonomy is designed with the aim that education can facilitate design activities in improving learning activities..

According to Vidayanti (2017) cognitive ability is a student's expertise in increasing thinking ability. One of the theories that discuss the importance of intellectual

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expertise is the theory found by Benjamin S. Bloom, a good quality education is obtained from the application of all levels of the intellectual realm in all learning activities (Huda, 2013). Intellectual skills are the competence of students in the intellectual aspect. The intellectual aspect contains behavioral attitudes by prioritizing the intellectual realm, namely insight, skills when thinking with the level of Lower Order Thinking Skills (LOTS), remembering (C1), understanding (C2), and applying (C3). There are three aspects of thinking skills at the level of Higher Order Thinking Skills (HOTS) namely analyzing (C4), evaluating (C5), and creating (C6) through Bloom's taxonomy which has been improved (Anderson and Krathwohl, 2002).

After conducting the research, the data obtained from the research results are as follows:

1. Quiz Results I

The data from the results of the first quiz research, that the cognitive ability of students in answering questions on the remembering level (C1) obtains a good score with a

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percentage of 75%. Furthermore, at the level of understanding (C2), obtain a sufficient score with a percentage of 57.5%. The results of the question in the applying level (C3) obtain a very good score with a percentage of 97.5%. The analyzing level (C4) obtains a good score with a percentage of 65%. The evaluating level (C5) obtains a good score with a percentage of 75%. Lastly, the creating level (C6) obtains a poor score by a percentage of 20%. The results achieved by students in the first quiz obtain an average score with a good predicate (percentage between 60-79%).

2. Quiz Results II

The data from the results of the second quiz research, that the cognitive ability of students in answering questions on the remembering level (C1) obtains a very good score with a percentage of 80%. Furthermore, at the understanding level (C2) obtains a score of very good with a percentage of 85%. The result of the question in the applying level (C3) obtains a good score with a percentage of 67.5%. The level of analyzing (C4) obtains a very

good score with a percentage of 85%. The evaluating level (C5) obtains a very good score with a percentage of 80%. Lastly, the creating level (C6) obtains a good result with a percentage of 72.5%. The results achieved by students in the second quiz obtain an average score with a very good predicate (percentage between 80-100%).

3. Quiz Results 3 III

The data from the results of the third quiz research, that the cognitive ability of students in answering questions on the level of remembering (C1) obtains a poor score with a percentage of 35%. This result is because the number of questions given is only 1 question. Furthermore, at the level of understanding (C2) obtains a good score with a percentage of 60%. The results of the question in the applying level (C3) obtain a very good score with a percentage of 90%. The analyzing level (C4) obtains a very good score with a percentage of 95%. The evaluating level (C5) obtains a good score with a percentage of 77.5%. Lastly, the creating level (C6) obtains a very good score with a percentage

of 90%. The results achieved by students in the third quiz obtain an average score with a very good predicate (percentage between 80-100%).

4. Evaluation Results

The data from the results of the third quiz research, that the cognitive ability of students in answering questions on the remembering level (C1) obtains a very good score with a percentage of 83.3%. Furthermore, at the level of understanding (C2) obtains a good score with a percentage of 93.3%. The results of the question in the applying level (C3) obtain a very good score with a percentage of 85%. The analyzing level (C4) obtains a very good score

with a percentage of 73.75%. The evaluating level (C5) obtains a good score with a percentage of 61.67%. Lastly, the creating level (C6) obtains a very good score with a percentage of 80%. The results achieved by students in the evaluation obtain an average score with a very good predicate (percentage between 80-100%).

Based on the quiz scores of 1,2,3, and the 5th grade evaluation of SDN Simpang Tiga Cilegon can be seen the N-Gain ability of the students with the learning that has been applied by the teacher. These results can be seen in detail in the following table.

Table 1
N-Gain Scores of Quiz and Evaluation Results

N	Quiz		Evaluation		Quiz-Evaluation	Quiz ideal score of 100	N-Gain Score	N-Gain Score %
	Score	Description	Score	Description				
C1	63.3	Moderate	83.3	Good	20	36.7	0.54	54.50
C2	67.5	Moderate	93.3	Good	25.8	32.5	0.79	79.38
C3	85	Good	85	Good	0	15	0.00	0.00
C4	81.6	Good	73.7	Good	-7.9	18.4	-0.43	-42.93
C5	77.5	Good	61.6	Moderate	-15.9	22.5	-0.71	-70.67
C6	60.8	Moderate	80	Good	19.20	39.2	0.49	48.98

Figure 1. Analysis of N-Gain score

Formula:

$$N\ Gain = \frac{Evaluation\ Score - Quiz\ Score}{Ideal\ Score - Quiz\ Score}$$

Criteria 1	$g \geq 0.7$	High
	$0.3 \geq g \leq 0.7$	Moderate
	$g \leq 0.3$	Low

Source: Meizer in Syah Fitri (2018:33)

Criteria 2	< 40	Not Effective
	40 – 55	Less Effective
	56 – 75	Quite Effective
	> 76	Effective

Source: Hale, R. R. 1999

This is in accordance with the research by Risky (2016), that online learning activities will be effective if the essential elements are fulfilled during the learning, namely discursive, flexible, active, and contemplative through a good part if integrated into the student’s condition so it makes integrated online learning to meet the digital learning ecosystem elements because it accommodates learning styles, flexibility, and

students learn from experience, so it can trigger positive feelings.

Based on the results obtained from the analysis of the cognitive abilities of 5th grade elementary school students in doing school assignments using the Google Form application, it can be concluded that the use of Google Forms is very helpful in the process of teaching and learning activities, especially in online learning.

E. Conclusion

Based on the results of data analysis, data obtained that the students' cognitive abilities in doing school assignments using the google form application for 5th grade students at SDN Simpang Tiga Cilegon in the online learning with students are going smoothly, teacher preparation started from the material, making questions, to giving assignments to students. The material prepared by the teacher is in several ways that can be explained to students, one of which is in the form of an interesting video, where the materials to be studied have been attached to the video according to the schedule. Besides the materials, the teacher makes questions through Google Forms and provides links to students through the Whatsapp group.

The 5th grade teacher of SDN Simpang Tiga Cilegon already understands the factors of obstacles and supports in analyzing students' cognitive abilities through giving assignments via Google Form, there are several factors as obstacles in learning using Google Form, one of which is the unsupported internet network. Internet is the main thing

that must exist in online learning, including Google Forms, which must have sufficient quota to be able to connect to the internet network to open Google Forms. Moreover, the supporting factors in online learning have been fulfilled by the school. Teachers are facilitated with stable internet so they can still make and give online assignments to students.

The results of the individual students' cognitive abilities in doing the assignments through Google Form, on average, students experienced an increase in their cognitive abilities. This can be seen in the quiz results on the level of remembering (C1) obtained a score of 54.50% including the medium category, the level of understanding (C2) obtained a score of 79.38% including the high category, the application level (C3) obtained a score of 0 because the score of quiz results is the same as the evaluation score, the analyzing level (C4) obtained a score of -42.93% for negative results because the quiz score is bigger than the evaluation score of the analyzing level, the

evaluation (C5) obtained a score of -70.67% for the negative results because the quiz score is bigger than the evaluation score of evaluation level, and the creation level (C6) obtained a score of 48.89% including the medium category. Learning can

be done not only from books, students can explore the materials on Google that can broaden their horizons, do not forget that in online learning, the presence of a guardian is very important to monitor online learning.

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