Indonesian Journal of Social Sciences Volume 14 No. 01, January-June 2022, page 14-25

The national curriculum implementation into the operational curriculum based on multiple intelligences theory (Research dissemination before pandemic Covid-19)

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Abstract

The purpose of this study is to present an overview of implementation of the national curriculum into the operational curriculum in accordance with the notion of multiple intelligences theory. As data sources, Laboratory Elementary School of Indonesia University of Education, 471 pupils, and 31 teachers participated in the mixed-methods study. Observation, testing, and in-depth indirect communication were used to acquire the data. Observation sheet was used to collect qualitative data on the implementation of the national curriculum into the operational curriculum of the school, Student Self-Multiple Intelligence (SSMI) was used to collect quantitative data on students' Multiple Intelligence scores, and Open-Minded Sharing (OPM) was used to collect quantitative and qualitative data on the impact of the teacher's actions on students. The results demonstrated that the implementation of the national curriculum in the form of an operational curriculum based on multiple intelligences theory showed that the Laboratory Elementary School of Indonesia University of Education is concerned with moral and spiritual values in order to instill noble morals in its pupils, and that it has been successful in assisting its children with the development of various intelligences. We conclude that it has an impact on the characteristics of the school and the learning process which both its own uniqueness.

Keywords: national curriculum implementation; operational curriculum; multiple intelligences theory; elementary school; moral and spiritual values of student

Article History
Received: January 17, 2022 Accepted: May 19, 2022
Cite this as: Gandasari A, Wahyudin D, Abdulhak I, & Djohar A (2022) The national curriculum implementation into the operational curriculum based on multiple intelligences theory (Research dissemination before pandemic Covid-19). Indonesian Journal of Social Sciences 14 (1):14-25. DOI 10.20473/ijss.v14i1.33003.

Introduction

The learning process is a process that involves the interaction of teachers and the curriculum as well as teachers and students. Education through a learning process that is carried out aims to help students develop their abilities. UNESCO argues (Scott 2015; Mugiraneza & Andala 2019) that learning is "preparing students for work, citizenship and life in the twenty first century" and as a whole implies (Central Board of Secondary Education & Community Centre 2020) having learning skills (critical thinking, creativity, collaboration, and communication), literacy skills (information literacy, media literacy, and technology literacy) and life skills (flexibility, leadership, initiative, productivity, and social skills). This is contained in the curriculum 2013 as the Indonesian national curriculum that is used today through a scientific approach (Prihadi 2014; Nugroho 2014; Budiyanto, Waluyo, & Mokhtar 2016; Suyanto 2018; Direktorat Guru dan Tenaga Kependidikan Pendidikan Dasar 2019).

DOI 10.20473/ijss.v14i1.33003

Education and curriculum are currencies that cannot be separated from one another. The curriculum is a "body of education" (Gandasari, Abdulhak, Djohar, & Wahyudin 2019) because there are link between education and learning, also between teacher and student (Aliyeva 2016) through the curriculum, the educational process can bring students to use their abilities (Siriwongs 2015; Othman, Shahrill, Mundia, Tan, & Huda 2016) to interact with the real world (Hardman 2016; Yachina, Valeeva, & Sirazeeva 2016; Boholano 2017; Aldabbus 2018; Tan, Whipp, Gagne, & Quaquebeke, 2018; Mohammed & Kinyo 2020; Ramli 2020; James, Humez, & Laufengberg 2020; Hau, Cuong, & Tinh 2020). Education cannot be implemented without the existence of a curriculum as the core of education implementation and therefore the curriculum is said to guarantee the quality of education implementation. Oliva (2013) as one of the curriculum experts argues that curriculum is "the program, a plan, content, and learning experiences." The real implementation of the national curriculum is said to be an operational curriculum. The term operational curriculum was first introduced by Ennis at 1986 in her article entitled "Conceptual Frameworks as a Foundation for The Study of Operational Curriculum". The operational curriculum is the real implementation of learning that is carried out at that time which involves interaction between students, teachers and teaching materials which are very vulnerable to change according to the current situation and conditions when learning takes place (Oderonmu, Alagbe, Opoko, Oluwatayo, & Alagbe 2014; Chen & Wei 2015; Gandasari 2019). Raka Joni at 2002 in his writing entitled "Triggering Educational Improvement through the Curriculum in the Framework of Decentralization: Between Content Transmission and Educational Learning" includes the operational curriculum in a form called curriculum level as shown in the following Table 1.

Table 1.
Curriculum level

1. Ideal Curriculum		
Definition:	**Form:**	**Function:**
Everything that is considered important and needs to be included in education	- Idea - Ideas	As a reflection of the aspirations of constituents that need to be considered and packaged in the right form by all parties involved
2. Formal Curriculum		
Definition:	**Form:**	**Function:**
Shown in the form of an official curriculum document	- Curriculum 2013 (K13/ Kurtilas)	To shape the vision and mission of education, objectives and guidelines for implementation and development
3. Operational Curriculum		
Definition:	**Form:**	**Function:**
The objective embodiment of instructional curriculum intentions is in the form of learning interactions	- Learning Activities	Creating a participatory learning process and humanizing humans (appreciating the potential that students already have) in accordance with student characteristics and indicators to be achieved.
4. Experiential Curriculum		
Definition:	**Form:**	**Function:**
The meaning of the learning experience that is shared by students	- Results and evaluation of learning	- To evaluate learning activities, program evaluation and curriculum evaluation - As a basis for developing or improving the curriculum

Source: Gandasari 2019: 24-25

The implementation of the national curriculum in the form of an operational curriculum in the school will create certain characteristics that characterize the school (Yulianti 2015; Bediako 2019). Of course, the learning that is carried out is quality and effective learning, indicated by the accuracy of the selection of learning components, so that collaboratively these components support learning in learning participants, gain maximum learning experiences, and achieve predetermined learning goals (Le, Janssen, & Wubbels 2018). The use of a particular theory as the basis for the operational curriculum will create distinctive characteristics that are visible in the learning process (McDonald & West 2021). One of them is the phenomenon of using the Multiple Intelligences theory (MIT) as the basis for the operational curriculum at the Laboratory Elementary School of Indonesia University of Education before pandemic Covid-19.

MIT was first introduced by Gardner at 1983 in his book entitled "Frame of Mind". Multiple intelligences theory argues that each individual has eight or more intelligences that can be developed to an adequate level and use them in the form of a combination of multiple intelligences to perform all kinds of tasks in life (Swanson, Platine, & Zobisch 2015; Gandasari 2019; Marenus 2020; Cherry 2021). Intelligence in MI theory is mapped into nine intelligences, namely musical intelligence, bodily kinesthetic intelligence, logical-mathematical intelligence, linguistic intelligence, visual spatial intelligence, interpersonal intelligence, intrapersonal intelligence, naturalistic intelligence, and existential intelligence. MIT as the basis of the operational curriculum plays a role in creating distinctive characteristics that can be seen in the learning process that occurs at the Laboratory Elementary School of Indonesia University of Education.

Methods

This research is dissemination research before pandemic Covid-19 uses mixed methods. The research did at Laboratory Elementary School of Indonesia University of Education, semester 2 of the 2018/2019 academic year. The research objective is to reveal the phenomenon of the implementation of the national curriculum in the form of an operational curriculum based on the Multiple Intelligence theory applied in the Laboratory Elementary School of Indonesia University of Education, especially in relation to the learning process carried out. The learning process will always involve student and teacher interactions, including their interactions with teaching materials.

Therefore, the research carried out involved Laboratory Elementary School of Indonesia University of Education, 471 students spread over three parallel classes ranging from grade 1 to grade 6 and 31 teachers. The qualitative data obtained from observation and in-depth indirect communication, while the quantitative data obtained from test and score of the answer of in-depth indirect communication. Data collection tools are observation sheet to know the implementation of the national curriculum into operational curriculum, test using Student Self-Multiple Intelligence (SSMI) to know the student's multiple intelligences and in-depth indirect communication using Open Minded Sharing (OPM) to know teacher activities that have an impact on students.

Results and Discussion

The national curriculum must be implemented at all levels of education in Indonesia, starting from early childhood school, elementary school, junior high school and high school. The implementation of the national curriculum must be in line with the vision and mission of the school which in its efforts brings up the existence of a school operational curriculum which is manifested in the operational curriculum at the class level. The operational curriculum at the classroom level is formed from interactions between students, teachers and teaching materials. This was confirmed by Wahyudin (2018) who said that "teachers and students are involved in a collective learning process to learn material. Students are fostered and empowered to get them accustomed to taking responsibility

for achieving their achievements. The position of the teacher is more as a facilitator who cares and gives full attention to the creation of an educative dialogue process for the student learning experience." In the classroom, the teacher does various things to be able to facilitate the development of the potential of students, one of which is the multiple intelligences of students. The dynamics that occur at The Laboratory Elementary School of Indonesia University of Education are the focus of this research discussion and there are three data to be discussed, namely observation data, test data and Open Minded Sharing (OPM) data There are three data to be discussed, namely observation data, test data and Open Minded Sharing (OPM) data to provide information about The National Curriculum Implementation into the operational curriculum based on Multiple Intelligences theory at the Laboratory Elementary School of Indonesia University of Education.

The observation result showed that implementation of the national curriculum into the operational curriculum provides its own uniqueness for schools that implement it and this can be seen in the subjects offered at school. This subjects that offered by the Laboratory Elementary School of Indonesia University of Education provide a different learning experience that only the school has. The Laboratory Elementary School of Indonesia University of Education have eighteen subjects scheduled in the subject schedule in semester 2 of the 2018/2019 academic year. The subjects offered at the Laboratory Elementary School of Indonesia University of Education show in Table 2.

Table 2.
Structure subject offered by the laboratory elementary school of Indonesia University of Education

Subject	Grade					
	I	II	III	IV	V	VI
Music Art	×	×	√	√	√	√
Traditional dance (for girls)	√	√	√	√	√	√
Silat (for boys)	√	√	√	√	√	√
Physical Education and Health Sciences	√	√	√	√	√	√
Surala (E-learning)	×	√	√	√	√	√
Mathematics	×	×	√	√	√	√
Sundanese language	√	√	√	√	√	√
English language	√	√	√	√	√	√
Bahasa Indonesia	√	√	√	√	√	√
BAQI (Reading Qur'an)	√	√	√	√	√	√
Tahfidz Qur'an (Memorize Qur'an)	√	√	√	√	√	√
BTQ (Read and Write Qur'an)	√	√	√	×	×	×
Visual Art	×	×	×	√	√	√
Social Sciences	√	√	√	√	√	√
Civic Education	√	√	√	√	√	√
Natural Sciences	√	√	√	√	√	√
Environmental Education	×	×	×	√	√	√
Islamic Education	√	√	√	√	√	√

Information: × (no taught in class) and √ (taught in class)

Table 2 shows that the Laboratory Elementary School of Indonesia University of Education have several subjects such as BAQI (Reading Qur'an), Tahfidz Qur'an (Memorize Qur'an), BTQ (Read and Write Qur'an) are very closely related to Islamic Education in which Islamic Education has subjects compulsory at all levels of education in accordance with the law on the education system in Indonesia. Although the 2013 curriculum as the national curriculum summarizes arts and crafts in the subject of Cultural Arts and Crafts (SBDP), however in this school, there are several independent art subjects, namely Music Art, Visual Art, Traditional dance (for girls) and Silat (for boys). In addition to Indonesian language as a subject required by the education law, the school have two languages taught at the school, namely English as an international language and Sundanese as a local language

(local wisdom). The schools also introduce learning using information technology in the form of surala subjects which in general can be regarded as e-learning and there are also subjects related to the environment in the form of environmental education. All of these subjects give offered by school made its own color to the school which makes the school has its own uniqueness. The subject contains subject matter which can be said as a curriculum (Oliva & William 2013). The subjects' gives offered by school is an operational curriculum at the school level and its implementation in learning process called operational curriculum at the classroom level (Gandasari 2019).

The observation results also showed that in the structure of the subjects offered by the Laboratory Elementary School of Indonesia University of Education, found that the Multiple Intelligences (MI) theory gets its own place which is indirectly connected to the distribution of existing subjects. There are dominances of Multiple Intelligences in subject structure and this can be seen in the following Table 3.

Table 3.
Dominance of Multiple Intelligences in subject structure

No	Multiple Intelligences	Subject
1	*Musical*	Music Art
2	*Kinaesthetic*	Dance (for girls)
		Silat (for boys)
		Physical Education and Health Sciences
3	*Logical*	Surala (E-learning)
		Mathematics
4	*Linguistic*	Sundanese language
		English language
		Bahasa Indonesia
		BAQI (Reading Qur'an)
		Tahfidz Qur'an (Memorize Qur'an)
		BTQ (Read and Write Qur'an)
5	*Visual*	Visual Art
6	*Interpersonal*	Social Sciences
7	*Intrapersonal*	Civic Education
8	*Naturalistic*	Natural Sciences
		Environmental Education
9	*Existential*	Islamic Education

According to what was said by Gardner that each intelligence cannot stand alone but complement each other (Vaci, Eldersbrunner, Stern, Neubouer, Bilalic, & Grabner 2019; Gandasari, Abdulhak, Djohar, & Wahyudin 2019). Examined from the point of view of the dominance of intelligence, it will be obtained that is more subjective and this can be seen in the dominance of multiple intelligences in the subjects offered by the Laboratory Elementary School of Indonesia University of Education. In Table 3 it is clear that the characteristics of each subject are closely related to multiple intelligences which are required to be optimal, especially in the dominant intelligence. BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the Qur'an) in the point of view of the theory of multiple intelligences, it leads to linguistic intelligence (Hali 2017; Rahmadina & Jufrizal 2020; Andro 2020) even though it has religious content, because it can be seen from the activities of reading, writing, and memorizing the Quran which are carried out in class.

Based on the results analysis of quantitative data, it was found that there were differences in findings, namely the overall dominance of intelligence owned by students and facilitated by schools showed that curriculum implementation affected the characteristics of schools. This is because BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the

Qur'an) have contains knowledge about religion or more about intelligence existential (Aljaddou 2018; Shrama & Jha 2021), although its application is more closely related to intelligence linguistics. So, it can be said that subjects can facilitate the overall multiple intelligences but the dominance of certain intelligences is very dependent on the real implementation of the learning that is carried out which is called the operational curriculum in the class level. However, what Gardner said that each intelligence cannot stand alone but complement each other also applies to this case. The big influence does not lie in the method used in learning, but the content of the material that contains knowledge also has a major influence on students' multiple intelligences. The impact of the implementation of the distribution of these subjects through Student Self-Multiple Intelligence (SSMI) shown in the following Figure 1.

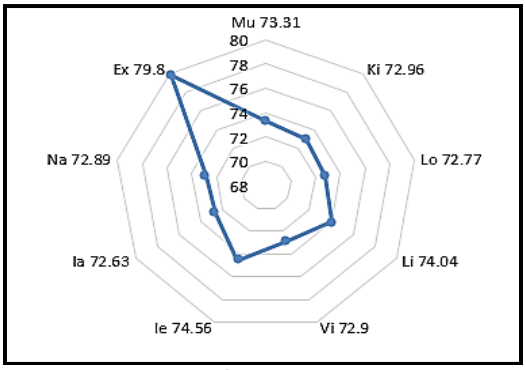

Figure 1.
Student Self-Multiple Intelligence (SSMI) web chart

In Figure 1, the SSMI results show that existential intelligence has the highest percentage value compared to other intelligences. Through the results of this SSMI, it was revealed that the Laboratory Elementary School of Indonesia University of Education have a more concern with moral and spiritual values, this can be seen in the presence of BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the Qur'an) which is included in the school lesson schedule as a subjects, besides the observation also found that the existence of a culture of congregational prayer carried out by teachers and students makes the relationship between teachers and students not only an extension of scientific information in schools but also has a role in guiding students to build noble morals. This is in line with what Abdulhak, Djohar, Rusman, and Wahyudin (2018) said, “The implementation of education is not merely a transfer of knowledge and know-how and technology. Moreover, education should be able to develop a civilized nation, moral and honorable”. If it is related to minds-on and hands-on learning activities, the learning activities carried out at the Laboratory Elementary School of Indonesia University of Education equip students with moral values and virtues. These moral values and virtues certainly have a very significant impact on the behavior of national and state life that will be carried out by students in the future. In other words, the implementation of the national curriculum in the operational curriculum at the Laboratory Elementary School of Indonesia University of Education showing religious characteristics of their students.

Education is a place for learning and the result of learning is a change towards improvement (Bruner 2018; Hubers 2020). Which in this case, implementation the national curriculum into the operational curriculum based on multiple intelligences, is said to be successful if there are indications of an increase or change for the better. Further search based on the results of the quantitative data analysis from Student Self-Multiple Intelligences (R_{SSMI}) related to the multiple intelligences possessed by the

student from grade 1 to grade 6 showed an increase in. The R_{SSMI} increases with the grade class shown in the following Figure 2.

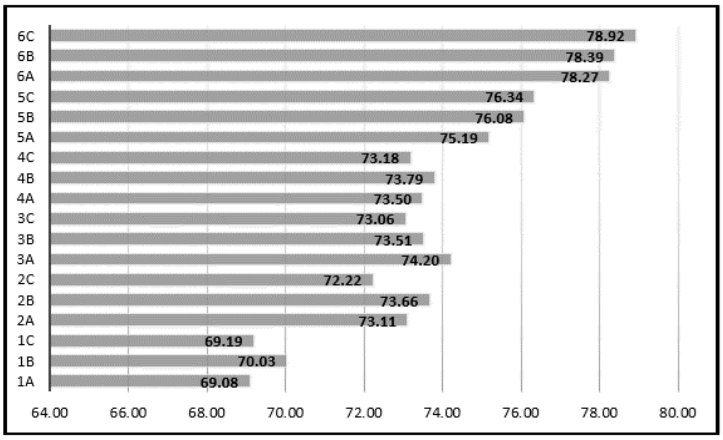

Figure 2.
The result of Student Self-Multiple Intelligences (R_{SSMI}) bar chart

In Figure 2, R_{SSMI} revealed that the reciprocal intelligence of students at the Laboratory Elementary School of Indonesia University of Education has increased along with the high-grade class of the students, namely higher the class, higher the percentage value of the R_{SSMI}. In other words, higher the grade class, higher the SSMI. This is evidence that the Laboratory Elementary School of Indonesia University of Education is said to have succeeded in helping its students in terms of accommodating the development of reciprocal intelligence possessed by students as long as students undergo the education process. Therefore, the schools can be said to be a place to increase students' multiple intelligences (Gul & Reba 2017; Yavich & Rotnitsky 2020).

In classroom learning, teachers and students will always interact in order to achieve learning objectives. The teachers do various ways to bring their students to succeed in learning (Bustami, Leliavia, Elisabeth, Gandasari, & Ratnasari 2020; Gandasari, Purwatih, Ege, & Subekti 2020; Bustami, Gandasari, Darmawan, Stephani, & Utami 2021; Gandasari, Wibowo, & Ocberti 2021; Hawai, Wedyawati, & Gandasari 2022) and of course this also happens at the Laboratory Elementary School of Indonesia University of Education. The greatest support lies in the teachers of the Laboratory Elementary School of Indonesia University of Education as the vanguard who is in direct contact with students. All teacher of the Laboratory Elementary School of Indonesia University of Education is given the Open-Minded Sharing (OPM) to get the quantitative and qualitative data. The results of the OPM are shown in the following Table 4.

Table 4.
Recapitulation of Open-Minded Sharing

No	Indicator	Result	Category
1	Teaching equipment	75.77 %	Very Good
2	Preliminary activities	74.42 %	Good
3	Core activities	77.10 %	Very Good
4	Closing Activities	74.92 %	Good
5	Implementation of the Lesson Plan	83.87 %	Very Good
6	Facilitated Multiple Intelligences	86.43 %	Very Good
	Average of the Indicators	**78.75 %**	**Very Good**

The results of the teacher's OPM show that: 1) the teacher already has a positive habit of preparing learning tools and using them when carrying out learning activities, 2) the teacher carries out preliminary activities at the beginning of the learning process and these activities adjust to the situation and conditions of the class when the learning process as apperception activities, 3) the teacher uses his pedagogical competence to be able to meet the needs of students in learning and students use their potential and ability to carry out learning activities, 4) the teacher carries out several closing activities to end the learning process, 5) the implementation of the Lesson Plan becomes Real Learning Implementation is determined by the situation and condition of students when learning takes place and the optimism of the teacher concerned in the success of the learning process being carried out, and 6) the teacher has a commitment in terms of facilitating multiple intelligences that students have during learning activities.

Each school has certain peculiarities that arise because of the impact of an implemented policy (Jong 2015). The policies taken by the Laboratory Elementary School of Indonesia University of Education show that the MIT-based operational curriculum has been implemented in the school. This operational curriculum is related to actual learning activities carried out both in class and outside the classroom which involve interactions between the instructional curriculum, namely the Lesson Plan, teachers and students. The operational curriculum is defined comprehensively which states that the operational curriculum is an objective embodiment of the intention of the instructional curriculum (Lesson Plan) in the form of learning interactions, the form of the operational curriculum is a learning activity, and the objective of the operational curriculum is to make the learning process participatory and humanizing humans (appreciating the potential that students already have) in accordance with student characteristics and indicators to be achieved.

The Laboratory Elementary School of Indonesia University of Education has used the 2013 Curriculum for all grade levels. Since the founding of the Laboratory Elementary School of Indonesia University of Education, there are a number of things that have been maintained by the school concerned, namely relating to the subjects offered by the school, namely art subjects consisting of dance, visual arts and music art. The policies taken by the school related to the preservation of art subjects had a very significant impact, especially on public assessment of schools and made the Laboratory Elementary School of Indonesia University of Education considered by the public as an outstanding school in the arts and culture. In addition, The Laboratory Elementary School of Indonesia University of Education also has subjects that given the religious characteristics to the school, namely BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the Qur'an) besides the religious education which is a compulsory subject at all levels of education. Besides that, there are also subjects that provide their own characteristics, namely Surala and environmental education.

The operational curriculum at The Laboratory Elementary School of Indonesia University of Education can be seen from all the subjects offered by the school which serve as a platform for the theory of multiple intelligences. This has an impact on the learning process that involves interaction between students, teachers and teaching materials, resulting in the increase of students' multiple intelligences along with the grade class. The Laboratory Elementary School of Indonesia University of Education has a policy to maintain several subjects that give its own characteristics to schools. This has a positive impact which shows that all subjects offered at the Primary School, Laboratory of the University of Education of Indonesia, can embrace the multiple intelligences of students in a holistic manner that is distributed in each subject the school offers. The intelligence is a product of an interaction between the environment and heredity and therefore not constant but modifiable, intelligence is not unitary characteristic but consist of a series of specific functional abilities. In this case, sees that in the world of education, it is inseparable from the interaction of students involving their intelligence and sees intelligence as something that is not constant and not singular.

Conclusion

The Laboratory Elementary School of Indonesia University of Education is a school that implements the national curriculum in the form of an operational curriculum based on the theory of multiple intelligences. This can be seen from the subjects offered by the school, namely: dance, visual arts and music art; BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the Qur'an); and Surala and environmental education. The implementation of the national curriculum in the form of an operational curriculum creates certain characteristics that characterize schools. In this case, subjects that provide religious knowledge such as BAQI (Reading the Qur'an), Tahfidz Qur'an (Memorizing the Qur'an) and BTQ (Reading and Writing the Qur'an) include Islamic religious education become the hallmark of the school so that it shows a school culture that has the moral and spiritual character displayed by its students. This is a form of implementing the national curriculum into the operational curriculum at the school level. The subjects offered by the school when implemented at the class level position the interaction of students, teachers and teaching materials in the learning process to accommodate students' multiple intelligences and which in this case is existential intelligence which contains religious matters. This is a form of implementing the national curriculum into the operational curriculum at the grade level.

Acknowledgements

This paper is dedicated to Prof. Dr. H. Ishak Abdulhak (RIP), Prof. Dr. H. As'ari Djohar, M.Pd (RIP) and Prof. Dr. H. Dinn Wahyudin, thank you for all the knowledge experience that has been given sincerely. I would also like to express my gratitude to BPS, Universitas Pendidikan Indonesia, for allowing me to conduct research at the School Laboratory of the University of Education and Mr. Hendi Indrawan, M.Pd, as the head of the Primary School Laboratory at the Universitas Pendidikan Indonesia, who facilitated this research.

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