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## Literacy and Numeracy Measurement in the Driving School Program in the West Jakarta Area in Data-Based Planning

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### Abstract

The Driving School must move to change the achievement of Literacy and Numeracy in a better direction in carrying out the Independent Curriculum. This study aims to determine the results of Literacy and Numeracy measurements in Education units in the West Jakarta area. Then plan follow-up activities that will be carried out to improve Literacy and Numeracy in each school. This research method uses qualitative approach and descriptive research method. Data collection techniques use questionnaire filling, interviews, observations, and literature studies. Qualitative data are analyzed using data reduction steps, data presentation, interpretation, and conclusion verification. The schools involved in this study consisted of 8 schools in the West Jakarta area involving principals, teachers, and school staff involved in the analysis and assessment of education report cards. The results showed that driving schools in West Jakarta had varying achievements in the measurement results of 4 (four) Literacy Indicators and 3 (three) indicators for numeracy. In the literacy aspect, the results showed 90% in the effective category, while in the numeracy aspect it was in the very affective category with 91% achievement. Internal school factors and environmental conditions influence the way these schools engage the entire school community in an effort to improve literacy and numeracy understanding and skills. The implications of these findings can contribute to the improvement of education at the primary school level and can be used as a reference for developing curriculum development strategies at the regional level.

**Keywords:** Measurement; Literacy; Numeracy; Driving School Program.

### 1. Introduction

One of the countries that has low literacy and numeracy skills is Indonesia. The latest information related to the results of the Survey from PISA (the Program for International Student Assessment) which assesses the ability of Literacy, Numeracy and Science. PISA 2022 measures the knowledge of 15-year-old students in Literacy, Numeracy, and Science skills. The results obtained by the Indonesian state decreased due to Learning Loss due to the Covid-19 pandemic, but were considered lower than the global average, so that Indonesia's PISA in 2022 increased by five to six positions compared to 2018. The announcement on December 5, 2023 presents results between 2018 and 2022, with average scores in 35 OECD (Organization for Economic Co-operation and Development) countries falling by almost 15 points for Mathematics, 10 points reading scores. In Math and reading, the majority of countries experienced a decline in average scores (41 countries in Math, 35 countries in Reading). For this reason, efforts are needed to improve Literacy and Numeracy in each Education unit (Ester Lince Napitupulu 2023).

Education is the main foundation in forming a superior and competitive generation. In this information age, it is very important for students to develop literacy and numeracy skills as the main foundation in facing the demands of modern life. In the West Jakarta area, there are Driving schools that have become agents of change in improving the quality of education. The Driving School is a government initiative in advancing the world of Education. With a focus on improving the quality and quality of learning, this program aims to create a dynamic learning environment and responsive to the times. The Mover School became a pioneer in

integrating literacy and numeracy as an integral part of their curriculum.

Literacy and Numeracy are abilities that are needed by the next generation of the nation to understand various numbers and symbols in the form of symbolic parts of basic mathematics in order to overcome problems in contextual life experienced by each individual. The importance of striving for literacy and numeracy at the school level to improve the quality of education in Indonesia. If the quality of education is good, and literacy and numeracy skills are also good, it will provide benefits for the development of the success of education in Indonesia (Astri Dinda Sripuspitasari; Akhmad Nugraha; Syarip Hidayat 2022).

Literacy refers to a person's ability to read, write and understand written information. Literacy is a key skill in facing challenges and taking advantage of opportunities in modern society. Numeration includes understanding between numbers, the ability to count, and the application of mathematical concepts in various contexts of everyday life. Likewise, numeracy is not only limited to remembering mathematical facts, but also includes the ability to understand and interpret concepts in various situations. Therefore, Numeration is an important skill in dealing with various aspects of modern life. Numeracy improvement can give a person better tool to solve problems, make decisions, and actively participate in society. The picture of literacy and numeracy development from each school will of course be very different. It is distinguished by the background of the learners and the extent to which they understand each aspect of learning in literacy and numeracy. Literacy is an effort to use, understand, evaluate, reflect in various text circumstances for completion to develop individual capacity, while numeracy is an effort to apply the concept of numbers and skills in the form of calculating operations in everyday life based on the ability to understand information in mathematical form, such as graphs, charts and tables (Ministry of Education and Culture 2020 in Adinda Sripuspasari) (Astri Dinda Sripuspitasari; Akhmad Nugraha; Syarip Hidayat 2022). This ability will certainly be very helpful in providing actions or activities in supporting the achievement of Literacy and Numeracy in each Education Unit in the future.

The DKI Jakarta Education Quality Assurance Center in collaboration with the Driving School Facilitators collected data related to the description of the development of Literacy and Numeracy in its assisted Driving Schools. So that from the observation carried out, the real achievements of each educational unit will be illustrated from each component of Literacy and Numeracy. The description of the literacy and numeracy profile of each education unit will be very different from each other, apart from the characteristics of different schools as well as the characteristic factors of education participants with diverse backgrounds. Literacy is the ability of students to access, know, and be able to understand well the process of reading, seeing, listening, and writing and speaking. While Numeration is the ability to understand, read, analyze information in the form of numbers, symbols, graphs and tables related to the science of counting in helping solve problems in everyday life (Arief et al. 2022). This literacy and numeracy profile in the Driving School Program is monitored by the Education Quality Assurance Center (BPMP) in each region. The Education Unit that implements the Independent Curriculum that has been launched by the Ministry of Education and

Culture aims to realize the vision of Indonesian Education in realizing an advanced Indonesia that is sovereign, independent, and personable through the creation of Pancasila Students. The Driving School program focuses on developing holistic student learning outcomes that include competencies (literacy and numeracy) and character, starting with superior human resources (principals and teachers). For mapping and planning programs for handling Literacy and Numeracy, it is necessary to collect data on literacy and numeracy profiles from the Driving School Program to support the independent learning policy and improve the Education Report Card of each Education unit in improving themselves in improving the achievement of Literacy and Numeracy each year.

## 2. Materials and methods

This study used a descriptive quality research approach and used descriptive research methods. So that this research seeks to describe the results of field research analysis related to the real development of literacy and numeracy aspects in 8 Education Units involved in the Mobilizer School Program. The procedure for the descriptive research method by distributing questionnaires in this study is with a. mapping the real development of literacy and numeracy by distributing questionnaires to school principals and learning committees with 32 items of instruments for literacy and 17 points of instruments provided by the Education Quality Assurance Center (BPMP DKI Jakarta); b.) Conduct observations and interviews with the School and Learning Committee, and c. conduct direct observations in the field; Phase II) The school follows up on the recommendations that need to be implemented by creating a Literacy and Numeracy-Based Learning Program; Phase III) a. provide technical assistance, b. draw conclusions for activities to be facilitated, c Conduct Further Coaching.

The data collection technique in this study is Phase I with activities (a.) mapping the real development of literacy and numeracy by distributing questionnaires to eight 8 (eight) school principals and 16 Learning Committees from each education center, with 32 items of instruments for literacy and 17 points of numeracy instruments that have been provided by the Education Quality Assurance Center (BPMP DKI Jakarta); The questionnaire used the Goodman scale with "yes" or "no" answers. Some questions as indicators of Literacy are as follows: (1) Fostering students' reading interest as many as 12 items, (2) Building a text-rich environment as many as 8 items, (3) Building a learning environment rich in literacy as many as 8 points (4) Building Thinking Skills through Reading Activities as many as 4 items. The Numeration Questionnaire consists of indicators (1) Strengthening Numeration in the physical environment and social interaction in schools as many as 8 items, (2) Strengthening Numeration in school programs as many as 4 items, (3) Strengthening Numeration in the school curriculum as many as 5 items. Provided that the percentage category range is 0%-50% (less effective), 51%-75% (moderately effective); 76%-90% (effective), and 91%-100% (very effective). Then (b.) Conduct observations and interviews with the School and Learning Committee, and (c.) conduct direct observations to the field. In Phase II, the School followed up on the recommendations that needed to be implemented by creating a Literacy and Numeracy-Based Learning Program. While in Phase III with activities (a.) providing technical assistance, (b.) drawing conclusions for

activities to be facilitated, (c.) Conducting further monitoring.

Qualitative descriptive analysis technique, which aims to objectively describe the Literacy and Numeracy of each education unit using data from education report cards from 8 education units accompanied by Driving School Facilitators, namely 1) Questionnaires and interviews Together involving 8 (eight) Principals who have been running the Mobilizing School Program for almost 1.5 years, and 16 Learning Committee Teachers, 2) field observations, and 3) literature reviews (online news, journals, books, proceedings, etc.). This research uses interactive data analysis, interactive data analysis is carried out on several components, 1) field data collection, 2) data condensation, 3) data display, and 4) conclusion drawing (Matius B. Miles, A. Michael Huberman 2014). The conclusion of this study is used as a basis for determining recommendations to be given to the achievement of Literacy and Numeracy with predetermined criteria. The data validity test in this study used a triangulation technique so that researchers could confirm the data between the results of interviews with the

Principal and Learning Committee Teachers with the results of interviews and observations in the field, along with questionnaires filled out by the principal so that the results showed that the data was in line with what was expected. The purpose of this study is to see the condition of the 2022 education report card results and the 2023 education report card results, then mapping and activities that will be carried out as an improvement in the situation based on existing data to improve the situation based on interviews with the Principal and Learning Committee for the preparation of follow-up plans to improve literacy and numeracy aspects in each driving school education unit.

### 3. Results

#### a. Measurement of Literacy Learning Program Outcomes

The results of Literacy and Numeracy mapping from 8 (eight) Education units participating in the Mobilization School Program in the West Jakarta area can be presented in Table 1 below.

**Table 1:** Literacy Learning Program Measurement Results.

No	Literacy Indicators	DK 16 Pg	JP 05 Pg	TDS 01	Kea 03	Km 05 Pg	Tm 03 Pg	MB 15 Pg	WK 02 Pg	Average (%)	Information
1	Fostering students' interest in reading (8)	64	100	100	91	91	91	82	100	90%	Effective
2	Build text-rich environments (8)	88	50	88	75	75	75	63	88	75%	Effective
3	Building a learning environment rich in Literacy activities (12)	40	60	80	90	90	100	20	100	49%	Less Effective
4	Building Thinking Skills through reading activities (4)	75	75	75	75	75	75	75	75	63%	Quite Effective

**Information:** (DKI Jakarta BPMP Team 2023).

Highly Effective: 91% - 100%

Effective: 76% - 90%

Quite effective: 51% - 75%

Less Effective: 0% - 50%

Table 1 provides a fairly comprehensive overview of literacy achievement in several elementary schools (SDN). Some things that can be noticed from the table are significant variations in achievement between schools, showing differences in approach and focus in the implementation of literacy programs. The indicator "Fostering students' interest in reading" showed very good results in most schools, especially at SDN JP 05 Pg and SDN WK 02 Pg which reached 100%. This indicates success in stimulating students' interest in reading, which can be used as a best practice for other schools.

Then the indicator "Building a text-rich environment" showed significant variation, with some schools reaching 88% (SDN DK 16 Pg) and 63% (SDN MB 15 Pg). This difference can be explained by a variety of factors, such as school policies and accessibility of reading materials. However, there are areas that need attention, especially in the indicator "Building a learning environment rich in Literacy activities". SDN DK 16 Pg and SDN MB 15 Pg showed unsatisfactory achievements. This shows the importance of increasing literacy activities outside the classroom to create a more stimulating learning environment in the school.

Finally, the indicator "Building Thinking Skills through

reading activities" shows fairly uniform achievement in all schools, but achievement of 75% still provides room for improvement. A more interactive learning approach and critical thinking strategies can help achieve better progress. Collaboration between schools to share good practices and experiences can be an effective step to improve literacy attainment at a broader level. In addition, periodic evaluations and adjustments to literacy programs based on these achievements can help schools achieve better targets. The results of literacy measurements in the instrument showed on average to be at the level of Fostering students' reading interest at 90% and building a text-rich environment at 75%, both in the effective category. The third indicator Building a learning environment rich in Literacy activities is at a less effective achievement with a percentage of 49%, and for the 4th indicator Building Thinking Skills through reading activities is in the category of quite effective with 63% achievement.

#### b. Numeration Learning Program Measurement Results

The results of Literacy and Numeracy mapping from 8 (eight) Education units participating in the Driving School Program in the West Jakarta area can be presented in Table 2 below.

**Table 2:** Numeration Learning Program Measurement Results.

No	Numeration Indicator	DK 16 Pg	JP 05 Pg	TDS 01	Kea 03	Km 05 Pg	Tm 03 Pg	MB 15 Pg	WK 02 Pg	Average (%)	Information
1	Strengthening Numeracy in the Physical Environment and Social Interaction in Schools (8)	100	88	100	100	75	100	75	100	91%	Highly Effective
2	Strengthening Numeracy in school programs (4)	100	100	100	100	75	100	100	100	91%	Highly Effective
3	Strengthening Numeracy in the School Curriculum (5)	80	100	80	100	100	100	40	100	90%	Effective

**Information:** (DKI Jakarta BPMP Team 2023).

Highly Effective: 91% - 100%

Effective: 76% - 90%

Quite effective. : 51% - 75%

Less Effective: 0% - 50

Table 2 shows a positive picture related to numeracy achievement in several elementary schools (SDN). Several aspects can be observed from the table. On the indicator "Numeracy Strengthening in the Physical Environment and Social Interaction in Schools," almost all schools showed excellent results, with scores reaching 100%. This indicates that the school has succeeded in creating a physical environment and social interaction that supports the development of student numeracy. The implementation of these best practices from the school can be used as inspiration by other schools to achieve similar goals.

Then the indicator "Numeracy Strengthening in school programs" shows very high achievement in most schools. Schools such as SDN DK 16 Pg, SDN JP 05 Pg, and SDN Kea 03 reached 100%, indicating that numeracy programs in these schools are running very effectively. These results can be used as a reference for other schools to improve the effectiveness of their numeracy programs. It should also be noted that in the indicator "Strengthening Numeracy in the School Curriculum," SDN MB 15 Pg has a relatively low score (40%). This may indicate a need to strengthen the integration of numeracy into the school curriculum. Increased support and resources in integrating numeracy aspects of the curriculum can help schools achieve higher levels of effectiveness.

The exchange of experiences and good practices between schools can enrich the numeracy approach strategies applied by each school. In addition, the involvement of teachers, parents, and students in designing numeracy programs can increase engagement and ensure the sustainability of the success that has been achieved. Continuous evaluation of numeracy programs and adjustments as needed can be an important step in ensuring optimal achievement at the level of all schools.

The results of numeracy measurements in the instrument show that the average numeracy is at a very effective level of 91% in indicator 1, namely Numeracy Strengthening in the physical environment and social interaction in schools and indicator 2, namely Numeracy Strengthening in school programs. Meanwhile, in Indicator 3 Numeracy Strengthening in the School Curriculum is within 90% achievement or effective.

#### 4. Discussion

##### a. Literacy Measurement Results

Building a text-rich environment", creating opportunities to apply theories about literacy development in the school environment. The book "Creating Literacy-Rich Schools for Adolescents" by Gay Ivey and Douglas Fisher can provide insight into strategies for building text-rich environments. There are several ways that can be done in literacy activities by updating materials, experiences, and expectations in the classroom, improving literacy in all subjects and looking for alternatives other than textbooks. Making independent reading an important part of student literacy development, an effective intervention for students who have difficulties (Gay Ivey 2006).

The importance of increasing literacy activities outside the classroom, as found in the indicator "Building a learning environment rich in Literacy activities," can be linked to theory and practice and can provide insights on how to integrate literacy activities involving families and communities. While in the indicator "Building Thinking Skills through reading," critical thinking theory and interactive learning approaches, as described in "Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions" by Stephen D. Brookfield, can support recommendations to improve achievement on this indicator. He stated that When to make critical thinking the focus of the class, how to encourage critical discussion, and how to reach skeptical students (Brookfield 2011); (Pratiwi 2023); (Agpriani 2022).

Involves collaboration between schools, sharing good practices, and adjusting programs based on the results of periodic evaluations. Articles such as "Collaborative Professionalism: When Teaching Together Means Learning for All" can provide additional insight into the importance of cooperation and collaboration in improving literacy at the school level. Continuous evaluation and adaptation of literacy programs can help achieve better targets. Educators can move from casual professional collaboration to deep and transformative collaborative work in advancing literacy in their classrooms (Andy Hargreaves 2018); (Syofyan and Rachmattullah 2019); (Syofyan et al. 2018).

### b. Numeration Measurement Results

Table 2 provides a positive picture of numeracy attainment in various primary schools, highlighting successes in creating physical environments and social interactions that support students' numeracy development. These results can serve as inspiration for other schools to improve their environmental aspects and social interactions, creating a solid foundation for student numeracy development. The book "Teaching Numeracy: 9 Critical Habits to Ignite Mathematical Thinking" by Margie Pearse and Kati Mears can provide practical guidance for strengthening numeracy aspects in the school environment. Like how to teach students in critical thinking in mathematics and explore the assumptions that underlie their thinking. In learning must also be given concrete examples to integrate contextual habits in learning (Margie Pearse 2011).

The Numeracy Strengthening Indicators in school programs" reflects the success of a number of schools in implementing highly effective numeracy programs. High results at SDN DK 16 Pg, SDN JP 05 Pg, and SDN Kea 03 can be useful models for other schools. The low score on the indicator "Numeracy Strengthening in School Curriculum" at SDN MB 15 Pg warns that the integration of numeracy in the curriculum needs to be strengthened and help schools enrich their curriculum with more effective numeracy strategies and approaches. The exchange of experiences and good practices between schools can be enriched through literature. This resource can provide insights on how teachers can collaborate and learn from each other in the context of numeracy development. (Zuhra and Safarati 2021); (Fuady 2022). The importance of continuous evaluation and adjustment of numeracy programs is recognized as an important step to ensure optimal achievement. A good reference for developing effective evaluation approaches in the context of school numeracy. Example integrate mathematical standards with effective teaching practices. Educators connect their practice to research-based concepts and skills. Numeracy literacy integrated learnings a learning that has a positive impact on mathematics learning from pre-school to higher education without being limited to one grade level (Anna Farida 2022); (Kemendikbudristek Team 2023b)

### 5. Conclusions

The conclusion of this study is that the achievement of the education report card of each education unit is different from each other, some have decreased and increased, this provides space for the Principal of the Education Unit and their Learning Committee to improve themselves and find a way out by preparing a follow-up plan for improvement in achievement in the following year.

That the understanding and implementation of driving schools on education report cards, especially literacy and numeracy, varies. There are challenges in the interpretation and application of evaluation results, as well as differences in focus between literacy and numeracy in each school. Internal school factors and environmental conditions influence the participation and involvement of the school community. This conclusion can help formulate curriculum development strategies and increase the effectiveness of education in the West Jakarta area.

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