

# DATA-BASED PLANNING AS A CATALYST FOR SUSTAINABLE EDUCATION QUALITY IN PUBLIC ELEMENTARY SCHOOLS IN CILEUNGSI SUB-DISTRICT

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**Abstract.** *The purpose of this research is to study data-driven planning as a catalyst in accelerating the improvement of sustainable education quality in primary schools by optimizing resources and creating more relevant and measurable programs. Many primary schools in remote areas lack adequate facilities, such as proper classrooms, access to technology, and limited numbers and quality of educators. This inequality leads to disparities in the quality of education received by students. Education planning that is not data-driven often results in education policies that are not well-targeted. The study used qualitative research methods. Data were collected through interviews with principals and teachers as well as observations about the planning process and program implementation in primary schools that have implemented the data-based planning model. The data was analyzed using a qualitative descriptive approach, which shows how the application of the data-based planning model impacts on the decision-making process and learning implementation. The results show that using a data-driven planning model has successfully changed the work culture in the school. The traditional and routine approach has evolved into a more reflective and evidence-based approach. After implementing this model, the school showed increased student accountability, more efficient resource management and success in achieving more measurable educational goals. The model also encourages collaboration among teachers and other stakeholders, who help work together to create programs that impact students. The role of the learning community plays a role in changing the culture of intuition to data-driven education planning. The results show that other schools can adopt this model as part of a more adaptive and data-driven strategy to improve the quality of sustainable education.*

**Keywords:** *Data-driven Planning, Education Planning, Sustainable Education Quality.*

## 1. INTRODUCTION

Inequality in access to resources is the root of the problem that is detrimental to the quality of education (Sri Rahayu, et al, 2022). One of the efforts in improving the quality of education in Indonesia is teachers or educators. The arrangement of educators still needs to be addressed, and the training of educators is still not sustainable so that it is necessary to improve the quality of educators. In schools there is still a lack of adequate infrastructure. The education management system still needs to be improved, the lack of equitable distribution of education. Even in terms of technological infrastructure, it is still not ready. Community participation has not been effective in the learning process.

The problem refers to the results of the Programme for International Student Assessment (PISA) survey. The first problem with Indonesian education is the large percentage of low-achieving students. The President targets the number of low-achieving students to be reduced to the range of 15-20 percent by 2030. The second problem is that the percentage of students repeating classes is still high reaching 16 percent, where this number is 5 percent more than the average percentage of students repeating classes in OECD member countries. PISA is a test that is held every three

years, except in 2021- 2022 which was postponed due to the pandemic. Indonesia has participated in the PISA study since 2000. In 2022, Indonesia's literacy learning outcomes ranking will increase by 5 to 6 positions compared to PISA 2018. PISA, Education Report Card, and Data-Based Planning (PBD) are all related to efforts to improve the quality of education in Indonesia. Data-Based Planning (PBD) is a very important tool in improving the quality of education that is more directed, effective, and sustainable. The need to improve the quality of education in a sustainable manner in the face of various challenges in the modern era is closely related to data-driven planning for improving the quality of continuous education. Data-Based Planning is an important approach in improving the quality of education because it can help in decision-making.

Data-based planning (PBD) is a way to utilize data on the platform's Education Report Card as a form of joint intervention between the education office and the government to enable targeted programs and procurement and improve the quality of education. According to Wayman & Stringfield, PBD is the process of using data for strategic decision-making and improving the quality of education. (Wayman & Stringfield, 2006). Marsh et al., on the other hand, say that PBD also involves the systematic analysis of different types of data to identify problems, plan activities, and evaluate impacts (Marsh & Craven, 2006). In Indonesia, the implementation of PBD is driven by the use of Education Report Cards and the Independent Teaching Platform, which play a role in evidence-based planning. As an illustration, if there is an educational unit that has not been maximized based on the results of the National Assessment (AN), it will certainly be easier if we can find out which parts need special attention (Ikhsan & Fauzan, 2021). The Education Report Card is an educational achievement report compiled based on the results of the National Assessment and various other data sources. Education Report Card can be used as the basis for PBD to improve the quality of teaching and learning.

The lack of human resources for educators and education personnel also plays an important role. Data from the Ministry of National Education Research and Development for 2023/2024 reveals that administrative employees in elementary schools are still very lacking. The number of elementary schools of 135,644 schools only has 7,687 administrative employees and 100,486 school guards. Based on data from the Central Statistics Agency, the number of elementary schools in West Java is 19,553, public and private teachers are 214,259. Elementary schools in Cileungsi sub-district have quite a lot of human resources, transportation facilities that are easy to reach. The diversity in schools is due to one of the factors of many immigrants and near industrial areas. The learning community that plays a role in educational planning helps the principal. Elementary schools in Cileungsi offer a variety of extracurricular activities to develop students' talents and interests outside of academics. Most of the classrooms are decent to use, making them comfortable for students. The results of the Education Report Card are used as the basis for Data-Based Planning.

One of the most crucial levels of education is basic education. Elementary school is the initial foundation for character formation and development of students' potential that will influence the future in order to achieve the goals of quality human development. However, efforts to improve the quality of education in elementary schools are often constrained by various structural problems, such as the lack of adequate facilities and infrastructure, limited quality human resources, and low efficiency in the planning and implementation of educational programs. However, the reality of educational planning at the elementary level is not data-based, so the decisions taken are often inaccurate and ineffective. Therefore, it is important for the government and related parties to carry out data-based education planning as a catalyst for sustainable improvement of the quality of education in elementary schools.

## **2. LITERATURE REVIEW**

### *2.1 Data-Driven Planning*

In Indonesia, the implementation of PBD is driven by the use of Education Report Cards and the Independent Teaching Platform, which play a role in evidence-based planning. As an illustration, if there is an educational unit that has not been maximized based on the results of the National Assessment (AN), it will certainly be easier if we can find out which parts need special attention (Ikhsan & Fauzan, 2021).

Data-Based Planning (PBD) is a transformative approach in education management. The essence is the use of accurate and relevant data as a foundation in formulating educational policies and programs at the school level. This data is a compass that guides schools in identifying the root of the problems that hinder the improvement of the quality of education. With a deep understanding of data, schools can design more targeted and effective solutions (Hidayah, et al., 2025).

The use of educational report cards in data-driven planning is a tool and method to find the root of the problem, reflect on achievements, and provide constructive discussion materials with relevant stakeholders to achieve the expected success. (Musakirawati, et al., 2023).

## *2.2 Quality of Continuing Education*

Sustainable quality education does not only focus on academic results, but also on the active involvement of all elements of the school community in creating a positive and empowering learning environment (Ningsih & Prasetyo, 2024).

According to W. Edwards Deming, quality is problem-solving to achieve continuous improvement. is known as an added value that was not highlighted before, but must now be communicated to all school staff and stakeholders as an important requirement that needs to be implemented immediately into practice in schools (Nik & Nik, 2017).

The quality of continuing education refers to systematic and continuous efforts to improve the quality of education through effective planning, implementation, and evaluation. The goal is to ensure that the education provided can meet the needs of society that continues to grow and change (Marzal, 2022).

The quality of continuing education based on TQM (Total Quality Management) emphasizes that everyone in the organization must be involved in continuous improvement efforts (Umar, 2016).

## **3. RESEARCH METHODS**

This stage of research is carried out using a descriptive qualitative approach by examining the object of research more deeply. Qualitative research is one of the methods used to explore and understand phenomena that occur in social and cultural contexts in a more in-depth and detailed way (Soegiyono, 2019). Descriptive research is a type of research that aims to describe or describe current phenomena, both of human and natural engineering. The place of research was carried out at the State Elementary School of Cileungsi District, Bogor Regency, West Java Province. The data collection techniques used in this study were to conduct participatory observations and structured interviews with several informants (principals, teachers, and school operators). In addition, technical data analysis is used through the stages of data reduction and data presentation so as to produce a conclusion that aims to understand the approach in education planning through data-based planning (Education Report) to accelerate the quality of continuous education in elementary schools in Cileungsi district.

## **4. RESULTS AND DISCUSSION**

Data-based planning is a planning activity that uses data that has been processed or grouped according to certain standards. The planning process in accordance with the goals and objectives of the organization will be more optimal (Prasetyono et al., 2023). Data-Based Planning (PBD) has an urgency so that education units can implement programs and procurement that are right on target, so that they can improve the quality of education in their educational units. In compiling Data-Based Planning, education units

can refer to achievements in five dimensions of the Education Report Card, namely: (1) Output, quality of student learning outcomes: a) Dimension A: Quality and relevance of student learning outcomes, b) Dimension B: Equitable distribution of quality education. Then (2) Process, Quality of Student Learning Process, namely Dimension D: Quality and relevance of learning. Furthermore, (3) Input, Quality of Human Resources and Schools; a) Dimension C: Competence and performance of PTK, and b) Dimension E: Participatory, transparent, and accountable school management. Of all the indicators in the Education Report, the Ministry of Education and Culture proposes 5 priority indicators for the Dikdasmen level as an initial focus for improving the education unit. If there is an indicator of an education unit that is red or below achievement, then the education unit can carry out the IRBB process (Identification, Reflection, Planning, Implementation). Where the stages and steps can be found in the download results of the Education Report Card.

Cileungsi Elementary School is an elementary school that has adequate educational resources such as the distribution of teachers and education personnel as well as students who meet the criteria as a well-accredited educational unit. In addition, educational infrastructure facilities are in optimal condition, but there is still a need to improve the quality of education as a whole, especially in school quality management in general. One of the priority indicators recommendations on the Education report card that needs to be improved is about the diversity climate. Then what needs to be fixed is the improvement of GTK competence and policies that support the creation of religious and cultural tolerance. Furthermore, strategic steps that can be taken to improve the quality of education in elementary schools in the Cileungsi area are 1) Heads of education units and educators learn concepts and practices related to religious and cultural tolerance as part of the diversity climate, 2). Educators implement knowledge about religious and cultural tolerance to improve the learning process of students, and 3). The head of the education unit encourages the improvement of the implementation of religious and cultural tolerance in the education unit through programs, policies, and budgeting. This local context is important because each region has different educational characteristics and challenges, so this study not only examines the use of Education Report Cards in planning, but also focuses on data-based planning.

School needs analysis, achievement monitoring, and policy design can be done with the help of data-driven planning. As a result of the data analysis that has been carried out, schools can design improvement programs, such as programs to improve the quality of teaching, infrastructure development, and increase parental involvement. data-based planning can be carried out well, training for teachers and principals is also carried out at elementary schools in Cileungsi district. Training on how to interpret data and use it for educational planning can accelerate the improvement of the quality of education through data-based planning in schools.

With structured data through the results of the Education Report Card, elementary schools in Cileungsi sub-district can plan programs that are more in line with their needs and have an impact on students. The data will help schools allocate resources more on target, both in terms of facilities, teaching time, and budget. The implementation of data-driven planning seeks the involvement of more parties, including parents and the community, in monitoring and supporting the progress of education. Decision-making is no longer traditionally based on assumptions or perceptions, but based on existing facts, making it more objective and accountable. In schools, Learning Communities are also formed which plays a very important role in supporting data-based educational planning, because this community can encourage collaboration, knowledge sharing, and problem solving together. Learning communities can help teachers get better at using data to create and implement better learning strategies. This training can include an understanding of how to analyze student data and how to use the data to create an appropriate learning plan.

The results of the study show that using a data-driven planning model has succeeded

in changing the work culture in schools. Traditional, routine approaches have evolved into more reflective and evidence-based approaches. After implementing Data-Driven Planning, schools show increased student accountability, more efficient resource management, and success in achieving more measurable educational goals. This data-driven planning also encourages collaboration between teachers and other stakeholders, which helps work together to create programs that impact students. The role of the learning community plays a role in changing the culture of intuition to be data-based in educational planning.

## **CONCLUSION**

Data-Based Planning (PBD) has proven to be an important factor in improving education in a sustainable manner. Utilizing data from Education Report Cards, National Assessments, and internal school data allows educational institutions to find the root of problems, make measurable improvement plans according to priority recommendations on Education Report Cards, and conduct continuous evaluations.

PBD encourages the birth of a reflective culture in the school environment, where teachers and principals do not only plan activities based on an annual routine, but based on concrete evidence of real achievements and challenges in the field. This process also strengthens collaboration within the learning community, which becomes a space to discuss data results and design follow-ups oriented towards improving the quality of learning.

Primary schools in Cileungsi are starting to show changes in planning and decision-making that is more based on learning outcomes after implementing PBD. This allows schools to concentrate on administrative accomplishments and build a reflective and collaborative culture among educators, including by enhancing learning communities. However, there are challenges associated with the implementation of PBD, such as a lack of technological infrastructure, low levels of data understanding, and a sufficient number of teachers.

PBD is not just a managerial tool; It is a strategic foundation for building resilient and sustainable primary education with ongoing support from educational institutions, teacher training, and active stakeholder engagement. To support the optimal implementation of PBD, schools need to be supported by a good data management system, ranging from simple digital devices, internet connections, to training in educational data input and reporting. Synergy between stakeholders, parents, teachers, and students is important so that the planning and implementation of quality improvement programs truly answers the needs of students and the context of their respective schools.

## **REFERENCES**

- Aji Rianto Slamet, Loenardus Putera Tandi, et al. (2025). Strategy to Improve the Quality of Continuing Education through Change Management at SMPN 3 Long Bagun. *JPP: Journal of Education and Learning*. 7(1). 84-92.
- Astutiningtyas Dewi Nur Laksmi, Ima Puji Astuti, et al. (2024). Implementation of Data-Based Planning in the Management of Education Financing at SDN 3 Bebengan, Kendal Regency. *Pendas: Journal of Elementary Education*. 9(2). 5512-5526
- Central Statistics Agency <https://www.bps.go.id/id/statistics-table/3/VWtKTmFFbDZaSFJWWVhOYU16WmhaRzICYIM5Wlp6MDkJMw==/jumlah-sekolah--guru--dan-murid-sekolah-dasar--sd--di-bawah-kementerian-pendidikan--kebudayaan--riset--dan-teknologi-menurut-provinsi.html?year=2023>. Retrieved Thursday, 19 December 2024. 13.00.
- Esteban Allan Jay, Ken Calang, Princes Mara E. Pagador. (2024). Review of Practices and Digital Technology Integration in Reading Instruction and Suggestions for the Philippines. *IJERE: International Journal Education and Research*. 13(6). pp. 3663~367.

- Gehrmann, A., Pelzmann, S., & Matthes, D. (2017). Data-Driven Planning and Regional Educational Management. Springer Cham: In Education, Space and Urban Planning. pp. 319-327
- Hasnadi. (2021). Total Quality Management: The Concept of Improving the Quality of Education. S.S.: An Introduction to Education. 6(2). 143-150.
- H. Askell-Williams and G. A. Koh, "Enhancing the sustainability of school improvement initiatives," School Effectiveness and School Improvement, vol. 31, no. 4, pp. 660–678, Oct. 2020.
- Herfiyanti Nasyrohah, et al. (2024). Improving the quality of schools with planning based on education report data. LEARNING : Journal of Education and Learning Research Innovation, 4(3), 508-512.
- Hidayah Emi, Inayah, et al. (2025). Planning Based on Education Report Data as a Strategic Effort to Improve School Quality. Learning: Journal of Education and Learning Research Innovation. 5(1). 16-23.
- Jamlean, L., Rahabav, P., Papilaya, J., & Rumfot, S. (2024). The Role of the Principal as a Managerial in Improving Quality Based on Education Report Cards at SMP Negeri 13 Kei Kecil. EDUCATION: Journal of Education and Learning, 5(1). 1513-1518.
- Jannah Ukhti Raudhatul, Indrianto Setyo Basori, et al. (2023). The Effectiveness of the Root Analysis of the Problem of "Learning Method" on the Education Report Card of Elementary School Driving Batch 1. Source: Journal of Educational Technology. 11(2). 539-559.
- Ministry of Education and Culture. (2021). Data-Based Planning in Education Units. (Slide Presentation).
- On the left side of the aisle, Nancy Pelosi is the Democrat. (2024). Implementation of Education Report Cards in Improving the Quality of National Education. Widya Accarya. 14(2). Sec. 156-164.
- K. Shibuya, "Community participation in school management from the viewpoint of relational trust: A case from the Akatsi South District, Ghana," International Journal of Educational Development, vol. 76, p. 102196, Jul. 2020, doi: 10.1016/j.ijedudev.2020.102196.
- Kurniawan Agus M, Khobibil Khoiri. (2022). Educational Planning. Lampung: Agus Salim Press Lexy. J. Moleong, Qualitative Research Methodology, (Bandung: PT Remaja Rosdakarya, 2000), p. 3
- Lexy. J. Moleong, Qualitative Research Methodology, p. 17.
- Masri, Hadiyanto, Yahya. (2023). Educational Planning Strategies and Their Implementation in Elementary Schools. Puskra: Journal of the Center for the Study of People's Education, 3(2). 1-7
- Matin. (2015). Educational Planning: Process and Technical Perspectives in the Preparation of Educational Plans. Depok: Raja Grafindo Persada.
- Matin, Sugiarto, Heru Santosa. (2023). Educational Planning Textbook Concepts, Processes, Techniques, and Applications. Jakarta: Damera Press.
- Mubin Fakhru. (2020). Development of Educational Planning Models. OSF preprints.
- Mubin, F. (2020). Development of Educational Planning Models. <https://doi.org/10.31219/osf.io/5fk6n>
- Murtadlo, M., Hazin, M., Roesminingsih, E., & Amalia, K. (2023). Optimizing Data-Based Planning (PBD) with Training for Elementary Schools on Bawean Island. DEDICATE: Journal of Community Engagement in Education, 2(02). 48–59
- Musakirawati, M., Jemmy, J., Anggriawan, F., Triansyah, F. A., Akib, A., & Tahir, A. (2023). The Utilization of the Indonesian Education Report Card Platform for Data-Based Planning. JDMP (Journal of Dynamics of Education Management), 7(2). 201–208.
- Mutu International. Bagaskara. <https://mutucertification.com/uu-no-20-tahun-2003-sistem-pendidikan/> Accessed Thursday, 19 December 2024 at 11.50
- Lord Zaedun. (2024). A Theoretical Review of Education Quality Management. Evaluation: Journal of Islamic Education Management. 8(1). 2615-2886.
- Nardawati. (2021). Good Educational Planning as an Effort to Improve the Quality of Education in the Digital Era. Journal of Literaology. 6(2). 14-25.
- Nurbani Destisari, et al. (2024). Case Study of the Use of Education Report Cards in Accelerating Students' Literacy Skills. DIDACTICS: Journal of Education. 13(001). 715-728.
- Nurhattati. (2023). School Management in the Era of the Industrial Revolution 4.0. Bandung: King Grafindo.
- P. Y. A. Dewi and K. H. Primayana, "The Role of Total Quality Management (TQM) in Elementary Schools," J. Quality Assurance. 5(2). Pp. StuRat (talk) 22:26, 23 January 2019 (UTC)

- Prasetyono, A., et al. (2023). Data-Driven Planning to Improve the Quality of Continuing Education. *Journal of Education Management*, 10(1). 45-60.
- Ramadhani Yulia Rizki, et al. (2021). *Fundamentals of Educational Planning*. Medan: Yayasan Kita Tulis
- Reichart E, K. Kaufman Kuchta. Dkk (2024). Can digital data provide an additional data basis for Educational reporting? The potential of search portals for continuing education programmes. *Springer Nature*, vol 47. 425-449.
- Smanto, B., Tagela, U., & Wasitohadi, W. (2017). 'The performance of basic education in the implementation of education programs for all. *Manage: Journal of Educational Management*, 4(1). 1–11. <https://doi.org/10.24246/j.jk.2017.v4.i1.p1-11>
- S. M Nurzen. (2022). Data-based decision making for education planning: strategies for principal success. *Jurnal Konseling dan Pendidikan*. 10(4). 589-596.
- Sri Rahayu, et al. (2022). The Contribution of School Operational Assistance Funds and School Principals' Managerial Abilities to the Quality of Education at Bangko District Elementary School, Rokan Hilir Regency. *Instructional Development Journal (IDJ)*, 05(02). 164-171