

Transforming Education Management Based on Poverty Data for the Sustainability of Children's Education in East Lombok

Sulaiman^{*1}, Taufan Iswandi², Sulastris³

^{1,2,3} Universitas Gunung Rinjani, Indonesia

Correspondence email: akademisi.ugr1999@gmail.com

Article history

Submitted: 2026/06/11; Revised: 2026/07/21; Accepted: 2026/09/05

Abstract

Poverty is one of the structural factors affecting children's access to, participation in, and continuity of education. Vulnerable household economic conditions increase the risk of learning difficulties and school dropout. This study aims to analyze the influence of the Poverty Gap Index (P1) and the Poverty Severity Index (P2) on the sustainability of children's education and to develop a model for transforming education management based on poverty data. The study employs a quantitative approach with a descriptive and causal-comparative research design. Secondary data will be obtained from the Central Bureau of Statistics (BPS) and relevant institutions, while primary data will be collected through questionnaires and limited interviews using purposive and stratified sampling techniques. The research stages consist of preparation and literature review, collection of primary and secondary data, data processing and cleaning, calculation of P1 and P2, instrument validity and reliability testing, statistical analysis, interpretation of findings, and development of a transformation model and policy recommendations. Data analysis will employ descriptive statistics, correlation analysis, and multiple linear regression to identify the relationship between poverty conditions and educational sustainability indicators, including the Net Enrollment Rate, Gross Enrollment Rate, and school dropout rate. The expected results and discussion will provide empirical evidence regarding the relationship between poverty depth and severity and the sustainability of children's education in East Lombok Regency. The findings will serve as a basis for developing a more precise, inclusive, and socially equitable education management model, as well as evidence-based policy recommendations to improve the sustainability of children's education.

Keywords

Education Transformation; Educational Sustainability; Education Policy; Poverty Depth; Poverty Severity.



© 2026 by the authors. This is an open access publication under the terms and conditions of the Creative Commons Attribution 4.0 International (CC BY SA) license, <https://creativecommons.org/licenses/by-sa/4.0/>.

INTRODUCTION

Poverty is still one of the structural problems that has a wide impact on human development, including the sustainability of children's education (Miskin et al., 2026; Putri et al., 2026). Household economic limitations not only affect the ability of families to meet basic needs, but can also limit children's access, participation, and sustainability of education, especially at the primary and secondary education levels. Children who come from families with vulnerable

economic conditions have a higher risk of falling behind in learning and dropping out of school (Aurellia et al., 2025).

In education management at the regional level, planning and policy-making still tend to be oriented towards administrative achievements and educational indicators in aggregate, such as school participation rates and average length of school (Manoppo et al., 2018; No Title, n.d.; S.S., 2026). This approach has not been able to fully describe the level of socioeconomic vulnerability experienced by poor households. In fact, the Poverty Depth Index (P1) and the Poverty Severity Index (P2) can provide a more comprehensive picture of the condition of the poor. P1 describes the average distance of poor expenditure to the poverty line, while P2 describes the level of inequality in expenditure among the poor. However, these two indicators have not been optimally utilized in the planning and management of regional education.

The gap between the availability of poverty data and education management practices has led to various educational assistance programs and interventions that have not been fully targeted (Development & Ratih, 2024; Putra, 2026). Education management that only uses aggregate indicators has the potential to ignore children who are in deeper and more severe conditions of poverty (Development & Ratih, 2024). Therefore, it is necessary to transform education management from a general approach to a poverty-based approach, so that education policies and programs can be designed in a more precise, inclusive, and socially equitable manner.

This problem is becoming increasingly important because the sustainability of children's education is not only determined by internal educational factors, but also influenced by the socio-economic conditions of the family. Households that experience economic stress can face difficulties in meeting various children's educational needs. Therefore, understanding the relationship between the depth and severity of poverty and the sustainability of education is important as a basis for formulating education policies that are more adaptive to community conditions.

This research is directed to bridge the gap between poverty data and education management through an evidence-based policy approach. This approach is carried out by integrating information on P1 and P2 with indicators of the sustainability of children's education. Problem-solving strategies include mapping children's educational vulnerability, integrating poverty data in education management, preparing a model for transforming education management, and formulating policy recommendations.

The novelty of the research lies in the integration of the Poverty Depth Index (P1) and the Poverty Severity Index (P2) into education management and its focus on the sustainability of children's education (Manoppo et al., 2018; Development & Ratih, 2024; Putra, 2026). Previous research referenced in the proposal focused more on the evaluation of educational assistance programs or the achievement of education indicators without directly linking them to the structure, depth, and severity of poverty. Therefore, this study offers an approach that connects poverty analysis with the transformation of data-based education management and regional policies.

Based on these problems, this study aims to analyze the influence of the depth and severity of poverty on the sustainability of children's education, identify the relationship between household economic conditions and educational participation and sustainability, develop a model for education management transformation based on poverty data, and formulate regional education management policy recommendations that support the sustainability of children's education.

More specifically, this research was carried out in East Lombok Regency using indicators of education sustainability in the form of Pure Participation Rate (APM), Gross Participation Rate (APK), and school dropout rate. The results of the research are expected to be an empirical basis for the development of more targeted education management and support the achievement of the Sustainable Development Goals (SDGs), especially Goal 1 on No Poverty and Goal 4 on Quality Education.

METHODS

This study uses a quantitative approach with a descriptive and causal-comparative design. The quantitative approach is used to measure the Poverty Depth Index (P1) and the Poverty Severity Index (P2) and analyze the relationship and influence of the two indicators on the sustainability of children's education in East Lombok Regency. The descriptive design is used to describe the condition of P1, P2, and educational sustainability indicators, while the causal-comparative design is used to analyze the relationship and influence of P1 and P2 on educational sustainability.

The research used secondary data and primary data. Secondary data was obtained from the Central Statistics Agency (BPS) and related agencies, which included data on the Poverty Depth Index (P1), Poverty Severity Index (P2), and education indicators. Primary data was obtained through questionnaires and limited interviews to obtain information on household socio-economic conditions and the sustainability of children's education.

Sampling was carried out using purposive sampling and stratified sampling. The technique was used to obtain respondents who were in accordance with the characteristics of the study and considered grouping based on conditions or characteristics that were relevant to the research objectives. The main variables of the study consist of poverty indicators and education sustainability indicators.

Table 1. Variables of the study consist of poverty indicators

Variabel	Indicator
Depth of Poverty (P1)	The average distance of poor people's expenditure to the poverty line
Severity of Poverty (P2)	Levels of inequality in expenditure among the poor
Sustainability of Education	Pure Participation Rate (APM), Gross Participation Rate (APK), and Dropout Rate

Household socioeconomic conditions	Economic conditions and household characteristics obtained through primary data
---	---

The education sustainability indicators used in the proposal specifically include the Pure Participation Rate, the Gross Participation Rate, and the dropout rate.

Data analysis was carried out using descriptive statistics, correlation analysis, and multiple linear regression. Descriptive statistics were used to describe the condition of P1, P2, and educational indicators. Correlation analysis was used to determine the relationship between variables, while multiple linear regression was used to analyze the influence of P1 and P2 on the sustainability of children's education, both partially and simultaneously. Conceptually, the research analysis model can be described as follows:

FINDINGS AND DISCUSSION

Education Conditions of East Lombok Regency in 2026

The results of the study show that education management in East Lombok Regency in 2026 needs to be directed towards the use of more specific education data up to the level of education units. Education data for the 2025/2026 school year published by the Central Statistics Agency of East Lombok Regency has contained information about education units, principals, educators, and students by sub-district. The availability of this data shows that the analysis of education sustainability can be carried out not only based on regional macro indicators, but also by considering the condition of students at each level and region. In the context of this study, school data in 2026 is important because it provides a more accurate picture of the condition of education compared to the use of historical data. The data can be used to identify the number of students, the distribution of students by level, and the potential of groups of students who need special intervention.

Thus, it is not enough to transform education management by looking at the number of students or the number of schools in aggregate. Education managers need to connect student data with family socio-economic information so that it can be known about the groups of students who have a higher level of vulnerability.

Identify Students' Educational Vulnerabilities

The findings of the study show that the sustainability of students' education cannot be separated from the socioeconomic conditions of the family. Students who come from economically disadvantaged households have the potential to face obstacles in meeting their educational needs, including transportation costs, school supplies, learning needs, access to technology, and other basic needs. In previous research on this document, P1 and P2 were used to describe the depth and severity of poverty. P1 shows the average distance of poor people's spending to the poverty line, while P2 shows the inequality of expenditure among the poor.

For the conditions of 2026, the approach can be developed into a student risk identification based on school data. This means that students are not only categorized based

on poor or non-poor status, but also based on the level of economic vulnerability of their families.

The approach results in three priority groups:

Groups	Features	Intervention Priorities
Low risk	Economic conditions are relatively stable and school attendance is good	Regular monitoring
Medium risk	Have economic limitations and have the potential to experience learning barriers	School Mentoring
High risk	Vulnerable economic conditions, low attendance or potential school dropouts	Specialized interventions and priority assistance

The grouping allows schools to take early action against students who are at risk of disruption to educational sustainability.

Integration of Poverty Data and School Data

The main findings of the study show that poverty data and education data need to be integrated. BPS East Lombok Regency itself places socio-economic data as an important basis in welfare analysis and policy formulation. The publication of the 2025 East Lombok Regency People's Welfare Statistics uses Susenas March 2025 data and covers aspects of education and socio-economic conditions of the community.

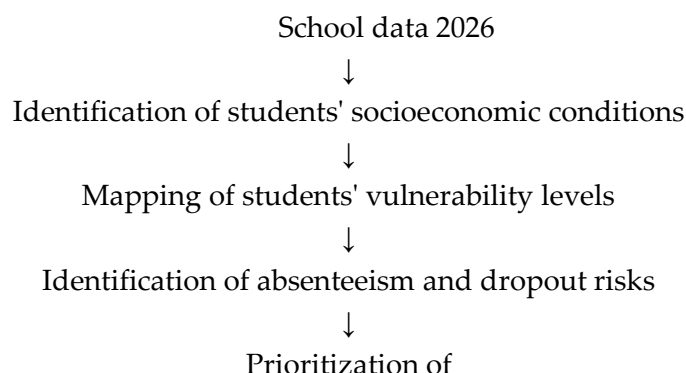
At the school level, such integration can be done by connecting: Family data → economic data → student data → attendance → achievement → risk of dropping out of school.

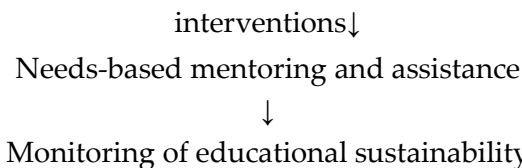
This model allows schools to get a more complete picture of the causes of educational problems. For example, students with low attendance are not directly categorized as academically problematic. Schools can check whether such absences are related to family economic conditions, distance of residence, transportation, work needs, or other social factors.

Paradigm Changes in Education Management in 2026

Based on these findings, education management in 2026 needs to undergo a change from an administrative approach to a **data-based and risk-based** approach. The old approach emphasizes more on the number of students, the number of schools, participation rates, and administrative achievements. The new approach combines the data with the socioeconomic conditions of students.

The resulting transformation model can be described as follows:





This model is in line with the research objectives that place the integration of P1, P2, and education indicators as the basis for the development of more targeted education management

Discussion

School Data in 2026 as a Basis for Decision Making

The use of school data in 2026 provides advantages because the condition of students can be mapped more actually. BPS East Lombok Regency has provided education data for the 2025/2026 school year by sub-district, including information about students at the primary and secondary education levels.

The availability of such data provides opportunities for schools and local governments to develop a more responsive education management system. The data is not only used as an administrative report, but as an instrument to determine students or groups of students who need intervention.

Poverty as a Risk Factor for Education Sustainability

The economic condition of the family is one of the factors that need to be considered in maintaining the sustainability of education. Households with economic limitations can experience difficulties in providing children's educational needs.

Therefore, educational interventions in 2026 need to be directed not only at improving the quality of learning, but also at reducing economic barriers that prevent students from being able to follow education optimally.

This reinforces the research concept that P1 and P2 are not only relevant as indicators of poverty, but can be used as supporting information in determining education policy priorities.

The Importance of the Early Warning System for School Dropouts

The results of the study also show the need for an early warning system at the school level.

Schools may provide warning signs if a student exhibits a combination of several conditions, such as:

- attendance is decreasing;
- decreased academic performance;
- having difficulty meeting school needs;
- come from a family with vulnerable economic conditions;
- potentially not continuing to the next level.

With such a system, schools can intervene **before students are actually out of school**.

Data-Based Education Management Transformation

The transformation of education management in 2026 can be formulated in four main stages:

Table 2. Transformation of Education in 2026

Stages	Pendekatan
Identification	Collecting data on students and socioeconomic conditions
Mapping	Classify students by vulnerability level
Intervention	Provide assistance according to the needs of students
Evaluation	Monitor school attendance, learning progress, and sustainability

With this model, education policies become more precise, inclusive, and fair, because resources are not only given equally but directed to students who have greater needs.

Key Findings of the Study

Based on the overall results of the analysis, there are four main findings.

1. Education data in 2026 needs to be the main basis for education management, because it is able to provide a more actual picture of the condition of students.
2. Family socioeconomic conditions are important information in identifying educational sustainability risks, so student data needs to be integrated with poverty data.

Educational interventions need to be risk-based, so that students with high vulnerability get priority help and mentoring.

3. The transformation of education management needs to be directed towards data-based systems, starting from identification, mapping, interventions, to monitoring education sustainability.

Thus, the results of the study reinforce the idea that education management is not enough to only be oriented towards the achievement of educational indicators in aggregate. A system that is able to identify who students are vulnerable, why they are vulnerable, and what interventions are most appropriate. This approach is becoming increasingly relevant with the availability of more up-to-date educational and socio-economic data in East Lombok Regency. BPS also emphasized that accurate and valid data is needed as the basis for the formulation of poverty alleviation programs and targeted interventions.

CONCLUSION

Based on the results of research on the transformation of poverty data-based education management for the sustainability of children's education, it can be concluded that family socioeconomic conditions are one of the important factors that need to be considered in education management. Poverty is not only related to the ability to meet basic needs, but can also be a factor that increases children's vulnerability to absenteeism, learning barriers, and the risk of not continuing education. This is in line with the research framework that places poverty conditions as an important part of the analysis of the sustainability of children's education.

The use of education data in 2026 provides an opportunity to identify students more realistically. School data can be combined with information on family socioeconomic conditions to identify students who are in the low, medium, and high risk categories. This approach allows schools and local governments not only to know educational attainment in

aggregate, but also to know the groups of students who need greater attention and intervention.

This study also shows the importance of integrating poverty data with education data. The Poverty Depth Index (P1) and the Poverty Severity Index (P2) can be used as supporting information to understand the level of economic vulnerability of the community. P1 describes the average distance of poor people's expenditures to the poverty line, while P2 describes the inequality of expenditure among the poor. By integrating this information with data on students, attendance, learning conditions, and the risk of dropping out of school, education management can be carried out in a more targeted manner.

Thus, the transformation of education management in 2026 needs to be directed from an administrative and aggregate approach towards data-based education management and student risk levels. The transformation includes the process of identifying student conditions, mapping vulnerabilities, providing interventions as needed, and monitoring education sustainability. This approach is expected to improve the accuracy of education program targets, prevent the risk of dropping out, and strengthen the sustainability of children's education. Overall, the poverty data-based education management model can be the basis for local governments and schools to build education policies that **are more** precise, inclusive, equitable, and sustainable. This is in line with the research objectives to integrate P1, P2, and education indicators as the basis for determining intervention priorities and developing evidence-based education policies.

The author expresses his deepest gratitude and appreciation to the Ministry of Higher Education, Science, and Technology through the research funding program which has provided financial support so that the research is titled "Transformation of Poverty Data-Based Education Management for the Sustainability of Children's Education" can be implemented properly. The funding support is an important part in supporting the implementation of all stages of research, starting from preparation, data collection and processing, analysis, to the preparation of research outputs.

Gratitude was also conveyed to Gunung Rinjani University through the Institute for Research and Community Service (LPPM) for support, facilitation, and coordination during the implementation of the research. The author also expressed his appreciation to all parties who have provided support, both in the provision of data, the implementation of data collection, and the process of analysis and completion of research. Hopefully the support provided can contribute to the development of data-based, targeted, inclusive, and socially equitable education management.

REFERENCES

- Adiguzel, T., Capa-Aydin, Y., & Akbas, U. (2021). Teachers' implementation of differentiated instruction: A systematic review of qualitative studies. *Journal of Research in Science Teaching*, 58(8), 1247–1277.
- Aurellia, N. C., Fajariani, E., Putri, A., & Rahajuni, D. (2025). *Pengaruh Faktor Ekonomi Terhadap*

- Angka Putus Sekolah di Kecamatan Sumbang*. 5, 84–92.
<https://doi.org/10.51903/jupea.v5i1.4502>
- Manoppo, J. J. E., Engka, D. S. M., Tumangkeng, S. Y. L., Pembangunan, J. E., Ekonomi, F., & Ratulangi, U. S. (2018). *Analisis faktor-faktor yang mempengaruhi kemiskinan di kota manado*. 18(02), 216–225.
- Miskin, T., Sumut, D., Rahmanda, R., Ayudis, D., Simangunsong, H. D., Veronika, A. M., & Husna, S. S. (2026). *Keterbatasan Ekonomi Dan Keberlanjutan Pendidikan Anak Pada Rumah*. 5(1), 11578–11585.
- Pembangunan, B. P., & Ratih, A. (2024). *Jurnal Ekspos Hubungan Tingkat Kemiskinan dan Angka Putus Sekolah Anak di Kabupaten Kudus: Studi Kuantitatif tentang Ketimpangan Akses Pendidikan Dasar*. 4932.
- Putra, E. D. (2026). *Dampak Kemiskinan terhadap Kualitas Pendidikan Anak di Indonesia : Rekomendasi Kebijakan yang Efektif The Impact of Poverty on the Quality of Children ' s Education in Indonesia : Effective Policy Recommendations*. 20, 740–749.
- Putri, A. A., Indah, G., Nastia, P., Studi, P., Kesejahteraan, P., & Indonesia, U. P. (2026). *Tumbuh dalam keterbatasan: realitas sosial anak dan upaya kesejahteraan di tengah kemiskinan*. 11(11), 2024–2026.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97–140.
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91–108.
- Halliday, S., Callaghan, P., Lavis, T., & Chur-Hansen, A. (2024). Best practice assessment methods for the undergraduate psychology program: A narrative review of the literature. *Australian Journal of Psychology*, 76(1).
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- Kemendikbudristek. (2022). *Panduan pembelajaran dan asesmen pada Kurikulum Merdeka*. Jakarta: Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Lindner, K.-T., & Schwab, S. (2020). Differentiation and individualisation in inclusive education: A systematic review and narrative synthesis. *International Journal of Inclusive Education*, 26(3), 2199–2219.
- Pratomo, H. W., Ramadhan, J., Firmansyah, F., Ummi, W., & Tenriwali, A. N. (2024). Pembelajaran berdiferensiasi dalam implementasi Kurikulum Merdeka di sekolah: A narrative literature review. *Pendas: Jurnal Ilmiah Pendidikan Dasar*.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.
- Susanti, A., Trisusana, A., Asrori, A., Sueb, S., & Zuhri, F. (2024). Implementing differentiated instruction in Emancipated Curriculum: Narrative review. *Technium Social Sciences Journal*, 62(1), 13–20.