

Strategy to Achieve Sustainable Development Goals in Achieving Quality Education in West Sumatra

Jusmanila Mustika Sari¹, Hefrizal Handra², Sri Maryati³

¹ Andalas University, Padang and Indonesia, ✉ jusmanilamustika@gmail.com

² Andalas University, Padang and Indonesia, ✉ hefrizalhandra@gmail.com

³ Andalas University, Padang and Indonesia, ✉ srie_jayamahe@yahoo.co.id

Abstract

Education in the SDGs is contained in the 4th Goal or SDG4 which is to ensure the quality of education that is inclusive and equitable and increases lifelong learning opportunities for all (UN, 2016). Education is the key that enables the objectives of other SDGs to be achieved by 2030. This study will identify the condition of the quality of education in West Sumatra Province by conducting baseline analysis of the SDGs target and identifying internal and external factors to formulate a Strategy. The results of the study show that the government has internal conditions with weaknesses greater than strength and has greater potential than threats. So that the strategy applied is W-O strategy, namely 1) With the existence of Presidential Regulation No. 59 of 2017 becomes the legal standing for the government in this case the OPD and the City District in West Sumatra to commit to the achievement of the SDGs. 2) With the support of NGOs and the Media, the government can increase the effectiveness of the socialization and promotion of SDGs. 3) With the development of information technology, weaknesses in data availability and achievements of SDGs in West Sumatra can be above with a platform that can be accessed by every stakeholder and supports SDGs governance.

Keywords: *strategy, SDGs, quality education, West Sumatera*

Introduction

Various approaches to development evolved in each decade and gave rise to a formulation of development aimed at a better world. The development paradigm that is oriented towards economic growth is in fact able to be achieved by many countries but still leaves problems related to poverty and inequality and environmental degradation. This issue raises a new development paradigm that is adopted by many countries, namely the sustainable development paradigm.

The world's attention to environmental issues and development was echoed at the Earth Summit in Stockholm 1972. Then this idea was outlined in a document entitled Future We Want at the 2012 Rio + 20 Summit in Rio de Janeiro and became the forerunner to the implementation of sustainable development at the global, regional and national (UN, 2016). More than 150 world leaders declare to jointly adopt the sustainable development agenda namely Transforming our world: the 2030 Agenda for Sustainable Development or better known as the Sustainable Development Goals (SDGs)

The SDGs is action plan for people, planets with 14 goals and 169 targets to be achieved in 2030. SDGs as the post-MDG development agenda that ended in 2015 were considered very comprehensive and ambitious with the principle of "no one left behind". One of the SDGs targets that are still an issue and an important issue in many countries is the issue of education. Education is contained in the 4th objective or SDG4 which is to ensure the quality of education that is inclusive and equitable and increases lifelong learning opportunities for all (UN, 2016).

The 4th goals SDGs has 7 targets in 3 ways implication with the principles of education that is fair and inclusive, gender equality, quality and lifelong learning opportunities (UNICEF, 2016). Education is the key that allows the goals of other SDGs to be achieved. "When people are able to get quality education they can

break from the cycle of poverty. Education therefore helps to reduce inequalities and to reach gender equality. It also empowers everywhere to live more healthy and sustainable lives (SDG, 2017).

As a global society, Indonesia faces major challenges in realizing quality education. Based on the results of an international study through the Program for International Student Assessment (PISA) in measuring literacy skills in reading, mathematics and science for children under 15, Indonesia is only ranked 63 out of 72 countries (OECD, 2018). The results are not much different in the Trends Study in the International Mathematics and Science Study (TIMSS) in measuring students' abilities in the field of mathematics and science. Indonesia's achievements in science skills are only ranked 45 out of 48 and ranked 45 out of 50 for math skills.

The low competitiveness of Indonesian education is due to education access and inequality which is still a problem at the regional level. West Sumatra is one of the provinces with relatively high inequality. On average, the achievement of the average length of school in West Sumatra only touched 8.72 years, equivalent to the third grade of junior high school. Padang City has the highest average length of school with 11.32 years while Mentawai District with an average length of school is only 6.69 years

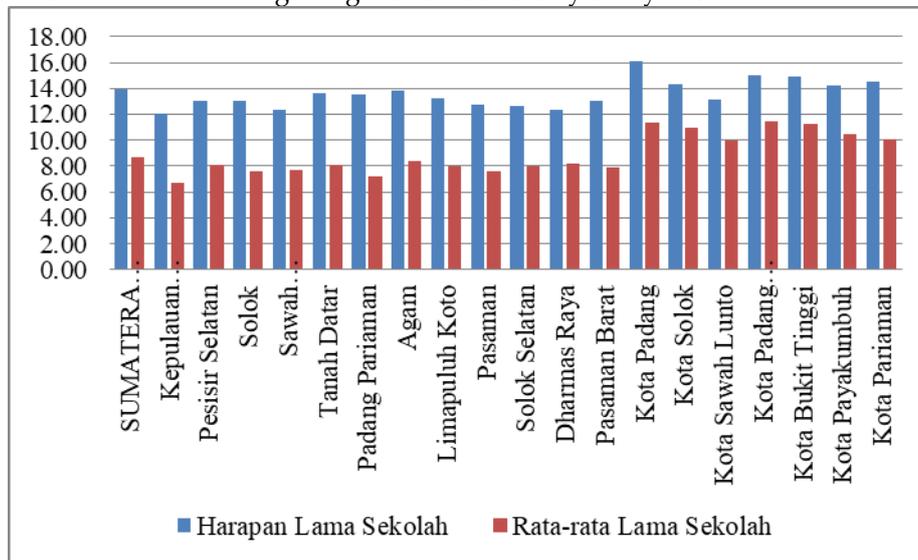


Figure 1. Education Indeks West Sumatera

Referring to the first target of SDGs at the goals of quality education, namely in By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. This objective implies that the regional government as the organizer of education is obliged to hold equal and quality education for free for 12 years before 2030. This target is still far from the reality of education in Indonesia which is still confined to the 9-year compulsory education

Education as a basic human right must be realized not only in access to education that can be enjoyed by every citizen but more than that is the improvement of the quality of education itself. Good quality education is a catalyst in producing competent and reliable human resources, and encourages the achievement of other SDGs goals such as poverty alleviation, inequality, access to good health and a sustainable environment. For this reason, there needs to be a strategy in achieving the SDGs to realize quality education in West Sumatra in line with the SDGs target at the 4th destination. So based on the description above, this study will try to answer the research questions as follows:

1. What is the condition of the quality of education in West Sumatra Province towards the target of SDG4 "Quality Education" ?
2. What are the external and internal factors that affect the achievement of the "Quality Education" SDG4 in West Sumatra?

3. What are the strategies for achieving SDGs in realizing quality education in West Sumatra?

Methods

This type of research is descriptive research that is a method for examining certain status and objects, certain conditions, systems of thought or something that happens at the present time. This study aims to provide a systematic, factual and accurate description or description of the facts, nature and relationship of the phenomenon under study. The approach used in this descriptive study is a quantitative and qualitative approach (mix method). The quantitative approach uses baseline analysis with the intention of getting an overview of the current condition of a phenomenon. Meanwhile, a qualitative approach uses SWOT analysis (Strength, Weakness, Opportunity, Threat) in the strategy planning process.

The type of data used in this study are primary and secondary data. To identify the condition of the quality of education based on the Indicators of the 4th objective of the SDGs using secondary data sourced from the Statistics of West Sumatera Province and the Mid-Term Regional Planning Document (RPJMD) and the Regional Education Balance from the Ministry of Education and Culture. Meanwhile, in supporting the qualitative analysis this study also uses primary data to formulate strategies for achieving SDGs. Data is needed relating to weaknesses, strengths, opportunities and threats in achieving SDGs from multi stakeholders in SDGs, namely Government, Universities, Non-Governmental Organizations (NGOs) and Businesses. and Philanthropy

Data processing methods used in this study were carried out through two methods in sequence. The first method is a quantitative descriptive method by conducting a baseline analysis of the target SDGs in West Sumatera Province. Baseline projections are carried out on educational indicators with business as usual assumptions or follow the nature of the data without any intervention until 2030 in accordance with the SDGs agenda. This projection is intended to estimate the position of City District in achieving SDGs targets. The results of the baseline projection can be used as input for local governments and related agencies as one tool to evaluate the direction of development policy.

The trend projection used in the study is a linear trend that describes the movement of data that increases or decreases in a straight line. The specification model used in the trend projection is the Autoregressive (AR) model mathematically as follows:

$$X_t = \phi_0 + \phi_1 X_{t-1} + \phi_2 X_{t-2} + \dots + \phi_p X_{t-p} + a_t$$

Information :

- X_t = data in the period t, t = 1, 2, 3, ..., n
- X_{t-i} = data pada periode t-i, i = 1, 2, 3, ..., p
- a_t = error pada periode t
- ϕ_0 = konstanta
- ϕ_i = konstanta AR, i = 1, 2, 3, ..., p

In assessing an SDGs indicator in a region it is said to be good or not, clear quantification of targets in 2030. Researchers then use the scorecard for the basis of assessment by comparing the results of baseline projections with the SDGs target in 2030. Quantitative Target SDGs Indicators in 2030 as follows :

Tabel 1. Quantitative Targets for SDGs Indicators in 2030

Numb.	Indicator	Quantitative Target
1	Average school years (years)	12 tahun
2	Participation Rate pre-primary	100%
3	Net primary participation rate	100%
4	Net lower secondary participation rate	100%
5	Net upper secondary participation rate	100%
6	Literacy rate	100%

Source: Formulated by researchers based on SDGs documents

The second method is to identify internal and external factors to determine the supporting factors and inhibiting factors in achieving the SDGs goals. Then use IFAS-EFAS interaction analysis (Internal Factor Evaluation - External Factor Evaluation) with related elements to produce alternative choice strategies that are in accordance with the objectives to be achieved.

Results and Discussion

The Province of West Sumatra has a total population of 4,846,909 with a regional vision of "Becoming the Leading Province Based on Human Resources That Are Religion in 2025". West Sumatra Province is one of the regions in Indonesia that has a complex geological order. This condition is due to its location in the collision area of two large tectonic plates namely the Indo-Australian plate in the south and the Euroasia plate in the north which is characterized by the presence of tectonic movement centers in the Mentawai Islands and its surroundings

In 2018, the Human Development Index (HDI) reached 71.73 or already in the provincial category with a "High" HDI even though there were still inequality at the municipal district level. West Sumatra in recent years experienced a slowdown in economic growth where in 2018 the economic growth of North Sumatra was only 5.14 percent. West Sumatra's unemployment rate in August 2018 reached 5.55% with unemployment of 141,680 people.

Baseline Analysis dan Scorecard

Overall, West Sumatra faces challenges in the implementation and achievement of the Sustainable Development Goals in realizing quality education. This is based on the projection of 6 indicators that describe the achievement of the SDGs in 2030 using the business as usual assumption which shows that there are some indicators of the SDGs in 2030. This condition requires steps and strategies that will accelerate the achievement of SDGs by 2030. Explanation of each Indicator is as follows:

1. Average school years (years)

In this indicator, the average school year target is 12 years. The projection indicator for the average school year in West Sumatera in 2030 is 9.76 years with scorecard B or approaching the SDGs target. Meanwhile, the projection according to the Regency / City shows that only Padang, Padang Panjang, Bukittinggi and Payakumbuh can achieve or almost reach the target of 12 years education by scorecard A. Meanwhile, Solok, Sawahlunto and the Pariaman received a B rating or approached the SDGs target and other cities / districts received C and D

2. Gross pre-primary Participation Rate

In this Indicator, the target Gross Pre-primary Participation Rate is 100%. The projection of the Participation Rate of Sumatra Barat's pre-primary rate in 2030 is 85.35% with the scorecard B assessment. Projection according to Regency / City shows that only Padang cities get scorecard A scores or reach the SDGs target in 2030. while other districts / cities mayorita gets a value of B and D scores.

3. Net primary participation rate

In this indicator, the target for net participation rate primary is 100%. The Projection of net primary participation rate of Sumatra Barat's in 2030 is 98.82% with scorecard A or almost reaching the SDGs target. Projection according to Regency / City shows that in 2030 almost all districts / cities in West Sumatra reach 100% Net participation rate or scorecard A. However, there are 3 regions that get scorecard B or close to the target SDGs with 90% achievement, namely Mentawai Islands, Sawahlunto and Padang.

4. Net lower secondary participation rate

In this indicator, the target of the Net lower secondary participation rate is 100%. The Projection of net lower secondary participation rate of Sumatra Barat's in 2030 is 76.99% with the scorecard C or still a quarter of the way towards the SDGs target. The projection results according to Regency / City show that in 2030 not one Regency / City in West Sumatra gets a 100% Net lower secondary participation rate. Just Only Lima Puluh Kota Regency get the score of Scorecard B or approach the SDGs target, while other districts / cities get scorecard C and D.

5. Net upper secondary participation rate

In this indicator, the target of the Net upper secondary participation rate is 100%. The Projection of net upper secondary participation rate of Sumatra Barat's in 2030 is 69.77% with scorecard D or only half way to the SDGs target. The projection results according to Regency / City show that none of the Regency / City in West Sumatra can achieve scorecard A or B. Only Lima Puluh Kota regency and Bukittinggi get C scores or are still a quarter of the way towards the SDGs target, while other city districts get D and E score.

6. Literacy rate

In this indicator, the target literacy rate is 100%. The results of Sumatra Barat's literacy rate projection in 2030 are 99.88% with the scorecard A or almost reaching the SDGs target. The projection results according to the regency / city show the same results with the projection of West Sumatra, namely that all regency and city in West Sumatra get an A score.

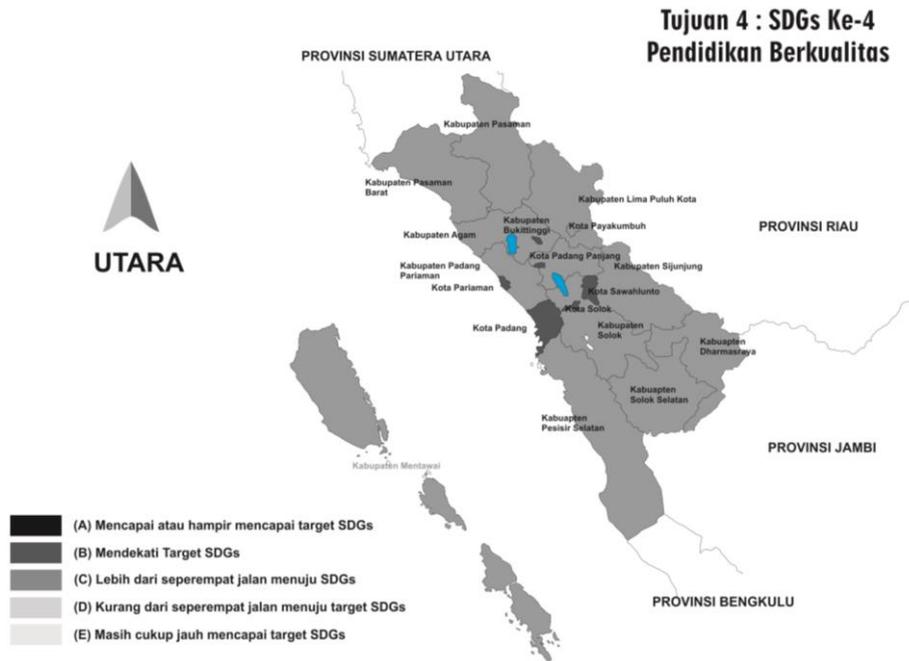


Figure 2. 4th SDGs Education Scorecard indicator value distribution

SWOT Analysis

SWOT analysis begins by identifying internal and external factors in the environment of the West Sumatra government that are considered influential in the implementation and achievement of the SDGs in realizing quality education. Identification results then formed the basis for subsequent analysis, namely the preparation of questionnaires and filling in questionnaires by respondents. Respondents who assessed internal and external factors were respondents who had sufficient authority and understanding of the problem. Based on the results of the identification of internal and external factors and the assessment of respondents, the results are as follows:

Internal Factors

Table 2. Internal Factor for Achieving SDGs

Internal Factors			
Strength	Weight	Weakness	Weight
Governor Regulation No.48 of 2018	0.32	SDGS Communication and Promotion	0.05
Coordination and Integration of policies	0.31	Effectiveness of SDG Socialization	0.28

Human Resource Quantity and Quality	0.32	Government Coordination and Collaboration with the NSA	0.29
Synchronize planning documents with SDGs	0.28	Funding Efficiency and Effectiveness	0.30
Availability of SDGs Funding	0.29	Availability of data and information on SDGs achievements	0.39
		Availability of a Monitoring and Evaluation system	0.23
Weight	1.54	Weight	1.56

Eksternal Factor

Table 3. Eksternal Factor for Achieving SDGs

Eksternal Factors			
Opportunity	Weight	Threat	Weight
Presidential Regulation No. 59 of 2017	0.30	National Political Conditions	0.28
West Sumatra Geographic Conditions	0.29	Socio-Economic Conditions	0.29
Globalization and Technology Development	0.31	4.0 Industrial Revolution	0.16
Funding from the Central Government	0.32	Funding support from the NSA	0.21
Global Cooperation Support	0.41	Philanthropic & Company Support and Commitment	0.22
NGO and Media Support and Commitment	0.32	Availability of NSA contribution data	0.16
Weight	2,28	Weight	1.34

Then the results of the study respondents will be weighted analysis of IFAS-EFAF, as follows :

Internal Factors Eksternal Factors	Strengts (S) Weight = 1.54	Weakness (W) Weight 1.56
Opportunities (O) Weight 2.28	S-O Strategy 3.51	W-O Strategy 3.55
Threats (T) Weight 1.34	S-T Strategy 2.06	W-T Strategy 2.09

Figure 3. Matrix IFAS-EFAS

The results of IFAS-EFAS interaction that produced the highest alternative strategy that got the highest weight were Weakness - Opportunity (W-O), which can be translated as a strategy that minimizes weaknesses to take advantage of opportunities. This position signifies a weak organization that is very likely. The recommended strategy is Change Strategy, meaning that the organization is advised to change its previous strategy. Because, the old strategy is feared difficult to be able to capture the opportunities that exist while improving the performance of the organization.

In achieving the SDGs to create quality education, the government of the province of West Sumatra has a greater weakness than strength. While from the external side, the opportunities that exist are far greater than the threats in the context of achieving the SDGs. The formulation of strategies is obtained through a combination of elements S, W, O, and T, resulting in several combination strategies as shown in the following table:

Table. 4 Weakness – Opportunity Strategy

Weakness	Opportunity
1. SDGS Communication and Promotion 2. Effectiveness of SDG Socialization 3. Government Coordination and Collaboration with the NSA 4. Funding Efficiency and Effectiveness 5. Availability of data and information on SDGs achievements 6. Availability of a Monitoring and Evaluation system	1. Presidential Regulation No. 59 of 2017 2. West Sumatra Geographic Conditions 3. Globalization and Technology Development 4. Funding from the Central Government 5. Global Cooperation Support 6. NGO and Media Support and Commitment
W-O Strategy (Weakness – Opportunity)	
1. With the existence of Presidential Regulation No. 59 of 2017 becomes the legal standing for the government in this case the OPD and the City District in West Sumatra to commit to the achievement of the SDGs. This legal basis is the basis for the establishment of governance among government agencies to improve coordination and integrating policies related to the SDGs target to be achieved by 2030. 2. With the support of NGOs and the Media, the government can increase the effectiveness of the socialization and promotion of SDGs to each community so that the principle of collaboration and collaboration among stakeholders can play a role in achieving the SDGs to realize quality education in West Sumatra. 3. With the development of information technology, weaknesses in data availability and achievements of SDGs in West Sumatra can be above with a platform that can be accessed by every stakeholder and supports SDGs governance. This platform is expected to bridge the relationship between state actors and Non-state actors in collaboration to accelerate the achievement of SDGs in West Sumatra	

Conclusions

Based on the discussion of baseline analysis and SWOT, conclusions can be drawn as follows:

1. The baseline analysis of the six education indicators shows that only two indicators are the Net Primary Participation Rate and Literacy Rate which shows achievement based on the SDGs target in 2030. Meanwhile the achievement of secondary participation rate and pre primary school is still a challenge to be achieved.
2. The SWOT analysis is carried out to formulate internal and external factors that become strengths and weaknesses as well as opportunities and threats, showing that the achievement of SDGs to realize quality education in West Sumatra is faced with conditions of weakness greater than the strength and opportunity greater than threats.
3. In the strategy formulation based on the SWOT analysis the strategy formulated is the W-O (Weakness - Opportunity) Strategy, namely by utilizing the existing potential to reduce weaknesses.

References

- Beebout, H., & Schultz, T. W. (1973). Investment in Human Capital. *American Journal of Agricultural Economics*. <https://doi.org/10.2307/1238690>
- David, F. R. (2010). *Strategic Management Concepts and Cases*. *Zeitschrift für Personalforschung*. <https://doi.org/10.1688/ZfP-2014-03-Rowold>
- Didham, R. J., & Ofei-Manu, P. (2015). Social learning for sustainability: Advancing community-based inquiry and collaborative learning for sustainable lifestyles. In *Responsible Living: Concepts, Education and Future Perspectives*. https://doi.org/10.1007/978-3-319-15305-6_15
- Janowski, T. (2016). Implementing Sustainable Development Goals with Digital Government – Aspiration-capacity gap. *Government Information Quarterly*. <https://doi.org/10.1016/j.giq.2016.12.001>
- Jauch, L. R., Osborn, R. N., & Glueck, W. F. (1980). Short term financial success in large business organizations: The environment-strategy connection. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250010106>
- Laurie, R., Nonoyama-Tarumi, Y., Mckeown, R., & Hopkins, C. (2016). Contributions of Education for Sustainable Development (ESD) to Quality Education: A Synthesis of Research. *Journal of Education for Sustainable Development*. <https://doi.org/10.1177/0973408216661442>
- OECD. (2018). Pisa 2015 Results in Focus. *OECD Publishing 2018*. <https://doi.org/10.1787/9789264266490-en>
- Ofei-Manu, P., & Didham, R. J. (2018). Identifying the factors for sustainability learning performance. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2018.06.126>
- SDG. (2017). QUALITY EDUCATION : Why it Matters.
- UN. (2017). Sustainable development goals - United Nations. <https://doi.org/10.1016/j.eururo.2010.10.002>
- Unesco. (2010). Teaching and Learning for a Sustainable Future. <https://doi.org/10.1016/j.econedurev.2011.03.008>
- United Nations General Assembly. (2015). Transforming our world: the 2030 Agenda for Sustainable Development. *General Assembly 70 Session*. <https://doi.org/10.1007/s13398-014-0173-7.2>