Research Article

Effectiveness of Human Capital Development Programs in Indonesia 2015-2024

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Abstract: This research evaluates the effectiveness of human capital development policies in Indonesia within the education and health sectors during the periods of 2015–2019 and 2020–2024. The analysis focuses on strategic programs implemented by the Ministry of Education and Culture and the Ministry of Health by comparing planned targets with the realization of performance indicators as stated in the Strategic Plan (Renstra) documents. The study employs a qualitative evaluative approach supported by descriptive quantitative data derived from official planning and performance reports. The findings indicate that during the 2015–2019 period, programs emphasizing the expansion of basic education and health services were relatively effective in increasing participation rates and improving equitable access. In contrast, programs aimed at enhancing the quality of human resources, particularly teacher development and institutional capacity building, showed lower levels of effectiveness due to weak performance measurement systems and inconsistent data reporting. During the 2020–2024 period, the effectiveness of most education and health programs declined significantly as a result of external shocks caused by the COVID-19 pandemic. However, health programs with strong financial protection mechanisms, such as the National Health Insurance (JKN), demonstrated greater resilience compared to other programs. The study concludes that the effectiveness of human capital development policies is strongly influenced by the clarity of performance indicators, consistency in program implementation, institutional capacity, and the ability of policies to adapt to external disruptions.

Keywords: Education Policy Programs; Health Policy Programs; Human Capital; Policy Effectiveness; Strategic Plan.

1. Introduction

Global human development has improved significantly, but this goal does not fully reflect the equitable distribution of human capital quality across countries. Countries with low investment in the education and health sectors tend to experience productivity gaps and slower economic growth (World Bank Group, 2018). In the education sector, the issue of human capital is reflected in low educational participation in many developing countries. UNESCO data shows that Nigeria's higher education participation rate in 2020 reached 10.7%, far below the global average of 38%, which limits the workforce's skills and hinders national productivity growth (Popoola et al., 2019).

Besides Education, limited access to basic healthcare services is also a critical factor hindering human capital development. In India, approximately 70% of the rural population faces difficulties in accessing healthcare services due to limited healthcare infrastructure, limited healthcare personnel, and limited financial capacity, which leads to high mortality rates

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and disease prevalence among low-income communities (Chawla, 2023). Furthermore, the high burden of infectious diseases such as HIV/AIDS, tuberculosis, and malaria, as well as malnutrition, contributes to low population participation in education and the labor market. This weakens human capital accumulation and increases the risk of falling into a poverty trap (Goenka & Liu, 2020). One of them is multidimensional poverty, which reflects the quality of human resources more comprehensively because it is not only influenced by limited income, but also by low levels of education, health conditions, and living standards that directly shape an individual's productive capacity (Ratih et al., 2023)

In Southeast Asia, human capital development shows relatively greater progress with increasing investment in human capital, as reflected in the Human Capital Index (HCI) values. Some countries like Singapore, Vietnam, Brunei Darussalam, Malaysia, and Thailand have values above the global average. However, Indonesia had an HCI value of 0.5400 in 2020, which is still below the global average, indicating that the quality of education and healthcare has not fully supported optimal labor productivity. As the country with the largest population in Southeast Asia, Indonesia has significant demographic potential. In 2024, over 65% of the population was of productive age (15-59 years), which could theoretically serve as a driver of economic growth (BPS, 2025). However, the low HCI score indicates that only about 54% of an individual's potential productivity can be realized under current education and health conditions.

Within the framework of national development, the Indonesian government included human capital in the National Medium-Term Development Plan (RPJMN) 2015-2019 and 2020-2024, which was further detailed in the strategic plan, emphasizing increased access to equitable and quality education, improving public health, and alleviating poverty as key pillars of sustainable development. Human capital development in these Strategic Plans not only considers the outputs of education and health services, but also the outcomes, such as achieving indicators as part of development goals. To illustrate, the following table presents the goals, objectives, programs, and indicators in human capital development.

2015-2019				2020-2024			
Goals	Objectives	Programs	Indicators	Goals	Objectives	Programs	Indicators
Strengthening the roles of students, teachers, educational staff, parents, and educational institution personnel within the educational ecosystem.	Increased positive student behavior	Teacher and education personnel program	14 indicators	Expanding access to quality education for students in a just and inclusive manner.	Increased equitable access to quality education services at all levels	Higher education programs	3 indicators
	Increased participation of parents and stakeholders involved in education					Early childhood education, primary education, and secondary education programs	
							1 indicator
	Improved quality of teacher and education staff attitudes in terms of personality, spirituality, and social skills.						
Increased access to early childhood education, primary education, secondary education, non-formal education, and special needs education	Increased access to early childhood education and community education in all provinces, districts, and cities	Basic and secondary education program	23 indicators	Strengthening the quality and relevance of education centered on student development	Improving the quality of learning and the relevance of education at all levels	Early childhood education, primary education, and secondary education programs	1 indicator
	Increased participation rates for the primary and secondary school-age population					Higher education program	9 indicators
						Teacher and education personnel program,	6 indicators
Improving the Quality and Relevance of Character-Building Learning	Improving the quality of early childhood education and community education with a gender perspective and education for sustainable development	Early childhood education and community education programs	9 indicators	Developing the character potential of students	Strengthening the character of students	Early childhood education, primary education, and secondary education programs	1 indicator
	quality of basic and secondary education services and graduates.	Teacher and education personnel	9 indicators				
	Increased professionalism and distribution of teachers and educational personnel.						
	Increased number of educational institutions/units and stakeholders providing family education.						

Figure 1. Human Capital Development Goals, Targets, and Programs.

Source: Ministry of Education and Culture Strategic Plan 2015-2019 and 2020-2024

Based on the table above, the Ministry of Education and Culture's Strategic Plan shows that the 2015-2019 period comprises 3 main objectives, 9 targets, 3 programs, and 55 indicators. Meanwhile, the 2012-2024 period includes 3 objectives, 3 targets, 3 programs, and 21 indicators.

2015-2019				2020-2024			
Goals	Objectives	Programs	Indicators	Goals	Objectives	Programs	Indicators
Improved public health status	Improved public health	Program to strengthen the implementation of the National Health Insurance (JKN)/Indonesia Health Card (KIS)	1 indicator	Improving public health through a life cycle approach	Improved maternal, child, and community nutrition	Public health program	6 indicators
	Increased disease control	Nutrition and Health Program for Mothers and Children	3 indicators				
		Disease control, sanitation, and environmental health program	5 indicators				
		Health effort development program					
Increased responsiveness and community protection against social and financial risks in the healthcare sector.	Increased access to and quality of healthcare facilities.	Pharmacy and medical device program	3 indicators	Strengthening basic and referral healthcare services	Increased availability and quality of primary and referral healthcare facilities	Healthcare service programs and the National Health Insurance (JKN)	
	Increased access, independence, and quality of pharmaceutical preparations and medical devices	Human health resource development and empowerment program	3 indicators			Education and training program	1 indicator
	Increasing the number, type, quality, and distribution of healthcare personnel						
				Improved disease prevention and control and public health emergency management	Increased disease prevention and control, as well as public health emergency management	Disease prevention and control program	11 indicators

Figure 2. Ministry of Health Strategic Plan for the period 2015-2019.
Source: Ministry of Health Strategic Plan 2015-2019 and 2020-2024

Based on the table above, the Ministry of Health's Strategic Plan for the 2015-2019 period comprises 2 main objectives, 5 targets, 6 programs, and 17 indicators. Meanwhile, the 2020-2024 period includes 3 objectives, 3 targets, 4 programs, and 30 indicators.

2. Theoretical Study

Human Capital Theory

Human Capital Theory is an economic concept that states that humans are a productive resource whose value can be increased through investments such as education, training, healthcare, and purchasing power. Human capital theory considers education an investment that enhances an individual's abilities, knowledge, and experience, thereby increasing productivity and income (Budiarty, 2019). According to Schultz (1961) In *"Investment in Human Capital"* investment in education and health is a key factor influencing labor productivity. Schultz (1961) describes that education plays an important role in increasing individuals' knowledge, skills, and cognitive abilities, making the workforce more adaptable to

technological changes and market needs. Individuals with higher levels of education tend to have greater productivity, wider opportunities, and higher incomes.

Becker (1964) In his book titled "Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education," explained that the human capital theory shifted the view of labor from being a "factor of production" to a "productive asset" that can be increased through strategic investments. This concept serves as the foundation for labor economics and human resource management. Becker stated that healthy individuals have a higher work capacity, lower absenteeism rates, and more stable productivity. This view is supported by (Grossman, 1972) through the concept of health capital, which states that health is a form of capital that enables individuals to participate optimally in education and the labor market. Investing in health not only improves individual well-being but also increases the potential productivity and competitiveness of the workforce.

Public Policy

The terms "policy" and "public policy" in Indonesian are translated as "kebijaksanaan," "kebijakan," "kebijaksanaan publik," or "kebijakan publik." Laswell and Kaplan define public policy as a program aimed at achieving directed goals, values, and practices. Thomas R. Dye (1975:1) states that public policy is whatever the government chooses to do or not to do. Carl Friedrich defines policy as a proposed course of action by an individual, group, or government within a specific environment, which presents obstacles and opportunities for the proposed policy to utilize and overcome to achieve a particular goal, realize a specific target, or fulfilll a certain intention (Winarno, 2002:16). Accoring to Nugroho (2008), there are two characteristics of public policy: 1) Public policy is easy to understand, as its meaning is the things done to achieve national goals; 2) Public policy is easy to measure, as its measurement is clear, namely the extent to which progress has been made in achieving ideals. Therefore, in the context of human capital development, public policy serves as the main instrument for directing resource allocation, establishing programs, and ensuring equitable access to education and healthcare services (Buse et al., 2012).

Evaluation of Policy

According to the Indonesian Big Dictionary, Evaluation means determining value (Suharso, 2005).   According to the module on the government agency performance accountability system (second edition) published by the National Institute of Public Administration of the Republic of Indonesia, the term "evaluation" can be equated with "appraisal," "rating," and "assessment." (LANRI, 2004). Meanwhile, policy evaluation is the process of assessing the extent to which a policy yields results, which is done by comparing the results obtained with the predetermined policy goals or targets   (Darwin, 1994). In conducting policy evaluation, there are functions in its analysis: 1) Evaluation provides information to understand the performance of policies that have been implemented; 2) Evaluation serves as an alternative to continuously improve weaknesses in programs through classification and constructive criticism; 3) Policy evaluation acts as an instrument and tool for analyzing policies, both in terms of problem formulation and recommendations (Dunn, 2003:609-611).

In national development planning, evaluating the Strategic Plan (Renstra) policy is an integral part of the government's performance accountability system. Bappenas explains that the Renstra evaluation serves as a control tool and feedback mechanism in the development

planning process, which not only assesses the level of output achievement but also evaluates policy outcomes as the basis for planning for the next period.

3. Research Method

This research employs a qualitative approach with an evaluative research design, supported by descriptive quantitative data, to assess the effectiveness of human resource development program implementation in Indonesia as outlined in the Strategic Plans (Renstra) of the Ministry of Education and Culture and the Ministry of Health for the periods 2015–2019 and 2020–2024. Evaluation is conducted by comparing the targets and realization of program performance indicators listed in the ministry's planning documents and performance reports. A qualitative approach is predominantly used because this research aims to understand the substance of policies, program objectives, and the meaning of indicator achievements within the context of human resource development implementation.

The use of this approach aligns with the performance perspective (Sugiyono, 2019), which emphasizes that evaluative research can be conducted with a qualitative dominance when the evaluation focus is directed toward the alignment between program planning and outcomes, while quantitative data serves as support for objectively analyzing performance achievement. Additionally, qualitative analysis in this study was conducted through a review of policy documents and official ministry reports to capture the meaning of the policies and the sustainability of the program implementation process. This approach aligns with what is understood (Moleong, 2017), which states that qualitative research allows researchers to understand social phenomena holistically and contextually through document-based data and policy narratives. Therefore, this research is not aimed at analyzing the process of preparing the Strategic Plan, but rather at evaluating the effectiveness of program implementation results based on the achievement level of the established indicators.

Data Collection Technique

Data collection techniques in this study were carried out through document analysis. Document analysis is a data collection technique that involves reviewing, recording, and analyzing official documents relevant to the research objectives. The documents used include reports from the Ministry of Education and Culture, the Ministry of Health, and related institutions. According to Sugiyono (2020) A document is a record of past events in the form of writing, images, or monumental works. Documentation study can thus be defined as a data collection technique involving the examination and recording of official documents relevant to the research objectives, which in this descriptive qualitative research focuses on policy analysis and program performance.

Policy Effectiveness Measurement Technique

Effectiveness is one of the main criteria in policy evaluation, measuring the extent to which a policy or program achieves its planned goals and objectives. Evaluating effectiveness not only assesses output achievement but also considers the alignment of targets and performance indicator realization, which aligns with the goal-attainment theory framework that emphasizes that policy effectiveness is measured by the degree to which established goals have been achieved (Etzioni, 1964). Similarly, in his book titled Development as Freedom (1999), Amartya Sen emphasizes that the effectiveness of policies should be measured by how much they expand individual freedom and the ability to reach one's full potential. Sen defines

"freedom" as encompassing economic, political, and social freedoms, and access to basic services such as education and healthcare. According to Sen, development is a process that gives people more choices and opportunities than simply increasing income (Amartya, 1999).

Effectiveness Assessment Criteria

Effectiveness analysis was conducted using comparative qualitative methods to assess the extent to which the implemented policies were effective in human capital development. A policy is considered effective when what has been formulated aligns with the established goals that have been set. The Evaluation criteria for effectiveness in research are based on Kepmendagri No. 690.900.329 of 1996 concerning Guidelines for Financial Performance Evaluation (Febriyani & Sofianty, 2022) as presented in the following table

Table 1. Effectiveness Assessment Criteria.

Percentage	Criteria
>100%	Very effective
91%-100%	Effective
81%-90%	Quite effective
61%-80%	Less effective
<60%	Tidak efektif

Source: Depdagri, Kepmendagri No. 690.900.329

To determine the effectiveness level of human capital development policy targets in Indonesia, it can be calculated using the following formula:

$$Effectiveness : \frac{Realization\ of\ Policy\ Implementation\ Targets}{Policy\ Implementation\ Targets} \times 100\%$$

Focus of the Human Capital Development Program

The work program established and implemented by the Ministry of Education and Culture, based on the Strategic Plan (Renstra), for the years 2015-2019, includes a total of 8 programs. Of these 8 programs, 3 were used in the research, reflecting human capital development: (Primary and Secondary Education Program, Early Childhood and Community Education Program, and Teacher and Education Personnel Program) (Kemendikbud, 2015). Meanwhile, in 2020-2024, it consists of 9 programs from the Ministry of Education and Culture in 2020 and 6 programs in 2021-2024, with 6 programs reflecting human capital development, namely: (Teacher and Education Personnel Program, Early Childhood Education, Primary and Secondary Education Program, Vocational Education Program, Higher Education Program, Teaching and Learning Quality Program, and Early Childhood Education and Compulsory 12-Year Education Program) (Kemendikbud, 2020).

Meanwhile, the work program established and implemented by the Ministry of Health based on the Strategic Plan (Renstra) for the period 2015-2019 includes two main Ministry of Health programs: the generic program, consisting of four programs with a focus on one program (the National Health Insurance (JKN)/Indonesia Health Card (KIS) implementation strengthening program), and the technical program, consisting of five programs (the Nutrition and Maternal and Child Health Development Program, the Disease Control and Environmental Health Program, the Health Efforts Development Program, the Pharmaceutical and Medical Devices Program, and the Health Human Resources Development and Empowerment Program) (Kemenkes RI, 2015). Similarly, in the 2020-2024 period, which has a generic program consisting of 3 programs with a focus on 1 program

(Vocational Education and Training Program) and technical programs consisting of 3 programs (Health Services & JKN Program, Public Health Program, and Disease Prevention and Control Program), these were used in the research (Kemenkes RI, 2020).

4. Discussion and Result

The evaluation results for the implementation of the human capital development program during the 2015-2019 period show varying levels of effectiveness across indicators in the education and health sectors. This is based on the assessment that has been carried out by comparing the actual achievements against the targets set in the Strategic Plans of the Ministry of Education and Culture and the Ministry of Health. During the period 2020-2024, the effectiveness of programs in the education and health sectors showed greater variation due to external factors, especially the COVID-19 pandemic. In general, the programs implemented were hindered, as happened in the education and health sectors.

Ministry of Education and Culture

Results of the Effectiveness of Educational Programs					
	2015-2019		2020-2024		
	Effective	Not Effective		Effective	Not Effective
Early childhood education and community education programs	7 indicators of effective	2 indicators not implemented	Early Childhood Education and 12-Year Compulsory Education Program	1 effective	11 ineffective indicators
Basic and secondary education program	20 indicators of effective	1 indicator of ineffectiveness	Early childhood education, primary education, and secondary education programs		3 indicators not realized
Teacher and education personnel program		2 indicators are ineffective, and 21 indicators are not implemented	Teacher and education personnel program,		6 ineffective indicators
			Vocational education and training programs		16 ineffective indicators
			Higher education program		10 ineffective indicators and 2 unrealized indicators

Figure 3. existing education programs have experienced significant changes in performance.

Source: Ministry of Education Report (by the author 2026)

Based on the image above, it can be seen that the existing education programs have experienced significant changes in performance. Overall, the period from 2015 to 2019 showed a reasonable success rate. This is evident from the fact that out of three human resource development programs, 27 out of 53 indicators were categorized as effective. However, in the 2020-2024 period, with similar programs, there was a significant decline. Only 1 out of 49 indicators was categorized as effective, and the other indicators showed results that were not achieved or not well implemented that year due to COVID-19.

2015-2019 Period

In the education sector, programs focused on access and equity in education services (primary and secondary education programs) show a relatively high level of goals or effectiveness, with an average of over 150%. Then, programs for strengthening human capital foundations and educational inclusivity (early childhood education and community education

programs) show an average achievement or effectiveness rate of 110.79%, and programs focused on the quality of education services and institutional capacity (teacher and education personnel programs) show an average achievement or effectiveness rate of 5.96%.

2020-2024 Period

The programs in the education sector during this period, which focused on expanding access and equalizing formal education services (Early Childhood Education, Primary Education, and Secondary Education programs), show that the established indicators were not realized. The program focused on improving skills and work readiness (Vocational Education Program) showed an average achievement or effectiveness rate of only 29.23%. The program focused on strengthening the quality of highly educated human resources and innovation (Higher Education Program) showed an average achievement or effectiveness rate of only 22.59%. The program focused on improving the quality of the learning process (Teaching and Learning Quality Program) showed an average achievement or effectiveness rate of only 16.59%, and the program focused on strengthening the foundation of human capital and education sustainability (Early Childhood Education and 12-Year Compulsory Education Program) showed an average achievement or effectiveness rate of only 21.57%.

Ministry of Health

Results of the Effectiveness of Health Programs					
2015-2019				2020-2024	
	Effective	Not Effective		Effective	Not Effective
Program to strengthen the implementation of the National Health Insurance (JKN)/Indonesia Health Card (KIS)	1 indicator is quite effective		Healthcare service programs and the National Health Insurance (JKN)	1 indicator is very effective, 2 indicators are effective, and 2 indicators are quite effective.	2 indicators are not effective, 4 indicators have no data available
Nutrition and Health Program for Mothers and Children	3 very effective indicators		Public health program		2 indicators are ineffective, 1 indicator is less effective, and 3 indicators are not realized.
Disease control, sanitation, and environmental health program.	4 very effective indicators		Disease prevention and control program	1 effective indicator, 1 quite effective indicator	3 indicators are ineffective, 1 indicator is less effective, and 5 indicators are not realized
Health effort development program	2 very effective indicators		Education and training program		not realized
Pharmacy and medical device program	2 very effective indicators	1 ineffective indicator			
Human health resource development and empowerment program	3 very effective indicators				

Figure 4. Health Programs From 2015-2019.
Source: Ministry of Health Report (by the author2026)

Based on the table above, it shows that the health program from 2015-2019 was at a very high level of effectiveness. Almost all program indicators recorded very effective results, then there was 1 indicator that had started to run well, which was in the fairly effective category, and only 1 indicator was not effective. Meanwhile, in 2020-2024, the health program experienced a decline, as seen from the indicators classified as effective, which were 7 out of 28 indicators that fell into the effective category, with details of 1 very effective indicator, 3 effective indicators, and 3 fairly effective indicators, the rest were classified as not effective because they did not reach the target. This is due to the problematic COVID-19 pandemic conditions, which have made it impossible to implement the indicators effectively.

2015-2019 Period

In the health sector from 2015-2019, the program focused on expanding access and financial protection for healthcare services (National Health Insurance (JKN) Implementation Strengthening Program / Healthy Indonesia Card (KIS)) showed an achievement or effectiveness rate of 89.59%. The program focused on improving health quality and preventing early health risks (Nutrition and Maternal and Child Health Development Program) showed a high achievement or effectiveness rate with an average of 135.83%. The program focused on disease prevention and reducing environmental health risks (Disease Control and Environmental Health Program) showed a relatively high achievement or effectiveness rate with an average of 146.93%. The program focused on strengthening the quality and reach of basic and referral health services (Health Effort Development Program) showed a high level of achievement or effectiveness, averaging 108.04%. The program focused on the availability, affordability, and safety of drugs and medical devices (Pharmaceutical and Medical Device Program) showed an achievement or effectiveness level averaging 110.125%, and the program focused on increasing the capacity and equitable distribution of health workers (Health Human Resources Development and Empowerment Program) showed an achievement or effectiveness level averaging 113.84%.

2020-2024 Period

In the health sector, which consists of the Vocational Education and Training Program, the Health Services & JKN Program, the Public Health Program, and the Disease Prevention and Control Program. The program focused on improving work skills and workforce readiness (Vocational Education and Training Program) showed an achievement or effectiveness rate with a relatively high average of 449%. The program focused on expanding assets and financial protection for health services (Health Services & JKN Program) showed an achievement or effectiveness rate with an average of 52.63%. The program focused on improving public health through promotive and preventive efforts (Public Health Program) showed an achievement or effectiveness rate with an average of 32.32%. The program focused on reducing disease risks and burdens (Disease Prevention and Control Program) showed an achievement or effectiveness rate with an average of 30.99%. So that with education and health, it can increase community knowledge, so that it can develop the ability to increase the capacity of local human resources, active participation of the community, and the creation of productive business opportunities (Emalia et al., 2024).

Most Effective and Least Effective Programs

Ministry of Education and Culture

In the health sector from 2015-2019, the most effective program was the disease control and environmental sanitation program. This is reflected in the percentage of districts/cities with improved environmental quality, increased disease prevention through immunization

leading to a decrease in disease, and improved preparedness in health response to outbreaks. Regarding the least effective programs during this period, it can almost be said that there were none, as overall the programs achieved an effectiveness rate above 85%. Meanwhile, the most effective program in the health sector for 2020-2024 is the Health Services & JKN Program, with an effectiveness achievement rate of 52.63%. Although it is the largest among other programs, it is still categorized as ineffective. This is supported by the increasing number of people receiving health insurance and standard-compliant health facilities and personnel. The least effective program is the Disease Prevention and Control Program, with an effectiveness achievement rate of 30.99%, due to the program's indicators not being fully realized during the 2020-2024 period.

5.   Conclusion and Suggestions

The research findings indicate that the effectiveness of human capital development policies is highly determined by the characteristics of the program and the stability of its implementation. During the period 2015-2019, the basic service expansion program, particularly in primary and secondary education and disease prevention health services, demonstrated a high level of effectiveness. This indicates that programs with clear indicators, direct interventions, and relatively easy implementation systems are more likely to achieve their targets. Conversely, the low effectiveness of teacher and education personnel programs reflects weak policy governance, particularly in terms of performance and data collection. This confirms that the success of human capital investment does not depend solely on budget allocation, but also on the quality of indicators and implementation capacity. Based on the evaluation results, it can be concluded that: The Teacher and Education Personnel Development Program for the 2015–2019 period has the lowest effectiveness level with an average achievement of 5.96%. The low effectiveness of this program is caused by changes in teacher certification policies, incomplete performance achievement data, and a weak system for collecting and reporting indicator data, resulting in most indicators not being able to be optimally evaluated. This condition indicates that limitations in performance measurement are a major factor contributing to the low effectiveness of the program, not just a failure in policy implementation.

The education sector program for the 2020–2024 period is generally considered ineffective, with indicator achievement rates below 30%. This condition is common in almost all programs, including primary to secondary education, vocational education, higher education, teaching and learning quality, as well as early childhood education and 12-year compulsory education. Although the Strategic Plan was revised in 2022, program achievements have not shown significant recovery, with the learning quality program being the least effective, achieving only 16.59%.

The health sector program for the period 2020–2024 has also not achieved optimal effectiveness. The Health Services and JKN program is the program with the highest effectiveness level, at 52.63%, although it is still considered ineffective, supported by increased health insurance participation and improvements in facilities and healthcare personnel. Conversely, the Disease Prevention and Control Program is the least effective program, achieving only 30.99% of its target due to failure to meet most indicators, limited diagnostic facilities, and low data reporting consistency.

Suggestions

Based on the research findings, improving the effectiveness of human resource development policies needs to focus on refining program performance indicators that emphasize achieving results and impact. Strengthening performance measurement and data collection systems for programs, particularly the Teacher and Education Personnel Development Program, needs to be a top priority. The government needs to ensure consistent performance indicators, transparency of achievement data, and integration of reporting systems across all levels of government so that program effectiveness can be evaluated objectively and sustainably.

The design and implementation mechanisms for post-pandemic education programs need to be more adaptive, particularly for vocational education, teaching and learning quality, early childhood education (PAUD), and 12-year compulsory education. Therefore, if a revised Strategic Plan is necessary, it should not only focus on updating indicators but also include implementation recovery strategies, strengthening implementer capacity, and providing adequate resource support to ensure improved program outcomes.

Strengthening the resilience of health programs to external shocks needs to be enhanced by emulating the relatively stable practices of the National Health Insurance and Health Services Program (JKN). The government is advised to strengthen the institutionalized health protection system, increase the availability of diagnostic tools, and ensure consistent data reporting, particularly for the Disease Prevention and Control Program, so that the effectiveness of health policies is not solely dependent on external conditions.

Bibliography

Amartya, S. (1999). *Development as Freedom*. Oxford University Press. Introduction.

Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (1st ed.). National Bureau of Economic Research.

BPS. (2025). *Jumlah Penduduk Pertengahan Tahun (Ribu Jiwa)*. Https://Www.Bps.Go.Id/Id/Statistics-Table/2/MTk3NSMy/Jumlah-Penduduk-Pertengahan-Tahun--Ribu-Jiwa-.Html.

Budiarty, I. (2019). *Ekonomi Sumber Daya Manusia*. Pusaka Media.

Buse, K., Mays, N., & Walt, G. (2012). *Making Healt Policy* (2nd ed.). Open University Press.

Chawla, N. S. (2023). Unveiling the ABCs: Identifying India's Healthcare Service Gaps. *Cureus*. https://doi.org/10.7759/cureus.42398

Darwin, M. (1994). *Kebijakan Publik*. PT RajaGrafindo Persada.

Dunn, W. N. (2003). *Public Policy Analysis: An Introdiution*. Pentice Hall.

Dye, T. R. (1975). *Understanding Public Policy*. Prentice-Hall.

Emalia, Z., Murwiati, A., Awaluddin, I., & Tri Purwaningsih, V. (2024). PENGEMBANGAN SMART TOURISM EKOSISTEM MANGROVE PETENGORAN UNTUK MEMPERKUAT KEMANDIRIAN MASYARAKAT DESA GEBANG KABUPATEN PESAWARAN. *BEGAWI : Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 6–12. https://doi.org/10.23960/begawi.v2i1.32

Etzioni, A. (1964). *Modern Organization*. Prentice-Hall.

Febriyani, S., & Sofianty, D. (2022). Pengaruh Efektivitas dan Kontribusi Pajak Parkir terhadap Pendapatan Asli Daerah Kota Bandung. *Bandung Conference Series: Accountancy*, *2*(1), 650–656. https://doi.org/10.29313/bcsa.v2i1.2050

Goenka, A., & Liu, L. (2020). Infectious diseases, human capital and economic growth. *Economic Theory*, *70*(1), 1–47. https://doi.org/10.1007/s00199-019-01214-7

Grossman, M. (1972). On the Concept of Health Capital and the Demand for Health. *Journal of Political Economy*, *80*(2).

Kemendikbud. (2015). *Rencana Strategis Kementerian Pendidikan dan Kebudayaan 2015-2019*.

Kemendikbud. (2020). *Rencana Strategis Kementerian Pendidikan dan Kebudayaan 2020-2024*.

Kemenkes RI. (2015). *Rencana Strategis Kementerian Kesehatan Tahun 2015-2019*.

Kemenkes RI. (2020). *Rencana Strategis Kementerian Kesehatan Tahun 2020-2024*.

LANRI. (2004). *Modul Sistem Akuntabilitas Kinerja Instansi Pemerintah (Edisi Kedua)* (Kedua).

Moleong, L. J. (2017). *Metodologi Penelitian Kualitatif (Edisi Revisi)*. PT Remaja Rosdakarya.

Nugroho, R. (2008). *Public Policy: Teori Kebijakan, Analisis Kebijakan, dan Proses Kebijakan Publik*. PT Elex Media Komputindo.

Popoola, O., Alege, P. O., Gershon, O., & Asaleye, A. J. (2019). HUMAN CAPITAL CHANNELS AND PRODUCTIVITY GROWTH: EVIDENCE FROM NIGERIA. *& Sociology*, *12*(4). https://doi.org/10.14254/2071

Ratih, A., Gunarto, T., & Murwiati, A. (2023). Is Multidimensional Poverty Different from Monetary Poverty in Lampung Province? *Advances in Economics, Business and Management Research*. https://doi.org/10.2991/978-2-38476-064-0_22

Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review*, *51*(1), 1–17.

Sugiyono. (2019). *Metode Penelitian Kebijakan* . Alfabeta.

Sugiyono. (2020). *METODE PENELITIAN KUANTITATIF, KUALITATIF, DAN R&D* (cetakan ke-2). Alfabeta.

Suharso, D. D. (2005). *Kamus Besar Bahasa Indonesia* (Suharso, Ed.; 1st ed.). Widya Karya.

Winarno, B. (2002). *Kebijakan Publik: Teori dan Proses*. Media Pressindo.

World Bank Group. (2018). *Kesenjangan Sumber daya manusia*. Https://Www.Worldbank.Org/in/News/Opinion/2018/06/18/Human-Capital-Gap.