

THE ROLE OF EDUCATION IN HUMAN RESOURCE DEVELOPMENT IN THE CONTEXT OF ECONOMIC DEVELOPMENT: A REVIEW

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Abstract: Education has a strategic role in developing quality human resources to support development. This study aims to identify the challenges and problems faced in access to education and the development of human resources. The research method used is the literature review, which synthesizes articles and documentation related to the research topic. The findings show that access to education in Indonesia still faces significant obstacles, especially in rural and remote areas. There is a stark gap between urban and rural areas, especially at the secondary level, which is influenced by geographical, economic, and cultural factors. In addition, the mismatch between education and labor market needs is also a challenge in developing human resources. There is a vertical mismatch with a percentage of 53.33 percent and a horizontal mismatch of 60.52 percent. Education is proven to have a significant impact on improving the quality of individuals, however, the development of soft skills in the education curriculum is still less than optimal. On the other hand, technology has become an important element in improving access and quality of education, although the digital divide between urban and rural areas still requires serious attention.

Keywords: Education, Human Resources, Economic Development.

Introduction

Education is the main foundation in building human resources that are superior, competitive, and have high adaptability in facing the times (Mujaddid, 2024). Quality education will create individuals who have broad insights, high skills, and a strong work ethic. In the dynamics of globalization and the era of the industrial revolution 4.0, countries, including Indonesia, are faced with the challenge of improving the quality of human resources in an effort to realize national progress and prosperity (Deffinika et al., 2022).

In this case, human resource development becomes a crucial aspect. Human resources include human abilities, skills, and potentials that sustain sustainability and socio-economic balance (Liu, 2024). This development is not only limited to aspects of formal education, but also includes moral guidance, development of soft skills, and providing access to various resources and opportunities that can support individual abilities (Uvarina et al., 2022). Without planned and sustainable human resource development, a country will find it difficult to catch up with the development of the world, especially in the rapidly changing technological and economic sectors. Related to resource development, the human development index in Indonesia is quite high. In 2022 Indonesia obtained an HDI score of 0.713, categorized as a country with a high human development index. However, Indonesia's score is still lower than the global average of 0.739, so Indonesia is ranked 112th out of 193 countries researched. While at the Asean level, Indonesia is ranked number 6 out of 11 countries (Ahdiat, 2024). This can be seen from the following data.

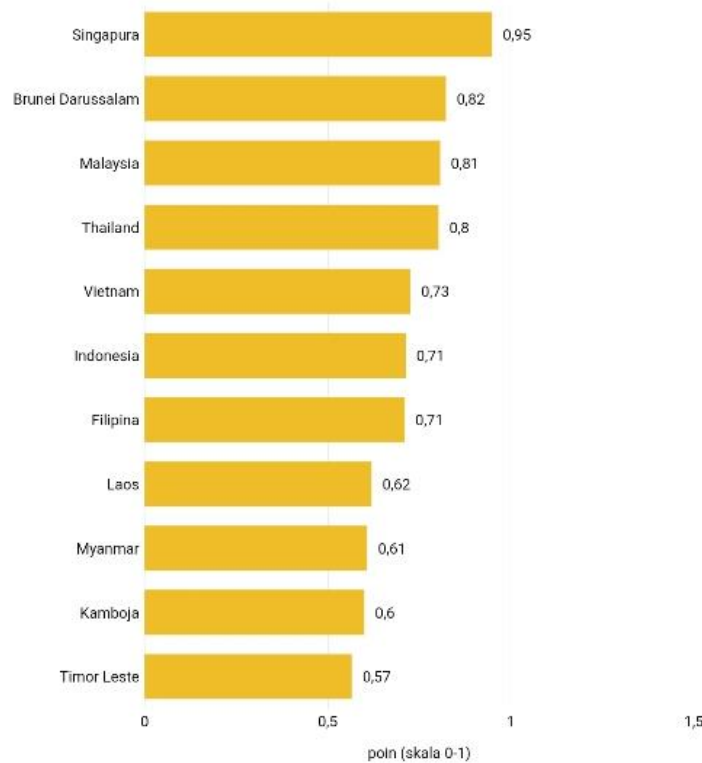


Figure 1: Asean Human Development Index, 2024
 Source: Dataoks, 2024

Access to education is crucial for all groups of society, as one of the pillars in human resource development. Equitable access to education enables all individuals, regardless of gender, to develop their full potential, actively participate in development and make a real contribution to society (Jumadi, 2020). Seeing how essential education is in human resource development, this research aims to identify the challenges and obstacles faced in education and human resource development. This research is expected to provide insight into the current condition of access to education in human resource development. Thus, this research is not only useful for the development of more responsive education policies, but also for improving the quality of human resources in Indonesia more broadly.

By understanding the challenges of education in human resource development, this research is expected to provide a new perspective on the importance of equal access to education, especially for women, in strengthening the nation's competitiveness. This research is expected to be a reference for further research in the field of human resource development, and support the achievement of sustainable development goals (SDGs) in Indonesia, especially those related to inclusive education, gender equality, and strengthening human resources.

Literature Review

Human Resource Development

Human resource development is an effort to develop the quality or ability of human resources through the process of planning education, training, and management of personnel or employees to achieve an optimal result, Armstrong states: "Human resource development is related to the availability of learning opportunities and development, creating training programs that include planning, organizing, and evaluating these programs" (Armstrong, 2010). McLagan and Suhadolnik say that human resource development is the use of training and development,

career development, and organizational development, integrated, to enhance individual and organizational effectiveness (Deepti & Roy, 2012). Mondy and Noe say that human resource development is a planned and sustainable effort made by organizations to improve employee competence and organizational performance through training, education, and development programs (Mondy, 2002).

Harris and DeSimone say that human resource development can be defined as a set of systematic and planned activities designed by organizations to facilitate their employees with the skills needed to meet job demands, both now and in the future. Stewart and McGoldrick say: Human resource development includes various activities and processes that are directed at the impact of learning, both for the organization and for individuals. Malayu S.P Hasibuan explains that development is an effort to improve the technical, theoretical, conceptual, and moral abilities of employees, according to the needs of the position. The purpose of development is to increase work productivity. Development is based on the fact that an employee needs a set of knowledge, skills and abilities that develop to work well in carrying out their duties and functions during their career. The long-term career preparation of an employee for a series of positions is what is meant by employee development (Effendi & Sulistyorini, 2021).

Method

The research method used in this article is the *literature review* method. This research was conducted by collecting, analyzing, and synthesizing various relevant literature (Higgins et al., 2011; Lame, 2019) related to the role of education in human resource development, especially in supporting sustainable development. The data collection process was conducted through searching journal articles, books, research reports, and academic documents, agency reports published in the last five years to ensure the relevance and actuality of the information. Literature sources were obtained from trusted databases, such as Scopus, and Google Scholar, and accredited journal portals.

Analysis was conducted using a thematic approach to identify key themes, patterns and research gaps (Lame, 2019) relating to the contribution of education to improving the quality of human resources. Synthesis was conducted to establish the relationships between educational theories, policies and practices that have been successfully applied in various development contexts. In addition, this research also reviews relevant conceptual frameworks, such as theories of human development, competency-based education and digital literacy, to provide a holistic perspective on the topic

Result and Discussion

In this study, results were obtained based on data analysis involving a literature review and data related to access to education and human resource development in Indonesia. The research identified several important findings related to education and human capital development as well as the challenges and opportunities faced in the effort to develop inclusive and competitive human resources.

Limited access to education

The analysis shows that access to education in Indonesia, especially in remote areas, is still limited. This is based on data published by Unicef that geographically, the rate of out-of-school children (ATS) ranges from 1.3 percent in Yogyakarta - a relatively affluent area - to 20.7 percent in Papua - the easternmost and poorest province in Indonesia (Unicef, 2024) .

Data published by BPS also shows the gap between access to education in urban and rural areas. Here is the data.

Table 1: Number of Out-of-School Children by Level of Education and Region

Number of Out-of-School Children by Level of Education and Region of Residence						
	Elementary School		Junior High School		High School	
	2022	2023	2022	2023	2022	2023
Urban	0.45	0.32	5.6	5.82	18.75	18.5
Rural	1.06	1.12	8.68	8.45	27.6	26.06

Source: BPS, 2024

Based on the data above, at the primary level, there was a slight decrease in urban areas of 0.13%, but in rural areas there was an increase of 0.06%, so the combined total showed a small decrease of 0.04%. At the junior high school level, the number of out-of-school children in urban areas increased by 0.22%, while in rural areas it decreased by 0.23%, with the overall change being almost neutral (0.01% decrease). Meanwhile, at the senior high school level there was a significant decrease, especially in rural areas where it decreased by 1.54%, followed by a decrease of 0.25% in urban areas, with a total decrease of 0.91% for both combined. However, what needs to be observed is that access to education with urban areas still shows a large gap, especially at the senior high school level. Children in rural areas are still lagging behind in terms of equitable access to education.

Some of the factors that contribute to this low access to education include economic, cultural and geographical constraints. Children in rural areas often face financial constraints that prevent them from continuing their education to higher levels. This is due to access constraints. For example, schools are very far from home, school fees are expensive and even secondary schools after primary school are not available in their area so they have to leave the area to get access to education. This limitation in access to education was also raised in research conducted by (Edo & Yasin, 2024; Maulido et al., 2024) .

In addition to the issue of equitable access to education, another problem faced is also related to the education gap between men and women. In rural and remote areas, cultural values can also hinder women's access to education. This is as revealed in research conducted by (Parancika & Mufida, 2024; Sari & Riansi, 2024) . Cultural values that prioritize women's role in household chores are also a barrier. In some areas, communities still consider that women's education is not as important as men's, and they are often given priority to help with household chores or marry at an early age. In this context, social and cultural norms that regard education as less important for women further exacerbate inequalities in the education gap. This suggests that policy interventions are still needed that can promote more equitable access to education for the whole community.

The Impact of Education on the Quality of Human Resources

Education is a factor that plays a very important role in shaping humans into quality individuals. Humans as one of the resources must have proper education to build a country. Because education is also one of the indicators of economic development. Through education, human resources will be of higher quality. Based on previous studies, it shows that there is a positive relationship between the level of education and the quality of human resources. This is corroborated by the findings of research conducted by (Ananda et al., 2023; Deffinika et al., 2022) . Individuals who have higher levels of education tend to have better abilities in critical thinking, problem solving, and adapting to technological developments. This is important in the era of the industrial revolution 4.0, where an adaptive and highly capable workforce is a key

asset in global competitiveness. Thus, quality education can enhance individuals' potential and optimize their contribution to economic development.

Soft Skills and Life Skills Development

Soft skills are critical in supporting career success and human resource empowerment. Literature traced shows that the education curriculum in Indonesia, still lacks emphasis on the development of *soft skills*, such as leadership, teamwork, and communication skills. There is a need to strengthen the curriculum with aspects of self-development that are in accordance with the needs of the labor market and the demands of the digital era. Education that focuses on developing life skills can be a solution to reduce the skills gap between graduates and industry needs. Because based on existing data, the *mismatch* of the workforce is a challenge faced by the labor sector in Indonesia. This is due to the incompatibility of labor force education and education curriculum with industry needs. This is as expressed in research conducted by (Mulkan & Zunnun, 2024; Utomo, 2021) .

According to the 2015 national labor force survey processed by the Demographic Institute of the University of Indonesia, *vertical mismatch* or job mismatch with education and wage levels reached 53.33 percent. Meanwhile, the *horizontal mismatch between* job qualifications and educational background reached 60.52 percent. The mismatch between education and employment, known as mismatch, is one of the main challenges in human resource development. Vertical mismatch, which stands at 53.33 percent, refers to the mismatch between an individual's education level and the job they are doing. In other words, many individuals have higher or lower levels of education than required for their jobs. This mismatch also has an impact on the wages received, where individuals are often compensated inconsistently with their educational qualifications. This can be caused by the low availability of jobs that match the level of education, or by the lack of practical skills despite high levels of formal education.

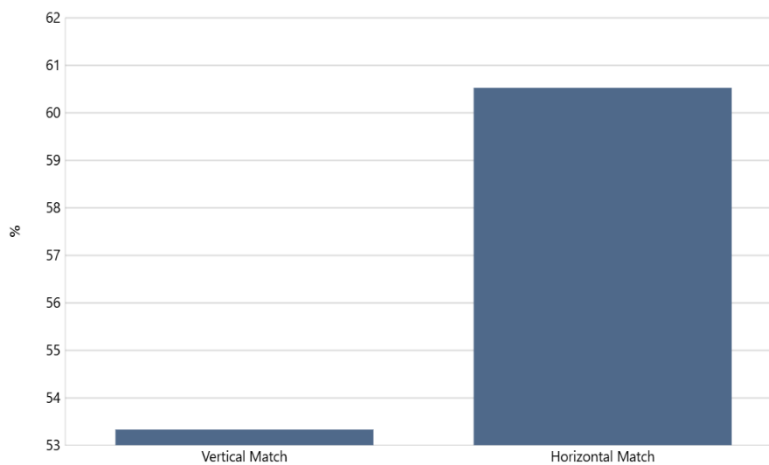


Figure 2: Education gap with industry needs

Source: Databoks, 2019

On the other hand, horizontal mismatch, which was recorded at 60.52 percent, refers to the mismatch between a person's educational background and the field of work they are engaged in. For example, graduates of certain educational majors work in sectors that are not relevant to their expertise, such as an engineering graduate who works in marketing or finance. This mismatch often arises due to the unavailability of relevant jobs, the lack of education planning that matches the needs of the labor market, or due to economic pressures that encourage individuals to accept any job available.

The Role of Technology in Education

Technology has a high urgency in education, especially in the digital era that demands the transformation of learning systems to be more inclusive, efficient, and relevant. With technology, access to education can be significantly expanded, allowing students from different regions, including remote areas, to learn without geographical barriers. In addition, technology encourages innovation in learning methods. Technology has a significant role in improving access to education and accelerating the learning process. This is as revealed by research (Meriyanti & Jasmina, 2022; Rabani et al., 2023) With online learning platforms, individuals from different backgrounds and regions can access educational materials without being limited by distance. However, there is still a digital divide between urban and rural areas. This can be seen from the data on computer ownership in Indonesia.

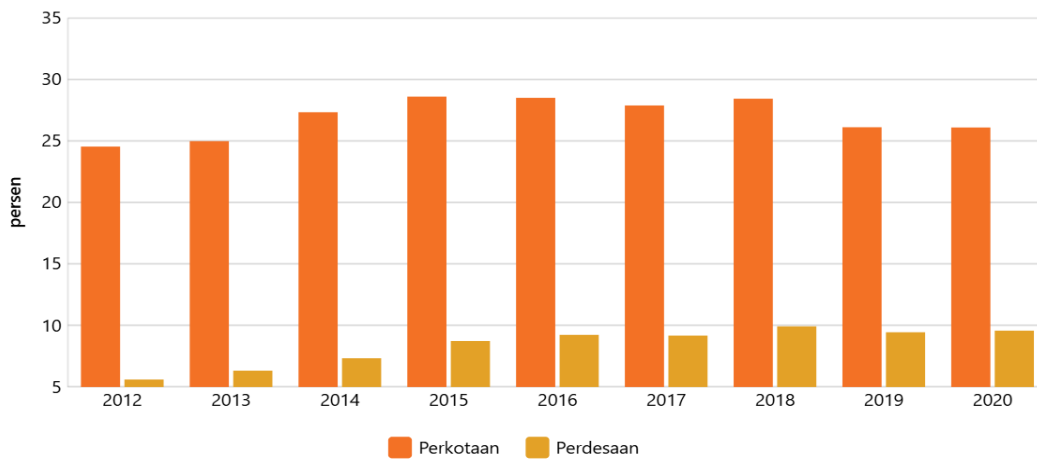


Figure 3: Percentage of Households Owning/Controlling a Computer by Region

Source Databoks, 2022

The percentage of rural households that own or control a computer was only 5.6% in 2012, then rose to 9.5% in 2020, so there is a need for government efforts to provide equitable digital infrastructure to support inclusive and equal learning processes. Meanwhile, the percentage of computer ownership in urban areas in 2012 was 24.5%, then increased to 26% in 2020. Despite the general increase, the level of computer ownership in rural areas is still far below urban areas as shown in the graph. This indicates that there is still a wide gap in access to technology between urban and rural areas in Indonesia.

Conclusion

Based on the analysis that has been done, several conclusions can be drawn about the problems and challenges faced by the world of education in developing human resources. The first finding is that access to education is still a major issue, especially in rural and remote areas. Based on the data previously presented, there is a significant gap between urban and rural areas, especially at the high school level, where access to education for rural communities is still far behind. Economic, cultural and geographical factors are still the main obstacles. In addition, the curriculum in Indonesia still lacks emphasis on the development of soft skills and skills. This exacerbates the mismatch between education and the needs of the labor market. In addition, technology plays an important role in expanding access and quality of education. However, there is again a problem of disparity between urban and rural areas in accessing technology for education. This requires great attention by relevant stakeholders considering that education is the main factor to improve the quality of human resources.

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