

A Comparative Study of Illiteracy Trends Across Age Groups and Years in Sumatra

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Abstract

Illiteracy remains a major problem in the island of Sumatra, Indonesia, especially in provinces with limited access to education. This study aims to analyse the illiteracy rate in Sumatra island using secondary data from the Central Statistics Agency or *Badan Pusat Statistik* (BPS) in the years 2021-2023. Using descriptive quantitative methods and comparative analysis, this study compares the illiteracy rate among provinces. The results show significant variations between provinces, with Lampung having the highest rate, while West Sumatra and Riau are lower. Aceh experienced a decrease in illiteracy rates by 2023. The findings highlight the importance of community-based literacy programs focusing on literacy learning, improved education facilities in remote areas, and collaboration between the government and local communities.

Keywords

Illiteracy rate, literacy programme, comparative analysis

Introduction

Illiteracy is a condition where an individual does not have the ability to read, write and count. Illiteracy remains a major challenge in the context of education. The ability to recognise letters is a strength for people in navigating the ark of life in the world (Kahar et al., 2019). The ability to read and write is fundamental to understanding the world, getting information and improving lives. However, not all people have the same opportunities to learn, especially those who live in remote areas with limited access to education. This leaves many people trapped in difficulties, both socially and economically.

Illiteracy is a critical problem, with problems such as not being able to recognise letters and numbers, not being able to read the alphabet and numbers properly, and not being able to calculate basic math. This condition is exacerbated by the lack of access to

educational facilities in remote areas, so that many community groups are trapped in a circle of poverty and have difficulty getting out of the conditions of social marginalisation they face (Made & Suarniti, 2023). In particular, children who do not have good reading, writing and arithmetic skills will have difficulties in understanding information and accessing further education opportunities.

There have been many efforts to eradicate illiteracy to help people improve their quality of life. Eradicating illiteracy, especially among children aged 10 to 15 years and above, can be done by implementing a literacy program based on *calistung* (reading, writing, counting). *Calistung* is the main foundation that allows individuals to recognise letters, words, and numbers more deeply (Amril et al., 2017). In this age group, the application of *calistung* serves not only for the initial introduction of letters and numbers, but also for strengthening reading comprehension, writing with good structure, and mastering basic calculation concepts. This approach is essential to prepare them to be able to comprehend information independently and contribute to everyday life.

Calistung, which stands for reading, writing and counting, is the basic stage of recognising letters and numbers. This ability is important to facilitate communication through written language and numbers. This phenomenon has led to the development of various literacy and *calistung* methods. According to Sonbait et al. (2020) reading to recognize written language symbols that serve as a stimulus to help remember what is read, in order to build understanding based on the experience you have. Writing creativity is a form of manifestation of language abilities and skills that are most recently mastered by language learners after listening, speaking, and reading abilities (Wulandari et al., 2022). In addition, counting is an activity that a person does to develop the ability to compile numbers. Thus, *calistung* is a basic literacy foundation that includes the ability to read, write and count to support the understanding, expression and development of numerical skills.

Relevant research related to illiteracy is taken from research by Fashia Ikhlasul Hikam, et al in 2024, regarding the Assistance of Illiterate Communities through Learning Houses in Gunung Pasang, Jember Regency. The research succeeded in improving community literacy and numeracy with an increase of 37.30%. On the other hand, there is research from Hayaturaiyan, et al in 2021, entitled Empowerment of Illiterate Communities in Children aged 7-9 years through Taman Belajar. The research shows that many children in Kembang Kerang village have not been able to read, write, and count, influenced by

an environment that is more concerned with playing. In addition, research from Andi Agam Maulana in 2024 on the alleviation of illiteracy through reading, writing, counting, discussion and action in Kawo Village, Central Lombok Regency. The research shows that the success of the activity depends heavily on collaboration with the local community and the support of various parties.

This research discusses the comparison of age-based illiteracy rates between provincial regions on the island of Sumatra by utilizing secondary data on illiteracy rates in the 2021-2023 range. In contrast to the research conducted by Fashia Ikhlasul Hikam, et al, which examines the assistance of illiterate communities through learning houses, Hayaturraiyah, et al, which focuses on empowering illiterate communities in children aged 7-9 years through learning parks, and Andi Agam Maulana highlights the alleviation of illiteracy through calistungdasi. After discussing the introduction, this article will discuss the research methodology, research results, and conclude with a conclusion.

Methods

The relevant research method to analyze data on illiteracy rates in Sumatra Island is descriptive research with a quantitative approach. Descriptive research is a detailed description of the main variables, presenting research results with data in accordance with the facts, collecting data in the period in accordance with flexible research. According to Firmansyah (2021), quantitative research methods are a way to gain knowledge or solve problems systematically, and the data collected is a collection of numbers.

This study aims to describe the distribution and changes in illiteracy rates based on secondary data obtained from official sources from BPS RI Susenas, namely, [illiteracy rate of population 10 years and above in Sumatera island](#), there are different data [illiteracy rate by province in Sumatera and age group 15 years old](#). The descriptive quantitative research type was chosen because the main focus is to understand the patterns, differences between provinces, and temporal trends that occur in illiteracy rates in certain age groups. This research will provide a detailed picture of the literacy condition in the island of Sumatra without direct intervention.

Comparative analysis is used to compare illiteracy rates at the provincial level and between specific time periods on the island of Sumatra. According to Karyati (2016),

comparative analysis is to find similarities and differences between two or more objects. The data collection instruments in this study are official documents, namely Susenas statistical reports from the relevant year. Data visualizations such as line and bar charts were used to facilitate interpretation of time trends and interprovincial comparisons. This analysis aims to identify areas with literacy levels that need the most attention and understand the factors that can contribute to changes in illiteracy rates, especially on the island of Sumatera.

Results and Discussion

This study uses a quantitative descriptive method that utilizes secondary data from the National Socio-Economic Survey (Susenas) in the Central Bureau of Statistics (BPS). The data was analyzed descriptively comparatively to provide a clearer picture of the distribution pattern, temporal trend, and interprovincial comparison of literacy rates during the 2021-2023 period. In addition, this study asks for recommendations regarding strategies that can be used to eradicate illiteracy, especially in regions that show low literacy rates.

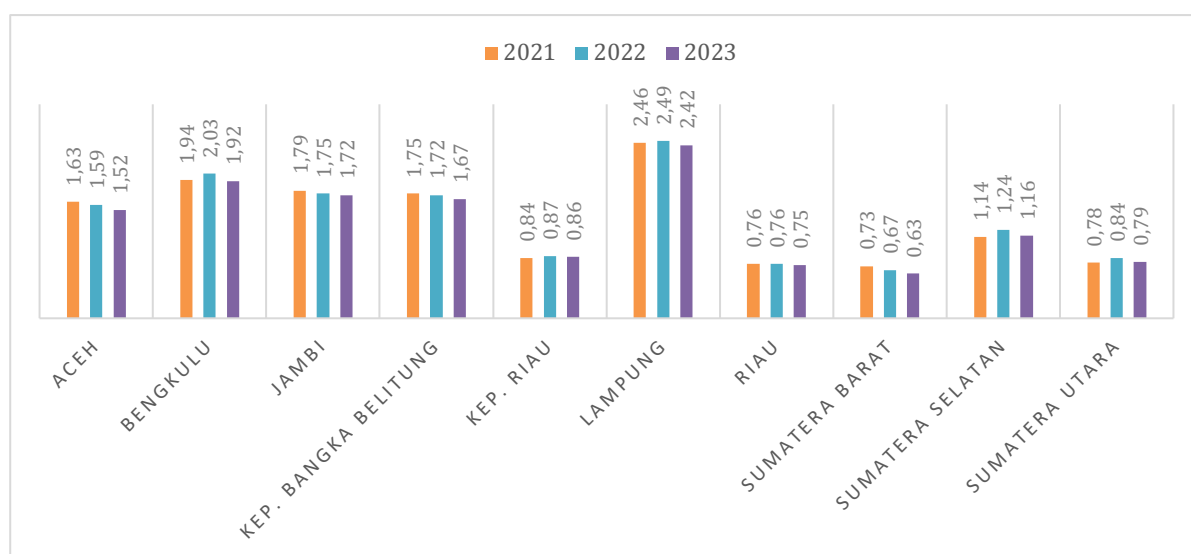


Figure 1. Illiteracy rates of the population aged 10 years and above on the island of Sumatra

Figure 1 shows the illiteracy rate of the population aged 10 years and above in several provinces on the island of Sumatra. In 2022, Lampung Province recorded the highest total illiteracy rate at 2.49%, a slight increase from 2021 at 2.46%, and remained at the same level in 2023. In contrast, the provinces of West Sumatra and Riau recorded the lowest rates of 0.67% and 0.75% respectively in 2022, with West Sumatra continuing to

decline to 0.63% in 2023. Interestingly, Riau's rate remained relatively stable from 2021 to 2022, hovering around 0.76%, before declining slightly to 0.75% in 2023. Meanwhile, some other provinces, such as Bengkulu and Jambi, show a small increase in 2023, reflecting the differences in literacy dynamics between provinces that may be influenced by local factors such as education, economy and socio-culture.

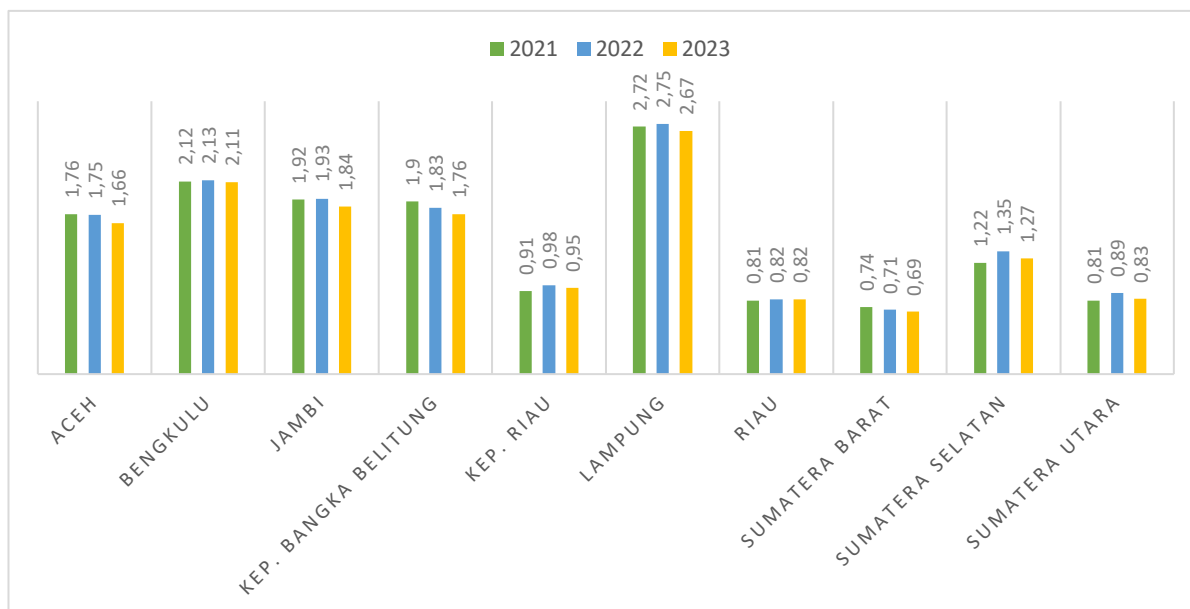


Figure 2. Illiteracy rates for the 15-year-old population on the island of Sumatra

Figure 2 shows that the illiteracy rates for the population aged 15 years and above in several provinces on the island of Sumatra show varying dynamics from 2021 to 2023. In West Sumatra, the illiteracy rate reached 2.75% in 2022, but managed to decline dramatically to 0.69% in 2023. In contrast, several provinces such as Aceh, Bengkulu, Jambi and Bangka Belitung Islands recorded an average increase to 1.84% in 2023. However, a downward trend was seen in other regions, such as Riau, South Sumatra and North Sumatra, with an average decrease of up to 0.96%. This difference in trends reflects that in addition to access to education, social and cultural factors also play a role in influencing people's literacy levels. This suggests that literacy improvement efforts should consider a more holistic and contextual approach according to regional needs.

This study contributes to the existing knowledge on the distribution of illiteracy rates in Sumatra Island by presenting an interesting perspective on the temporal patterns and trends. One of the unexpected findings is that some provinces such as Lampung have the highest illiteracy rate. Aceh, Bengkulu, Jambi and Bangka Belitung Islands, on the other hand, show an increase in illiteracy rate by an average of 1.84% in 2023. However, so far,

from the perspective of national literacy trends, the gains from illiteracy eradication programs in other provinces seem to be quite similar to those in Riau and South Sumatra, which show an average decrease of 0.96% over the same period. These findings highlight that in addition to educational access factors, social, economic and cultural elements can have a significant influence on literacy levels, requiring a more diverse and contextualized approach to intervention.

This finding supports the research of Hayaturraiyana et al. (2021), which shows that the social environment can be a barrier to literacy, especially in early childhood. This study is also in line with Hikam et al. (2024), which noted an increase in literacy of up to 37.3% through the learning home approach, demonstrating the effectiveness of community-based interventions. In addition, research by Maulana (2024) highlighted the success of *calistungdasi* methods through cross-sector collaboration, although the effectiveness was more pronounced in areas with strong community support. These findings reinforce the importance of a holistic approach to improving literacy, especially in areas with high illiteracy rates such as Lampung.

As a concrete example, Lampung province, which recorded the highest illiteracy rate of 2.75% in 2022, is an area with urgent literacy intervention needs. This is thought to be due to limited educational infrastructure and the lack of community-based literacy programs in the area. Some of the feasible solutions available to address this challenge include the development of community-based literacy programs that focus on literacy learning, improved education facilities in remote areas, and collaboration between the government and local communities. By utilizing a data-driven approach, more targeted interventions can be designed to effectively reduce illiteracy.

This study has several limitations, including the use of secondary data from BPS which does not cover in-depth social and cultural factors, which greatly affect literacy levels in certain areas. In addition, this study did not involve direct intervention to measure the impact of the community-based literacy program so it cannot provide a clear picture of the effectiveness of the program in reducing illiteracy. Another limitation is that there was no monitoring of social changes in the community that could affect the level of participation in literacy programs. Therefore, future research should examine social, cultural and economic factors in more depth and conduct longitudinal research to evaluate the long-term impact of community-based literacy programs that directly involve the community. This will provide a more comprehensive understanding of the

sustainability and effectiveness of literacy programs in overcoming illiteracy, especially in areas with limited access to education.

Conclusion

This study uses a quantitative descriptive approach by utilising secondary data from BPS to analyse the illiteracy rate in Sumatra Island in the 2021-2023 period, with a focus on interprovincial comparisons. The aim is to identify disparities in literacy rates between provinces with different access to education. The research process included data collection from different provinces and comparative analysis to understand the patterns and trends of changes in illiteracy rates. The results show that Lampung province has the highest illiteracy rate, while West Sumatra and Riau have the lowest rates. An unexpected finding was the increase in illiteracy rates in provinces with better access to education, such as Aceh, indicating that there are social and cultural factors to consider.

The findings suggest that to overcome literacy challenges in areas with limited access, community-based literacy programs involving local communities and close collaboration between government and educational institutions are essential. However, the use of secondary data from only one source is a limitation as it does not allow this study to further explore the social and cultural factors that influence illiteracy rates. Therefore, for future research, it is recommended to use a more in-depth qualitative approach to explore the influence of these factors, especially in remote areas, and gain a more complete insight into the social aspects that play a role in illiteracy rates.

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