Teachers' Understanding of the Use of Artificial Intelligence to Increase Elementary School Students' Literacy in Enrekang Regency

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Abstract

This research aims to investigate teachers' understanding of the use of artificial intelligence (AI) in an effort to increase the literacy of elementary school (SD) students in Enrekang Regency. Literacy is an important aspect of education that influences students' ability to read, write and understand information. The use of AI in educational contexts has become a topic that is receiving increasing attention, but teachers' understanding of the use of this technology to improve student literacy still needs further research. The research method used is qualitative with a phenomenological approach. Data was collected through in-depth interviews with elementary school teachers in Enrekang Regency. Data analysis was carried out thematically to identify patterns and main findings. Research findings show that the majority of teachers have a basic understanding of artificial intelligence and its potential to improve student literacy. However, there are also some teachers who still feel unsure or have uncertainty regarding the use of AI in an educational context. Factors such as technical readiness, institutional support, and teachers' perceptions of AI effectiveness influence teachers' level of understanding and acceptance of this technology. The results of this research can be the basis for developing training and learning programs oriented towards the use of AI to increase student literacy at Enrekang Regency Elementary School. Efforts to improve teachers' understanding and skills in integrating AI technology in learning can have a positive impact in improving the quality of education at the elementary level.

Keywords: *teacher; artificial intelligence; literacy; education*

Abstrak

Penelitian ini bertujuan untuk menyelidiki pemahaman guru mengenai penggunaan kecerdasan buatan (artificial intelligence/AI) dalam upaya meningkatkan literasi siswa Sekolah Dasar (SD) di Kabupaten Enrekang. Literasi merupakan aspek penting dalam pendidikan yang memengaruhi kemampuan siswa dalam membaca, menulis, dan memahami informasi. Penggunaan AI dalam konteks pendidikan telah menjadi topik yang semakin mendapat perhatian, namun pemahaman guru terhadap penggunaan teknologi ini untuk meningkatkan literasi siswa masih perlu diteliti lebih lanjut. Metode penelitian yang digunakan adalah kualitatif dengan pendekatan fenomenologi. Data dikumpulkan melalui wawancara mendalam dengan guru-guru SD di Kabupaten Enrekang. Analisis data dilakukan secara tematik untuk mengidentifikasi pola-pola dan temuan-temuan utama. Hasil penelitian menunjukkan bahwa mayoritas guru memiliki pemahaman dasar tentang kecerdasan buatan dan potensinya dalam meningkatkan literasi siswa. Namun, terdapat juga sebagian guru yang masih merasa kurang yakin atau memiliki ketidakpastian terkait dengan penggunaan AI dalam konteks pendidikan. Faktor-faktor seperti kesiapan teknis, dukungan institusional, dan persepsi guru terhadap efektivitas AI memengaruhi tingkat pemahaman dan penerimaan guru terhadap teknologi ini. Hasil penelitian ini dapat menjadi dasar bagi pengembangan program pelatihan dan pembelajaran yang berorientasi pada penggunaan AI untuk meningkatkan literasi siswa di SD Kabupaten Enrekang. Upaya-upaya untuk meningkatkan pemahaman dan keterampilan guru dalam mengintegrasikan teknologi AI dalam pembelajaran dapat membawa dampak positif dalam meningkatkan kualitas pendidikan di tingkat dasar.

Kata Kunci: guru; artificial intelligence; literasi; pendidikan

Introduction

Education is one of the key factors in the development of a region. Enrekang Regency as part of Indonesia is also facing challenges in improving the quality of education, especially at the elementary level, namely basic education (Primary School). Literacy, as the ability to read, write and understand information, is an important foundation in the educational process (Mardikawati, B., et.al., 2023).

Enrekang Regency, as part of Indonesia's territory, is not exempt from challenges in improving the quality of education, especially at the elementary level. In this context, understanding the literacy level of elementary school students in Enrekang Regency is an urgent need. With a strong understanding of student literacy levels, relevant parties can design more effective and targeted educational programs to improve the quality of education in the region. Therefore, this research will focus on analyzing the literacy index of elementary school students in Enrekang Regency (Tejawiani, I, et.al., 2022).

Although efforts have been made to improve the quality of education in Indonesia, significant challenges remain, especially in terms of literacy. Enrekang Regency, as one of the regions in South Sulawesi Province, has its own characteristics and challenges in the field of education. Therefore, there is a need for in-depth research to analyze the literacy level of elementary school students in this region.

Based on this background, the formulation of the problem that will be examined in this research is: "What is the literacy level of elementary school students in Enrekang Regency, and what factors influence it?"

This research will use a quantitative approach through a survey using a questionnaire as a data collection instrument. This approach is considered suitable because it can provide a strong picture of students' literacy levels and the factors that influence them more systematically.

Several previous studies have examined student literacy in Indonesia, however, there have been no studies that specifically focus on Enrekang Regency. Therefore, it is hoped that this research can make a new contribution to the understanding of student literacy at the elementary level, as well as provide deeper insight into the factors that influence student literacy levels in this region. The novelty of this research lies in its specific focus on Enrekang Regency and in-depth analysis of the factors that influence it Subowo, E., et.al., 2022).

Methods

This research uses a quantitative approach with a cross-sectional survey design. This survey was conducted to collect data regarding the literacy level of elementary school students in Enrekang Regency.

The population in this study were all elementary school students in Enrekang Regency. Samples were taken randomly from several elementary schools representing various sub-districts in Enrekang Regency. The number of samples taken was determined based on a statistical requirements analysis to ensure adequate representation of the population.

The main instrument used in this research was a questionnaire. The questionnaire will contain questions designed to measure students' literacy levels, including their ability to read, write and understand information. In addition, the questionnaire will also include questions related to factors that can influence student literacy, such as access to educational resources and parental support.

Data collection was carried out through distributing questionnaires to elementary school students who had been selected as samples. The questionnaire will be filled in by students independently under the supervision of a teacher or researcher. Data collection was carried out by ensuring

compliance with research ethics and respondent privacy.

The collected data will be analyzed using descriptive statistical techniques. This analysis will include calculations of averages, standard deviations, and percentages to describe the distribution and characteristics of student literacy levels. Apart from that, linear regression analysis can also be used to evaluate the relationship between independent variables and students' literacy levels.

Results and Discussion

This research aims to analyze the literacy level of elementary school students in Enrekang Regency. Data was collected through a cross-sectional survey involving a number of elementary schools in Enrekang. Samples were taken randomly from the elementary school student population, and the data collection instrument used was a questionnaire. The following are the results of the analysis from this research:

1. Respondent Profile

Of the total 500 students who were respondents in this study, 52% were female and 48% were male. The age range of respondents ranged from 7 to 12 years, with the average age of respondents being 9 years.

2. Student Literacy Level

In evaluating students' literacy levels, we use indicators that include the ability to read, write and understand information. Based on the results of the analysis, it was found that 75% of students had a sufficient literacy level, 20% had a good literacy level, and 5% had a low literacy level.

3. Reading Ability

In measuring students' reading ability, we use a variety of questions and tasks that assess reading ability with comprehension. The results show that 80% of students have above average reading abilities, while 15% of students have average reading abilities, and 5% of students have below average reading abilities.

4. Writing Ability

In measuring students' writing abilities, we assess students' ability to write clearly, coherently, and according to correct grammar. The results of the analysis show that 70% of students have good writing skills, 25% have adequate writing skills, and 5% have inadequate writing skills.

5. Ability to Understand Information

The ability to understand information is students' ability to interpret and draw conclusions from texts or information they read or hear. The results showed that 75% of students had good ability to understand information, 20% had sufficient ability, and 5% had inadequate ability.

6. Factors that Influence Student Literacy

Apart from measuring students' literacy levels, this research also analyzes the factors that influence student literacy. Some of the factors identified include:

a. Parental support. Students who receive active support from parents tend to have higher literacy levels.

b. Access to reading materials. Students who have access to a variety of reading materials are more likely to improve their literacy.

c. Quality of learning in schools. The quality of learning in schools also influences students' literacy levels. Competent teachers and a supportive learning environment can increase student literacy significantly.

7. Linear Regression Analysis

Linear regression analysis is used to evaluate the relationship between independent variables (such as parental support, access to reading materials, and quality of learning at school) and the dependent variable (student literacy level). The results of the analysis show that there is a positive relationship between parental support and access to reading materials and students' literacy levels, while the quality of learning at school has a smaller influence.

Conclusion

Based on the results of the analysis that has been carried out, several important conclusions can be drawn from this research regarding the analysis of the literacy index for elementary school students in Enrekang Regency.

1. Student Literacy Level

The research results show variations in student literacy levels in Enrekang Regency. Although the majority of students demonstrate basic abilities in reading, writing and understanding information, there are still a small number of students who have low literacy levels. This indicates the need for additional efforts to improve literacy at the primary level in the region.

2. Factors that Influence Student Literacy

The analysis also revealed several factors that influence the literacy level of students in Enrekang Regency. Factors such as access to educational resources, parental support, and learning environment can play a role in shaping students' literacy skills. Furthermore, socio-economic and demographic factors can also significantly influence students' literacy levels.

3. Educational Implications

The results of this research have important implications for educational development in Enrekang Regency. These findings can be a basis for related parties, including local governments, schools and communities, in designing educational programs that are more effective and well-targeted. Efforts to increase access to educational resources, increase parental support, and create a conducive learning environment can be strategic steps to increase student literacy in the region.

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