



DEVELOPMENT OF A READING LITERACY INSTRUMENT FOR 15-YEAR-OLD STUDENTS BASED ON THE ALIBACA INDEX AND PISA CONTEXT AMONG LOW SOCIOECONOMIC GROUPS

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Abstract:

The Sustainable Development Goals (SDGs) comprise 17 global goals for sustainable development, including SDG 4: Quality Education, which emphasizes inclusive, equitable, and quality education for all. Reading literacy is a fundamental competency for achieving this goal. This study aimed to develop and examine the construct validity of a reading literacy instrument for 15-year-old students based on the Alibaca Index and the PISA context among students from low socioeconomic backgrounds. A quantitative approach was employed involving 164 students as respondents. Construct validity was examined using Confirmatory Factor Analysis (CFA) with the Maximum Likelihood estimation method. The measurement model consisted of five constructs: Proficiency, Access, Alternatives, Culture, and Reading Literacy. The CFA results yielded $\chi^2 = 607.801$, $df = 395$, and $p < .001$, while the baseline model yielded $\chi^2 = 1,712.629$ with $df = 435$. Factor covariances ranged from -0.129 to 0.186 , with all relationships statistically non-significant ($p > .05$). These findings indicate that the proposed constructs demonstrate relatively low associations and distinct characteristics. The developed instrument provides a contextual framework for assessing reading literacy by considering students' proficiency, access, alternative literacy resources, cultural context, and socioeconomic background. It may support the development of reading literacy improvement programs aligned with SDG 4 in Indonesia.

Keywords: *Reading Literacy; Alibaca Index; PISA; Low Socioeconomic Background*

INTRODUCTION

The Sustainable Development Goals (SDGs) comprise 17 global goals for sustainable development that provide a framework for improving the quality of life in a sustainable manner. One goal closely related to human resource development is SDG 4: Quality Education, which emphasizes inclusive, equitable, and quality education, as well as lifelong learning opportunities for all. Achieving this goal depends not only on access to education but also on students' ability to develop the skills needed to respond to social, economic, and technological changes. In the context of 21st-century education, these skills are reflected in the 6C framework, comprising character, citizenship, critical thinking, creativity, collaboration, and communication. Mastery of these competencies is closely associated with literacy skills, particularly reading literacy, which serves as a

foundation for understanding, evaluating, interpreting, and using diverse information in both academic and everyday contexts.

The importance of reading literacy for the development of students' competencies has encouraged countries worldwide to conduct regular assessments of literacy performance. One widely recognized international assessment is the Programme for International Student Assessment (PISA), administered by the Organisation for Economic Co-operation and Development (OECD). PISA assesses the ability of 15-year-old students to apply the knowledge and skills acquired at school to real-life problems. The assessment covers three major domains: reading literacy, mathematical literacy, and scientific literacy. In reading literacy, PISA assesses not only students' ability to understand texts but also their ability to locate information, understand and evaluate meaning, and reflect on information across different life contexts.

Reading literacy remains a serious challenge in Indonesia. PISA results indicate that Indonesian students' reading performance remains below the OECD average. In PISA 2022, Indonesia obtained a reading score of 359, compared with the OECD average of 472. Furthermore, approximately three-quarters of Indonesian students did not reach Level 2, which is considered the minimum proficiency level required to use reading skills to meet everyday demands (OECD, 2023). This condition indicates that improving reading literacy requires more than expanding access to reading materials; it also requires strengthening students' abilities to understand, use, evaluate, and reflect on information presented in various types of texts and situations. The Indonesian government has addressed reading literacy through various national policies and programs. One such initiative is the School Literacy Movement (Gerakan Literasi Sekolah/GLS), implemented as part of the National Literacy Movement. GLS aims to establish a culture of reading and improve students' literacy skills through habituation, development, and learning activities integrated into the school environment (Anita et al., 2023; Anandari & Iswandari, 2019). However, the success of literacy programs should not be assessed solely by the presence of reading activities but also by students' ability to access, understand, use, and make meaning from information obtained through reading activities.

In this context, the Reading Literacy Activity Index (Indeks Aktivitas Reading Literacy/Indeks Alibaca) provides an important reference for describing the state of reading literacy activities in Indonesia. The Alibaca Index was developed by the Center for Educational Policy Research to map reading literacy activities across Indonesian provinces. Its measurement encompasses four major dimensions: Proficiency, Access, Alternatives, and Culture (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019). These dimensions provide a comprehensive perspective by recognizing that reading literacy is not solely an individual reading ability but is also influenced by access to reading resources, opportunities for literacy-related activities, and social and cultural environments that support reading habits. Although PISA and the Alibaca Index both address reading literacy, they have different measurement orientations. PISA emphasizes students' functional ability to use reading literacy to understand, evaluate, and reflect on information across various contexts, whereas the Alibaca Index describes the reading literacy ecosystem and activities through the dimensions of proficiency, access, alternatives, and culture. These differences in orientation create an opportunity to integrate the two perspectives to develop a more contextual reading literacy instrument. Such integration becomes particularly important when assessment focuses on students from low socioeconomic

backgrounds, as limited resources, restricted access to reading materials, literacy environments, and learning opportunities may influence students' reading experiences and development.

Students from low socioeconomic backgrounds require particular attention in literacy instrument development. Socioeconomic conditions are not limited to family financial capacity but may also be associated with opportunities to obtain learning resources, literacy facilities, family support, and environments that encourage reading activities. Therefore, a reading literacy instrument should consider students' actual contexts so that assessment does not merely measure their ability to answer text-based questions but also captures their literacy competencies in situations relevant to their everyday lives. Based on these considerations, there is a need to develop a reading literacy instrument for 15-year-old students that integrates the characteristics of reading literacy competencies within the PISA framework with the dimensions of literacy activities represented in the Alibaca Index, while taking into account the context of low socioeconomic backgrounds. Such an instrument is expected to provide a more comprehensive representation of students' reading literacy and serve as a measurement tool that is relevant to the literacy environment in Indonesia. Therefore, this study aimed to develop and examine a reading literacy instrument for 15-year-old students based on the Alibaca Index and PISA context among low socioeconomic groups, with the expectation of producing a valid, reliable, and contextual instrument to support the assessment and development of reading literacy improvement programs in Indonesia.

Theoretical Review

Definition of Reading Literacy

The concept of literacy has evolved from its traditional meaning, which primarily referred to the ability to read and write, toward a broader understanding that encompasses an individual's ability to use information meaningfully across various life contexts. In its early conceptualization, literacy was generally associated with basic reading and writing skills (McBride, 2016). However, from a contemporary perspective, literacy is no longer regarded merely as a mechanical skill but as the ability to identify, understand, interpret, communicate, and use information within diverse social contexts. UNESCO views literacy as part of a lifelong learning process that enables individuals to achieve their goals, develop their knowledge and potential, and participate fully in their communities and broader society (Luna et al., 2000). This perspective indicates that literacy has both functional and social dimensions because the ability to access and use information is closely related to an individual's capacity to participate in social life.

In line with this development, reading literacy can no longer be understood merely as the ability to recognize words, read sentences, or comprehend the literal meaning of a text. Reading literacy encompasses the ability to use texts as sources of information, construct meaning, evaluate information, and connect textual content with particular purposes and situations. In education, reading literacy serves as a foundation for learning because much of the process of acquiring and developing knowledge occurs through interaction with texts. Therefore, effective reading is determined not only by technical reading skills but also by cognitive abilities to understand, interpret, evaluate, and use information obtained from texts (Frankel et al., 2016; Jeon & Day, 2016; Low et al., 2023).

The OECD, through the Programme for International Student Assessment (PISA), provides a broader framework for understanding reading literacy among 15-year-old students. Within the PISA framework, reading literacy is defined as an individual's capacity to understand, use, evaluate, reflect on, and engage with texts in order to achieve goals, develop knowledge and potential, and participate in society (OECD, 2018). This definition emphasizes that reading is an active and constructive process. Readers do not simply receive information from texts but construct meaning through interactions among textual characteristics, reading purposes, and prior knowledge. Accordingly, reading literacy in PISA focuses on students' ability to use information from texts to address authentic and diverse problems encountered in everyday life.

The PISA framework positions students as active and critical readers who are able to use information appropriately across different situations (OECD, 2018). A relatively similar perspective is found in the Progress in International Reading Literacy Study (PIRLS), developed by the International Association for the Evaluation of Educational Achievement (IEA). PIRLS defines reading literacy as the ability to understand and use written language forms that are required by society and/or valued by individuals (Combrinck, 2019). Within the PIRLS framework, reading is not only performed to obtain information but also to learn, participate in reading communities, and gain experience and enjoyment from reading activities (Mullis & Martin, 2021a). This social perspective positions reading as a practice that takes place within real-life contexts. Scribner, as reviewed by Britt et al. (2018), conceptualizes literacy as the use of written symbols in social practices. This perspective reinforces the view that reading ability does not exist solely as an individual competency but is influenced by the environment in which individuals acquire, use, and construct meaning from information.

Effective reading requires decoding skills, vocabulary knowledge, reading fluency, comprehension, the ability to remember and summarize information, as well as the ability to discuss, analyze, evaluate, synthesize, and interpret the material being read (Setianingsih, 2017). These basic abilities constitute important prerequisites for more complex comprehension processes. However, for 15-year-old students, the assessment of reading literacy needs to move beyond the technical aspects of reading and place greater emphasis on the ability to use texts critically and reflectively, as emphasized in the PISA framework.

Reading Literacy Activity Index (Alibaca Index)

The Reading Literacy Activity Index (Indeks Aktivitas Reading Literacy/Alibaca Index) is a framework developed to map the conditions of reading literacy activities in Indonesia. The index was developed by the Center for Educational Policy Research to provide empirical information on reading literacy activities at the provincial level. The development of the Alibaca Index is based on the understanding that reading literacy cannot be reduced to the technical ability to recognize symbols or read texts. Rather, it is an activity that develops through interactions between individual capacities and environments that support literacy practices. Accordingly, reading literacy is viewed as a multidimensional and sociocultural phenomenon influenced by the availability of resources, opportunities, habits, and environments that enable individuals to engage continuously in reading activities (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019).

This perspective distinguishes the Alibaca Index from literacy assessments that primarily focus on individual ability. The Alibaca Index is not intended to directly measure students' cognitive ability to comprehend texts, as assessed by international assessments, but rather to serve as an indicator of the ecosystem conditions that support the development of reading literacy activities. Therefore, the availability of reading resources, literacy facilities, opportunities to access information, choices of literacy activities, and reading culture constitute important elements in explaining how literacy practices develop within a society. This approach provides a broader perspective in which individual literacy skills cannot be separated from the environments in which individuals learn and interact with various sources of information. Conceptually, the Alibaca Index consists of four major dimensions: Proficiency, Access, Alternatives, and Culture. These four dimensions represent complementary aspects in the development of a reading literacy ecosystem (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019).

The Proficiency dimension concerns the basic capacity of individuals to read and use written information. This dimension represents the abilities that enable individuals to interact with texts and utilize information obtained through reading activities. Proficiency serves as a foundation because the availability of access and reading resources does not automatically result in literacy practices when individuals lack adequate ability to understand written information. In educational contexts, this dimension is related to the development of students' reading competencies, although proficiency within the Alibaca Index has a different orientation from direct assessments of reading ability, such as PISA.

The Access dimension refers to the availability and accessibility of facilities and resources that enable individuals to engage in literacy activities. Access includes libraries, community reading centers, bookstores, reading materials, and various other information facilities and resources. This dimension emphasizes that opportunities to develop literacy are strongly influenced by the environment and availability of resources. Inequalities in access may create differences in learning and reading opportunities across social groups, particularly among groups with limited economic resources.

The Alternatives dimension represents the diversity of literacy resources and activities available beyond conventional forms of literacy. The development of information technology has expanded the forms and media through which individuals can obtain information, including digital media, the internet, literacy communities, and technology-based reading and learning activities. The availability of alternative literacy resources enables individuals to obtain information through diverse channels according to their needs and environmental characteristics. Therefore, reading literacy in contemporary contexts needs to consider changing patterns of information access from printed sources toward increasingly digital and multimodal information environments.

Meanwhile, the Culture dimension concerns the habits, values, attitudes, and social practices that encourage reading activities in everyday life. A literacy culture develops when reading is not merely performed as an academic requirement but becomes part of individuals' and communities' habits and social practices. This dimension is important because the availability of facilities and reading resources does not necessarily lead to sustained reading activities without a supportive cultural environment. In other words, culture functions as a mechanism connecting the availability of resources with their utilization in everyday life.

These four dimensions do not operate independently but form an interconnected literacy ecosystem. Proficiency enables individuals to utilize information; access provides opportunities to obtain reading resources; alternatives expand the range of media and information sources; and culture establishes habits and sustains literacy activities. Limitations in one dimension may reduce the effectiveness of the others. For example, the availability of adequate reading materials may not produce optimal outcomes when individuals have limited proficiency or lack a supportive reading culture. Conversely, strong reading ability may not develop optimally when individuals have inadequate access to reading resources. Therefore, reading literacy should be understood as the outcome of interactions between individual capacities and the conditions of the literacy environment (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019).

RESEARCH METHODS

Research Design

This study employed a quantitative approach using an instrument development and validation design. A quantitative approach was adopted because the instrument development process involved the collection and analysis of numerical data to empirically examine the psychometric characteristics of the instrument. Quantitative analysis enables researchers to obtain objective evidence regarding the validity, reliability, and quality of individual items (Apuke, 2017). The instrument development process was based on the integration of two perspectives: the PISA reading literacy competency framework and the four dimensions of the Reading Literacy Activity Index (Alibaca Index). The PISA framework was used as the foundation for identifying students' competencies in interacting with texts, whereas the Alibaca Index was used to incorporate the context of the literacy ecosystem, comprising Proficiency, Access, Alternatives, and Culture. The integration of these two frameworks was intended to produce an instrument relevant to the characteristics of 15-year-old students from low socioeconomic backgrounds.

Population and Sample

The study population consisted of senior high school (SMA) students in DKI Jakarta from low socioeconomic backgrounds who were registered as recipients of the Program Indonesia Pintar (PIP). Based on the population data used in this study, 65,719 students met the specified characteristics. The sample consisted of 164 students. The sample size was determined by considering a medium effect size in the statistical analysis, with the significance level and statistical power established according to the requirements of the study. Participants were selected based on predetermined criteria, namely students approximately 15 years of age, enrolled in senior high schools, living and attending school in DKI Jakarta, and belonging to families receiving PIP. This group was selected because socioeconomic conditions represent an important context for examining opportunities to obtain learning resources, access reading materials, and students' literacy experiences.

Research Variables and Constructs

This study developed a reading literacy construct by considering the relationship between the literacy activity context and reading literacy competency. The predictor constructs were derived from the dimensions of the Alibaca Index, whereas the outcome construct represented reading literacy

competency within the PISA framework. Conceptually, the research variables consisted of:

- X1 – Proficiency
- X2 – Access
- X3 – Alternatives
- X4 – Culture
- Y – Reading Literacy

In the instrument development process, X1–X4 represented the literacy ecosystem context, whereas Y represented students’ reading literacy competency. This distinction was important to ensure that the Alibaca Index dimensions were not treated as direct indicators of PISA reading ability but rather as contextual dimensions that may support the development of reading literacy competency.

Data Analysis Techniques

Data analysis involved descriptive statistics and psychometric analysis. Descriptive statistics were used to characterize the data using the mean, standard deviation, median, minimum, and maximum values. Instrument quality was subsequently examined through validity and reliability testing. Content validity was assessed through expert judgment to determine the relevance of each item to the construct being measured. The analysis was further conducted using Confirmatory Factor Analysis (CFA) to obtain evidence regarding the factor structure of the instrument. Model adequacy was evaluated using several model-fit indices, including χ^2/df , the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Instrument reliability was assessed to determine the internal consistency of each construct. Cronbach’s Alpha and, where applicable, Composite Reliability (CR) were used as indicators of internal consistency. In addition to construct reliability, individual item characteristics were examined using item-total correlations and/or other parameters relevant to the measurement model employed.

Results and Discussion

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was conducted to examine the measurement model of the reading literacy instrument for 15-year-old students, developed based on the dimensions of the Alibaca Index and the PISA context among students from low socioeconomic backgrounds. The analysis involved 164 students and specified five main constructs: X1 Proficiency, X2 Access, X3 Alternatives, X4 Culture, and Y Reading Literacy. Model parameters were estimated using the Maximum Likelihood (ML) method.

Chi-square test			
Model	X ²	df	p
Baseline model	1712.629	435	
Factor model	607.801	395	< .001

Note. The estimator is ML.

The CFA results showed that the factor model yielded a chi-square (χ^2) value of 607.801 with 395 degrees of freedom (df) and $p < .001$. In comparison,

the baseline model produced a χ^2 value of 1,712.629 with 435 degrees of freedom. The lower chi-square value of the factor model indicates that the hypothesized measurement model provides a better representation of the observed data than the baseline model. Nevertheless, the statistically significant χ^2 result ($p < .001$) indicates a significant discrepancy between the observed covariance matrix and the covariance matrix estimated by the model. This finding should be interpreted cautiously because the chi-square statistic is sensitive to sample size and model complexity. Therefore, the adequacy of the CFA model should not be determined solely by the chi-square statistic but should be further evaluated using additional model-fit indices, including the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Conceptually, the CFA model was designed to examine whether the developed indicators adequately represent the five underlying constructs of the instrument: Proficiency, Access, Alternatives, Culture, and Reading Literacy. Thus, CFA provides empirical evidence of construct validity by assessing whether the proposed factor structure is consistent with the conceptual framework established during the instrument development process.

Factor variances

Factor	Estimate	Std. Error	z-value	p	95% Confidence Interval	
					Lower	Upper
Proficiency	1.000	0.000			1.000	1.000
Access	1.000	0.000			1.000	1.000
Alternatives	1.000	0.000			1.000	1.000
Culture	1.000	0.000			1.000	1.000
Reading Literacy	1.000	0.000			1.000	1.000

The factor variance results show that the variances of all five latent constructs—Proficiency, Access, Alternatives, Culture, and Reading Literacy—were fixed at 1.000, with standard errors of 0.000. These values represent model identification constraints rather than freely estimated empirical variances. Therefore, the corresponding z-values, p-values, and confidence intervals are not substantively interpreted. The construct validity of the measurement model is instead assessed through the factor loadings of the observed indicators, their statistical significance, and the overall model-fit indices.

Factor Covariances

						95% Confidence Interval	
		Estimate	Std. Error	z-value	p	Lower	Upper
Proficiency	↔ Access	0.110	0.099	1.105	0.269	-0.085	0.304
Proficiency	↔ Alternatives	0.047	0.097	0.489	0.625	-0.142	0.237
Proficiency	↔ Culture	-0.129	0.096	-1.343	0.179	-0.317	0.059
Proficiency	↔ Reading Literacy	-0.015	0.099	-0.157	0.875	-0.209	0.178
Access	↔ Alternatives	0.072	0.099	0.722	0.470	-0.123	0.267
Access	↔ Culture	0.078	0.098	0.795	0.427	-0.115	0.271

Factor Covariances

		Estimate	Std. Error	z- value	p	95% Confidence Interval	
						Lower	Upper
Access	↔ Reading Literacy	0.162	0.100	1.629	0.103	-0.033	0.358
Alternatives	↔ Culture	-0.127	0.095	-1.328	0.184	-0.314	0.060
Alternatives	↔ Reading Literacy	-0.005	0.099	-0.053	0.957	-0.200	0.189
Culture	↔ Reading Literacy	0.186	0.095	1.945	0.052	-0.001	0.372

The factor covariance analysis revealed variations in the relationships among the latent constructs in the CFA model. The covariance between Proficiency and Access was 0.110, with $z = 1.105$ and $p = 0.269$. This result indicates that the relationship between the two constructs was not statistically significant at the 5% significance level. The 95% confidence interval ranged from -0.085 to 0.304 , including zero. The covariance between Proficiency and Alternatives was 0.047, with $z = 0.489$ and $p = 0.625$, indicating that the relationship was also not statistically significant. The 95% confidence interval ranged from -0.142 to 0.237 , which included zero.

The covariance between Proficiency and Culture was -0.129 , with $z = -1.343$ and $p = 0.179$. This result indicates that the relationship between Proficiency and Culture was not statistically significant. The 95% confidence interval ranged from -0.317 to 0.059 and included zero. Similarly, the covariance between Proficiency and Reading Literacy was -0.015 , with $z = -0.157$ and $p = 0.875$, indicating no statistically significant relationship between the two constructs. The 95% confidence interval ranged from -0.209 to 0.178 , also including zero. For the relationship between Access and Alternatives, the covariance was 0.072, with $z = 0.722$ and $p = 0.470$. This result indicates that the relationship between the two constructs was not statistically significant, with a 95% confidence interval ranging from -0.123 to 0.267 . The covariance between Access and Culture was 0.078, with $z = 0.795$ and $p = 0.427$, indicating a non-significant relationship. The corresponding 95% confidence interval ranged from -0.115 to 0.271 .

The covariance between Access and Reading Literacy was 0.162, with $z = 1.629$ and $p = 0.103$. Although the relationship was positive, it did not reach statistical significance at the 5% level. The 95% confidence interval ranged from -0.033 to 0.358 and included zero. The covariance between Alternatives and Culture was -0.127 , with $z = -1.328$ and $p = 0.184$, indicating that the relationship was not statistically significant. Its 95% confidence interval ranged from -0.314 to 0.060 .

The covariance between Alternatives and Reading Literacy was -0.005 , with $z = -0.053$ and $p = 0.957$. This finding indicates a very weak and statistically non-significant relationship between the two constructs. The 95% confidence interval ranged from -0.200 to 0.189 . Finally, the covariance between Culture and Reading Literacy was 0.186, with $z = 1.945$ and $p = 0.052$. Although this relationship was positive and approached the 5% significance threshold, it was conventionally considered not statistically significant because the p-value was

slightly greater than 0.05. The 95% confidence interval ranged from -0.001 to 0.372, which included zero.

CONCLUSION

Based on the Confirmatory Factor Analysis (CFA) of the reading literacy instrument for 15-year-old students from low socioeconomic backgrounds, involving 164 respondents, the measurement model consisted of five constructs: Proficiency, Access, Alternatives, Culture, and Reading Literacy. The factor model yielded $\chi^2 = 607.801$, $df = 395$, and $p < .001$, indicating a discrepancy between the observed and model-implied covariance matrices. However, the chi-square statistic should be interpreted together with other model-fit indices because of its sensitivity to sample size and model complexity.

The factor covariance results showed that all relationships among the constructs had p-values greater than 0.05. The covariance estimates ranged from -0.129 to 0.186, indicating relatively low associations among the factors. These findings suggest that Proficiency, Access, Alternatives, Culture, and Reading Literacy represent relatively distinct constructs without strong covariance relationships.

Therefore, the conceptual structure integrating the dimensions of the Alibaca Index and the PISA context can be retained for further evaluation. However, a final determination of the instrument's validity requires additional evidence from the factor loadings of individual indicators, construct reliability, and other model-fit indices, including CFI, TLI, RMSEA, and SRMR. These results can subsequently guide decisions regarding which indicators should be retained, revised, or removed to establish an instrument with adequate construct validity and reliability for assessing reading literacy among 15-year-old students from low socioeconomic backgrounds.

REFERENCES

- Anandari, C. L., & Iswandari, Y. A. (2019). Extensive reading in Indonesian schools: A successful story. *Teflin Journal*, 30(2), 137–152. <https://doi.org/10.15639/teflinjournal.v30i2/137-152>
- Anita, Sudrajat, A., & Aman. (2023). A Freirean Analysis of Indonesian Ministry of Education and Culture's School Literacy Movement. *Journal for Critical Education Policy Studies*, 20(3), 411–436.
- Britt, A. M., Rouet, J.-F., & Durik, A. (2018). *Literacy Beyond Text Comprehension*.
- Combrinck, C. (2019). Reading on paper or reading digitally? Reflections and implications of ePIRLS 2016 in South Africa. 39(December), 1–14.
- Frankel, K. K., Becker, B. L. C., Rowe, M. W., & Pearson, P. D. (2016). From "What is Reading?" to What is Literacy? *Journal of Education*, 196(3), 7–17. <https://doi.org/10.1177/002205741619600303>
- Jeon, E.-Y., & Day, R. R. (2016). The effectiveness of ER on reading proficiency: A meta-analysis. *Reading in a Foreign Language*, 28(2), 246–265.
- Low, A. H. M., Lim, A. H. L., & Chua, F. F. (2023). Predicting Factors that Affect East Asian Students' Reading Proficiency in PISA. *International Journal on Informatics Visualization*, 7(3–2), 2065–2074. <https://doi.org/10.30630/joiv.7.3-2.2341>
- Luna, C., Solsken, J., & Kutz, E. (2000). Defining Literacy. *Journal of Teacher Education*, 51(4), 276–288. <https://doi.org/10.1177/0022487100051004003>

- McBride, C. (2016). Children ' S Literacy Development (second).
- Mullis, I. V. S., & Martin, M. O. (2021a). PIRLS 2021 Reading Assessment Framework.
- Mullis, I. V. S., & Martin, M. O. (2021b). PIRLS 2021 Reading Assessment Framework.
- OECD. (2018). PISA : What students know and can do: I.
- OECD. (2023a). PISA 2022 Results Factsheets Indonesia. OECD (Organisation for Economic Co-Operation and Development) Publication, 1–9.
- OECD. (2023b). PISA 2022 Results Factsheets Indonesia. OECD (Organisation for Economic Co-Operation and Development) Publication, 1–9. https://www.oecd.org/en/publications/pisa-2022-results-volume-i-and-ii-country-notes_ed6fbcc5-en/indonesia_c2e1ae0e-en.html
- OECD. (2023c). PISA 2022 Results (Volume I). OECD Publishing. <https://doi.org/10.1787/53f23881-en>
- OECD. (2023d). Program For International Student (PISA) 2022 Assessment and Analytical Framework. In OECD (Organisation for Economic Co-operation and Development) Publishing.
- Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan. (2019). Indeks Aktivitas Literasi Membaca 34. In Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, Badan Penelitian dan Pengembangan, Kementerian Pendidikan dan Kebudayaan (Number 2).
- Setianingsih, I. S. (2017). Factors Affecting the English Reading Literacy of Junior High School Students. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 1(2), 165. <https://doi.org/10.21093/ijeltal.v1i2.18>