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Influence of authoritative parenting, reading attitude, and early literacy on reading comprehension

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ABSTRACT

This study examines the relationships between authoritative parenting or *keibubapaan autoritatif* (KA), parents' reading attitudes or *sikap membaca Ibu Bapa* (SMIB), early literacy activities or *aktiviti literasi awal* (ALA), and students' reading comprehension which measured by *skor kefahaman membaca* (SKORKM), focusing on the role of ALA as a mediator. Utilizing cross-sectional surveys in a quantitative approach, data were collected from 393 year-5 pupils and their parents across 15 primary schools in Kelantan, Malaysia. Participants were selected through a multilevel random sampling method. The research design incorporated both descriptive statistics and inferential analysis using structural equation modeling. The structural path analysis revealed that only ALA had a significant direct influence on SKORKM. Moreover, ALA fully mediated the relationships between KA and SKORKM, as well as between SMIB and children's reading comprehension. These findings suggest that KA and positive parental reading attitudes impact SKORKM primarily through the practice of ALA at home. The study successfully developed a new structural equation model that elucidates how family contextual factors, including KA, SMIB, and ALA, are associated with SKORKM achievement.

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1. INTRODUCTION

The development of an individual's reading abilities involves a multifaceted process influenced not only by cognitive and non-cognitive factors [1]–[3] as well as environmental aspects, such as the learning environment at home [4], [5]. Reading encompasses not only individual engagement but also the influence of one's environment and family, integrating both physical and cognitive elements [6]. Students' development in reading comprehension can be influenced by their social environment, particularly family members [7], [8]. Furthermore, Elliot *et al.* [9] also recommend that parents or other caregivers influence the learning environment at home through their own attitudes, affective responses, choices of activities, and availability of learning-supporting materials.

Most primary school students can read fluently; nevertheless, some struggle to grasp the meaning or content of their reading materials [10], [11]. Students who have difficulties in reading comprehension can

disrupt their ability in the education and academic learning process [12], [13]. This challenge may arise due to the insufficient emphasis on reading comprehension in the teaching and learning processes for early primary students [14], compounded by limited research prioritizing reading comprehension, particularly among students [15]. This highlights a notable research gap concerning reading comprehension in primary school students.

The development of reading skills constitutes a continuous process that commences in early childhood through exposure to foundational literacy skills, particularly between ages 3 and 4 [16]. This is because early skills in literacy are the most important predictors of children's future reading and writing abilities [17]. In Malaysia, studies related to early literacy skills are increasingly gaining attention, but are still not widespread [18]. Recent studies primarily concentrate on the implementation of activities and instructional methods aimed at developing early literacy skills [19]. However, comprehensive correlation surveys examining early literacy activities or *aktiviti literasi awal* (ALA) conducted by parents at home remain limited in Malaysia. Therefore, investigating the impact of ALA on Malaysian students reading comprehension is necessary.

Parents possess an important part in their children's education and may influence their educational progress [20], [21]. A meta-analysis by Masiran [22] shows that neither authoritative nor authoritarian parenting yields the best outcomes for future generations in Malaysia although the effects of authoritative parenting or *keibubapaan autoritatif* (KA) on reading activities have been consistently demonstrated in Western contexts. Additionally, studies on the role of parents in collaborating with schools to improve children's learning performance are still not widely discussed [23]. Based on prior research, this study focuses on the parental context which includes KA, parents' reading attitudes or *sikap membaca Ibu Bapa* (SMIB), and ALA, that could exert a significant impact on children's reading comprehension.

Parenting style refers to the attitude or behaviour statements of parents towards their children that they practice in the process of educating their children [24]. The majority of parenting style research is based on parenting styles model [25] which categorizes 3 broad qualitative patterns of parenting styles as authoritative, authoritarian, and permissive parenting style. Authoritarian parents place high demands on their children but are unresponsive. Permissive parents have high responsiveness but low demands on their children. Ishak *et al.* [26] discovered that parents in Malaysia use both authoritative and authoritarian parenting methods, with KA simplifying the concept of academic self-image in relation to academic accomplishment.

Bradley *et al.* [27] indicated that responsive parents (common indicators of KA) have a correlation with receptive vocabulary and children's reading abilities after controlling for parental demographic characteristics. Conversely, Mantzicopoulos [28] discovered that children's performance on reading and mathematics assessments is significantly influenced by literacy opportunities at home, parental involvement with school, and educational expectations; in which KA did not significantly affect any measure of the outcomes of the children. The findings align with previous research by [28]–[30] that discovered no causal relationship between KA and students' reading abilities. As a result, previous research has produced conflicting conclusions about the relationship between KA and children's language and literacy development.

Previous research consistently demonstrates a favorable relationship between parents' attitude and participation in literacy and language tasks with their children [31], [32]. As a result, parents play an important role in their children education because their good attitude towards reading encourages their children to have the similar attitude. The home literacy environment relies heavily on parents' conceptions of their involvement in their children's literacy and language development [32]. Parents who actively support their children and value reading activities create an enriching environment conducive to the development of literacy at home.

Alramamneh *et al.* [33] found a small to moderately positive relationship between parental reading attitudes and their children's performance on early literacy tasks while Steensel [34] found a strong correlation between first- and second-graders' improved reading abilities and their families' encouragement of positive reading attitudes. In short, previous research has consistently shown significant connections between parental attitudes toward reading and children's reading abilities. These findings underscore the crucial role of positive parental attitudes in shaping children's reading skills. They highlight how fostering an early interest in literacy activities can positively influence the development of students' reading abilities.

ALA conducted at home help children become more proficient readers and are a crucial part of the home reading environment [35]. The 2 types of literacy tasks that occur in the home are formal and informal tasks [36]. Formal literacy tasks involve both parents and children to spend time with printed materials, such as when parents teach their children to recognize letters or spell words. Informal literacy tasks involve the use of written communications, such as parents reading stories to their children before bed. During reading sessions, parents might provide commentary on the narrative's meaning, while children may inquire about the explanations of key vocabulary. This form of participation exposes the child to printed content, but in a casual manner.

Dong *et al.* [37] conducted a meta-analysis of 59 publications from 1998 to 2018 to examine the impact of home literacy environment factors on children's reading comprehension. The results of the meta-analysis show that children's reading comprehension and the home literacy environment have generally

positive correlation. Lehrl *et al.* [38] indicated that varied early activity experiences predict different literacy and numeracy skills, with possible long-term impacts. The study concluded that enhancing children's early years with a supportive home learning environment improves their proficiency in reading and arithmetic. Relyea *et al.* [39] discovered that the home literacy setting has no significant direct influence on English reading comprehension, whereas Niklas *et al.* [40] discovered that the quality of the home literacy environment provided by parents is influenced by their attitudes toward reading activities with their children. As a result, there is a significant causal effect of parental assistance with their children' literacy, which is mediated by the level of the home literacy setting.

The current study aims to identify the influence of SMIB, KA, and ALA on students' reading comprehension which measured by *skor kefahaman membaca* (SKORKM). Additionally, it examines the mediating role of ALA between SMIB and KA on SKORKM. Prior research has not specifically integrated these variables, creating a gap in the literature. This study seeks to address this gap by investigating the interconnected effects of parental influences and early literacy on students' reading outcomes. The findings are expected to make a significant contribution to the field of educational psychology, providing insights for enhancing reading comprehension through targeted parental involvement and early literacy interventions.

2. METHOD

The study included fifth-grade students from ten districts in Kelantan, Malaysia. According to the Department of Kelantan State Education, there were 28,953 fifth-grade students in the state in 2022. The minimal sample size necessary was found as 264 using Cochran's [41] formula. In accordance with Salkind [42] proposal of increasing 40% to 50% to the sample size, 50% of the initial sample size was added (264*50%=132). Thus, the total maximum sample size required was 396. The study employed quantitative methodology with a correlational research approach. A cross-sectional survey was used to obtain data for the study at a specified period from a sample of the population. The questionnaires utilized in this study were divided into 2 sections: one for the students and one for their parents. Data were collected using particular items from the parental authority questionnaire-revised (PAQ-R), progress in international reading literacy study (PIRLS) 2016 learning to read survey for home and the Malay language reading comprehension assessment.

Stratified random sampling was used in the multistage random sampling procedure of the sample selection process to guarantee the representative quality of the samples. The ten districts in Kelantan were divided into 4 zones based on geographic regions. The 15 schools were then randomly selected from each zone in proportion to the population, and thirty students were randomly chosen from each selected school. Following a careful evaluation and analysis of the returned questionnaires from both students and their respective parents or caregivers, the researcher gathered 393 complete surveys. The data were descriptively analysed using IBM 26.0's statistical package for social science (SPSS), and inference analysis was performed using structural equation modelling (SEM) with AMOS 26.0 software.

The study received approval from the Universiti Putra Malaysia Ethics Committee prior to its commencement. The planning and research division of the Ministry of Education Malaysia, the Department of Kelantan State Education, and the respective headmasters of the participating schools granted authorization for the study's execution. The researcher collected completed questionnaires from parents before administering the reading comprehension assessment to students. Only those students whose parents had submitted the questionnaires and provided consent were included in the study. Additionally, students were given the option to withdraw from the study at any time should they choose not to participate.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Measurement model test results

A confirmatory factor analysis (CFA) was first carried out to identify quantitative metrics for assessing the reliability and validity of the proposed theoretical model. To evaluate model fit, the researcher employed goodness-of-fit indices. Parameters were divided into 3 distinct categories by Hair *et al*. [43] which are absolute fit, incremental fit, and parsimonious fit. The 3 specific indices were used in this study: the chi-square for parsimonious fit, the comparative fit index (CFI) for incremental fit, and the root mean square of error approximation (RMSEA) for absolute fit.

Figure 1 shows RMSEA index which is 0.047 (range<0.08 is acceptable), CFI=0.961 (<0.90), and Chisq/df=1.881 (<5.0). It shows that the measurement model for KA, SMIB, and ALA adhere to fitness indexes. The inter-item correlation for ALA and SMIB are r=0.53; ALA and KA are r=0.42; KA and SMIB are

r=0.35 in which in all r value is less than 0.90 hence demonstrating that the measurement model has attained discriminant validity.

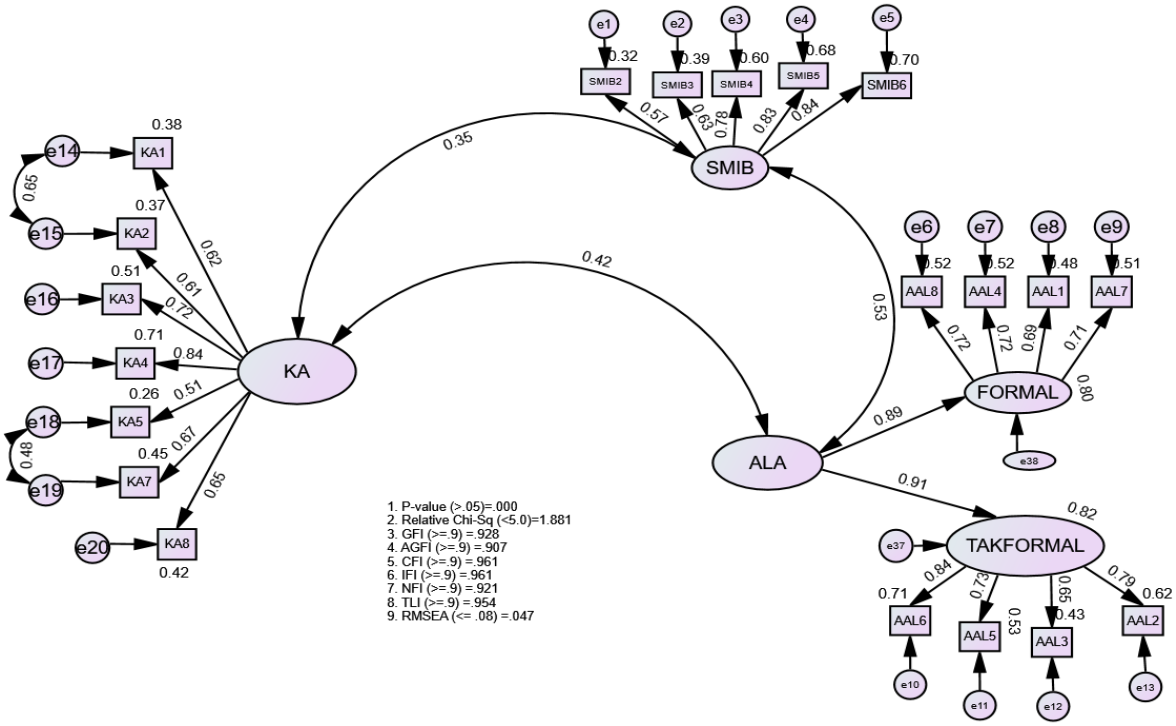

Figure 1. CFA result of the measurement model for measuring latent constructs

Table 1 shows the validity and reliability values for latent variables which are ALA [α=0.879, CR=0.895, AVE=0.810]; SMIB [α=0.843, CR=0.853, AVE=0.542] and KA [α=0.855, CR=0.846, AVE=0.50] are all significantly above their threshold levels. Thus, the validity and reliability of the measurement models utilized in the present study have been established.

Table 1. Validity and reliability of measurement models in the hypothesized model

Construct	Cronbach alpha (>0.7)	CR (>0.6)	AVE (>0.5)
KA	0.855	0.846	0.50
SMIB	0.843	0.853	0.542
ALA	0.879	0.895	0.810

3.1.2. Mediation test results

The mediation analysis examines the mediating role of ALA in the relationship between SMIB, KA, and SKORKM. This section presents the findings, highlighting whether ALA currently mediate the influence of these parental factors on SKORKM outcomes. Figure 2 illustrates the testing model in which ALA functions as a mediator in the relationship between KA and SKORKM. Referring to the analysis results in Figure 2, ALA and KA (P1) are significant (β=0.27), ALA and SKORKM (P2) are significant (β=0.38), and SKORKM and KA (P3) are not significant (β=-0.02). Considering that P1 and P2 which are indirect effects are significant; while P3 (the direct relationship) is not significant, ALA serve as a significant full mediator in explaining the indirect influence of KA on SKORKM. In other words, KA can influence SKORKM if ALA are conducted at home.

Figure 3 shows the testing model when ALA functions as a mediating variable in the association between SMIB and SKORKM. ALA and SMIB (P1) are significant (β=0.44), ALA and SKORKM (P2) are significant (β=0.38), and SKORKM and SMIB (P3) are not significant (β=0.11). The analysis finds that ALA act as a full mediator because the indirect effect (P1 and P2) are significant while the direct effect is not significant. This indicates that SMIB can influence SKORKM through the application of ALA at home.

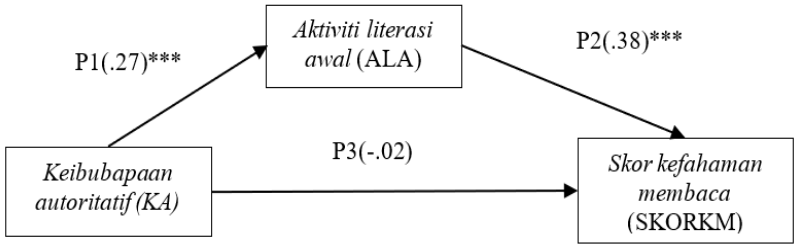

Figure 2. ALA function as a mediator for the indirect effect of KA on reading comprehension

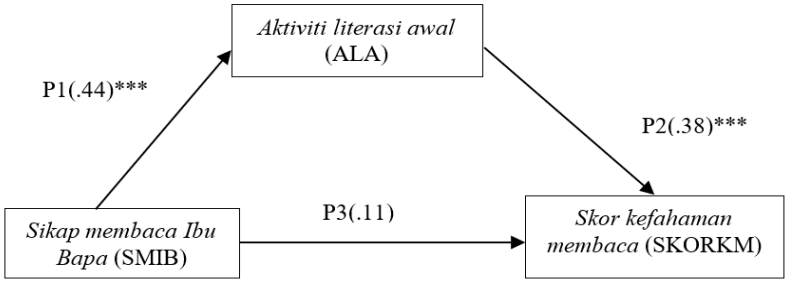

Figure 3. ALA function as a mediator for the indirect influence of SMIB on SKORKM

3.1.3. Measurement model test results

Figure 4 illustrates the measurement model from AMOS output. The fitness indexes of this model as in Figure 4 meet the threshold required with the value of RMSEA=0.039 (<0.10), CFI=0.959 (>0.90) and Chisq/df=1.598 (<5.0). This indicates that all fit indices have been accepted at once, showing that the structural model of the study demonstrates good fit with the research data.

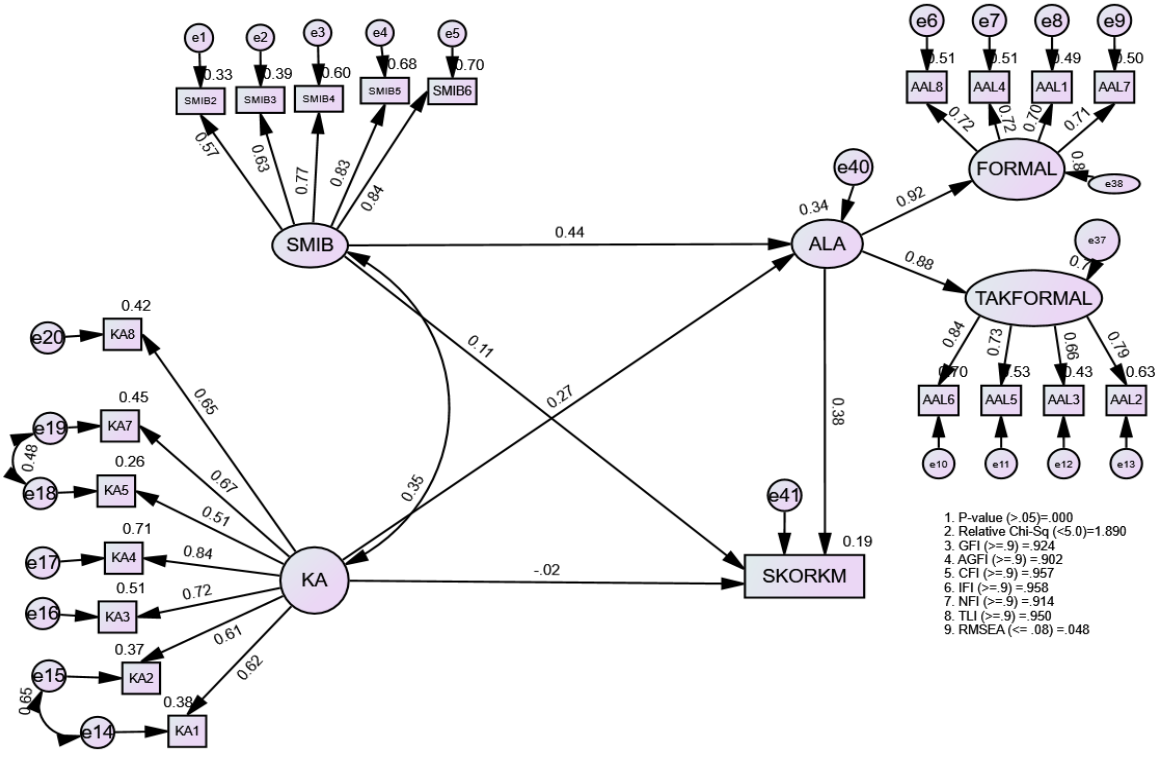

Figure 4. A mediation model for ALA based on the relationship between KA, SMIB, and SKORKM

The R^2 findings indicate that KA style and SMIB contribute to 34% of the variance in ALA. The R^2 value also reports that SMIB, KA, and ALA contribute to 19% of the variance for SKORKM. The most significant contributor to SKORKM is ALA, with a value of 0.38 ($p<0.05$). This indicates that involvement in ALA is significantly associated with higher achievement for reading comprehension within students.

3.2. Discussion

The results of the structural model analysis reveal that SMIB are a significant predictor of ALA ($\beta=0.423$, $p<0.01$), but do not significantly predict SKORKM ($\beta=0.109$, $p=0.078$). Specifically, although no direct association was found between SMIB and SKORKM, the analysis indicates that ALA fully mediate this relationship. The study shows that parents with more positive attitudes toward reading are more likely to engage in literacy activities with their children. Our finding aligns with previous studies [33], [44]–[46] which show that parents with a positive disposition toward reading are more frequently involved in literacy activities with their children. Consequently, children exposed to literacy at home earlier due to their parents' positive reading attitudes may develop enhanced reading comprehension abilities over time.

Furthermore, KA is identified as a significant predictor of ALA ($\beta=0.245$, $p<0.01$), but does not significantly predict SKORKM ($\beta=-0.038$, $p=0.498$). This aligns with the findings by Bingham *et al.* [30] which demonstrated that KA positively correlates with the home literacy environment. However, the non-significant direct relationship between KA and SKORKM contradicts the findings by Shute *et al.* [47] and Walker and MacPhee [48] who demonstrated that KA consistently influences academic achievement. These findings suggest that although KA does not have a direct impact on SKORKM, it significantly increases the frequency of ALA conducted by parents. Consequently, KA may cultivate a home environment that promotes early literacy, and indirectly impact SKORKM ability.

In conclusion, this study demonstrates that KA style and SMIB play a substantial role in promoting ALA, explaining 34% of the variance. Furthermore, these factors, along with ALA, account for 19% of the variance in SKORKM. Notably, ALA emerge as the most significant contributor to reading comprehension, underscoring the importance of parental involvement in early literacy. These results suggest that fostering a home environment that supports ALA can significantly enhance children's reading comprehension skills. Consequently, educational strategies should prioritize empowering parents with KA styles and positive reading attitudes to maximize students' literacy outcomes.

4. CONCLUSION

This study highlights the importance of ALA as a mediator between KA, SMIB, and SKORKM. The findings from 393 year-5 pupils and their parents in Kelantan, Malaysia, reveal that while KA and positive reading attitudes significantly predict ALA, they do not directly impact SKORKM. Instead, ALA emerge as the crucial link that enhances reading comprehension through increased parental involvement. These findings underscore the importance of creating a home environment that supports ALA, which is influenced by KA and positive parental attitudes toward reading. Such an environment significantly boosts SKORKM. Therefore, educational strategies should emphasize fostering positive parental attitudes and KA styles to advance early literacy development and, consequently, enhance children's reading comprehension skills.

While this study contributes valuable insights to the literature on SKORKM, it is not without inherent limitations. The research focused on a specific population of fifth-grade students, aged 11 years, in government primary schools in Kelantan, thereby limiting the geographical scope and generalizability of the findings. The unique characteristics of this sample may not accurately represent the broader population of primary school students. Future research should seek to replicate this study with diverse student groups across different ages and state locations to enhance the generalizability of the results. By investigating larger and more varied populations, subsequent studies can provide more precise generalizations. Despite these limitations, the study offers promising insights and underscores the need for further research.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

No conflicts of interest are declared.

INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

ETHICAL APPROVAL

The research related to human use has been complied with all the relevant national regulations and institutional policies in accordance with the tenets of the Helsinki Declaration and has been approved by the authors' institutional review board or equivalent committee.

DATA AVAILABILITY

The data supporting the findings of this study is available upon reasonable request. Any restrictions on data access, including confidentiality or ethical considerations, are clearly outlined.

REFERENCES

[1] B. Boman, "The influence of SES, cognitive, and non-cognitive abilities on grades: cross-sectional and longitudinal evidence from two Swedish cohorts," *European Journal of Psychology of Education*, vol. 38, no. 2, 2023, doi: 10.1007/s10212-022-00626-9.
[2] P. Karaman, "Examining non-cognitive factors predicting reading achievement in Turkey: evidence from PISA 2018," *International Journal of Contemporary Educational Research*, vol. 9, no. 3, pp. 450–459, Oct. 2022, doi: 10.33200/ijcer.1026655.
[3] G. Ramirez *et al.*, "Reading anxiety: an early affective impediment to children's success in reading," *Journal of Cognition and Development*, vol. 20, no. 1, pp. 15–34, 2019, doi: 10.1080/15248372.2018.1526175.
[4] Y. Anders *et al.*, "Home and preschool learning environments and their relations to the development of early numeracy skills," *Early Childhood Research Quarterly*, vol. 27, no. 2, pp. 231–244, 2012, doi: 10.1016/j.ecresq.2011.08.003.
[5] M. I. Susperreguy, H. Douglas, C. Xu, N. Molina-Rojas, and J. A. LeFevre, "Expanding the home numeracy model to Chilean children: relations among parental expectations, attitudes, activities, and children's mathematical outcomes," *Early Childhood Research Quarterly*, vol. 50, pp. 16–28, 2020, doi: 10.1016/j.ecresq.2018.06.010.
[6] E. Ünal, "An analysis of the reading attitudes of elementary school fourth and fifth grade students," *The New Educational Review*, vol. 22, no. 3–4, pp. 117–127, 2010.
[7] F. Chen, A. Sakyi, and Y. Cui, "Linking student, home, and school factors to reading achievement: the mediating role of reading self-efficacy," *Educational Psychology*, vol. 41, no. 10, pp. 1260–1279, 2021, doi: 10.1080/01443410.2021.1953445.
[8] P. Rämä-Ory, "Language acquisition in early years of childhood: the role of family and pre-primary education: thematic report," 2022. [Online]. Available: https://policycommons.net/artifacts/6941563/language-acquisition-in-early-years-of-childhood/7851131/
[9] L. Elliott, P. Zheng, and M. Libertus, "Individual differences in parental support for numeracy and literacy in early childhood," *Education Sciences*, vol. 11, no. 9, p. 541, 2021, doi: 10.3390/educsci11090541.
[10] S. Lubliner, "The power of clarifying: a comparative analysis of strategies that strengthen comprehension," in *Annual Meeting of the American Educational Research Association*, 2002, pp. 1–12.
[11] O. Gedik and H. Akyol, "Reading difficulty and development of fluent reading skills: an action research," *International Journal of Progressive Education*, vol. 18, no. 1, pp. 22–41, 2022, doi: 10.29329/ijpe.2022.426.2.

[12] N. Abid, S. Aslam, A. A. Alghamdi, and T. Kumar, "Relationships among students' reading habits, study skills, and academic achievement in English at the secondary level," *Frontiers in Psychology*, vol. 14, p. 1020269, 2023, doi: 10.3389/fpsyg.2023.1020269.
[13] N. K. Duke, A. E. Ward, and P. D. Pearson, "The science of reading comprehension instruction," *Reading Teacher*, vol. 74, no. 6, pp. 663–672, 2021, doi: 10.1002/trtr.1993.
[14] S. Singh and S. Mishra, *A study on role of multimedia in early childhood education*. Saarbrücken: LAP LAMBERT Academic Publishing, 2013.
[15] J. Oakhill, "Four decades of research into children's reading comprehension: a personal review," *Discourse Processes*, vol. 57, no. 5–6, pp. 402–419, 2020, doi: 10.1080/0163853X.2020.1740875.
[16] M. Majorano *et al.*, "Early literacy skills and later reading and writing performance across countries: the effects of orthographic consistency and preschool curriculum," *Child and Youth Care Forum*, vol. 50, no. 6, 2021, doi: 10.1007/s10566-021-09611-7.
[17] J. M. Machado, *Early childhood experiences in language arts: early literacy*, 11th ed. Boston, MA: Cengage learning, 2015.
[18] K. Kong, "Early childhood education in Malaysia," in *International Handbook on Education in South East Asia*, L. P. Symaco and M. Hayden, Eds., Singapore: Springer Nature Singapore, 2022, pp. 1–32, doi: 10.1007/978-981-16-8136-3_13-1.
[19] M. S. Hashim and I. Said, "Vocabulary knowledge in science learning on children's development through farming activities in the rural area," *Southeast Asia Early Childhood*, vol. 10, no. 2, pp. 119–131, 2021.
[20] J. M. Froiland and M. L. Davison, "Parental expectations and school relationships as contributors to adolescents' positive outcomes," *Social Psychology of Education*, vol. 17, no. 1, pp. 1–17, 2014, doi: 10.1007/s11218-013-9237-3.
[21] M. Pinquart, "Associations of parenting styles and dimensions with academic achievement in children and adolescents: a meta-analysis," *Educational Psychology Review*, vol. 28, no. 3, pp. 475–493, 2016, doi: 10.1007/s10648-015-9338-y.
[22] R. Masiran, "A review of parenting in a multicultural country: the Malaysian experience," in *Parenting - Challenges of Child Rearing in a Changing Society*, S. A. Samadi, Ed., London UK: IntechOpen, 2022, doi: 10.5772/intechopen.101173.
[23] S. M. Al-Hassan *et al.*, "Parents' learning support and school attitudes in relation to adolescent academic identity and school performance in nine countries," *European Journal of Psychology of Education*, vol. 39, no. 4, pp. 3841–3866, 2024, doi: 10.1007/s10212-024-00827-4.
[24] N. Darling and L. Steinberg, "Parenting style as context: an integrative model," *Psychological Bulletin*, vol. 113, no. 3, pp. 487–496, May 1993, doi: 10.1037/0033-2909.113.3.487.
[25] D. Baumrind, "Effective parenting during the early adolescent transition," in *Family transitions*, P. A. Cowan and E. M. Hetherington, Eds., Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1991, pp. 111–163.
[26] Z. Ishak, S. F. Low, and P. L. Lau, "Parenting style as a moderator for students' academic achievement," *Journal of Science Education and Technology*, vol. 21, no. 4, pp. 487–493, 2012, doi: 10.1007/s10956-011-9340-1.
[27] R. H. Bradley, R. F. Corwyn, H. P. McAdoo, and C. G. Coll, "The home environments of children in the United States Part I: variations by age, ethnicity, and poverty status," *Child Development*, vol. 72, no. 6, pp. 1844–1867, 2001, doi: 10.1111/1467-8624.t01-1-00382.
[28] P. Y. Mantzicopoulos, "The relationship of family variables to head start children's preacademic competence," *Early Education and Development*, vol. 8, no. 4, pp. 357–375, 1997, doi: 10.1207/s15566935eed0804_1.
[29] A. H. Hindman and F. J. Morrison, "Differential contributions of three parenting dimensions to preschool literacy and social skills in a middle-income sample," *Merrill-Palmer Quarterly*, vol. 58, no. 2, pp. 191–223, 2012, doi: 10.1353/mpq.2012.0012.
[30] G. E. Bingham, H. J. Jeon, K. A. Kwon, and C. Lim, "Parenting styles and home literacy opportunities: associations with children's oral language skills," *Infant and Child Development*, vol. 26, no. 5, p. e2020, 2017, doi: 10.1002/icd.2020.
[31] B. D. DeBaryshe, "Maternal belief systems: linchpin in the home reading process," *Journal of Applied Developmental Psychology*, vol. 16, no. 1, pp. 1–20, 1995, doi: 10.1016/0193-3973(95)90013-6.
[32] D. J. Weigel, S. S. Martin, and K. K. Bennett, "Contributions of the home literacy environment to preschool-aged children's emerging literacy and language skills," *Early Child Development and Care*, vol. 176, no. 3–4, 2006, doi: 10.1080/03004430500063747.
[33] Y. Alramamneh, S. Saqr, and S. Areepattamannil, "Investigating the relationship between parental attitudes toward reading, early literacy activities, and reading literacy in arabic among emirati children," *Large-Scale Assessments in Education*, vol. 11, no. 1, pp. 1–23, 2023, doi: 10.1186/s40536-023-00187-3.
[34] R. van Steensel, "Relations between socio-cultural factors, the home literacy environment and children's literacy development in the first years of primary education," *Journal of Research in Reading*, vol. 29, no. 4, pp. 367–382, 2006, doi: 10.1111/j.1467-9817.2006.00301.x.
[35] M. Sénéchal and J. A. LeFevre, "Parental involvement in the development of children's reading skill: a five-year longitudinal study," *Child Development*, vol. 73, no. 2, pp. 445–460, 2002, doi: 10.1111/1467-8624.00417.
[36] M. Sénéchal, J. Lefevre, E. M. Thomas, and K. E. Daley, "Differential effects of home literacy experiences on the development of oral and written language," *Reading Research Quarterly*, vol. 33, no. 1, pp. 96–116, 1998, doi: 10.1598/rrq.33.1.5.
[37] Y. Dong, W. Y. Dong, S. X. Y. Wu, and Y. Tang, "The effects of home literacy environment on children's reading comprehension development: a meta-analysis," *Educational Sciences: Theory and Practice*, vol. 20, no. 2, pp. 63–82, 2020, doi: 10.12738/jestp.2020.2.005.
[38] S. Lehrl, S. Ebert, S. Blaurock, H. G. Rossbach, and S. Weinert, "Long-term and domain-specific relations between the early years home learning environment and students' academic outcomes in secondary school," *School Effectiveness and School Improvement*, vol. 31, no. 1, pp. 102–124, 2020, doi: 10.1080/09243453.2019.1618346.
[39] J. E. Relyea, J. Zhang, Y. Liu, and M. G. L. Wui, "Contribution of home language and literacy environment to English reading comprehension for emergent bilinguals: sequential mediation model analyses," *Reading Research Quarterly*, vol. 55, no. 3, pp. 473–492, Jul. 2020, doi: 10.1002/rrq.288.
[40] F. Niklas, A. Wirth, S. Guffler, N. Drescher, and S. C. Ehmig, "The home literacy environment as a mediator between parental attitudes toward shared reading and children's linguistic competencies," *Frontiers in Psychology*, vol. 11, p. 1628, 2020, doi: 10.3389/fpsyg.2020.01628.
[41] W. G. Cochran, *Sampling techniques*, 3rd ed. New York, NY: John Wiley & Sons, 1977.
[42] N. J. Salkind, *Exploring research*, 9th ed. New York, NY: Pearson, 2018.
[43] J. J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, 8th ed. Andover, UK: Cengage Learning, 2019.
[44] G. E. Bingham, "Maternal literacy beliefs and the quality of mother-child book-reading interactions: associations with children's early literacy development," *Early Education and Development*, vol. 18, no. 1, pp. 23–49, 2007, doi: 10.1080/10409280701274428.
[45] F. Niklas and W. Schneider, "Home literacy environment and the beginning of reading and spelling," *Contemporary Educational Psychology*, vol. 38, no. 1, pp. 40–50, 2013, doi: 10.1016/j.cedpsych.2012.10.001.
[46] L. E. Skibbe, L. M. Justice, T. A. Zucker, and A. S. McGinty, "Relations among maternal literacy beliefs, home literacy practices, and the emergent literacy skills of preschoolers with specific language impairment," *Early Education and Development*, vol. 19, no. 1, pp. 68–88, 2008, doi: 10.1080/10409280701839015.
[47] V. J. Shute, E. G. Hansen, J. S. Underwood, and R. Razzouk, "A review of the relationship between parental involvement and secondary school students' academic achievement," *Education Research International*, vol. 2011, no. 1, p. 915326. 2011, doi: 10.1155/2011/915326.

[48] A. K. Walker and D. MacPhee, "How home gets to school: parental control strategies predict children's school readiness," *Early Childhood Research Quarterly*, vol. 26, no. 3, pp. 355–364, 2011, doi: 10.1016/j.ecresq.2011.02.001.

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