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Beyond Cultural Values: Identifying Proximal Predictors of Early Literacy Skills in Indonesian Kindergarteners

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Abstract: Beyond Cultural Values: Identifying Proximal Predictors of Early Literacy Skills in Indonesian Kindergarteners. Objectives: Early literacy development in young children is influenced by many interrelated factors within the family and cultural environments. In this study, we have also taken into account family values, parent–child relationships, and literacy activities in relation to children's emergent reading in kindergarten. **Methods:** In the current study, a multiple regression design research approach was employed with 100 participants (early childhood teachers and parents). The information was collected by official questionnaires. The questionnaire included measures of familial sociocultural value orientation, parent–child interaction, literacy-related activities at home, and children's early literacy skills, assessed through parent self-report items developed and adapted from established early literacy and home literacy environment instruments. To determine the predictive capability of the factors, multiple regression analysis was conducted as the technique for data analysis. **Findings:** The current research aims to identify the degree to which family socio-cultural values, parent-child interaction, and home literacy activities can predict outcomes in early literacy for children in kindergartens in Pasuruan, East Java, Indonesia. The results showed that parent-child interaction and home literacy activity variables have a strong positive effect on children's performance in early literacy. In contrast, family socio-cultural values alone did not demonstrate a direct statistical effect in the model. **Conclusion**: It would appear from our findings that active involvement and literacy-related pursuits are more influential in building early reading skills than attitudes towards learning within the family as a whole. Our recommended solution would be increasing parent-child interaction activities and engaging in literacy pursuit programs. However, these activities must be situated within culturally salient family contexts. The main originality of the study is that it simultaneously examines three family-based variables in a given cultural context, which reinforces the hypothesis that early literacy is influenced by a social and cultural framework.

Keywords: early literacy, family socio-cultural values, parent–child relationship, literacy practices, preschool education.

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INTRODUCTION

Literacy in the early years provides a foundation for academic success and lifelong learning. It is not just the early years of reading and writing. It is a child's task to interpret their symbolic environment (symbols, language, and communication) within their own sociocultural network (Yafie, 2018). Home atmosphere is essential for developing these conditions, especially for transferring cultural and social

beliefs, shaping types of parent-child interaction, and enriching literacy activities in daily routines (Hayes et al., 2025; Nan & Tian, 2025). Such aspects are the micro-level underpinnings of children's learning that support the development of their emerging literacy proficiency by valuing communication means and home-connected literacy activities.

In Indonesia, family involvement is emerging as a priority in early childhood education policies alongside culturally based curricula (Yafie et al., 2024; Yafie et al., 2024). The Pasuruan Regency has a cultural tradition that protects the local community and is very close to the family, providing an interesting setting to examine the relationship between family sociocultural beliefs and reading practices in early literacy development (Carissima et al., 2024). In particular, aspects of the cultural context in Pasuruan: collective responsibility, intergenerational links, and oral storytelling traditions, should, in theory, enhance children's language, vocabulary development, and early reading interest (Jefferies et al., 2019). However, according to the local education report from PAUD institutions in Pasuruan, the achievements in early literacy are still below developmental benchmarks, with several PAUD schools reporting that more than 40–50% of children are below the minimum literacy indicators. As well, consistent with early observations in one local kindergarten that showed considerable room for improvement in children's early literacy skills, which would impact their preparedness to participate in later phases of learning (Pianta et al., 2021; Sutapa et al., 2021). There was minimal reading observed in the data, with the levels of literacy stimulation in the homes of the children also low. This can cause academic learning deficiencies and a lack of fundamentals in reading, writing, and communication skills. These results imply that families in Pasuruan have not done their utmost to create the optimal early childhood education environment. Pasuruan plays an especially significant role in that its cultural contexts in Indonesia make cultural orientations (community values, religious rituals, and hierarchical kinship systems) primarily responsible for shaping parents' attitudes towards literacy.

There are various contributors to the phenomenon in question. Firstly, cultural values have not been built into many families' children's learning at home (Modecki et al., 2022). Fewer opportunities to learn through language, therefore (Barnett & Jung, 2020; Ikawati et al., 2024). The second is that the quality of parent and child interaction in literacy-related activities like sharing a reading experience, storytelling, and conversation is lacking because caregivers are overworked and/or unaware of their contribution to educational obligations (Chang, 2023; Neneng et al., 2023). Furthermore, the lack of structured, ongoing literacy activities in homes is less effective at engaging children in reading and writing (Navy & Kaya, 2020). As a result, the instruction children receive in early childhood programs matters greatly for their reading development. However, this teaching may not make up for a home environment without literacy experiences.

The issue has several implications that range from the educational path of children. According to Wirth et al. (2022) and Talwar et al. (2023), literacy ability in the early ages is known to predict reading comprehension outcomes, school performance, and social outcomes. Large numbers of young children who enter school not ready to read could find decoding what is on the page, understanding its meaning, or expressing themselves extremely difficult. Such factors might result in a lack of enthusiasm for learning, lack of self-esteem, and skills for critical thinking (Alatalo & Westlund, 2019). Thus, home factors related to early literacy could be effective in preventing disadvantaged outcomes for children at school and play a critical role in promoting children's readiness for learning (Barnett & Jung, 2020).

In light of the increasing empirical knowledge about home literacy environments, there still exist areas devoid of knowledge. Historically, previous studies have focused on those concepts (parental involvement, family literacy environments, and socio-cultural aspects) separately instead of looking at their collective impact on reading achievement among children. Moreover, few have examined whether such relations are established in an Indonesian context where local culture (Sari et al, 2022) and family background (Susperreguy et al., 2021) may interact differently with the practice of literacy at home. These variations highlight the importance of literacy development as a holistic process that needs to take into account culture as well as behavior-level aspects.

Bronfenbrenner's bioecological system theory and the sociocultural conception of literacy provide the conceptual foundation for this study. According to the ecological model, children's literacy development emerges from proximal processes occurring within the home microsystem and is shaped by cultural conventions and daily interpersonal relationships (Aminpour, 2023; Rosa & Collado, 2019). On the other hand, the sociocultural perspective views literacy as a social practice that emerges from language, interaction, and cultural orientations (Vygotsky et al., 1978). There are connections between the two approaches. Bronfenbrenner's (1979) theory contains the construct of microsystem, which focuses on the present nature of parent-child interaction, and Vygotsky's Zone of Proximal Development (ZPD), which discusses how children with developing literacy skills become competent participants by engaging in planned involvement in mediated activities. In unison, they point to the sociocultural values that shape the quality of proximal processes (e.g., reading together, storytelling) and thereby set the trajectory by which children pass through their ZPD in early literacy activities. Such a viewpoint is well supported by various studies; for instance, Alothman (2024) demonstrated that children's early literacy activities show the influence of cultural identity by means of social interaction between children and other people. Literacy is not just about acquiring skills. Weldemariam (2025) writes that, from this perspective, literacy also encompasses knowledge and attitudes about literacy forms and functions. (2024) supported this by statingthat home literacy experiences are mostly contextualized by family social events and the way family members interact with each other, and the family members' attitudes also influence the children's academic achievementThe research had indicated an idea that literacy could not be considered purely a technical practice but rather something that took place through the act of social and cultural factors. Together, the theories imply that sociocultural values influence the quality and kinds of proximal processes between parents and children, which, in turn, influence children's success as they navigate their ZPD with early literacy tasks. This integrated framework is behind the assumption that family sociocultural values, interaction between parents and children, and home literacy practices simultaneously impact young children's early literacy skill development (Nursyafitri et al., 2024).

This study examines the contributions of family socio-cultural values, parent-child play, and literacy in EAL children's early reading skills and the cumulative effects. The empirical evidence described here is for the impact of culture, family relationships, and home literacy activities on kindergarten-aged children in Pasuruan Regency, and supports early development in reading.

The contribution of this paper is that this project on SRTD is capable of crossing boundaries from theoretical to instrumental. It provides a theoretical enduring question of family literacy and culture for understanding the development of children's literacies. Data from these datasets can be used to educate parents,

teachers, or policymakers about how a literacy program might be tailored to make it more congruent with the family culture. This finding also supports the national agenda of Indonesia in facilitating parental participation in early childhood education and supporting early years literacy development in schooling.

To achieve these goals, a quantitative research design was used with kindergarten children as well as parents in Pasuruan Regency. Multielement statistical analyses are conducted to separately and jointly estimate the effects of these three predictor factors on early literacy performance. The purpose of this research is guided by four research questions: (1) To what degree do family sociocultural values predict early literacy skills among the children of kindergarteners in Pasuruan Regency; (2) What is the role of parent–child interaction in promoting the emergence of literacy skills in children; (3) What is the relationship between home literacy activities and children development in early literacy skills; and (4) Do these three predictors of family sociocultural values, parent–child interaction, and home literacy activities make sense in the same analytical model when predicted simultaneously early literacy skills?. As such, this research further examines the extent to which the integrated model is able to offer predictive power with respect to early literacy achievement by young students.

METHOD

Research Approach

This research employed a quantitative correlation research design that investigates the relationship between several independent variables, namely family sociocultural values, parent-child interaction, and literacy activity, and a single dependent variable, which is early literacy skills of children. A quantitative approach was used as it enabled an exploration that produced data that could be measured and interpreted using statistical analysis. A correlational method was used to identify correlations, not causations or relationships, among and between family and literacy-dependent variables associated with early reading achievement. This article has investigated the role of social and family background on the literacy development of young children.

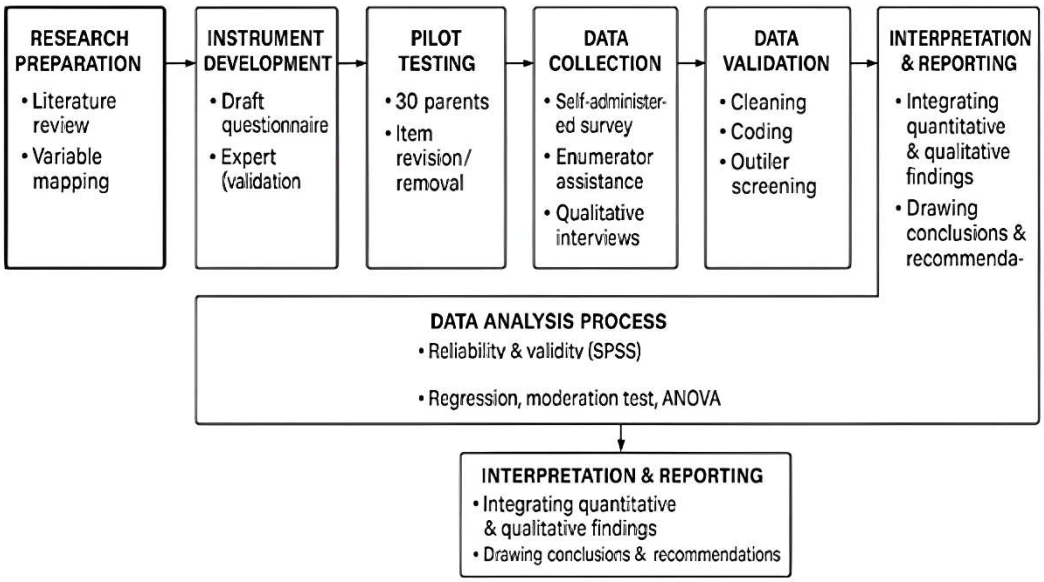

Figure 1. Research procedure

Research Participants

A total of 100 parents of school-age children in Winongan District, Pasuruan Regency, East Java, Indonesia were included. Participants were recruited by purposive sampling based on predefined inclusion criteria: The inclusion criteria for participation in this study were as follows: (1) parents or legal guardians of children attending the selected kindergarten; (2) children who had attended school for a minimum of three months in order to allow for the observation of their literacy development by the parents; and (3) voluntary participation and completion of the entire questionnaire. If the primary caregivers were not parents or if the subjects completed fewer than 80% of their questionnaires, the parents were also excluded from the study. Winongan, as a district, was chosen for research as it possesses a rich culture of sociocultural values with varied socioeconomic backgrounds. It was decided to use this context to focus on family sociocultural practices and their influence on early literacy. To reach the majority of the sample, mothers (96%) are the main caregivers and also the individuals who facilitate home literacy experiences. They recognize that gender imbalance is also one of the more serious limitations of this study because men may be expected to have different participation patterns than women within early literacy activities, and this is not represented within the results of this study. Data were collected over six months (April–October 2025), a period believed to be sufficient to perform validation exercises and interpret the data correctly.

Research Instrument

The data was gathered using a standardized protocol interview. The four core areas explored in the questionnaire include family/sociocultural value orientation, parent–child interaction, literacy-related practices, and early literacy. This scale was created after a review of the literature on early literacy concepts as well as sociocultural theories. Every construct was defined by a large number of dimensions and indicators that comprised both behavioral and attitudinal aspects of home literacy activities. All measures were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Table 1. Research instrument

No	Variable	Dimensions	Indicators	Items	Scale
1	Family Sociocultural Values (X_1)	Cooperation and Collectivism	Family engagement in collaborative activities	1–2	Likert (1–5)
		Cultural Appreciation	Introduction of local culture through storytelling and daily routines	3–4	
		Positive Social Norms	Family behaviors that promote literacy-oriented attitudes	5–6	
2	Parent–Child Interaction (X_2)	Emotional Engagement	Extent and quality of caregiver emotional support during shared reading	7–8	Likert (1–5)
		Interactive Literacy Activities	Reading, writing, and talking stories together	9–10	
		Motivational Encouragement	A Proconstructive Approach to Positive Feedback for Literacy Growth	11–12	
3	Literacy Activities (X_3)	Reading Frequency	Hours per week reading to children	13–14	Likert (1–5)
		Literacy Creativity	Culturally based literacy	15–16	

			activities (e.g., storytelling, drawing)		
		Activity Variety	Range of literacy-related play activities	17–18	
4	Early Literacy Skills (Y)	Letter Recognition	Ability to identify and name alphabet letters	19–20	Likert (1–5)
		Basic Reading	Ability to read simple words or short sentences	21–22	
		Story Comprehension	Ability to answer questions or retell a story	23–24	
		Early Writing	Ability to write letters or simple words	25–26	

The questionnaire was self-administered by parents under researcher supervision; however, for participants with limited reading ability, trained enumerators assisted by reading each item aloud following a standardized protocol to ensure consistency and reduce administration bias. To conceptualize content validity, example items have been added as follows: *"Is my child exposed to traditional lore as I teach him/her during daily routines"* for cultural appreciation, *"I give my child encouragement and attention during shared reading activi Do I give my child encouragement and attention during shared reading activities."* for emotional engagement, *"Do my child and I engage in many literacy play activities, like pointing to objects, storytelling"* for literacy activity variety, and *"Is my child able to identify most of the alphabet letter cards I show him/her"* for early literacy skills.

Instrument validation was performed by three experts in early childhood and literacy, with all items obtaining acceptable validity coefficients using Aiken's V [0.76–0.89, (value of less than 0.81 indicates that at least one of the words used is ambiguous, while a value of > 0.9 indicates redundancy elements)], which led to setting and rephrasing ambiguous wording and redundancy writing. In addition to eliminating two items with very low item-total correlation values, revising five unclear items, and re-ordering questions to improve flow, we made several other improvements based on a pilot study of 30 parents outside our sample. The reliability analysis after the pilot revealed Cronbach identificative values between 0.78 and 0.91. To increase construct validity, a Confirmatory Factor Analysis was conducted using AMOS. All factor loadings were> 0.50, and the model fit indices (CFI = 0.92; RMSEA = 0.06) indicated good fit. Finally, the study regards the measure of early literacy skills as its "main limitation, as they were measured through parent-reported items, which may be influenced by social desirability bias and perceptual inaccuracy"; hence, it is advised to be cautious with interpretation, since "a standardized direct child assessment was not feasible due to contextually-bound constraints".

Research Procedure

The research procedure included three key stages. 1) The research instrument for the questionnaire survey was developed from theoretical studies and pre-tested on a sample to check for clarity and consistency before it could be used in the actual survey. 2) The data collectors, as well as teachers, were oriented for a brief period on the procedure for administering the survey. Data collectors assisted parents who needed reading support. At the same time, teachers recorded children's literacy behaviors using structured observation sheets during routine

learning activities, without giving children additional tasks, as observations were made only of naturally occurring behaviors. 3) Parents complete the questionnaire under the supervision of the researcher, the data is checked for completeness, and then coded into a numerical format for correlational and regression analysis. At the same time, the observation notes are used only as contextual support in interpreting the results.

Data Analysis Technique

Data were analyzed using SPSS version 26.0 and AMOS to provide both statistical and structural validation of the research model. In this phase of analysis, the validity and reliability of the instrument were first tested using item-total correlations. The threshold in this test was 0.70, with internal consistency relating to Cronbach's Alpha. Confirmatory Factor Analysis (CFA) was used to assess construct validity (using CFI and RMSEA). The characteristics of the participants and the distribution of variables were described using descriptive statistics (mean (SD) or percentage distribution). Multiple linear regression analysis was conducted to determine the direct and indirect effects of family sociocultural factors, parent and child interaction, and literacy activities on early literacy skills. Moderation analysis was also conducted to determine whether the relationship between parent and child interaction and early literacy skills was moderated by parental education level, and analysis of variance was conducted to determine the literacy skills of children of various occupational groups of their parents. Statistical analysis. All tests were performed at a 5% significance level (á = 0.05), and statistical results with $p < 0.05$ were considered significant. To enhance methodological rigor, qualitative interview data were incorporated as a form of triangulation to support and contextualize quantitative findings.

■ RESULT AND DISCUSSION

This research examined characteristics of respondents, including gender, age, education level, and occupation. The results of the collected respondents are in Table 2 below.

Table 2. Respondent characteristics

No	Characteristic	Category	Frequency (n)	Percentage (%)
1	Gender	Female	100	100
		Male	0	0
2	Age (years)	< 25 years	9	9.0
		25–35 years	55	55.0
		36–45 years	28	28.0
		> 45 years	8	8.0
3	Education Level	Junior High School	22	22.0
		Senior High School	63	63.0
		Diploma/Bachelor	15	15.0
4	Occupation	Private Employee	35	35.0
		Teacher	10	10.0
		Farmer	18	18.0
		Trader	15	15.0
		Housewife	17	17.0
		Others	5	5.0

All participants in this research were women (100%), including mothers. This situation resulted from the fact that, when data were collected, the majority of fathers were excluded due to inconsistent working hours and availability. Also, the father in this scenario will be working in a factory or doing some other physically demanding work that will limit their involvement in the research. It was the mothers, as a result, who were both the most available and appropriate informants about early literacy activities in the home. This corresponds to previous research that showed caregivers to be mothers who devote more time to children's educational activities during early childhood. Thus, the entire female sample of respondents represents the naturally occurring involvement patterns in Pasuruan's community context.

Descriptive Statistics of Research Variables

To describe the distribution, central tendency, and variability of the key variables, descriptive statistics were performed for the following categories: Family Sociocultural Values (X1), Parent–Child Interaction (X2), Literacy Activities (X3), and Early Literacy Skills (Y). Before testing statistical inferences, a qualitative analysis was conducted to illustrate participants' overall response trends.

As shown in Table 3, all constructs received high scores (on average 4.38-4.50 on a five-point Likert scale). These observations point to a strong value system for both socio-cultural beliefs and involvement with literacy practices at home. The high mean score for Early Literacy Skills (Y) (mean = 4.50) implies that mothers perceived their young children as having advanced early literacy development.

Table 3. Descriptive statistical analysis results

Predictor	B	SE B	β	t	p
Constant	0.28	0.33	—	0.83	.410
Family Sociocultural Values (X1)	0.14	0.05	.17	2.77	*.007*
Parent–Child Interaction (X2)	0.45	0.06	.50	7.50	*< .001*
Literacy Activities (X3)	0.21	0.07	.22	3.00	*.003*

Note. N = 100. Dependent variable: Early Literacy Skills (Y). Table formatted following APA 7 standards (no vertical lines, â coefficients standardized, p-values in italics for significance).

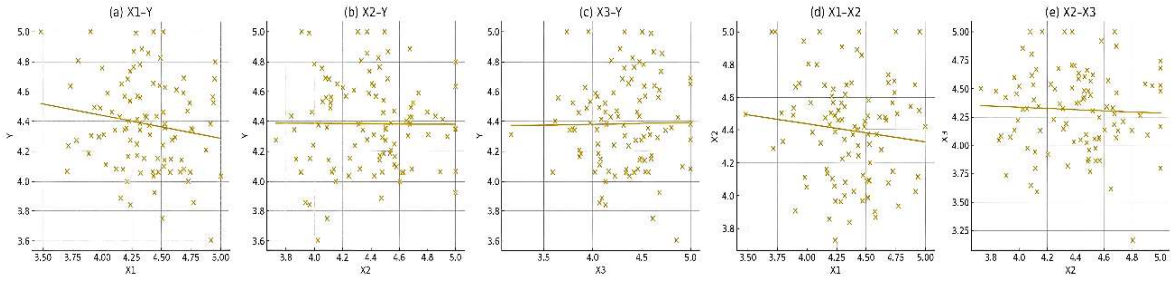

Figure 2. Distribution visualizations

Nevertheless, this finding should be interpreted with methodological prudence. While low standard deviations (0.37–0.42) raise the possibility of an even response to each item, the more likely explanation is a ceiling effect or a very strong response bias. The very high means near the upper limit of the scale and the small variability suggest that respondents engaged in

overestimation or positive bias in their evaluations. It is more relevant given that only maternal reports of child performance in various tasks were used to assess early literacy skills (Y), and maternal reports may not correlate with objective assessments.

Also, the interpretation of Parent–Child Interaction (X2) should consider an important methodological limitation: the data were obtained solely from mothers. The complete absence of paternal data limits the generalizability of statements about the "parent–child interaction" construct. Father–child interaction patterns may be radically different from those with mothers and, if included, would produce distinct relationships or levels of significance. Accordingly, the results should be considered as indicative of "mother–child interaction," not parental interaction.

Furthermore, the descriptive statistics point to a narrower range of scores that could potentially reduce multi- or under-inflate variable correlations and fail to capture true variance in parent or child behavior. This supports that findings must be interpreted within the context of methodological constraints and imperfections of measurement associated with self-reported data collected from a single informant.

Validity and Reliability Test

To ensure that all the questions in the questionnaire were valid (effective) measures of the intended constructs and to establish some degree of equivalence between observations, an instrument test was carried out. The test of validity was analysed using Pearson's product-moment correlation; each item was deemed valid if the estimated correlation coefficient (r-value) was greater than the critical value of 0.1966 at the 0.05 significance level.

All items across all four constructs had correlation coefficients with the construct above

Table 4. Results of validity test

Variable	Item	r-count	p-value	Description
Family Sociocultural Values (X1)	X1.1	0.742	< .001	Valid
	X1.2	0.806	< .001	Valid
	X1.3	0.385	< .001	Valid
	X1.4	0.706	< .001	Valid
	X1.5	0.835	< .001	Valid
	X1.6	0.740	< .001	Valid
Parent–Child Interaction (X2)	X2.1	0.821	< .001	Valid
	X2.2	0.835	< .001	Valid
	X2.3	0.885	< .001	Valid
	X2.4	0.804	< .001	Valid
	X2.5	0.806	< .001	Valid
	X2.6	0.829	< .001	Valid
Literacy Activities (X3)	X3.1	0.759	< .001	Valid
	X3.2	0.768	< .001	Valid
	X3.3	0.790	< .001	Valid
	X3.4	0.744	< .001	Valid
	X3.5	0.752	< .001	Valid
	X3.6	0.727	< .001	Valid
Early Literacy Skills (Y)	Y1	0.720	< .001	Valid
	Y2	0.650	< .001	Valid
	Y3	0.704	< .001	Valid

Y4	0.602	< .001	Valid
Y5	0.650	< .001	Valid
Y6	0.796	< .001	Valid
Y7	0.708	< .001	Valid
Y8	0.661	< .001	Valid

the r-critical (> 0.1966) and $p < 0.05$, thus implying that all items were statistically valid and accurately measured each construct. The internal consistency of the instrument was tested using Cronbach's Alpha coefficient. Traditionally, a value of 0.60 is considered to be an acceptable level of dependability.

The values of Cronbach's Alpha were between 0.80 and 0.91, which exceeds the minimum required level of 0.60. The results show that all variables achieve acceptable reliability, and the measuring instrument measures some issues reliably. Accordingly, the results concerning validity and reliability show that the questionnaire can be further analyzed statistically.

Table 5. Results of the reliability test

Variable	Cronbach's α	Description
Family Sociocultural Values (X1)	0.84	Reliable
Parent–Child Interaction (X2)	0.80	Reliable
Literacy Activities (X3)	0.91	Reliable
Early Literacy Skills (Y)	0.85	Reliable

Note. All scales exceeded the recommended reliability threshold of á e" .60.

Classical Assumption Test

Normality Test

Results indicated that the data were normally distributed (Sig. = 0.158 > 0.05) and homoscedastic (all Sig. > 0.05), suggesting that the model met the desired assumptions for further regression analysis.

The normality assumption was tested using One-Sample Kolmogorov–Smirnov's test. Results showed that the distributions of the study variables were not significantly skewed from normality, D(100) = 0.08, p = .158. Because the p-value was greater than the. 05, indicating normal residuals and normality was not violated.

Table 6. Normality test results

Test	Statistic	p-value	N
One-Sample Kolmogorov–Smirnov	0.08	.158	100

Multicollinearity Test

The multicollinearity test seeks to determine whether there is a strong association among the independent variables being regressed. Strong multicollinearity can lead to unstable regression coefficients. If the Tolerance is greater than 0.10 and the VIF is less than 10, then the model does not have multicollinearity.

Table 7. Multicollinearity test results

Variable	Tolerance	VIF
X1	0.44	2.28
X2	0.46	2.19
X3	0.50	2.02

Note. The VIF indices of all variables were less than 5, and all tolerance levels were greater than 0.10, thereby ensuring that there was.

Multicollinearity was assessed using tolerance and the Variance Inflation Factor (VIF) for each predictor. All predictors were based on the analysis tolerance above the threshold tolerance of 0.10 (0.44–0.50) and VIF below the cutoff value of 5 (2.02–2.28). These all show that there was no multicollinearity between the predictors, and the regression model does not suffer from it.

Heteroscedasticity Test

The heteroscedasticity test was used to examine whether the residuals exhibit heteroscedasticity. Heteroscedasticity can make regression estimates wasteful and reduce the accuracy of hypothesis testing. If the significance value (Sig.) is greater than 0.05, there is no heteroscedasticity. If the Sig. is less than 0.05, there is heteroscedasticity.

Table 8. Heteroscedasticity test results

Predictor	B	SE B	β	t	p
Constant	3.33	1.59	—	2.09	.039
Family Sociocultural Values (X1)	–0.13	0.10	–.20	–1.32	.188
Parent–Child Interaction (X2)	–0.04	0.08	–.08	–0.53	.599
Literacy Activities (X3)	0.14	0.09	.22	1.53	.129

Note. Non-significant p-values (p > .05) indicate that heteroscedasticity was not detected in the model

The findings show that all independent variables have significance values (Sig.) greater than 0.05, indicating no heteroscedasticity. As a result, the regression model meets the assumption of homoscedasticity and may be regarded as robust for future regression analyses.

Determination Coefficient (R^2) Test

The R^2 test determines the degree to which independent variables explain variance in the dependent variable. A value for R^2 close to 1 implies that the model does have a lot of explanatory capability, whereas a value for R^2 close to 0 implies that the independent variables do not have much capability to explain the dependent variable.

Variance explained by the regression equation may be considered substantial with the three-parallel predictors, Family Sociocultural Values (X1), Parent–Child Interaction (X2), and Literacy Activities (X3), accounting for 41% of the variance in Early Literacy Skills (Y), R^2 =.

Table 9. Determination coefficient (R^2) test result

Model	R	R^2	Adjusted R^2	SE of Estimate
1	.64	.41	.39	3.37

41, Adjusted R^2 =. 39. From the standpoint of the degree of explained variance represented by the model itself, it can be said that it is not exceptionally high, although it certainly shows a moderate to strong level of explanatory power, which can be associated with observations normally yielded by studies on complex, multi-dimensional socio-behavioral phenomena. This means that while it is clear that all three predictors are making a significant contribution to children's early literacy capabilities, it is also clear that a significant amount of variance is not explained by the current model, which pertains to other, as-yet-unidentified factors.

T Test

A t-test, or a partial t-test, is a statistical technique used to measure the effect of each independent variable on the dependent variable. It helps determine which variables play an important role in the changes in the dependent variable. If the calculated value of t-value is greater than critical/t-table (t-table) or the significance level (Sig.) is smaller than 0.05, it is believed that the independent variable has a significant partial effect.

The multiple regression analysis attempted to predict early literacy ability (Y) based on family cultural values and attitudes (X1), parent–child interaction (X2), and literacy-related activities in the home environment (X3). In the model, parent–child interaction was a significant predictor of early literacy skills, â = 0.46, t(96) = 3.90, p < .001, indicating that higher-quality parent–child interactions are related to more pronounced early literacy skills. Literacy activities were a statistically significant predictor of early literacy skills, â = 0.25, t(96) = 2.21, p =. 030) suggested that more engagement in literacy-related activities was a positive predictor of ELL on early literacy skills. However, family sociocultural values did not predict the dependent variable (â = –0.01, t(96) = –0.07, p = .944) and were not significantly correlated with it in this model.

Table 10. T Test result

Predictor	B	SE B	β	t	p
Constant	12.474	2.466	—	5.06	< .001
X1 (Family Sociocultural Values)	–0.011	0.157	–0.008	–0.07	.944
X2 (Parent–Child Interaction)	0.453	0.116	0.455	3.90	< .001
X3 (Literacy Activities)	0.306	0.139	0.247	2.21	.030

The Effect of Family Socio-Cultural Values on Early Literacy Skills in Kindergarten Children

According to the t-test results in Table 10, the family's socio-cultural values (X) do not have a significant effect on children's early reading skills [t = -0.071, excepted value t-table (1.984); Sig. = 0.944 > 0.05). This finding indicates that family socio-cultural values do not significantly influence early literacy competence among children in the contexts of this study. Family values are patterns of beliefs, practices, and activities that interrelate parent and child in a literacy educational orientation. However, the results of this study suggest that these culturally internalized aspirations do not necessarily translate to actually reading at home. Although the values that families may possess could be good in terms of education, they may not practice them in ways that involve meaningful literacy activities like storytelling or dialogic conversation, or in terms of having the appropriate books for reading (Young et al., 2021).

This result does not establish that there is a discrepancy between parental beliefs and actual literacy practices, since the questionnaire did not include items that distinguish between value-endorsement and behaviour-generation. Interpretations of such a lack of consistency between belief and behaviour cannot, therefore, be made based on the current data. A more theoretically informed explanation would be that family socio-cultural values are not necessarily direct causes of early literacy skills. However, they do so through more proximal predictors like parent and child interaction and literacy in the home environment. This is in line with previous research that has found that for cultural orientations to be salient for literacy acquisition, they must be informed by concrete activity

(Gonzalez et al., 2022). It is therefore possible that the non-significant direct effect found in this study reflects an indirect or fully mediated pathway (Chaika & Chaika, 2024; Liu, 2023). However, it must be noted that the research design applied in this study was only focused on analyzing direct effects through multiple regression analysis and did not incorporate procedures for model mediation analysis. As a result, the presence of indirect relationships could not be examined empirically (Irajzad, 2022; Murniati, 2023).

This study also suggests a hypothesis: Other factors, such as the quality of the parent–child relationship and the intensity of family reading activities, may moderate the relationship. According to Becqué et al. (2021), effects were more likely to occur when family values are supported through verbal reinforcement and physical assistance with learning. This position corresponds to Bronfenbrenner's ecological systems theory, which states that family and cultural environments are microsystems that influence childhood development as they interact with their environment, according to Gerrard (2022). Family socio-cultural values can, therefore, serve as a mediating influence in supporting early literacy (p. 545). However, the relationship between family socio-cultural values and early literacy is not direct; it depends on the contextualized practices of living culture that contribute to the creation of a rich, involving, and language-oriented home literate environment (p. 1974).

The Impact of Parent-Child Interaction on Emergent Literacy Skills among Kindergarten Children

The results of the t-test in Table 10 indicate that parent-child interaction (X,) exerts a significant effect on early reading competence (t = 3.902 > t-table = 1.984; Sig. = 0.000 < 0.05). This study implies that the involvement of parent communication and relationships is a critical factor in the development of early literacy skills in children (Arace et al., 2021; Mas et al., 2022). Hot, contingent, and supportive interactions provide not only verbal content but also opportunities for meaning-making, self-expression, and the emergence of phonological sensitivity. Conversational interactions between parent and child are the primary conduit through which children learn about language structures and printed symbols in early literacy (Conica et al., 2023; Mendelsohn et al., 2020; Tura et al., 2023). Parents who ask questions, make comments, or read books aloud to their children. When parents respond to questions, make comments, and/or read stories, such talking helps children in language internalization and linking book text to their personal experiences, making comprehension and symbolic thought easier (Silinskas et al., 2020).

Socioculturally, in Indonesian homes, there can be a great deal of warmth but minimal purposeful literacy-based communication (Mulasih, 2022). Looking specifically at the situation in Pasuruan, this trend seems all the more evident in that many families are engaged in busy schedules of an industrial or agricultural nature, making it difficult to facilitate extensive language interactions in the home. This, in turn, means that emergent literacy will be influenced to a far greater extent by the visible behaviors on the part of parents, such as conversation interactions and book reading, rather than the values of the socio-cultural environment. That also explains why interaction (X,) and literacy activities (X*f*) were more dominant than general family values (X) in this study. These types of exercises are guided by Vygotsky's Zone of Proximal Development (Bodrova & Leong, 2017), which holds that literacy can be developed through social interaction with more advanced peers. Parent–child interaction, as a proximal process, takes place at the microsystem and thus directly and repeatedly influences children's cognitive and linguistic development from early in life. Socio-

cultural values, in contrast, are more distal influences that may not have strong effects unless mediated through these relatively proximal literacy experiences.

Furthermore, our only respondents in this study were mothers. Consequently, this result needs to be considered with caution. However, the generalisability of parent–child interaction is limited due to a lack of empirical data on fathers. Thus, it appears that fathers, too, practice very different interactive behaviors, which can have differing levels of contributions towards literacy development. Without data on the father, one can only hypothesize that the effect size of X2 reflects maternal interactions and may not show a strong family effect. This constraint has particular relevance in our dataset because it implies that the involvement of the mother in proximity interactions is more prominent.

Parent-child relationships, for instance, may also act as an affective link, thus promoting the students' confidence, enthusiasm, and positive attitude towards reading (Edwards, 2023; Zhang et al., 2024). Calm, loved-up kids will generally be interested in actively and playfully exploring reading and language. Eventually, in combination with technical reading and writing skills, this affective engagement translates into a lifetime interest in learning. Lastly, high quality interaction between parents and children is also characterized as contributing to early literacy skills because it provides a sociolinguistic environment which is rich in linguistic input, interactional involvement and functional exchanges, turning what might be a formal instructional task into lived intersubjective experience so that the "literacy embodies an identity, values and myths about behaviours which tie our lives together" (Croce & Moss, 1990).

The Impact of Early Literacy Activities on Kindergarten Children's Early Literacy Skills

The t-test results in Table 10 indicate that literacy activities (X*f*) affect early literacy skills (see Figure 3). Furthermore, this finding is supported by the bar graph, which emphasizes the important differences between the various aspects of early literacy, ranging from letter recognition to early writing, where the scores were 20-22% higher during the posttest compared to the pretest. Finally, this visual proof demonstrates that children performed overall better during early literacy tasks when they were more actively involved in structured literacy activities, consistent with the statistical analysis presented in Figure 3. The bar graph emphasizes this discovery, confirming important differences between letter recognition and early writing, where the scores were significantly higher during the posttest by a margin of 20-22% compared to the pretest, as presented in Table 10. The current research suggests that the greater a child's involvement in reading-related activities, the better their early literacy development (Brodin & Renblad, 2020; Maureen et al., 2020; Walker et al., 2022). Activities involving early alphabetic knowledge involve language- and literacy-promoting cognitive-theoretic and creative activities performed in groups or pairs, such as shared book reading, storytelling, singing rhyming songs, drawing simple symbols, and word play (Caldwell et al., 2020). Not only are these activities helpful in learning the letters and sounds, but they are also important opportunities for young children in being able to learn the social uses of language (communication and expression) (Yang et al., 2021).

These findings are in line with the theory of emergent literacy, which states that literacy is not a result of schooling but is developed through living with language and symbols (Fajriyah, 2018; Schachter et al., 2023). Literacy activities offer children a context in which they are able to integrate sounds, letters, and meanings through game-mediated exploration. This argument is also supported by experimental studies that show home literacy-based activities that encourage book sharing and story discussion promote the

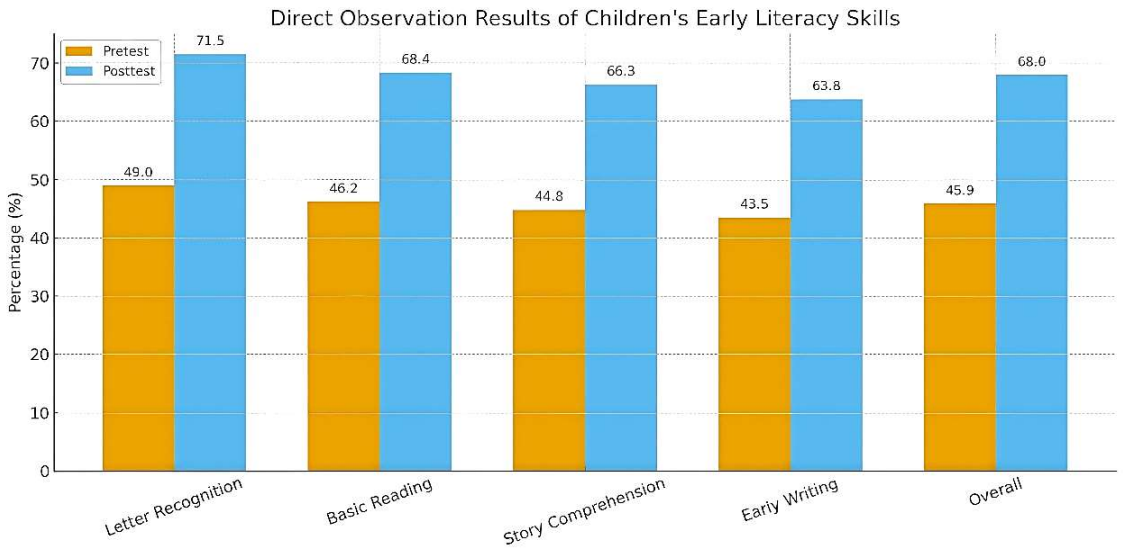

Figure 3. Direct observation result of children's early literacy skills

student's ability to understand and comprehend text, understanding, and motivation in reading (Kustiawan & Yafie, 2021; Yafie et al., 2021) in particular propose that children with more frequent interactive literacy experiences are better able to sample language from the input and now have higher vocabularies and text comprehension skills than those exposed infrequently. Literacy also enhances socioemotional development in children because narrative helps the child infer feelings in a story and understand its meaning (Sutama et al., 2023).

There is an increasing awareness of the importance of literacy-related activities as part of family environments, especially when formal schooling is emphasized as part of early education. Home-based literacy activities, such as story-narration in the L1, introducing vocabulary through interactive games, or scribbling and writing small words, activate children's linguistic knowledge and may help make up for deficits incurred from lower stimulation in school (Yafie et al., 2020). The findings lend strong support to the claim that literacy activities constitute a fundamental aspect in the early literacy development phases of young children, as the "amount" as well as "quality" of parent-child interaction is proven to have a crucial influence in shaping outcomes. Exciting, responsive, and interactive literacy events that young children have with their peers help them see themselves as part of their everyday lives, not as a learnable ability. Literacy activities, by association, are essential in developing readiness in children. These readiness aspects cover cognition, emotions, and the social aspects.

The Influence of Family Socio-Cultural Values, Parent-Child Interaction, and Literacy Activities on the Early Literacy Skills of Kindergarten Children

An F-test is used to determine whether all independent variables are related to the dependent variable in the regression model. This test assesses whether the model fits well in general, and so reflects how well it captures the relationship between variables. If the calculated F-value is greater than the critical(table) value of F, or it is less than sig. < 0.05, H€ is rejected. This means that independent variables exert a strong influence on the dependent variable.

Table 11. F test result

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	740.302	3	246.767	21.737	.000
Residual	1089.808	96	11.352	—	—
Total	1830.110	99	—	—	—

Note. Dependent Variable: Y; Predictors: X1, X2, X3

Results from the ANOVA indicate that the regression equation with variables X1, X2, and X3 significantly influences the dependent variable Y together. From the result, it appears that the equation is statistically significant, with $F(3, 96) = 21.74$, $p < .001$. This shows that the regression equation can be utilized in the prediction of the dependent variable. Thus, the three independent variables collectively contribute significantly to explaining the variance in Y. Rather than suggesting an exceedingly high influence, the findings indicate that the combined contribution of family sociocultural values (X), parent–child interaction (X,), and literacy activities (X*f*) reflects a moderate to strong collective effect on children's early literacy skills, consistent with the magnitude of explained variance reported earlier. In other words, this triple effect has been profound in the roles they have played to influence the early literacy ability of the children. Theoretically, this result has shown that the early development of literacy skills is dependent on the interconnected associations between the culture, social experiences, and the engagement of children in literacies. As per the model for the ecological system of development for children, as explained by Bronfenbrenner (1979) (Gerrard, 2022), the engagement of gifted children in early literacies resulted from the parental microsystem as well as the cultural macrosystem.

Family moral and cultural values (X), Family socio-cultural values influence the norms and culture around which all parental positions on literacy are built. Among children whose families place a high value on learning and education, literacy is something they receive moral, emotional, and material encouragement to engage with from an extremely young age. While the direct effect of X was not statistically significant, the simultaneous analysis indicates that cultural values do have an indirect effect mediated by parental behaviors and quality of parent-child interaction. This is in accordance with studies such as (Tadjuddin et al., 2019) and (Yafie et al., 2020) that suggest that family cultural leadership will affect the prevalence, as well as the attributes of home literacy activities. Here, the parent–child interaction (X,) is a key driver of this model, as warm, responsive, and nurturing communication creates opportunities for children to understand language, put ideas into words, and connect real-world experiences to symbolic forms. According to Vygotsky, the learning processes of reading and writing occur in the zone of proximal development, where adults or more able peers scaffold emerging literacy skills (Samawi et al., 2025).

Meanwhile, materiality-related (X*f*) manifests as the textual medium in which family values and practices appear. Collaborative literacy activities – inter-glyphic narratives or stories, language play, make-and-draw messages – serve not only to develop linguistic capacity but also to build emotional confidence in clear social interactions. Regular involvement in home literacy activities (Kaya & Tortop, 2020; Soyoof et al., 2024) was linked with significant improvements in the in phonological awareness, reading comprehension, and readiness for reading. When all three elements function in a coherent, integrated triad, they form a strong HLE that is perceived by children as an activity woven into the fabric of

their social life rather than a formal exercise (Walker et al., 2022; Wang et al., 2024). This observation supports the findings of the Bar & Shaul (2021) study cited above, which stressed that the best possible development of early literacy skills involves the development of these skills in relation to familial cultural context and literacy experiences. Hence, the possession of family values by themselves will not in any way ensure a high level of literacy in relation to the applications involved. Practical applications have to target the goal with precision. Early childhood centres should implement weekly home-school literacy routines that mirror high-impact practices proxying for X, . Teachers should distribute individualised literacy task cards for families to perform two to three materials-based activities each week, corresponding to the strong main effect of Xf . Monthly parent micro-workshops on dialogic reading should be given priority, since exposure alone is not effective. A simple home literacy log should be implemented to measure the frequency of X, and Xf activities with children and to promptly identify those at risk of low levels of home reading. These focused solutions correspond to the statistically validated predictors in the model, leading to interventions that are both feasible and consistent with the context and evidence-based.

■ CONCLUSION

The present study intended to investigate the role of family socio-cultural values, parent–child Quality of parent involvement, and cultural values and activities at home in supporting early literacy among kindergarten children in Pasuruan. The findings show that parent–child communication and home literacy activities are strong indicators of early literacy skills, whereas family socio-cultural values do not directly predict in our model. The results indicate that younger children tend to develop more home- and daily-based reading readiness than cultural reading readiness. Young children's emergent literacy development underscores the significance of everyday relational communication with others in accessible literacy activities as groundwork for how young children acquire emergent literacy skills while dispelling the myth that early reading is constructed individually at a cognitive level.

There are a number of implications that emerge from the findings. In practice, preschools and school centres should work together with families to develop weekly home-based literacy activities that focus specifically on interactional practices (e.g., dialogic reading, guided conversation routines) and activity-based engagement (e.g., letter play, shared writing). Similar literacy play materials kits based on the variables found to be significant predictors in this study could also be developed and supplied by teachers. The study has theoretical implications for sociocultural and ecological theories, indicating that literacy develops from proximal interactional and activity experiences within the microsystem. However, this research has limitations. The use of mother-reported data alone limits researchers' knowledge of fathers' roles; a cross-sectional approach does not allow for the identification of developmental patterns; and the lack of significant findings in cultural values may reflect measurement error rather than substantial influence. These issues impact the generalizability of our findings and suggest a need for further development in future research. Future researchers can look to drawing from data available from the mother and father, and exploring the growth in the rate of literacy gains in a longitudinal manner, as a way to further develop measures that tap the actual realization of culture in literacy practice. Such advances would allow for a deeper exploration of how family contexts influence early literacy development across different socio-cultural settings.

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