

LEARNING LOSS: WHY IS COLLABORATION BETWEEN EDUCATORS AND PARENTS IMPORTANT?

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Abstract. The condition of learning loss has already occurred or been experienced by students in suburban or rural areas. While it cannot be denied that this phenomenon also occurs in urban areas, its frequency is not as high as in suburban and rural regions. This research is conducted in the form of an ex-post facto study, which means data collection is carried out after the event being studied has occurred. The subjects of this research involve 15 teachers, comprising 2 civil servants (PNS) and 13 contract teachers (honorar). Grade 5 has a total of 20 students with diverse abilities. The data collection methods used in this research include observation, interviews, questionnaires, and tests. The analytical technique applied in this study is based on the assumption of linearity using regression linearity testing. The research results indicate a significant influence between the roles of educators and parents in addressing learning loss, as indicated by significance values smaller than 0.05. Furthermore, the

calculation results show that the combined influence of the variables of educators' and parents' roles is 0.879. The inactivity of educators and parents in the learning process can lead to learning loss, which in turn negatively impacts the quality of education. Therefore, effective communication, collaboration, cooperation, and coordination are necessary to ensure that the education process remains of high quality.

INTRODUCTION

Education is the right of every learner. Every individual has the right to receive quality education without worry. Good education provides opportunities for learners to develop their potential, acquire knowledge and skills, and helps them become participative and productive citizens in society. This is undoubtedly the hope of everyone, to receive quality education. However, there are still situations where the opportunity to receive education is not accessible to learners. Many children are still missing out on their learning opportunities, experiencing setbacks in academics, including knowledge, attitudes, and skills. This phenomenon is commonly known as learning loss. The phenomenon of learning loss, or the loss of learning opportunities, has become more apparent and serious during the COVID-19 pandemic (Angrist et al., 2021; Ardington et al., 2021; Donnelly & Patrinos, 2021; Engzell

et al., 2021; Kuhfeld et al., 2020; Sabates et al., 2021; Vit, 2023). The pandemic has affected the education system worldwide, including in Indonesia, with school closures and difficulties in face-to-face learning, which have undoubtedly impacted the loss of opportunities for learners to receive proper education.

In fact, the condition of learning loss has already occurred or is experienced by students in rural or remote areas. This does not mean that it does not occur in urban areas, but the frequency is not as high as in rural and remote areas. One of the regions experiencing a significant level of learning loss is Papua. This can be seen as there are still several areas or villages in Papua where illiteracy persists (Sangadji et al., 2021; Tahang et al., 2019). According to the report from BPS (Central Bureau of Statistics) in West Papua in 2018, the Arfak Regency had the highest illiteracy rate in West Papua Province among the productive age group (15-59 years), with a total of 3,447 individuals (Sonbait et al., 2020). The highest school participation rate occurred in the age group of 13-15 years, reaching 97.35%. This means that out of every 100 individuals aged 13-15 years, 97 of them are attending school, and only 3 are not attending. There has been a decline in the pattern of School Participation Rate (APS) across different age groups (Sinag & Hasanah, 2022).

There are several common factors that can influence the occurrence of learning loss in education. Firstly, the lack of adequate educational access, such as a shortage of schools or sufficient educational facilities, can hinder students' learning opportunities (Noviantari & Faridhoh, 2021; Nur et al., 2019). Second, inadequate teaching quality and curriculum, including underqualified teachers, irrelevant teaching materials, and ineffective teaching methods, can affect students' understanding and motivation (Haser et al., 2022a; Jojor & Sihotang, 2022). Thirdly, economic factors like poverty can impact students' access to educational resources (Hallin et al., 2022), such as books and equipment, which can contribute to learning loss. Additionally, social and cultural factors, such as cultural norms or barriers that do not support education, as well as health issues or specific student conditions, can also play a role in influencing learning outcomes. Lastly, the lack of family support in promoting education and their involvement in their child's education can also negatively impact students' academic progress (Teristonia et al., 2022). Therefore, it is essential to pay attention to these factors and promote collaborative efforts between the government, educational institutions, families, and the community to address learning loss and improve the overall quality of education.

Several studies have been conducted related to learning loss, the role of parents, and the role of educators in education, particularly during the COVID-19 pandemic. These studies shed light on how parents and educators can influence student learning and address learning loss. Among these studies, one focused on understanding the dynamics of learning loss from the perspectives of both teachers and parents (Pratiwi, 2021). Another study delved into the role of parents in online learning (Nida & Kuntari, 2021), while a separate research project examined the role of parents in facilitating communication in online learning environments (Batoebara & Hasugian, 2021). Additionally, a study explored the financial support provided by parents within families (Nurhab, 2018), highlighting the significant role parents play in a student's success in both learning and work (Sulistiobudi & Kadiyono, 2023). Furthermore, there was research on the teacher's role in addressing students' learning difficulties (Munawwaroh & Fawaid, 2020) and investigations into how teachers and parents collaborate to address learning difficulties, particularly in mathematics, among slow-learner children during the COVID-19 pandemic (Handayani et al., 2021). Lastly, a study examined the roles

of teachers and parents, highlighting the challenges and solutions in online learning during the COVID-19 pandemic (Hakim & Azis, 2021). These studies collectively contribute to our understanding of how to enhance education quality and support students in navigating the challenges of learning in uncertain situations, such as a pandemic.

The explanation provided indicates that learning loss is caused by factors such as a lack of learning support, suboptimal teaching practices, and limited learning facilities. These factors involve the roles of educators and parents in creating a conducive learning environment. The research studies discussed offer insights into the critical roles that parents and educators play in the learning process, serving as motivators for students and providers of learning resources. Based on these findings, research aimed at better understanding the importance of collaboration between educators and parents in addressing learning loss is conducted. This research differs from previous studies in that it will focus more on the collaboration between the roles of educators and parents in the phenomenon of learning loss. The hope is that this research can provide insights into how the collaboration between educators and parents can support the success of students

METHOD

This research is conducted in the form of an ex-post facto study, meaning that data collection takes place after the events under investigation have occurred. Both the independent and dependent variables have occurred prior to the initiation of this study. The ex-post facto approach is used in this research for two main reasons: (1) to test the relationships among the variables present in the research subjects, and (2) to investigate whether the previously occurred conditions can lead to differences in the behavior of the research subjects. In terms of the approach, this research employs a quantitative approach with a causal correlational design (Sugiono, 2015). This approach aims to identify cause-and-effect relationships between the correlated variables in this study. The research is carried out at one of the elementary schools, namely YPPK Santo Agustinus Erambu. This elementary school has a total of 15 teachers, consisting of 2 civil servants (PNS) and 13 contract teachers (honorer). Grade 5 comprises 20 students with diverse abilities. The selection of Grade 5 students is based on their age, as they have reached the stage of abstract thinking and formal operational development. The choice of Grade 5 students heading towards the formal operational stage is highly relevant. At this stage, students have the ability to comprehend abstract concepts and engage in more critical thinking. This means they can participate in research involving a deeper understanding of complex concepts, analysis, reasoning, and abstract problem-solving. By involving Grade 5 students who have reached the formal operational stage, the research can explore their understanding of complex concepts and analyze their ability to apply abstract thinking in an educational context. Furthermore, the research can also help identify the extent to which students have developed their understanding of more complex subject matter, providing essential information for teachers to design learning strategies appropriate for the students' cognitive developmental stage.

The data collection methods used in this research include observation, interviews, questionnaires, and tests. Observation is employed to understand the conditions related to learning loss, the roles of parents and educators within the research context. This includes observing the learning environment and processes that contribute to learning loss, both inside and outside the classroom. In the classroom, observations focus on teacher-led teaching processes and student learning behaviors. Interviews are another research method used to gain insights into the conditions of learning loss, the roles of parents and educators in the learning process. Interviews are conducted to capture perspectives and opinions that

may not be accessible through questionnaires. Additionally, interviews provide an opportunity to gather input from individuals who are not subjects of the research but are part of the school community. Questionnaires are distributed to measure the roles of teachers and parents in the learning process. The questionnaire completed by teachers aims to assess their responsibilities towards students. The questionnaire is structured around five indicators, including lesson planning, teaching processes, evaluation of learning, student guidance, and teacher presence. Each of these indicators is represented by four statements, resulting in a total of 20 statements. On the other hand, the questionnaire for parents aims to evaluate their role in the learning process, covering indicators such as providing facilities, accompanying and guiding students, and involvement in school programs. This questionnaire comprises 15 statements derived from these three indicators. The final data collection method is testing, used to measure learning loss. Numeracy literacy is chosen as the indicator for the test, given that mathematics is a fundamental subject in education. The test is designed to align with the literacy indicators developed by the Ministry of Education and Culture, which consist of six indicators: estimating and calculating with whole numbers, using fractions, decimals, and percentages, recognizing and using patterns and relationships, employing spatial reasoning, using measurements, and interpreting statistical information. In this study, these six indicators are translated into 20 test items. Overall, this multi-method data collection approach allows for a comprehensive exploration of learning loss, the roles of parents, and the roles of educators in the educational context under investigation.

Prerequisite testing in multiple regression analysis involves a series of steps that must be taken before proceeding to the main hypothesis testing. This is important to ensure that the data used meets the necessary statistical assumptions for the accurate interpretation of multiple regression analysis results. Some common prerequisite tests conducted in multiple regression analysis include: Normality Test: This test is used to check whether the distribution of errors (residuals) in the multiple regression model follows a normal distribution. One commonly used method is the Kolmogorov-Smirnov test. Multicollinearity Test: This test was conducted to examine whether there is multicollinearity among the independent variables (X_1 and X_2). Multicollinearity occurs when two or more independent variables in the model have high correlations with each other. This test can be performed by looking at the correlation coefficients among the independent variables or by using tolerance and VIF (Variance Inflation Factor). Heteroskedasticity Test: This test aims to determine whether the variance of errors (residuals) in the multiple regression model is constant or not. If heteroscedasticity is present, then the multiple regression model does not meet the assumption of homoscedasticity, which can affect the results of statistical tests. This test can be conducted using the Breusch-Pagan or White test. Autocorrelation Test: This test is used to examine whether there is autocorrelation in the errors (residuals) in the multiple regression model. Autocorrelation occurs when errors in the model are correlated with errors in previous or subsequent periods. This test can be performed using the Durbin-Watson test. Once all prerequisite tests have been conducted and the data meets the required assumptions, then you can proceed to the main hypothesis testing, such as testing the significance of regression coefficient and conducting the determination test, to analyze the relationship between the variables of educator's role, parental role, and learning loss.

RESULTS AND DISCUSSION

RESULTS

The analysis results indicate that the scores of each variable, the educator's role, and the parent's role in the learning process, fall into the relatively low category. The average score for the educator's role variable is 56.56, which is categorized as relatively low, while the

parent's role has an even lower score of 42.67. This condition suggests significant support for the high level of learning loss that has occurred. The high level of learning loss is reflected in the average learning loss score of 75.87, which falls into the high category. To further strengthen these results, a hypothesis analysis is conducted before performing a hypothesis test, and an initial test is carried out first. The first preliminary test is the Normality test. The Normality test conducted in this study uses the Kolmogorov-Smirnov test. The analysis results indicate that the data follows a normal distribution, as the significance value (sig) is greater than 0.05. For more detailed information, please refer to Table 1. After fulfilling the normality test, the next step is the multicollinearity test.

Tabel 1. Normality Analysis

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Learning loss	0.103	20	0.200*	.975	20	.860
Peran_Orang_Tua	0.142	20	0.200*	.947	20	.318
Peran_Pendidik	0.209	20	0.200*	.935	20	.190

This test was conducted to examine whether there is multicollinearity among the independent variables (X1 and X2). Multicollinearity occurs when two or more independent variables in the model have high correlations with each other. This test can be performed by looking at the correlation coefficients among the independent variables or by using tolerance and VIF (Variance Inflation Factor). The analysis results show no signs of multicollinearity, as evidenced by the tolerance value of 0.99 and VIF of 1.07. This indicates the absence of multicollinearity, and the hypothesis test can proceed. The next analysis is the Heteroskedasticity Test: This test aims to determine whether the variance of errors (residuals) in the multiple regression model is constant or not. If heteroscedasticity is present, then the multiple regression model does not meet the assumption of homoscedasticity, which can affect the results of statistical tests. This test can be conducted using the Breusch-Pagan or White test. The analysis results show that there is no heteroskedasticity, as indicated by the Sig. values for each variable, which are all > 0.05, namely 0.89 for the educator's role and 0.78 for the parent's role. The next test is the Autocorrelation Test: This test is used to examine whether there is autocorrelation in the errors (residuals) in the multiple regression model. Autocorrelation occurs when errors in the model are correlated with errors in previous or subsequent periods. This test can be performed using the Durbin-Watson test. The analysis results show that the Durbin-Watson value (d) is 1.760, which is greater than the upper limit (dU) of 1.100 and less than 2.24. This means that there is no autocorrelation present. The preliminary tests have indicated the suitability for regression analysis. The regression results are presented in Table 2.

Tabel 2. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1302.518	2	651.259	12.028	.001 ^b
	Residual	920.432	17	54.143		
	Total	2222.950	19			

a. Dependent Variable: Learning_loss

b. Predictors: (Constant), Peran_orang_tua, Peran_pendidik

Based on Table 2, the ANOVA results indicate that the Sig value in the F-test is 0.001, with an F value of 12.028. Since the Sig value is < 0.005 , it suggests that the combined roles of education and parental involvement have a simultaneous impact on learning loss. Furthermore, in Table 3, the model summary shows that the coefficient of determination, or R-squared, is 0.586, which is equivalent to 58.6%. This percentage supports the existence of a significant influence between the roles of educators and parents collectively on learning loss. From these calculations, it can be inferred that 41.4% is influenced by other factors besides these two variables. Additionally, concerning the partial effects, the variable of the educator's role has a significant impact on learning loss, as indicated by the Sig value, which is smaller than 0.05, specifically 0.000. Similarly, the role of parents also has a significant impact, with a Sig value smaller than 0.05, which is 0.003. In conclusion, the research results suggest a significant relationship between the roles of educators, parental involvement, and learning loss. To reduce the high rate of learning loss, there needs to be effective collaboration between educators and parents.

Tabel 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.765 ^a	.586	.537	7.35820

DISCUSSION

The research findings reveal a significant occurrence of learning loss within the school's educational process. This is evident from the average test scores given to students, where 75% of students have not yet mastered numeracy literacy, particularly in their ability to interpret statistical information. Students face considerable difficulties in interpreting statistical information, and their numeracy literacy remains notably low. Of concern is the fact that students struggle to answer questions that go beyond previously provided examples. Allowing this situation to persist would undoubtedly have adverse effects on the quality of education. Numeracy literacy is defined as the knowledge and skills to use various numbers and symbols related to basic mathematics to solve practical problems in everyday life, analyze information presented in various forms, and interpret the results of analysis for prediction and decision-making (Mahmud & Pratiwi, 2019). Furthermore, students' numeracy skills fall into the low category, which significantly impacts their preparedness for everyday activities (Nurjanah et al., 2022). This, in turn, could have substantial implications for the nation as a whole. A higher level of literacy within a nation directly correlates with the nation's ability to collaborate effectively in the global arena (Putri Utami & Muzakki, 2020). In this context, it indicates that students are experiencing academic setbacks due to extended gaps or discontinuities in education, a phenomenon commonly known as learning loss (Hevia et al., 2022; Juwita et al., 2022; Muzdalifa et al., 2022; Pratiwi, 2021). Moreover, learning loss represents a scenario where there is a decrease in the time spent learning by students (Alban Conto et al., 2021; Angrist et al., 2021; Ardington et al., 2021). This situation is inevitably linked to the role of educators in the learning process.

The research findings indicate that the role of educators plays a significant role in contributing to learning loss. This is evident from both statistical analysis and observation. When examining the readiness of teachers to conduct effective teaching, it becomes apparent that there is a need for special attention. Some teachers do not create lesson plans that are suitable for the specific circumstances or situations, and there are even teachers who do not

prepare any lesson plans at all. What's concerning is the low attendance of some teachers, with some present for only 10 out of 20 working days. This condition undoubtedly results in a loss of learning time for students. As we know, the role of teachers in education is crucial. Teachers have various roles, including nurturing students' natural curiosity, shaping their character, helping them overcome learning difficulties, and fostering their independence. These roles are critical for producing high-quality students. However, in this research, it is clear that the role of teachers is not yet optimal, contributing significantly to learning loss. To address this issue, the role of school principals is essential in enhancing teacher accountability. School leadership has a profound impact on students' knowledge development, teacher performance, and parental participation in school activities. In this case, the school leadership appears to be suboptimal, which, in turn, affects the overall quality of the school.

The research findings highlight that learning loss is primarily attributed to the limited involvement of parents in their children's learning process. In education, we acknowledge the pivotal role that parents play for students (Assefa et al., 2022). Parents' role extends to providing financial support within the family, which, in this context, translates into parents serving as providers of learning resources for their children. Effective parental involvement has the power to foster student motivation (Fatimah, 2020), shape their character (Batoebara & Hasugian, 2021), and instill habits of reading and writing, which are critical for literacy development (Muslimin, 2018). In essence, parental involvement in a student's learning process significantly influences the student's daily behavior (Koşkulu-Sancar et al., 2023). Parents also play a substantial role in a student's success in both learning and future endeavors (Sulistiobudi & Kadiyono, 2023). In this research, it is evident that parental involvement is quite low, which can be attributed, in part, to the socioeconomic status of the parents. Parents may not necessarily be unwilling to provide the best for their children but may prioritize what they perceive as more immediate needs over their children's education. This perspective often centers on securing immediate necessities, such as food, over the importance of their children's education. If this condition persists, it can undoubtedly have long-term repercussions on the quality of education.

Several studies that align with this research indicate that learning loss occurs due to the limited face-to-face interactions between educators and students, leading to student boredom (Rejeki, 2022). Other research emphasizes that learning loss can result from the lack of quality and adequate facilities for effective teaching and learning (Noviantari & Faridhoh, 2021). Findings from studies also point out that learning loss is influenced by factors related to the educational environment, curriculum content, teaching methods, and educational resources (Jojo & Sihotang, 2022). Additionally, research reveals that learning loss is prevalent in various countries, with reading skills often presenting a significant challenge compared to other subjects, emphasizing the importance of literacy and numeracy (Rhamdan et al., 2021). Furthermore, studies suggest that limited teaching methods used by mathematics educators, family socioeconomic status, and a lack of collaboration with teachers are among the causes of mathematics learning loss (Haser et al., 2022b). These findings collectively underscore the crucial roles of both educators and parents in the student learning process. Effective collaboration between teachers and parents is essential to produce high-quality students. Communication, collaboration, teamwork, and coordination between these two key stakeholders are vital components for ensuring a quality education process.

CONCLUSION

The results of the analysis indicate that the scores for each variable of the educator's role and the parent's role in the learning process are in the fairly low category. The average score for the educator's role is 56.56, which falls into the fairly low category, while the parent's role has an even lower score of 42.67. This condition indicates support for the high level of learning loss that is occurring. The high level of learning loss is reflected in an average learning loss score of 75.87, which falls into the high category. This shows that there is a significant influence between the educator's and parent's roles in learning loss. The low involvement of educators and parents in the learning process will lead to learning loss. This condition will undoubtedly also have an impact on the quality of education. Therefore, it is necessary to have good communication, collaboration, cooperation, and coordination to ensure that the education process is of high quality as well.

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