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# Development of School Management Information System and Learning Management System at RA-Al Hida

**Hapsari Widayani[1], Rudi Bratamanggala[2]**
[1]Doctoral Program in Economics, Borobudur University, Indonesia, hapsariw17@gmail.com
[2]Doctoral Program in Economics, Borobudur University, Indonesia,
rudi_bratamanggala@borobudur.ac.id

Corresponding Author: hapsariw17@gmail.com[1]

**Abstract:** The objectives of this research were to create a web-based computerized system, fund internet installation costs, conduct outreach and analyze the contribution of the school information system to RA Al-Hida's progress, improve the quality of education for each student, and increase global prosperity by improving the standard of living for teachers and staff. Data collection methods include observation, interviews, and surveys. The methods used in developing this system include system development and implementation, as well as system testing and use. The trial implementation of this system was carried out for 10 days. The test reliability of the system, a survey was conducted using Google Forms with 4 questions and the rating scale of 1-5. The subjects were teachers and parents, consisting of 3 teachers and 3 parents. The results of this study are the creation of an integrated and comprehensive school management information system and learning management system that can improve the quality of education for students, teachers and parents understand the use of the system, and improve the standard of living for teachers and staff, thereby creating global prosperity.

**Keyword:** Education, Global Prosperity, Learning Management System, School Management Information System, Quality of Education

## INTRODUCTION

Education in Indonesia consists of several levels, according to Undang-Undang Nomor 20 Tahun 2003 concerning the Indonesian education system are early childhood education, primary education, and senior secondary education. One of the key concerns in Indonesian education is early childhood education. Early childhood education is a crucial foundation for developing the quality of human resources in the future.

Early childhood education system is also relate to the learning processes that are carried out. Learning for young children is usually conducted through direct learning methods or face-to-face (offline). This is because the absorption of knowledge by young children is still very limited, although their desire to learn is very high. However, offline intensive learning activities have changed with the occurrence of the Covid-19 pandemic.

Pandemic Covid-19 brought about significant changes in the education system, where 1.6 billion students in over 190 countries and across all continents were affected by lockdowns. This lockdown closed educational institutions worldwide, affecting approximately 94% (Rakhmetov et al., 2022). The ongoing pandemic for nearly a year has given rise to various issues such as: limited understanding of the material, difficulties in fostering learning interests, arranging study time due to parents' work, parents being impatient in accompanying their children's learning, insufficient knowledge to use gadgets, and the difficulty of accessing the internet (Wardani & Ayriza, 2020). With the existence of this pandemic, the learning and teaching process requires a user-friendly integrated system that can be conducted remotely.

Beside of pandemic Covid-19, some preschool still face several issues with their educational management system. The problems include a still conventional, document-based management system, reliance on internet installation costs, limitations in the teachers' or school staff's ability to use technology, and a lack of comprehensive monitoring of student progress. The conventional document-based system leads to delays in information delivery, lack of data integration, and low accuracy in children's development reports. This results in reduced decision-making effectiveness and parental involvement in the education process.
To answer this issue, it is necessary to develop a comprehensive school management and e-learning system based on a learning management system (LMS) designed with digital technology.

School management information system is a support for management activities such as planning, organizing, actuating, and controlling in order to support the achievement of operational functions' goals and objectives in educational organizations (Aryadi, 2023). A web-based school management information system is an information technology tool designed to support educational administration activities more efficiently and structurally (Wahyuni, et.al, 2025).

Learning Management System is a web-based software program for managing, documenting, monitoring, reporting, administration, and distribution of educational content, training programs, technical manuals, instructional videos, or digital library materials, as well as learning and development projects (Shymkova et.al., 2021). On the other hand, the Learning Management System (LMS) is a technological development as a learning medium, which is one of the efforts to provide quality educational services (Fa'iziyah, 2023).

The second system must be able to integrate the main school functions, starting from digital attendance, student progress reporting, two-way communication between teachers and parents, up to academic data management and administration. A web-based and application approach allows for quick, transparent, and real-time access for all stakeholders, thereby significantly improving the quality of education.

Improving the quality of education can support the achievement of sustainable development goals (SDGs). The fourth goal of sustainable development regarding the quality of education is to promote inclusive and equitable quality education and to encourage opportunities for lifelong learning for all. The realization of this goal requires complex efforts and consistent interventions in various fields of education (Erlina, 2021).

Dengan the improvement of the quality of early childhood education, it is expected that there will be an increase in the quality of human resources, especially in soft skills and hard skills, which will contribute to economic growth, poverty alleviation, and the achievement of global prosperity.

One of the object research is a preschool that has issues such as still using manual documents, being constrained by internet installation costs, limited ability in using technology by teachers and parents, and a lack of comprehensive monitoring of student development is RA Al-Hida. RA Al-Hida is an early childhood education institution that

operates within a professional scope, with learning and teaching activities that always emphasize student well-being, character development, spiritual intelligence, and intellectual growth. Therefore, it requires a comprehensive system development.

Based on the description above, the objective of this research is to develop a web-based computerized system, aiming to reduce the cost of internet installation, carry out socialization and analysis of the contribution of the school information system to ensure that RA Al-Hida continues to progress and enhance global prosperity.

## METHOD

Data collection methods include observations, interviews, and surveys conducted on teachers, school employees/operators, and parents in order to develop a system according to school needs. The methods for developing this system include the system development and implementation stages, as well as the system testing and use stages. Implementation of the system that has been created is carried out for 10 days. To test the reliability of the system being built, a survey was conducted using Google Form with the number of questions being 4 questions with a rating scale of 1-5. The objects are teachers and parents, total of 3 teachers and 3 parents of students.

## RESULT AND DISCUSSION

This section presents the empirical findings from the panel data regression analysis. It is divided into two main parts: the first examines the factors determining broiler production, and the second analyzes the economic contribution of this production to the regional economy.

### Determinants of Broiler Production

For the first model, which investigates the determinants of broiler production, a series of specification tests were conducted to select the most appropriate estimation technique. The Chow test and Hausman test both yielded statistically significant results, indicating that the Fixed Effect Model (FEM) was the most suitable for analyzing the data. The FEM accounts for unobserved, time-invariant heterogeneity across the five provinces, thereby providing more robust and unbiased estimates. The results of the FEM regression are summarized in Table 1.

**Table 1.Panel Regression Results for Determinants of Broiler Production (FEM)**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Number of Farmers ($X_1$ ) | 29968.71 | 4697.277 | 6.380017 | 0.0000 |
| Price ($X_2$ ) | -4.386978 | 0.972848 | -4.509419 | 0.0000 |
| Bank Credit ($X_3$ ) | 4.014843 | 1.617109 | 2.482729 | 0.0145 |
| Domestic Investment ($X_4$ ) | 1.370119 | 0.832683 | 1.645427 | 0.1027* |
| Constant (C) | -52749.16 | 24002.94 | -2.197612 | 0.0301 |
| **Model Statistics** | | | | |

| | | | | |
|---|---|---|---|---|
| R-squared | 0.937315 | | | |
| Adjusted R-squared | 0.932797 | | | |
| F-statistic | 207.4693 | | Prob(F-statistic) | 0.0000 |
| *Note: Significant at the 10% level.* | | | | |

The regression results show an Adjusted R-squared of 0.9328, indicating that approximately 93.3% of the variation in broiler production across the five provinces can be explained by the independent variables in the model. The F-statistic is highly significant ($p<0.001$), confirming the overall validity of the model.

The coefficients for the Number of Farmers ($X_1$ ), Bank Credit ($X_3$ ), and Domestic Investment ($X_4$ ) are positive and statistically significant. The coefficient of $X_1$ (29968.71) implies that, on average, the addition of one core farmer corporation is associated with an increase in annual production of nearly 30,000 tons. This finding confirms the hypothesis that expanding the base of core producers directly translates to greater production capacity. Similarly, the positive coefficients for Bank Credit and Domestic Investment underscore the critical role of capital in this industry. As a capital-intensive sector, access to financing for operational costs (feed, chicks) and investment (modern housing, equipment) is a fundamental prerequisite for growth. An increase in credit and domestic investment provides the necessary fuel for farmers to scale up their operations and improve productivity.

The most striking result from this model is the coefficient for Price ($X_2$ ), which is -4.387 and highly significant. This finding is counter-intuitive, as it contradicts the standard Law of Supply, which posits that higher prices should incentivize producers to increase output. This anomaly points not to an economic paradox, but rather to a deep-seated structural market failure within the industry. The dissertation repeatedly highlights the "unequal partnership" where core companies function as both input suppliers and output buyers. This dual role creates a perverse incentive structure. When the final market price for broilers increases, the core company can capture the additional margin by raising the prices of the inputs it sells to its plasma farmers (e.g., day-old chicks, feed). Consequently, the higher market price does not translate into higher profits for the plasma farmers who are undertaking the actual production. Instead, their margins are squeezed from the input side, effectively disincentivizing any expansion of production. Therefore, the negative price coefficient is not measuring a typical supply response; it is an empirical manifestation of the power asymmetry in the core-plasma relationship. It quantifies the extent to which price signals are distorted by a market structure that penalizes, rather than rewards, the primary producers in response to favorable market conditions.

**The Economic Contribution to Gross Regional Domestic Product**

For the second model, which assesses the impact of broiler production on regional economic output, the specification tests (including the Hausman and Breusch-Pagan LM tests) indicated that the Random Effect Model (REM) was the most efficient and appropriate estimator. The REM is suitable when individual-specific effects are assumed to be random and uncorrelated with the independent variables. The results of the REM regression are presented in Table 2.

**Table 2. Panel Regression Results for the Impact of Broiler Production on GRDP (REM)**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Broiler Production ($\hat{Y}$) | 0.026927 | 0.000804 | 33.49733 | 0.0000 |
| Constant (C) | 359.9530 | 498.8350 | 0.721587 | 0.4720 |
| **Model Statistics** | | | | |
| R-squared (weighted) | 0.905449 | | | |
| F-statistic | 1130.004 | | Prob(F-statistic) | 0.0000 |

The results in Table 2 show a highly significant and positive relationship between broiler production and the GRDP of the livestock sub-sector. The coefficient for Broiler Production is 0.026927, with a p-value of 0.0000. This indicates that for every one-ton increase in broiler production, the regional GRDP from the livestock sector is expected to increase by approximately 0.027 million Rupiah (or 26,927 Rupiah), holding other factors constant.

This finding empirically validates the role of the broiler industry as a significant contributor to regional economies. The magnitude of this impact can be understood through the sector's function as a high-velocity economic multiplier. The dissertation notes the remarkably short production cycle for broilers, typically between 28 to 32 days. This rapid turnover means that capital is injected, circulated, and regenerated within the local economy at a much faster pace compared to other agricultural sub-sectors with longer cycles, such as cattle ranching or perennial crops. This high velocity creates powerful forward and backward linkages. An increase in broiler production stimulates immediate demand in upstream industries, including feed mills, hatcheries, and veterinary services. Simultaneously, it fuels activity in downstream industries such as slaughterhouses, food processing plants, logistics, and retail. Each of these linked activities generates its own value-added, which is captured in the aggregate GRDP figures. Therefore, the significant impact on GRDP is not merely a reflection of the direct value of the poultry itself; it is amplified by a rapid and continuous cycle of economic activity that permeates the entire regional value chain, making the broiler sector a particularly potent engine for short-term economic growth.

## CONCLUSION

According the discussion above, it can be concluded that early childhood education is a very important foundation in the world of education. Therefore, by improving the quality of education through the creation of this web-based application, various problems can be solved such as making learning more interactive and comprehensive, ensuring data accuracy, accelerating the administrative process, and teachers and parents understanding digital literacy. The implementation of this system is in line with the achievement of the fourth Sustainable Development Goals (SDGs) regarding the improvement of education quality, which ultimately contributes to the enhancement of students' soft skills and hard skills, economic growth, and global prosperity.

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