

DEVELOPMENT OF A LEARNING MANAGEMENT SYSTEM FOR LEARNING PARTNERSHIPS IN PANCASILA EDUCATION BASED ON THE DEEP LEARNING FRAMEWORK AT THE JUNIOR HIGH SCHOOL LEVEL

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Abstract

This study develops a learning management system for Pancasila Education grounded in a deep learning framework to strengthen partnerships among students, teachers, parents, and communities. A design-based research approach guided iterative analysis, co-design, development, and reflection with junior high school participants in Bandung, using questionnaires, field observations, literature review, and focus group discussions. The partnership-oriented model supported a deep understanding of Pancasila values and enabled collaboration among schools, families, and communities through an online platform that removed spatial and temporal constraints. Partnerships enhanced guidance, feedback, and motivation because learning responsibilities were shared between home and school, reducing learning loss and toxic stress while promoting civic character. The system and model provide a practical route to embed deep learning in civics, inform strategy for partnership-based instruction in the digital era, and offer a scalable foundation for future evaluation and improvement in Indonesian schools.

Keywords: Deep learning, Junior high school, Learning partnership model, Pancasila education, Teaching,

1. Introduction

The increasing complexity of global challenges necessitates a relevant learning approach to prepare high-quality human resources capable of supporting sustainable development. Indonesia continues to face significant disparities in education quality, as reflected in international benchmarks. Although the country's performance in the 2022 programme for international student assessment (PISA) assessment showed modest improvement compared to 2018, the overall education index remains low [1, 2]. The educational attainment level of the Indonesian population is still predominantly composed of primary and junior high school graduates, indicating a considerable gap in access to higher education [3]. These data reflect a serious concern regarding the effectiveness of current learning processes, which often result in suboptimal learning outcomes.

To address this issue, deep learning has been introduced as a promising paradigm for educational reform in Indonesia. Deep learning emphasizes the cultivation of critical thinking, creativity, and the application of knowledge in real-life situations [4, 5]. In the context of Pancasila Education, this approach enables students to internalize national values and engage meaningfully with their civic identity. A teaching and learning partnership model embedded within the deep learning framework can support this goal by fostering active collaboration among students, teachers, parents, and communities [6]. This model offers a comprehensive ecosystem that enriches the learning experience beyond the classroom.

Research has shown that such partnerships play a crucial role in improving educational outcomes. When schools work in synergy with parents and communities, students benefit from increased motivation, support, and engagement (see Table 1).

Table 1. Previous studies for critical role in improving educational outcomes.

No.	Title	Reference
1	Exploring the experiences of senior high school parents in online learning context	[7]
2	Exploration of parents' involvement in their children's education	[8]
3	Academic performance of left-behind senior high school students in the Philippines: Impacts of parental migration	[9]
4	Impact of single parenting on academic performance of junior secondary school students in mathematics	[10]
5	Community service perspective on intervention strategies by parents-teachers associations: Challenges and prospect	[11]

Building on this foundation, the present study investigates the development of a teaching and learning partnership model grounded in the deep learning framework for Pancasila Education at the junior high school level in Bandung. The novelty of this research lies in three core contributions: (i) the formulation of a partnership-based teaching model within the deep learning framework, (ii) the integration of deep learning principles into Pancasila Education, and (iii) the creation of a learning management system to support this model.

2. Literature Review

Figure 1 presents a visualization of the learning management system (LMS) model designed to support a teaching and learning partnership in Pancasila Education within a deep learning framework. This model integrates three key components: content delivery, counselling, and collaborative partnership programs involving schools, families, and communities. LMS platforms are commonly utilized to manage online classes, deliver learning materials and assessments, monitor student progress, and facilitate audiovisual interactions [12-14]. Within the deep learning framework, learning partnerships play a critical role in fostering student engagement, creativity, and collaboration by promoting attentive cooperation between individuals and groups [15]. The model facilitates an inclusive educational ecosystem that connects students, teachers, parents, and communities, thereby reinforcing Pancasila values in everyday learning. This approach is particularly crucial in an era of globalization, where national identity and moral foundations are increasingly challenged [16, 17]. Deep learning prioritizes profound conceptual understanding and aims to develop key global competencies such as character, citizenship, collaboration, communication, creativity, and critical thinking [18-20].

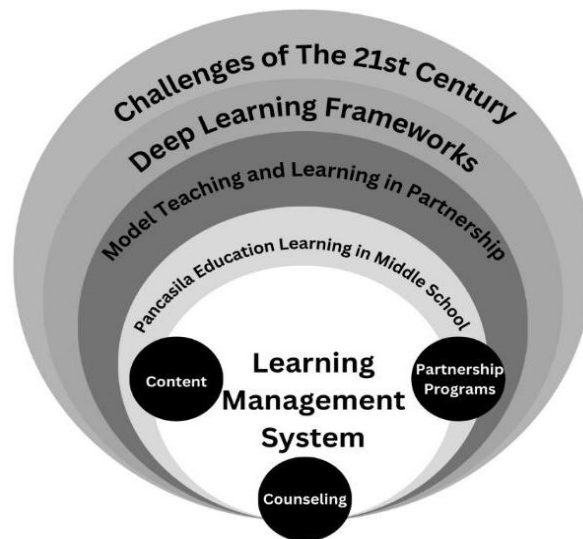


Fig. 1. Visualisation of the LMS model for teaching and learning partnership in Pancasila education based on deep learning.

3. Research Method

Figure 2 presents the research flow that underpins the design and development of an LMS for learning partnerships in Pancasila Education based on a deep learning framework. This study employed a design-based research (DBR) approach to systematically identify problems, design solutions, implement prototypes, and evaluate feasibility. The DBR method was selected to allow iterative refinement and contextual adaptation of the LMS model.

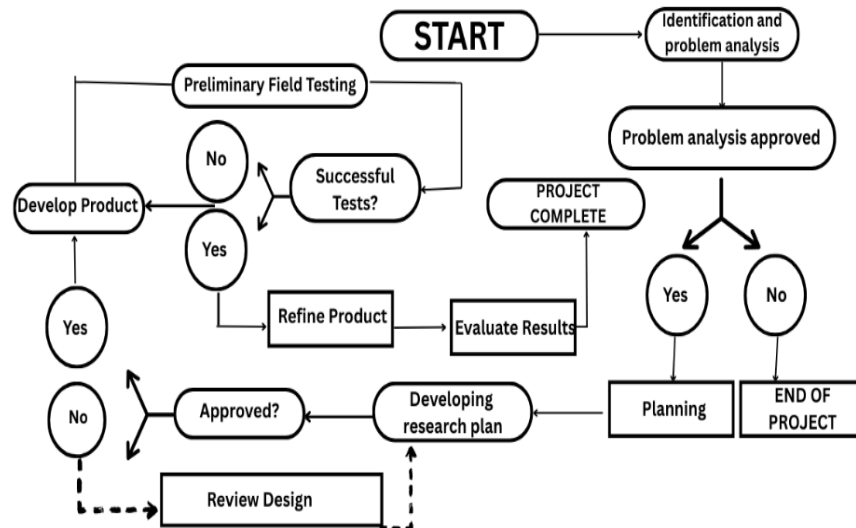


Fig. 2. Research flow for developing the LMS-based teaching and learning partnership model within the deep learning framework.

The research involved junior high school students in Bandung City as the population, with a total sample of 434 students selected through random sampling techniques. Data collection methods included questionnaires, literature review, field observations, and Focus Group Discussions (FGDs). Qualitative data were analysed through a multi-stage process comprising data reduction, categorisation, data display, cross-site analysis, and interpretation of findings. Quantitative data obtained from questionnaires were analysed using descriptive statistics to measure trends and responses.

4. Results and Discussion

Figure 3 illustrates the SCOLA FAMILIA development flowchart, designed to align with the creation of digital learning resources that address key issues in the current educational landscape. Based on a survey involving 434 junior high school students in Bandung, significant shifts in learning behaviour have emerged, contributing to toxic stress and ongoing learning loss following the COVID-19 pandemic. Approximately 38.9% of students reported studying and completing assignments independently, which limited opportunities for feedback, motivation, and guidance. While parental support was rated as 'adequate' with an average score of 33.56, more than half of the students noted that their parents rarely or never participated in school activities. This suggests a persistent gap in the school-parent partnership, often attributed to time constraints, insufficient communication, and the prevailing belief that education is solely the teacher's responsibility.

To address these issues, the SCOLA FAMILIA model was developed to support parenting and educational needs through collaboration among families, schools, and communities. The learning materials were compiled in consultation with experts in education, psychology, law, and the social sciences, and enriched with

educational entertainment to ensure child and family engagement. The early stages of development involved designing a user interface using relevant programming tools, resulting in an LMS format that supports accessibility, interaction, and partnership-based learning.

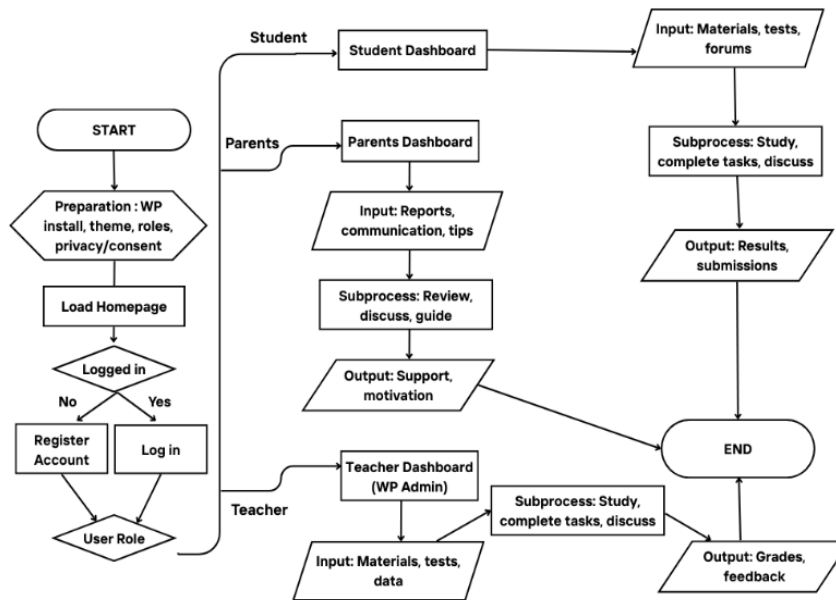


Fig. 3. Flowchart of SCOLA FAMILIA development aligned with digital learning resource design.

Figure 4 presents the visual structure of the SCOLA FAMILIA platform, including the homepage, login interface, informational content ("About Us"), and the partnership program feature. This digital format empowers students, teachers, and parents to collaborate within a single platform, enhancing flexibility and communication without spatial or temporal limitations. The LMS model reflects the principles of deep learning by creating an environment that supports active, connected, and meaningful learning experiences.

The findings suggest several key implications. First, although many parents are involved at home, their limited presence in school activities reveals a need for stronger partnerships. Research confirms that such collaboration contributes to more positive learning environments and helps build mutual trust between families and educators [21-23]. In Pancasila Education, this collaboration becomes even more crucial as it supports character education aligned with national values [24].

Second, the minimal parental involvement in school may worsen learning loss and increase toxic stress. A strong partnership model encourages shared responsibility between teachers and parents, both of whom play vital roles in student development [25]. As Pancasila Education aims to foster civic competence and moral responsibility, its successful implementation relies on integrated support systems involving all stakeholders [26-28].



Fig. 4. SCOLA FAMILIA: (a) Home, (b) About Us, (c) Login, (d) Partnership programs.

Third, the SCOLA FAMILIA LMS presents a practical tool for actualizing deep learning in Pancasila Education. More than just theoretical content delivery, it enables students to internalize and apply Pancasila values in their daily lives, preparing them to become responsible and critical citizens [17, 29, 30]. The LMS format ensures wider access to resources and encourages schools, families, and communities to foster environments where values are practiced, not merely taught. This holistic approach is essential in shaping graduates aligned with the national identity and the goals of the independent curriculum.

5. Conclusions

The development of a Teaching and Learning Partnership model within the framework of Deep Learning for Pancasila Education at the junior high school level is implemented in the SCOLA FAMILIA LMS, which functions as an interactive service that builds partnerships between families, schools, and communities. The aim is to create an integrated and supportive learning ecosystem in the digital age and to shape outstanding graduate profiles in line with Pancasila values.

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