

Bridging Cultures: Integrating Game-based Learning based on Local Wisdom in ELT

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Highlights

Implementing Game based Learning integrated to Local Wisdom facilitated students to be able to learn effectively and fun.

During learning, students engage to discover and explore not only the vocabulary mastery but also the local wisdom characteristics.

ABSTRACT: The implementation of the Merdeka Curriculum in Indonesia aims to cultivate students who embody the values of Pancasila. However, achieving the profile of Pancasila learners has been challenging due to less meaningful learning experiences that do not cater to diverse student needs. This study explores the potential of Game-Based Learning (GBL) integrated with local wisdom to address these challenges in Batang Regency's high schools and vocational schools. Using a qualitative phenomenological approach, data were collected from 25 teachers through questionnaires, interviews, and observations. The findings reveal that GBL activities, such as traditional game adaptations, folktale integration, cultural role-playing, and local-themed vocabulary and grammar games, significantly enhance student engagement, motivation, and cultural awareness. These activities not only make learning more enjoyable and relevant but also foster the values of Pancasila, promote local culture, and support Batang tourism. The study reveals the importance of providing adequate resources and training for teachers to overcome implementation challenges and suggests future research to explore the long-term impacts and scalability of GBL. By integrating local wisdom into GBL, educators can create a dynamic and inclusive learning environment that aligns with the Merdeka Curriculum's goals and enriches the educational experience in Indonesia.

Keywords: Game-based Learning, Local wisdom, Student's Competence, ELT.

Introduction

The implementation of the Merdeka Curriculum in the education system in Indonesia carries the mission to improve students' competences, also institutions and educators ability in order to achieve educational ideals based on the Pancasila Student Profile (Wahyudi & Miftahusyai'an, 2023). In implementing Merdeka Curriculum, teaching learning process

explored teachers to apply the principles of active, innovative, fun learning and 4C (Critical Thinking, Collaboration, Creativity, Communication) so that the situation and the result of learning process will be meaningful (Hidayati et al., 2022). In the Merdeka Curriculum, learning is oriented towards essential knowledge and the development of students' competencies according to their phase (Pertiwi et al., 2023).

Game-based learning (GBL) is a learning method that uses games as a tool to teach material (Davies, 2022). Combining the fun of playing games with the learning process, this method is expected to increase student motivation and learning outcomes (Anggita, F., & Nisa Lubis, 2023). In the game there is a level system that challenges students so that they are interested in completing (Dewati, 2020). Moreover, in English there are 4 basic skills that must be mastered by each student who learn English they are Speaking, Writing, Listening, also Reading so that meaningful learning is very crucial to be applied (Magableh, I. S. I., & Abdullah, 2020).

Batang Regency, located in Java Island which is on the north side. It has a unique topography and landscapes consisting of coastal and mountainous areas, based on those situations there are various characteristics and diverse local wisdom in Batang societies and people (Shofyana et al., 2022). Various forms of natural resources, community beliefs and local cultures develop according to the environment in the region (Khairunisa et al., 2023). One of the local cultures is "*Nyadran*" as gratitude expression ceremony from the Batang community but has various implementation forms, in coastal areas it is done with *larung laut* and in the mountains it expressed in the form of *sedekah bumi*. This diversity is faced by students in their environments and daily situations (Shofyana et al., 2022). There are games that are suitable for each region, such as the Aquatico Game contains aquatic ecosystem learning content that is suitable for coastal local wisdom, while the mountains and surrounding areas can apply the OWA (*Onet Wawasan Nusantara*) game with the theme of local cultural knowledge of the archipelago (Sugara & Mustika, 2018).

Learning in the Merdeka Curriculum is orientated using a project-based learning model that focuses on developing student competencies according to the Pancasila Student Profile (Khairunisa et al., 2023). In its implementation, GBL is a manifestation of project-based learning by containing elements of case method and team-based projects because it develops critical thinking, problem solving, cooperation and sustainable learning in a fun way (Chen & Nguyen, 2023)(Mailis, 2022). Learning can be more meaningful if it is synchronized with the surrounding environment of students and schools (Anida & Eliza, 2021). The integration of local wisdom in learning process has multiple impacts in addition to preserving the traditions and local culture in the younger generation as well as the potential for regional tourism (Haryanto. R, 2019). The advantages of local wisdom that can be internalised in students are: 1) it can be a learning tool to become a smart, clever, and wise person, 2) it can form a positive personality (Sulianti, A., Safitri, R. M., & Gunawan, 2019). By combining GBL with traditional learning methods, it can create a more enjoyable and effective learning experience for students (Pitriani & Dantes, 2024).

The application of game-based learning has been conducted by previous researchers (Rahini et al., 2024) who aimed to improve children's understanding of basic English vocabulary in Selat Village through the application of GBL media Crossword. Use method of PALS (Participatory Action and Learning System), the results described the increase in understanding and memorization of English vocabulary, positive responses and enthusiasm of the children.

The study on GBL was then developed by Rahma & Wiranti (2024), describing the effect of GBL on the Javanese language abilities of grade V students at SD Negeri 03 Sekuro in the academic year 2023/2024. Using pre-test and post-test one group design in quantitative

research form, 12 samples from the population of grade V students through observation and test techniques. The results of the t-test were obtained $t\text{-count} > t\text{-table}$, namely $8.022 > 1.796$, it was concluded that GBL learning had an effect on the Javanese language skills of class V SD Negeri 03 Sekuro.

GBL intervention to learning has also been done by Soraya & Dewi (2024) who explored efforts to increase the motivation of class X-3 students at SMAN Pakusari in English lessons using Wordwall game media. Using the PTK method and data 35 students for three cycles, data were obtained by observation, motivation questionnaire, and learning outcome test. Results indicated the application of Wordwall game consistently increased students' English learning motivation.

Furthermore, Jivani, et al (2024) explored the potential of games in promoting active learning and fostering deeper understanding of subject matter. The findings highlighted the positive impact of games on student engagement and academic achievement in undergraduate engineering modules. By the application of learning integrated to game elements, such as Kahoot and a leaderboard system, students showed increased motivation and active response of participation during lectures.

From the literature discussed, GBL is applied in only one type of game, in motivation enhancement and the majority is applied in primary education; however, the literature discussing local wisdom-based GBL in English language learning is still very limited.

In our previous study (Sugiharto et al., 2022), we found that improving teacher competence is crucial to improving the quality of learning process in education. This ability is suitable in improving teachers' pedagogical competence (Aditama et al., 2022). Students' understanding level in learning process is strongly influenced by the use of media and strategies in learning activities (Aditama, et al, 2023). Integration of local wisdom in English learning process is able to increase student interest and facilitate students in mastering basic English skills (Shofyana et al., 2022). The implementation of environmentally integrated learning can build character education of the students in learning (Aditama, et al, 2022). However, there are still shortcomings in fulfilling the needs of students, that's why research is needed to improve the results and appropriate learning methods. Therefore, this study is proposed to develop local wisdom-based GBL in Merdeka Curriculum.

To develop local wisdom-based Game-Based Learning (GBL) within the Merdeka Curriculum, this research took a multi-faceted approach, integrating cultural elements unique to the Batang Regency with innovative GBL strategies tailored to the educational goals of the Merdeka Curriculum. Here's how this development addressed, alongside an identification of existing gaps and the explicit novelty of this study:

Identification of Local Wisdom Elements:

1. Contextual Analysis: The first step in developing local wisdom-based GBL is to conduct a thorough contextual analysis of the local wisdom elements in Batang Regency. This involves cataloging and understanding the cultural practices, values, and traditions prevalent in the area, such as the "*Nyadran*" ceremony, coastal and mountainous cultural practices, and specific local games (Pugu et al., 2024).
2. Alignment with Educational Goals: These local wisdom elements will then be aligned with the learning outcomes of the Merdeka Curriculum, particularly focusing on the Pancasila Student Profile, which emphasizes competencies like critical thinking, creativity, collaboration, and communication (Rahayu M, et al., 2021).

Design of GBL Framework Incorporating Local Wisdom:

1. Game Concept Development: Based on the identified local wisdom, specific game concepts designed. For instance, using the "*Nyadran*" ceremony, a game could be developed that

- teaches environmental stewardship and social cooperation, reflecting the local practices of gratitude and community bonding (Adam & Sailuddin, 2024).
2. Integration with English Language Learning: The game concepts tailored to enhance English language learning, particularly in developing the four core skills: speaking, listening, reading, and writing. For example, a game based on the "*larung laut*" might involve vocabulary and grammar exercises themed around coastal life (Miolo et al., 2023)
 3. Pedagogical Integration: The games will be structured to fit within the pedagogical principles of the Merdeka Curriculum, emphasizing active learning, problem-solving, and project-based learning (Monalisa, 2023).

While existing researches have explored the application of GBL in various educational settings, significant gaps remain in the integration of local wisdom into these games, particularly within the context of English language learning in Indonesia (Yusuf, M., & Harsono, 2023). Most studies have focused on motivation enhancement or basic skill development through GBL, but few have deeply integrated cultural elements into the learning process (Rizky et al., 2024). Moreover, the majority of GBL applications have been in primary education, with limited exploration at higher levels (Anggita, F., & Nisa Lubis, 2023)

The novelty of this research lies in its explicit integration of local wisdom into GBL, tailored specifically to the Merdeka Curriculum's objectives. Unlike previous studies that use GBL for general skill enhancement, this research will:

1. Culturally Tailored Learning: Develop games that are not only educational but also deeply rooted in the local culture of Batang Regency, ensuring that learning is both meaningful and contextually relevant (Agustina, 2021).
2. Holistic Educational Approach: Align these culturally integrated games with the holistic educational goals of the Merdeka Curriculum, fostering not only language skills but also character development and cultural awareness (Aditama, et al., 2022).
3. Innovative Pedagogical Tools: Create innovative, scalable pedagogical tools that can be adapted to different regions, allowing for the preservation and promotion of local cultures through education (Kim, S., & Lee, 2023).

By addressing these gaps and introducing culturally integrated GBL within the Merdeka Curriculum, this research offers a novel approach to education that not only enhances learning outcomes but also preserves and promotes local cultural heritage. This dual focus on academic and cultural education represents a significant advancement in the field of educational technology and pedagogy.

According to the background described before, formulation of problems raised in this study are 1) How is the application of Game-based Learning (GBL) based on local wisdom in the Merdeka Curriculum? and 2) What kind of learning methods applied by teachers in implementing Game-based Learning (GBL) based on local wisdom?

The research focuses on 25 English teachers who will provide insights into the practicalities, challenges, and benefits of this integrated approach. Data will be collected through observation, questionnaires, and in-depth interviews to capture the nuanced experiences and perceptions of these teachers. This phenomenological approach will allow for a comprehensive understanding of the effectiveness and feasibility of Game-based Learning based on local wisdom in enhancing English language teaching in Indonesia.

The findings from this study are expected to contribute valuable insights into the development of culturally relevant pedagogical strategies that can be adopted more widely in Indonesian schools. By aligning educational practices with the cultural context of the students, this research hopes to promote a more engaging, effective, and meaningful English language learning experience.

Method

The research method employed in this study is the phenomenological approach, a qualitative research method that seeks to explore and understand the essence of lived experiences from the perspective of the individuals involved (Smith, J. A., et al., 2022). This approach emphasizes the importance of subjective experiences and is often used in educational research to gain insights into the personal and social aspects of teaching and learning (Al-Busaidi, 2008).

In this study, the phenomenological approach is specifically applied to explore the experiences of teachers in Batang Regency as they integrate local wisdom into Game-Based Learning (GBL) within the framework of the Merdeka Curriculum. This method allows researchers to delve into how teachers perceive, interpret, and enact this integration, uncovering the underlying meanings and implications of their experiences in real classroom settings (Aditama, M G, et al, 2022). The research design adopted in this study is a qualitative phenomenological study. This design is particularly effective for investigating complex, context-dependent human experiences and is widely recognized for its ability to capture the depth and richness of participants' lived realities (Aditama et al., 2023)

The research approach can be described as contextualized phenomenology, where the emphasis is on understanding the phenomenon (in this case, the integration of local wisdom into GBL) within the specific cultural and educational context of Batang Regency. This approach recognizes that the meanings and practices associated with local wisdom are deeply embedded in the local cultural environment and that these must be understood in their specific context to be effectively integrated into educational practices (Thompson, 2022).

The integration of local wisdom into GBL is a relatively unexplored area, particularly in the context of the Merdeka Curriculum. This research approach not only adds to the existing body of knowledge by documenting teachers' experiences but also provides practical insights into how educational practices can be adapted to reflect and preserve local cultural values (Yusuf, M., & Harsono, 2023). By applying a phenomenological approach that is both contextualized and culturally sensitive, this study offers a novel perspective on the intersection of education, culture, and technology, contributing to the broader discourse on culturally responsive pedagogy (Manen, 2021).

Data and Data Sources

This study took the subject data of teachers of English subjects who taught in senior high school and vocational school levels in Batang Regency also apply GBL based on local wisdom in the Merdeka Curriculum. The data in this study are questionnaire results, interview answers and descriptions of methods and documentation. The summary of the data is recorded in the form of a form, and documents can be in the form of photos or files of learning media applied by the subject. Furthermore, the data is coded to be grouped and then analyze the GBL learning implementation model carried out by the teacher.

Data Collection Technique

The data collection technique of this research was conducted by using observation, questionnaires, and interviews addressed to 25 English teachers at the high school and vocational level in Batang Regency by involving students as research assistants. The questionnaire was in the form of a set of written situational questions which submitted to respondents to be filled in independently without interference and influence from other parties (Sugiyono, 2019). Observations were made of local wisdom-based GBL learning practices

implemented by English teachers, followed by interviews with teachers and students regarding the learning process and outcomes.

Data Analysis Technique

This study analyzed data which has been collected through a phenomenological approach, and need to be explained its natural phenomena by emphasizing the meaning, perspective, and experience of participants. The phenomenological approach is used to explore the experiences of data subjects (Sugiyono, 2019). Data analysis follows a phenomenological framework, which involves coding, categorizing, and thematizing the data to identify common themes and patterns in the teachers' experiences. The goal is to distill the essence of these experiences and to present them in a way that is faithful to the participants' own perspectives (Giorgi, 2019). Researchers engage in reflective analysis to interpret the data, continually returning to the original narratives to ensure that the interpretations remain grounded in the participants' lived experiences (Finlay, 2021). In general, the steps of data analysis are:

1. Data reduction, it conducted to identify the data obtained.
2. Data Presentation, it conducted to classify the types of GBL learning applied by teachers and real examples of methods in learning applied by teachers at school.
3. Drawing Conclusions, is conducted by compiling hypotheses from the results of data acquisition and classification also other supporting results obtained in research activities.

To address the problem statements using the data analysis technique described, the following process can be applied to systematically analyze and interpret the data:

1. "How is the application of Game-based Learning (GBL) based on local wisdom in the Merdeka Curriculum?"

Step 1: Data Reduction

Objective: To identify and focus on the most relevant data concerning the application of GBL based on local wisdom.

Process:

- a. Begin by thoroughly reviewing the raw data collected from interviews, observations, and any relevant documents.
- b. Identify key themes and patterns related to how GBL is being applied.
- c. Eliminate any data that does not directly contribute to understanding the application of GBL within the context of local wisdom and the Merdeka Curriculum.
- d. Create summaries or codes that encapsulate the essential aspects of the data, focusing on practices, methods, and teacher experiences related to GBL application.

Step 2: Data Presentation

Objective: To classify and clearly present the types of GBL being implemented and real-life examples of their application.

Process:

- a. Organize the reduced data into categories that reflect different aspects of GBL application. For example:
- b. Types of GBL: Categorize the different game types or strategies used by teachers, such as digital games, role-playing activities, or traditional games adapted for language learning.
- c. Local Wisdom Elements: Classify the specific elements of local wisdom
- d. Alignment with Curriculum Goals: Present how these GBL activities align with the objectives of the Merdeka Curriculum, particularly in promoting the Pancasila Student Profile.
- e. Use visual aids like tables or charts to clearly illustrate how different types of GBL are applied across various schools or classrooms.

- f. Include real-life examples from the data, such as a teacher using a game based on the "Nyadran" ceremony to teach environmental vocabulary, showcasing how these methods are operationalized in the classroom.

Step 3: Drawing Conclusions

Objective: To synthesize findings and draw meaningful conclusions regarding the application of GBL based on local wisdom.

Process:

- a. Review the classified data and look for overarching trends and insights
- b. Formulate conclusions about the overall effectiveness of GBL in this context, any gaps or challenges identified, and the potential for broader implementation within the Merdeka Curriculum.
- c. Hypothesize about the factors that contribute to successful GBL application.
- d. Develop actionable recommendations based on the conclusions.

2. "What kind of learning methods are applied by teachers in implementing Game-based Learning (GBL) based on local wisdom?"

Step 1: Data Reduction

Objective: To filter and focus on data specifically related to the learning methods employed by teachers.

Process:

- a. Extract data that directly pertains to the methods teachers use to implement GBL.
- b. Identify the variations in methods among different teachers or schools, noting any unique or particularly effective approaches.
- c. Discard extraneous data that does not contribute to understanding the learning methods in question.

Step 2: Data Presentation

Objective: To organize and categorize the different learning methods identified.

Process:

Classify the learning methods into distinct categories

Provide concrete examples of each method from the data, highlighting how they are applied in real classroom scenarios.

Step 3: Drawing Conclusions

Objective: To derive insights about the effectiveness and variety of learning methods used in GBL implementation.

Process:

- a. Analyze the classified methods to determine which are most commonly used and why.
- b. Conclude how these methods support or enhance the learning outcomes associated with the Merdeka Curriculum, particularly in relation to local wisdom.
- c. Identify any challenges or limitations in applying these methods, such as resource constraints or varying levels of teacher expertise.
- d. Offer recommendations for optimizing learning methods in future GBL implementations, potentially suggesting further professional development for teachers or additional resources.

Limitations

1. Sample Size and Generalizability

The study's findings are based on a real situation of 25 teachers, which may limit the generalizability of the results to other contexts or populations.

2. Subjectivity

As a qualitative study, the findings are subject to the researchers' interpretations, which may introduce bias. Efforts will be made to ensure rigor and credibility through triangulation and member checking.

3. Resource Constraints

The implementation of GBL and local wisdom might vary significantly across different schools and regions, depending on the availability of resources and support.

Findings and Discussion

Findings

The study reveals that the application of Game-Based Learning (GBL) based on local wisdom in Batang Regency's high schools and vocational schools has shown promising results. Based on the research result, the implementation of Game based learning based on Local Wisdom were categorized into 6, they are: Traditional Game Adaptation, Folktale Integration, Cultural Role-Playing Games, Vocabulary Games with Local Themes, Grammar Games Using Local Proverbs, and Local Festivals and Cultural Events. The Figure 1 here illustrates the implementation of Game based learning based on Local Wisdom by teachers in Batang Regency to integrate local wisdom into Game-Based Learning (GBL).

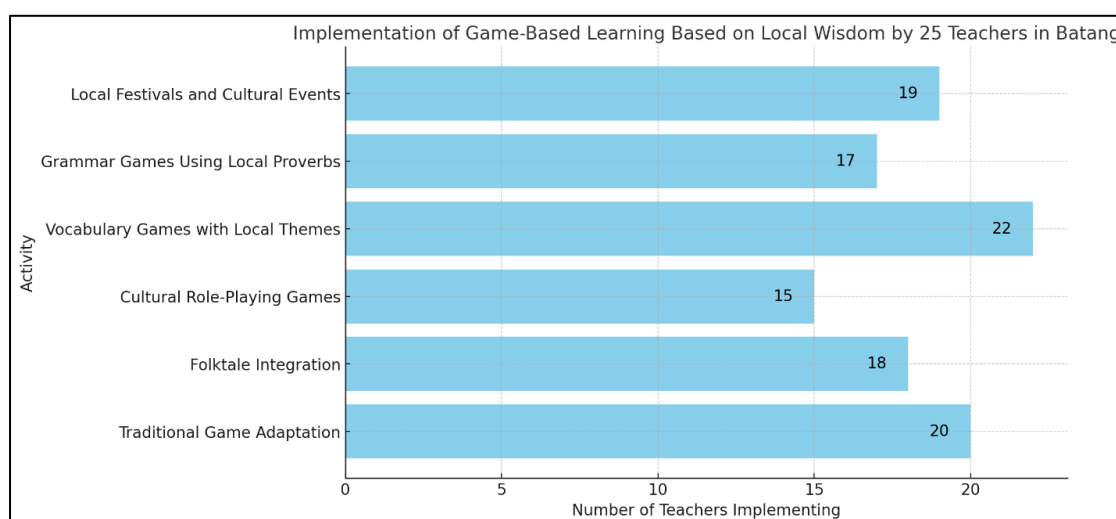


Figure 1: Number of implementation Game-based learning based on Local Wisdom by Teachers

This chart illustrates the number of teachers implementing various Game-Based Learning activities integrated with local wisdom in Batang Regency. Each teacher has different perspectives in applying GBL in their class. the application of each category GBL are follows:

1. Traditional Game Adaptation 20 teachers
2. Folktale Integration: 18 teachers
3. Cultural Role-Playing Games: 15 teachers
4. Vocabulary Games with Local Themes: 22 teachers
5. Grammar Games Using Local Proverbs: 17 teachers
6. Local Festivals and Cultural Events: 19 teachers

The chart highlights the widespread adoption of these activities, showcasing how teachers utilize local wisdom to make learning more engaging and culturally relevant. The detail description of GBL implementation by each teacher were described in the Table 1 bellow:

Table 1

Detailed Implementation of Game-Based Learning by Each Teacher

Data	Activities Implemented
Teacher 1	Traditional Game Adaptation, Vocabulary Games with Local Themes
Teacher 2	Folktale Integration, Cultural Role-Playing Games
Teacher 3	Traditional Game Adaptation, Grammar Games Using Local Proverbs, Local Festivals and Cultural Events
Teacher 4	Vocabulary Games with Local Themes
Teacher 5	Folktale Integration, Local Festivals and Cultural Events
Teacher 6	Cultural Role-Playing Games, Grammar Games Using Local Proverbs
Teacher 7	Traditional Game Adaptation, Vocabulary Games with Local Themes
Teacher 8	Local Festivals and Cultural Events
Teacher 9	Vocabulary Games with Local Themes, Grammar Games Using Local Proverbs
Teacher 10	Folktale Integration, Cultural Role-Playing Games
Teacher 11	Traditional Game Adaptation
Teacher 12	Vocabulary Games with Local Themes, Local Festivals and Cultural Events
Teacher 13	Folktale Integration, Grammar Games Using Local Proverbs
Teacher 14	Traditional Game Adaptation, Cultural Role-Playing Games
Teacher 15	Vocabulary Games with Local Themes
Teacher 16	Folktale Integration, Local Festivals and Cultural Events
Teacher 17	Cultural Role-Playing Games
Teacher 18	Traditional Game Adaptation, Grammar Games Using Local Proverbs
Teacher 19	Vocabulary Games with Local Themes
Teacher 20	Folktale Integration, Local Festivals and Cultural Events
Teacher 21	Traditional Game Adaptation
Teacher 22	Vocabulary Games with Local Themes, Cultural Role-Playing Games
Teacher 23	Grammar Games Using Local Proverbs
Teacher 24	Traditional Game Adaptation, Vocabulary Games with Local Themes
Teacher 25	Local Festivals and Cultural Events, Grammar Games Using Local Proverbs

Out of the 25 teachers, 17 teachers implemented multiple Game-Based Learning activities based on local wisdom. This detailed breakdown showcases the widespread and diverse application of GBL activities among the teachers, emphasizing the comprehensive integration of local wisdom into their teaching practices.

The development of skills in English which integrated in the application of Game based Learning based on local wisdom is illustrated in the Figure 2 below.

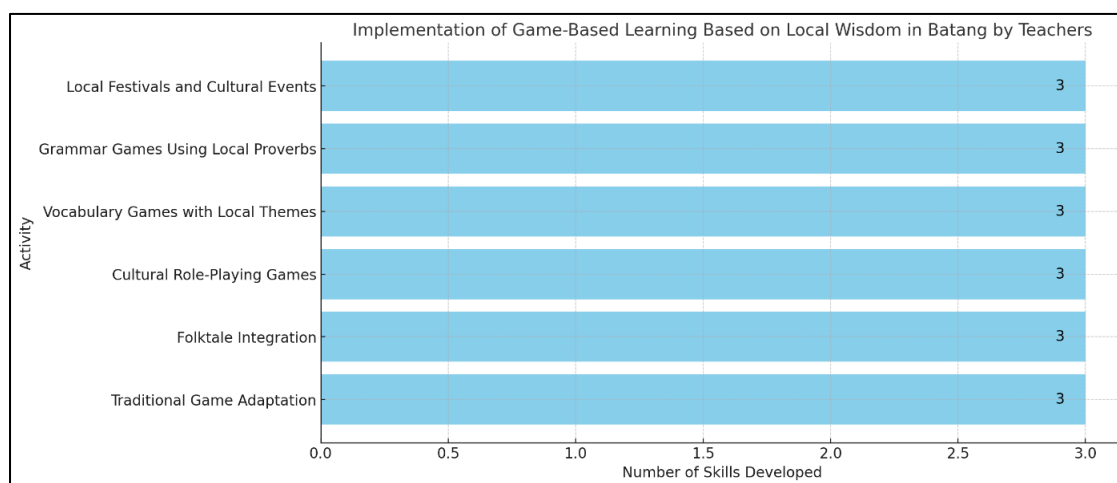


Figure 2: Implementation of Game based Learning based on Local Wisdom in Batang

Each activity is associated with the number of skills developed, highlighting the effectiveness of these methods in enhancing various educational competencies. Some key points revealed:

1. Traditional Game Adaptation (Gobak Sodor): Focuses on developing speaking, listening, and vocabulary skills.
2. Folktale Integration (The Legend of Alas Roban): Enhances reading, writing, and cultural awareness.
3. Cultural Role-Playing Games (Historical Events): Improves speaking, listening, and historical knowledge.
4. Vocabulary Games with Local Themes (Local Flora and Fauna): Develops vocabulary, teamwork, and adaptability.
5. Grammar Games Using Local Proverbs (Local Proverbs): Strengthens grammar, writing, and cultural appreciation.
6. Local Festivals and Cultural Events (Batik Festival): Promotes speaking, writing, and cultural knowledge.

Teachers have effectively integrated elements of local culture and traditions into their English language lessons, which has significantly increased student engagement and interest. The following key findings emerged from the data:

1. Enhanced Student Engagement:

Increased Participation: Teachers reported a noticeable increase in student participation and enthusiasm in the classroom. The incorporation of local games and cultural stories made learning more relatable and enjoyable for students.

Example: A popular local game called "Gobak Sodor" was adapted into a language learning activity where students had to use English instructions and dialogues while playing, enhancing their speaking and listening skills.

2. Promotion of Local Culture:

Cultural Preservation: The use of local wisdom in GBL not only helped in preserving and promoting Batang's cultural heritage but also fostered a sense of pride and identity among students. This aligns with the Merdeka Curriculum's goal of nurturing Pancasila values in students.

Example: Traditional Batang folktales were incorporated into reading and comprehension exercises. Students would read the stories in English and then discuss the moral lessons and cultural significance, which helped them appreciate their heritage while improving their language skills.

3. Differentiated Learning:

Catering to Diverse Needs: GBL allowed for differentiated instruction that catered to the diverse needs and characteristics of students. Teachers were able to customize games to address various learning styles and abilities, making education more inclusive and effective.

Example: In a vocabulary-building game, students worked in groups to create word puzzles based on local flora and fauna. This activity was tailored to different proficiency levels, with simpler puzzles for beginners and more complex ones for advanced students.

4. Teacher Enthusiasm and Innovation:

Professional Growth: The study found that teachers became more innovative and enthusiastic about their teaching methods. The freedom to design and implement culturally relevant games stimulated their creativity and professional growth.

Example: One teacher designed a role-playing game where students acted out historical events from Batang's past in English, combining language learning with history and drama, which proved to be highly engaging and educational.

5. Challenges and Limitations:

Resource Constraints: Despite the positive outcomes, teachers faced challenges such as limited resources, time constraints, and initial resistance from some students who were accustomed to traditional teaching methods. However, these challenges were gradually overcome with continuous practice and support.

Example: Limited access to digital tools required teachers to rely on handmade materials and physical resources. One teacher overcame this by creating a card game that taught grammar rules using local proverbs, making the lesson both interactive and culturally rich.

The integration of Game-Based Learning based on local wisdom in Batang Regency represents a significant step towards realizing the ideals of the Merdeka Curriculum. This study provides valuable insights into how culturally relevant educational practices can enhance student engagement, promote local culture, and foster Pancasila values. By addressing the challenges and building on the successes identified in this research, educators can continue to innovate and improve the quality of education in Indonesia.

The implementation of Game-Based Learning (GBL) based on local wisdom in Batang Regency involves incorporating traditional games, cultural stories, and local knowledge into the educational process. Here are some detailed examples:

1. Adaptation of Traditional Games:

Example: Gobak Sodor

- **Description:** Gobak Sodor is a traditional game in Indonesia that involves players trying to pass through a series of lines guarded by opponents. The game was adapted to teach English vocabulary and instructions.
- **Implementation:** In the classroom, the game was modified so that students had to give and follow directions in English to navigate through the lines. For instance, students on the opposing team would give commands such as "Move forward three steps" or "Turn left," enhancing their ability to understand and use directional vocabulary.

2. Integration of Folktales:

Example: The Legend of Alas Roban

- **Description:** The Legend of Alas Roban is a folktale from Central Java. This story was used to improve reading comprehension and cultural awareness.
- **Implementation:** Students read the story in English and then participated in group discussions and activities related to the tale. Activities included creating story maps, acting out scenes, and writing alternative endings. These exercises helped students practice their reading, writing, and speaking skills while also learning about local culture.

3. Cultural Role-Playing Games:

Example: Historical Role-Playing

- **Description:** Role-playing games based on historical events from Batang's past were created to teach English through drama and history.
- **Implementation:** Students were assigned roles from historical events and had to act out scenarios in English. For example, a role-playing game might involve a meeting between local leaders and Dutch colonizers, where students would practice formal greetings,

negotiations, and historical vocabulary. This method engaged students in active learning and deepened their understanding of local history.

4. Vocabulary Games with Local Themes

Example: Local Flora and Fauna Puzzles

- Description: Vocabulary-building activities focused on local flora and fauna to make learning relevant and interesting.
- Implementation: Teachers designed word puzzles and matching games using names of local plants and animals. Students worked in groups to solve the puzzles, learning new vocabulary and improving their teamwork skills. For advanced students, the activity included writing sentences or short paragraphs using the new words.

5. Grammar Games Using Local Proverbs:

Example: Proverb Matching Card Game

- Description: A card game using local proverbs was created to teach grammar rules in a fun and culturally meaningful way.
- Implementation: Each card had a proverb in English on one side and the corresponding proverb in the local language on the other. Students played a matching game where they had to pair proverbs with their translations and then use them in sentences. This activity reinforced grammar rules and helped students appreciate the wisdom embedded in local proverbs.

6. Local Festivals and Cultural Events:

Example: Festival Simulation

- Description: Simulating local festivals and cultural events in the classroom to teach language and cultural traditions.
- Implementation: Students participated in a simulated local festival, such as Batang's annual "Batik Festival." They engaged in activities like crafting dialogues for a festival skit, writing descriptive essays about the festival, and presenting their work in English. This approach not only improved their language skills but also deepened their understanding of local cultural practices.

By integrating these examples into their teaching, educators in Batang Regency have successfully made learning more engaging and meaningful. These culturally relevant games and activities not only align with the Merdeka Curriculum's goals but also help in preserving and promoting local wisdom among the younger generation.

Discussion

The integration of Game-Based Learning (GBL) based on local wisdom in Batang Regency's high schools and vocational schools has proven to be an innovative approach that aligns with the objectives of the Merdeka Curriculum. The findings of this study underscore the potential of GBL to create a more meaningful and engaging learning experience. Traditional teaching methods often fail to capture students' interests, leading to disengagement and lower academic performance. However, GBL, with its interactive and participatory nature, has been shown to significantly enhance student engagement and motivation (Kirikkaya, E. B., & Oğuz, 2022). GBL makes learning relatable by incorporating familiar cultural elements and traditional games into the curriculum. This not only makes lessons more interesting but also helps students connect with the material on a personal level. According to Kirikkaya, E. B., & Oğuz, (2022), game-based learning strategies have a positive impact on student achievement, particularly when the content is relevant to students' lives and experiences. This relevance is amplified when local wisdom is integrated, as it resonates with students' cultural backgrounds and daily lives.

One of the primary goals of the Merdeka Curriculum is to foster the values of Pancasila in students, promoting moral and ethical development alongside academic learning. The integration of local wisdom into GBL plays a crucial role in achieving this objective. Local wisdom, embodied in traditional games, folktales, and cultural practices, inherently carries the values and principles of Pancasila. By incorporating local wisdom into educational activities, teachers can reinforce values such as mutual cooperation (*gotong royong*), respect for others, and a sense of community. Kim, S., & Lee, (2023) emphasized that cultural heritage education helps students develop a deeper understanding of their cultural identity and societal values. When students engage in GBL activities that are rooted in their cultural heritage, they are more likely to internalize these values and reflect them in their behavior.

One of the standout features of GBL is its ability to cater to diverse learning needs and styles. Traditional teaching methods often struggle to accommodate the varying abilities and preferences of students. In contrast, GBL offers a flexible and adaptive learning environment that can be tailored to meet the needs of all students. Differentiated instruction is a key component of effective teaching, and GBL excels in this area. Setiawan, B., & Rahmawati, (2022) highlight that the Merdeka Curriculum aims to provide a more personalized learning experience for students. GBL allows teachers to design activities that are appropriate for different skill levels, ensuring that all students can participate and benefit from the lesson. For instance, vocabulary games based on local flora and fauna can be adjusted in complexity to suit both beginners and advanced learners.

The positive response from teachers regarding the use of GBL based on local wisdom indicates a significant shift towards more innovative and dynamic teaching practices. Teachers who engage in GBL are often more motivated and creative, which has a direct impact on their professional development. GBL encourages teachers to think outside the box and experiment with new teaching methods. It was found that teachers who incorporate game-based approaches in their classrooms tend to be more enthusiastic and innovative (Suparman, U., & Kusumaningtyas, 2023). This not only improves their teaching competence but also enhances the overall learning experience for students (Aditama et al., 2023). The freedom to integrate local content and design culturally relevant games empowers teachers and promotes continuous professional growth.

While the study highlights several benefits of GBL, it also points out challenges that need to be addressed to maximize its effectiveness. These challenges include limited resources, time constraints, and initial resistance from students accustomed to traditional teaching methods. Addressing these challenges is crucial for the sustainable implementation of GBL. Providing adequate resources and training for teachers is essential. As suggested by Widyastuti, A., & Sari, (2023) that ongoing support and professional development opportunities can help teachers overcome these obstacles and enhance their ability to implement GBL effectively. Additionally, future research should explore the long-term impacts of GBL on student learning outcomes and cultural preservation, as well as its scalability across different regions and educational levels. The integration of Game-Based Learning based on local wisdom in Batang Regency represents a significant step towards realizing the ideals of the Merdeka Curriculum. This study provides valuable insights into how culturally relevant educational practices can enhance student engagement, promote local culture, and foster Pancasila values. By addressing the challenges and building on the successes identified in this research, educators can continue to innovate and improve the quality of education in Indonesia.

Conclusion

The integration of Game-Based Learning (GBL) based on local wisdom in Batang Regency represents a significant advancement towards achieving the objectives of the Merdeka

Curriculum. By leveraging traditional games, cultural stories, and local festivals, educators have successfully made learning more engaging, meaningful, and culturally relevant. The key points of implementing GBL based on Local Wisdom revealed some important aspects, such as Enhanced Student Engagement, Promotion of Pancasila Values, Catering to Diverse Learning Needs, Teacher Empowerment and Innovation. While the benefits of GBL are evident, challenges such as limited resources and initial resistance need to be addressed. Providing adequate training and support for teachers is crucial for the sustainable implementation of GBL. Future research should focus on the long-term impacts of GBL on student outcomes and its scalability across different regions. In summary, the integration of GBL based on local wisdom is a promising strategy for enhancing the educational experience in Batang Regency. It aligns with the Merdeka Curriculum's goals of fostering well-rounded individuals who embody the spirit of Pancasila, preserving cultural heritage, and promoting local tourism. By continuing to innovate and address challenges, educators can further improve the quality of education and ensure that learning is both meaningful and enjoyable for all students.

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