

SIKU (*SISTEM KUARTET UNTUK INGGRIS*): REDESIGNING A QUARTET CARD GAME BASED ON PACITAN LOCAL WISDOM TO ENHANCE STUDENTS' ENGLISH VOCABULARY

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Abstract: The main objective of this research is to design and develop a quartet card game that integrates Pacitan's local wisdom to enhance students' English vocabulary. Mastery of English is crucial in today's globalised world, yet Indonesian students' proficiency remains low. Effective and engaging learning materials, like the quartet card game, can help improve English skills. This research uses the Research and Development (R&D) method with the ADDIE model, which includes five stages: Analysis, Design, Development, Implementation, and Evaluation. The analysis stage involved needs assessment and learning context analysis. The design stage created an initial quartet card game based on Pacitan's local wisdom. In the development stage, a prototype was made and tested. The implementation stage used the game in classroom learning. The evaluation phase assessed the game's effectiveness by measuring students' vocabulary enhancement and their responses. The study evaluated the effectiveness of the SIKU game media in improving English language proficiency by comparing pre-test and post-test results. The findings showed an average increase of 16.22% in English vocabulary comprehension. The positive response from students indicates that integrating local wisdom into learning media makes the learning process more engaging and meaningful. This research contributes to education by developing innovative, local wisdom-based learning media, enriching learning materials, and strengthening students' cultural identity.

Keywords: *ADDIE model, cultural identity, learning media design, needs analysis, Research and Development (R&D),*

INTRODUCTION

Difficulties in reading comprehension and language skills are often rooted in the communal problem of a lack of vocabulary mastery. Without a strong vocabulary foundation, students will face barriers in accessing deeper meaning from texts and integrating current information with what they already know. As stated by Moody et al., (2018), that larger vocabularies enable readers to access richer semantic resources to activate relevant background knowledge and integrate current information with existing knowledge and vocabulary has been found to predict the acquisition of critical aspects of metalinguistic awareness. Therefore, enriching vocabulary is the main key to unlocking the potential of language learning. Good vocabulary mastery not only improves reading skills, but also expands students' abilities in various other aspects of language, such as writing, listening, and speaking Meierding (2005) as cited in Jannah et al., (2020).

Considering the challenges in mastering vocabulary, it is essential to innovate and implement new methods in English language learning, particularly in vocabulary acquisition. English vocabulary teaching methods fall into two main categories: conventional methods and contemporary methods (Hadzimehmedagic & Akbarov, 2014). For learning media, Smith, (2023) states that there are a variety of options that include print media, which includes books and vocabulary cards, and digital media, which includes the use of the internet and various apps. Both approaches offer their advantages and can be chosen according to learners' needs and preferences. Traditional methods are often considered more systematic, while modern methods offer greater flexibility and interactivity. Thus, the selection of learning methods and media should be adjusted to the educational objectives, the learning context, and the characteristics of the individual learners.

Therefore, improving English vocabulary can be achieved through learning methods that integrate games, which can strengthen students' motivation, participation and academic achievement (Eka Agustina et al., 2023). Educational games such as crossword and Scrabble are proven to be effective in helping students memories and use vocabulary in various situations (Puspitasari & Budi Kurniawan, 2017). One of which is through the use of game tools such as quartet cards. This approach, as described by Puspitasari, (2024) offers an innovative and interactive way of teaching vocabulary.

The Quartet card game was one of the most popular games of the 90s, providing a fun and participatory method of learning vocabulary. Within each card of the Quartet game, there is a related illustration or symbol, which encourages players to endeavour to assemble a complete set of cards. It is not just a game, but also an educational tool that allows players to expand their language knowledge while engaging in healthy competition (Puspitasari et al., 2024). Quartet cards not only hone language skills, but also train visual memory and thinking strategies (Puspitasari & Budi Kurniawan, 2017). By combining educational and entertainment aspects, Quartet cards have become a favourite among children and adults who want to improve their language skills in a more interactive and entertaining way (Meiliani & Nurhadiah, 2017).

Quartet card games offer several advantages, such as ease of accessibility, players can enjoy these games without the need for other equipment and have the flexibility to play in any location. However, the game also has some limitations, including an undependable number of players and the need for more variety in the game to keep it interesting (Istikholah et al., 2019). From some of the backgrounds that have been explored by the experts above. The connection between local culture and early language learning is crucial, as it offers a relevant and familiar backdrop for children to grasp language. By incorporating aspects of local culture into language education, children can enhance their language abilities while also learning about the values, traditions, and identity of their community. This approach nurtures both an appreciation for their own culture and the development of effective communication skills.

Cultural relevance in vocabulary acquisition is crucial as it enhances the significance of the material and simplifies comprehension for students. When vocabulary ties to familiar cultural aspects like local traditions, stories, or objects from their environment students can better understand word meanings because of a direct association with their everyday experiences. Furthermore, this cultural link inspires students, boosts engagement, and helps with vocabulary retention through meaningful context. Therefore, cultural relevance not only aids in language

understanding but also nurtures a respect for their local cultural heritage., it eases students' engagement with their heritage, transforming it into dynamic chemistry learning experiences, as noted by Pamenang, (2021). This approach to learning underscores the significance of local wisdom in fostering a deeper comprehension of one's cultural roots. Pacitan's distinctive cultural identity and wisdom mirror the community's values and traditions, thereby enhancing students' interest and eagerness to learn English.

Integrating such cultural elements into English vocabulary lessons can yield a more captivating and participatory educational experience. By converting traditional narratives, customs, and cultural practices into compelling educational activities like role-playing, storytelling, or language games, learning becomes not only more enjoyable but also reinforces students' vocabulary comprehension and memory. From that researcher concludes that this research is thus important because it combines Pacitan local wisdom with English learning, which not only improves students' vocabulary acquisition but also strengthens their cultural identity. By infusing the game with aspects of local culture, the research aims to not only improve students' language abilities but also strengthen their connection to and comprehension of their cultural heritage. This method is designed to create a more engaging and impactful learning environment, allowing students to cultivate vital English language skills while simultaneously valuing and reinforcing their own cultural identity.

RESEARCH METHODOLOGY

The research methodology of the study is detailed, with a focus on the Research and Development (R&D) approach aimed at creating and refining a quartet card game designed to enhance English vocabulary acquisition through the local wisdom of Pacitan. The research utilizes the ADDIE model, which is a structured framework consisting of Analysis, Design, Development, Implementation, and Evaluation. During the analysis phase, assessments of needs, student characteristics, and material relevance are conducted to inform the creation of a culturally relevant learning product. In the design phase, the foundational structure of the quartet cards is developed, incorporating elements of Pacitan's culture into the vocabulary learning process.

The development stage includes the creation of the cards using design applications such as Canva, followed by expert validation and iterative revisions based on feedback. Implementation involves testing the cards with students to gauge their engagement and understanding of the cultural content before and after use. The evaluation phase examines the effectiveness of the cards in enhancing vocabulary skills and allows for further refinement based on student input. This study employs a mixed-method approach, integrating both qualitative and quantitative data through interviews, observations, and questionnaires to assess the product's practicality and appeal. Validation is carried out by media and content experts as well as English teachers, who offer insights that ensure the quartet cards align with educational standards and cultural significance.

RESULT AND DISCUSSION

During this study on media research and development, data is categorized into three distinct types: evaluations from subject-matter experts, assessments from media specialists, and feedback from users via post-test surveys. The evaluative data stems from comprehensive questionnaires completed by both media and subject-matter experts, as well as from post-test surveys administered to users. Presented below are the collated data and their corresponding analyses:

Material and Media Validation

The first validator is an English teacher, conducted the validation and feasibility evaluation for the SIKU media development. An analysis of the assessment results by the subject matter expert is presented in the table. The comprehensive analysis conducted by material experts, the SIKU: *Sistem Kuartet Untuk Inggris* has been awarded a cumulative score of 48 across ten questions. This equates to an average score of 4.8, leading to the conclusion that the system is classified within the “Highly Feasible” category, boasting a feasibility rate of 96%. Based on the results obtained from score conversion, it is clear that the SIKU: *Sistem Kuartet Untuk Inggris* stands firmly in the category of being highly feasible as you can see in table 1.

No	Assessment Aspect	Number of Items (n)	Score obtained (x)	Max Score	Category (\bar{X})	Percentage of eligibility
1	Material Aspect (Number 1-5)	5	23	25	$\bar{X} = \frac{\sum x}{n}$	$\frac{X}{\text{Totalscoreeach}} =$
2	Language Style Aspect (Number 6-7)	2	10	10	$\bar{X} = \frac{48}{10}$	$= \frac{48}{5} \times 100\%$
3	Ease of Media Aspect (Number 8-10)	3	15	15	$\bar{X} = 4,8$	$= 96\%$
Sum		n=10	$\sum x=48$	50	Highly Feasible	

Table 1. Material Expert Lecturer Validation Results

The second validator was an academician at STKIP PGRI Pacitan, has completed the validation and assessment of the SIKU learning media. Furthermore, a comprehensive breakdown of the evaluation by the media specialist is encapsulated in Table 2 for clarity. The SIKU media has achieved a cumulative score of 41 out of 100 questions, with an average rating of 4.1. This shows that the learning media is classified as “Feasible,” with an 82% suitability rating, and is recommended for use.

No.	Assessment Aspect	Number of Items (n)	Score obtained (x)	Max Score	Category (\bar{X})	Percentage of eligibility
1	Design Aspect (Number 1-4)	4	17	20		
2	Media Composition Aspect (Number 5-7)	3	13	15		$= \frac{4,1}{5} \times 100\%$ $= 82\%$

					$\bar{X} = \frac{\sum x}{n}$
3	Ease of Media Aspect (Number 8-10)	3	11	15	$\bar{X} = \frac{41}{10}$ $\bar{X} = 4,1$
Sum		$n=10$	$\sum x=41$	50	Feasible

Table 1. Media Expert Validation Results

Media Analysis (User)

In the English Language course at SMP Islam Nahdlatussubban, twelve first graders undertook a user feasibility assessment for SIKU: Sistem Kuartet Untuk Inggris. Due to absences on the day of the media trial, data was gathered from only eight students. Table 3 encapsulates the analysis of this data. The assessment’s data table reveals that the SIKU system, evaluated by the participating students, achieved a cumulative score of 420 across 19 items. The assessment was completed by eight students, while three were unable to contribute due to non-attendance. With an average rating of 4.30, the SIKU system is classified as “Feasible,” with students rating its viability at 86%, affirming its adequacy based on the converted scores.

No	Assessment Aspect	Items (n)	Score obtained (x)	Max Score	Category (\bar{X})	Percentage of eligibility
1	Media Attractiveness	5	172	25	$\bar{X} =$	
2	Content	5	173	25	$\frac{1}{StudentCount} x \frac{\sum x}{n}$	$= \frac{4,30}{5} x 100\%$
3	Language	4	137	20	$\bar{X} = \frac{1}{8} x \frac{482}{14}$ $\bar{X} = 4,30$	$= 86\%$
Sum		$n=14$	$\sum x=482$ $X=34,43$	70		Feasible

Table 2. User Feasibility Assessment

Final Media

This media is in the form of quartet cards designed using Canva. The number of cards in this media is 155, consisting of 12 types of Pacitan local wisdom. For detailed information about this media can be seen in this link: <https://bit.ly/3EsR3sG>

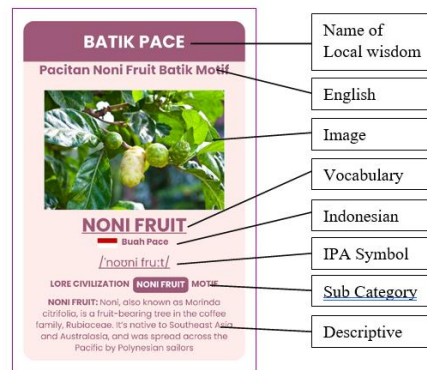


Image 1. Front View

The SIKU Quartet card’s front page displays various elements as you can see in Figure 1. The “Name of Local Wisdom of Pacitan” which is a sub-chapter title, its direct English translation, related images, vocabulary terms, a subcategory, IPA symbols for pronunciation, and a descriptive text. The “Name of Local Wisdom” section highlights the specific wisdom used, divided into 12 distinct sub-chapters. The “English Translation” provides the wisdom’s English counterpart, with explanations for non-translatable terms. Visual aids go with the vocabulary, while the “Indonesian Translation” teaches the English-Indonesian vocabulary correlation. The “IPA Symbol” helps in the correct pronunciation of English words. Collecting four cards from the same subcategory scores a point and declaring “SIKU” upon completing a quartet in a subcategory earns more points, as per the game’s rules. The card’s descriptive text guides players through the vocabulary used.

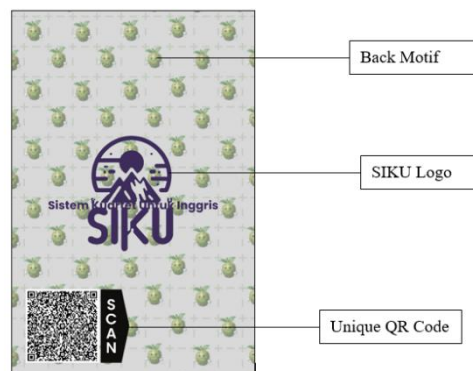


Image 2. Card Reverse side

The card’s reverse side in image 2 is elegantly simple, highlighting only three elements: a distinctive back pattern, the SIKU logo, and a scannable QR Code. Each card’s QR Code is distinct, linking to an interactive SharePoint OneDrive for auditory vocabulary aid. Adorning the back, a checkered motif interspersed with Noni Fruit illustration known locally as Pace or Mengkudu reflects the fruit’s significance in Pacitan’s identity and research inspiration.

The using Microsoft AI technology, the researcher made these fruits in 3D, enhancing the design’s appeal. The SIKU acronym, standing for “Sistem Kuartet Untuk Inggris,” underscores

the media’s innovative approach. The QR Code, when engaged, connects to SharePoint OneDrive, vocalizing the front’s vocabulary to aid pronunciation learning link for game instruction could be access at <https://s.id/guidepaper>.



Image 3. Game Instruction

This media also comes with a guide you can see in image 3, so players will easily understand to play this game. The SIKU Media game guide is a vital tool for maximizing player engagement and enjoyment. Presented as a convenient single-page paperback, the guide offers straightforward, step-by-step instructions. It includes essential pre-game setup details, a breakdown of game elements, and the ultimate aim players strive for. The guide outlines the gameplay process, from commencement to the in-game regulations and concluding with winner determination. Crafted in accessible and educational language, it serves to enhance the gaming experience for both novices and seasoned players. Available in both Indonesian and English, the guide aims to reach a broad audience, helping knowledge sharing without linguistic hurdles. This dual-language approach fosters inclusive participation, cultural dialogue, and global cooperation, aligning with the interconnected nature of today’s scholarly and professional environments.

The SIKU Quartet cards have undergone a comprehensive review by field experts to ensure their effectiveness as educational tools. The validator rated the materials as “Highly Feasible,” with a high-quality score of 48 and a 96% success rate. Recommendations for improvement included diversifying language use, which the researcher has implemented. The second validator’s analysis considered the media “Feasible,” scoring 41 with an 82% success rate. She suggested enhancements to the game instructions and usability, which have been incorporated into the last version of the SIKU Quartet cards.

No.	Respondents	Number of Questions	Number Correct pre-test	Number correct Post-Test	Percentage Increase
1	IF	25	10	14	40%
2	DA	25	11	13	10%
3	NA	25	5	13	8%
4	FA	25	6	13	24%
5	BA	25	3	6	12%

6	DO	25	10	13	20%
7	SH	25	4	5	16%
8	DK	25	4	5	16%
9	IZ	25	14	14	0%
Average					16,22%

$$\text{Percentage Increase} = \left(\frac{\text{Number correct Post-Test} - \text{Number correct Pre-Test}}{\text{Number correct Pre-Test}} \right) \times 100\%$$

Table 4. Percentage increase in pre-test and post-test results

The evaluation of the educational media by students was conducted through a structured questionnaire, administered post-interaction and post-test completion. The evaluation focused on three primary aspects: the appeal of the media, its content quality, and language use. Analysis of questionnaire responses from nine students rated the media as “Feasible,” with an aggregate score of 482 and an average of 34.43. Feedback was universally positive, indicating students found the media to be effective, beneficial for learning, and suitable for publication. Despite this, some dissent was noted regarding the media’s suitability for independent use. Overall satisfaction with the media was high, aligning with the successful attainment of research goals. Additionally, the study assessed the media’s impact on enhancing English language proficiency through pre-test and post-test comparisons, utilizing the SIKU game media. The data revealed an average improvement in English vocabulary comprehension of 16.22%.

Finally, research synthesized from various methods like interviews and trials highlights key outcomes. Firstly, SIKU media’s user-friendliness and seamless integration into educational settings stand out, with its straightforward interface welcoming all user groups. Secondly, the use of SIKU media correlates with a noticeable enhancement in students’ vocabulary skills, especially when the content is inserted with the local wisdom of Pacitan, making learning more relatable and engaging. Lastly, it serves as a cultural bridge, acquainting students with Pacitan’s rich heritage, which is deemed a valuable educational asset. In summary, SIKU media is seen as a promising tool for enriching English vocabulary learning through local cultural insights, though it requires further refinement and support for optimal classroom application.

CONCLUSION

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Incorporating the rich tapestry of local wisdom into educational resources can profoundly transform the learning experience. By weaving traditional knowledge and cultural heritage into the fabric of learning materials, educators can create a more captivating and relatable learning environment. This integration not only enhances the educational content with depth and context but also plays a crucial role in fortifying the cultural identity of students. It allows learners to connect with their roots and understand the relevance of their ancestors’ insights in today’s world. As a result, education becomes not just a transfer of information, but a meaningful journey that respects and celebrates the uniqueness of each culture, fostering a sense of pride and continuity among students. This approach to education is invaluable as it helps preserve

Indigenous knowledge and practices, ensuring they remain a vibrant part of our world's cultural mosaic.

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