

Development of GEM (Go Explore Malang) to Enhance Understanding of Natural Tourism Potential in Board Game Based Social Studies Learning

Bintang Muhammad Sahara Efendi^{1*}, Arista Wati², Bima Wahyu Pratama³, Tuti Mutia⁴, Ravinesh Rohit Prasad⁵

^{1*2,3}Program Pendidikan Profesi Guru, Sekolah Pascasarjana, Universitas Negeri Malang, Malang, Indonesia

⁴Program Studi Pendidikan Geografi, Fakultas Ilmu Sosial, Universitas Negeri Malang, Malang, Indonesia

⁵Social Sciences Department, School of Arts and Humanities, Fiji National University, Suva 0069-004, Fiji

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ABSTRACT

This study aims to develop an innovative learning medium called GEM (Go Explore Malang), a board game designed to enhance students' understanding of natural tourism potential in the Greater Malang area. The research seeks to improve contextual and engaging Social Studies learning by integrating local content with a game-based approach. The development employed the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation stages. The product was validated by material and media experts and tested on sixteen ninth-grade students at SMP Negeri 13 Malang. Data were collected using expert validation sheets, student response questionnaires, and learning achievement tests, and analyzed using descriptive statistics. The validation results indicated that GEM achieved 95.71% feasibility from material experts and 81.33% from media experts, categorized as "highly feasible." Field implementation showed active student participation, increased motivation, and a perfect learning mastery rate. The game effectively enhanced geographical literacy, collaboration, and critical thinking skills through enjoyable play-based interaction. The study was limited to a small sample from one school; future research should expand the testing scope and explore digital adaptations of GEM for wider implementation. GEM can be used as an alternative learning medium that contextualizes Social Studies content, strengthens local awareness, and promotes 21st-century competencies such as collaboration and problem-solving. This research introduces a novel integration of local tourism content into a board game framework, providing a "glocal" innovation that bridges local identity with global learning strategies in Social Studies education.pertama.

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Corresponding Author:

Bintang Muhammad Sahara Efendi,

Program Pendidikan Profesi Guru,

Sekolah Pascasarjana,

Universitas Negeri Malang, Malang, Indonesia

Jalan Semarang No.5, Lowokwaru, Kota Malang, Jawa Timur, Indonesia

Email: bintang.muhammad.2331747@students.um.ac.id

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1. Introduction

A common phenomenon in Indonesian education indicates that although students' literacy and numeracy achievements have improved, the quality of understanding in certain subjects including Social Studies still faces significant challenges. According to data from the 2024 National Assessment, only 70.3% of junior high school students reached the minimum literacy competency, and 68.1% achieved the minimum numeracy standard (Kemendikbudristek, 2024). Meanwhile, the 2023 Education Report revealed that only 59% of students possessed literacy skills above the minimum standard, and 40.6% did so in numeracy. A survey conducted by Puspendik (2022) also found that more than 60% of students considered Social Studies learning uninteresting and irrelevant to their daily lives. This issue is exacerbated by the dominance of lecture-based approaches and the lack of innovation in utilizing learning media. Therefore, more contextual and interactive media are needed to enhance students' engagement and understanding of Social Studies materials.

Social Studies learning aims to shape students into critical, active, and environmentally conscious citizens (Efendi & Wiradimadja, 2024; NCSS, 1994; Wiradimadja, 2021). In practice, however, Social Studies education often faces various contextual challenges (Dewi et al., 2025). One of these challenges is the gap between the learning materials and students' daily lives. Abstract content and a lack of diverse teaching approaches can lead to low interest and poor understanding among students toward the subject matter (Agusta et al., 2025; Efendi & Insani, 2024; Siregar, 2025). Therefore, Social Studies learning needs to be developed to become more contextual and connected to students' real-life experiences, particularly those related to their local environment. Various efforts have been made to improve the quality of Social Studies learning, one of which is through the introduction of innovative and interactive learning media. Appropriate learning media can not only enhance conceptual understanding but also foster students' emotional and cognitive engagement (Srimuliyani, 2023). In the context of 21st-century education, the use of Game-Based Learning (GBL) has emerged as an appealing alternative that accommodates the learning needs of the current generation (Yusuf, 2023).

Game-Based Learning (GBL) is an instructional model that utilizes the principles and elements of games to achieve learning objectives. This concept has evolved since the early 2000s and has become increasingly relevant in the context of 21st-century education due to its ability to effectively integrate entertainment and education. According to Yusuf (2023), GBL can enhance student engagement, foster curiosity, and strengthen conceptual mastery through enjoyable and challenging learning experiences. Furthermore, research by Wijaya et al. (2023) indicates that the use of games as learning media, including board games, can significantly improve students' motivation and learning outcomes. Therefore, the integration of media such as board games serves as a potential intervention to address the challenges of Social Studies learning, which is often perceived as monotonous and impractical.

Board games, as a form of non-digital learning media, have advantages in creating an enjoyable, competitive, and collaborative learning atmosphere (Putra & Mansoor, 2023). Through board games, students not only learn Social Studies concepts thematically but also develop critical thinking, problem-solving, and teamwork skills. In the local context, the development of board games that highlight regional potential such as natural tourism in the Greater Malang area can strengthen the connection between Social Studies materials and students' surrounding environments. This aligns with the spirit of contextual learning and the

reinforcement of national character education. Game-based media, including board games, can enhance students' motivation, active participation, and conceptual understanding across various subjects, including social studies (Dahlena & Mulyana, 2022; Wijaya et al., 2023). Several studies have also highlighted the effectiveness of board games in developing geographical literacy, environmental awareness, and social values through educational gameplay mechanisms (Hidayati, 2020; Kurniawati et al., 2021). However, the development of similar media that integrate local content and are designed using systematic approaches such as the ADDIE model aimed at ensuring quality and effectiveness in the learning process remains limited.

To strengthen the urgency of developing this medium, a needs analysis conducted among prospective users junior high school students in Indonesia revealed a pressing need for more interactive and contextual Social Studies learning media. According to a study on the analysis of digital learning media needs for junior high school students (Kurniasih et al., 2024), approximately 75% of students stated that conventional media are uninteresting and that they require game-based approaches to increase learning interest, particularly in topics related to needs and local potential. This finding is supported by a study on the needs analysis for developing educational game media (Kusmirah et al., 2025), which revealed that the pedagogical, technical, cognitive, and aesthetic aspects of social Studies media remain low, with more than 65% of student respondents indicating the need for engaging and life-relevant learning media. This theory aligns with the concept of Game-Based Learning (GBL), which has been proven effective in improving Social Studies learning outcomes, as demonstrated by research on the effectiveness of the Game-Based Learning model on students' learning outcomes in seventh-grade Social Studies (Maharani et al., 2024), where the use of GBL increased motivation by up to 30% and conceptual understanding by 25%. These data reinforce the research gap, namely the lack of non-digital, game-based media integrated with local contexts, thereby emphasizing the urgency of developing media such as GEM to fill this gap.

The novelty of this study lies in the integration of an educational board game with the local context of natural tourism in the Greater Malang area, which has not been specifically explored before. Although there have been developments of board games with historical or heritage themes in Malang City (Farhandika & Hanaru, 2024; Wibowo, 2023), the focus on natural tourism potential along with conservation and socio-economic aspects through an interactive board game represents a new innovation. This distinguishes it from previous studies that generally focused on digital GBL or non-local themes. Therefore, this research contributes to a glocalization approach in Social Studies education, where the local values of the Greater Malang area are integrated with global game elements to enhance students' environmental appreciation and geographical literacy. Based on the above statement, this development research aims to develop the GEM (Go Explore Malang) learning media in the form of a board game as an innovative alternative in Social Studies education. The development of this medium is not only intended to enable students to identify the natural tourism potential in the Greater Malang area but also to encourage them to analyze its benefits and conservation efforts through a collaborative and enjoyable approach. The urgency of this research lies in the importance of providing learning media that are locally relevant, educational, and easily implemented in the classroom, while also making a tangible contribution to improving the quality of Social Studies learning at the junior high school level.

2. Method

This study was conducted using the ADDIE approach, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. This approach was chosen because it is well-suited for developing and testing a learning product in this case, Social Studies

learning media that was directly tested on students.

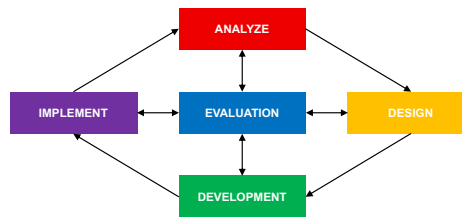


Figure 1. Research and Development Procedure of the ADDIE Model
Source: Branch (2009)

Table 1. Research Stages in the Development of the ADDIE Model

No.	ADDIE Model	Description
1	Analysis	Identifying learning needs, learner characteristics, and learning objectives to be developed in the instructional process.
2	Design	Designing the learning media, including format, content, and presentation methods.
3	Development	Developing the initial product based on the designed plan, followed by expert validation.
4	Implement	Testing the media on students to assess their understanding, interest, and the media's effectiveness.
5	Evaluation	Evaluating based on validation and experimental data to improve and refine the learning media.

The subjects of this study were junior high school students. The experiment was conducted in a Social Studies class, taking into account the diversity of student characteristics and ease of access during the learning process. The participants consisted of 16 ninth-grade students from SMP Negeri 13 Malang. The media was designed in accordance with the main topic, namely "The Natural Tourism Potential of the Greater Malang Area." This study employed two types of instruments: validation instruments and experimental instruments. The validation instrument was used to assess the validity of the developed media or learning tools, with the assistance of expert validators (content experts and media experts). This validation was necessary to evaluate aspects such as content, design, and the feasibility of the media to be implemented. The instrument consisted of validation sheets with specific rating scales, accompanied by columns for comments and suggestions. Second, the experimental instrument included a questionnaire to measure students' responses to the developed media, as well as a learning achievement test to evaluate the impact of the media on learning outcomes. The content and media validation instruments, along with the media evaluation instrument completed by students, are presented in the three tables below.

Table 2. Material Validation Assessment Instrument

No.	Aspect	Indicator
1	Relevance	Material relevant to the competencies that students must master. Learning media relevant to the competencies that students must master. Completeness of the material in accordance with students' developmental level. Illustrations in the material suited to students' developmental level.

No.	Aspect	Indicator
2	Accuracy	Illustrations in the material relevant to the conveyed competencies.
		Material presented in accordance with scientific accuracy.
		Material aligned with current developments.
		Material relevant to everyday life.
		Presentation of material in the learning media aligned with a relevant scientific approach (Cooperative Learning type <i>Teams Games Tournament</i> (TGT)).
3	Completeness of Presentation	Presents the competencies that students must master.
4	Conceptual Basis of Material	Appropriateness of the material concept regarding the natural tourism potential in Malang.
5	Suitability of Presentation with Learning Needs	Encourages students' curiosity.
	Focused on Students	Promotes interaction among students.
		Encourages students to construct their own knowledge.
		Encourages students to construct their own knowledge.

Table 3. Media Validation Assessment Instrument

No.	Aspect	Indicator
1	Media Efficiency	Easy to use
		Easy to store
		Does not require special handling
		Attractive design of the board game packaging
		Color design of the board game media
2	Media Accuracy	The language used in the board game is easy to understand
		Appropriateness of the font type used
		Consistency in the use of fonts, images, spacing, and typing on the cards
		Alignment in color selection on the game board
		Harmony of text color on the cards
3	Aesthetics	Color harmony used in designing the board game
		Accuracy of color in the board game columns
		Attractiveness of the cards
4	Media Durability	Not easily detached, broken, or damaged during use
5	Safety for Students	Made from safe materials (not sharp and not heavy)

Table 4. Learning Media Evaluation Instrument by Students

No.	Aspect
1	Enjoyment
2	Attention
3	Interest
4	Participation
5	Concentration

The data analysis techniques in this study were divided into two main parts: validation analysis and statistical analysis. In the validation analysis, data from expert validation sheets were analyzed descriptively and quantitatively to obtain the average score for each aspect,

which was then categorized according to the established criteria. Subsequently, data analysis was carried out using descriptive statistics (mean and standard deviation) to examine students' learning outcomes after using the media. The data analysis in this study involved two types of analysis: (1) validity analysis and (2) statistical analysis. For the validity analysis, the formula table below was used.

Table 5. Validation Analysis Formula

Formula		
EV =	$\frac{\text{Test}}{\text{Times}}$	X 100%
Keterangan		
Ev	:	Expert validity
Test	:	Total empirical score (validation results from the validator)
Times	:	Total expected maximum score
100%	:	Constant

Source: Arikunto (2013)

Table 6. Validation Questionnaire Assessment Using Likert Scale

Category	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

Source: Arikunto (2013)

Table 7. Validity Level Assessment Criteria

No.	Percentage	Criteria	Category
1	81.25–100.00%	Strongly Agree	Usable
2	62.50–81.25%	Agree	Usable
3	43.75–62.50%	Neutral	Not Recommended for Use
4	25.00–43.75%	Disagree	Not Usable
5	00.00–25.00%	Strongly Disagree	Not Usable

Source: Arikunto (2013)

3. Results and Discussion

Results

Analysis

The analysis stage aimed to identify students' learning needs and the challenges they face in understanding Social Studies material, particularly on the topic "Tourism Potential in the Greater Malang Area." Information was obtained through preliminary observations and interviews with subject teachers, which revealed that learning tends to be one-directional, lacks contextual relevance, and involves minimal participatory activities. The results of observations conducted through teacher interviews indicated that students found it difficult to understand the interconnections among local tourism potentials because the material was presented in an overly

theoretical manner. This was further supported by classroom observations, which showed that students tended to pay little attention when the teacher delivered instructions, as the learning process felt monotonous. Therefore, there is a need for learning media that promote active participation, provide enjoyment, and connect closely with students' surrounding environments.

Design

At this stage, the research team designed the learning media in the form of an educational board game. The selection of this type of media was based on the characteristics of junior high school students, who tend to be more responsive to visual stimuli and enjoyable play-based activities. The main objective of developing this medium is to create an interactive board game that not only introduces the tourism potential of Malang but also integrates conservation aspects in an educational manner. The GEM (Go Explore Malang) media was specifically designed to enhance students' understanding, collaboration, and critical thinking skills through engaging gameplay mechanisms (Andrew & Muladi, 2021). During the trial phase, the target audience consisted of 16 junior high school students selected due to their low engagement in conventional learning and the need for contextual media that promotes active participation.

The game structure was designed to align with the learning objectives of Social Studies, particularly within the dimensions of local understanding and critical thinking skills. The game format was intended for group play, with main components including a game board, quiz cards, challenge cards (lucky/unlucky cards), pawns, and dice. The visual design of the media was developed using the Canva graphic design software, which enabled the creation of visually appealing and proportionally balanced elements for printing purposes. The design process was further supported by additional graphic design tools for the visual presentation of cards and the game board. The GEM board game is intended for face-to-face use in small groups, where students play directly during Social Studies sessions. The game will be facilitated by the teacher to ensure that learning remains aligned with the Learning Objectives (LO). All development stages were planned over approximately six months, from conceptual design to testing and evaluation. Project management was conducted through a timeline that monitored the development of the game board, question creation, and post-testing revisions.

The design phase focused on developing the structure and game mechanisms of the GEM board game in alignment with the core competencies of Social Studies. The game was designed based on the types of tourism potential found in the Greater Malang area (Malang City, Malang Regency, and Batu City). Learning challenges were integrated into gameplay activities, such as answering challenge cards, making decisions, and completing group missions.

Development

This stage focused on developing the initial prototype of the GEM (Go Explore Malang) media based on the analysis conducted by the research team. The development process involved several stages, as follows:

a. Content and Question Development

The material was designed based on the Social Studies (IPS) curriculum for junior high school, particularly on the topic of natural tourism potential in the Greater Malang area. The content included narratives about tourist destinations, geographical facts, conservation values, and related topics.

b. Game Mechanism Design

The game's flow and mechanics such as the pawn movement system on the board, scoring system, types of cards used, game rules, and other elements were designed to align with cooperative learning activities. Simply put, the gameplay mechanics were adapted from the

Monopoly board game. A clearer overview of the game's flow and mechanics can be seen in the guide image below.

1. **Persiapan Bermain**
 - a. Letakkan papan permainan di tengah meja.
 - b. Siapkan semua tumpukan kartu:
 - Lucky Card
 - Unlucky Card
 - Quiz Card (Multiple Choice)
 - Quiz Card (True or False)
2. **Pembentukan Tim**
 - a. Masing-masing tim berjumlah 2-4 orang (sesuai instruksi dari guru)
 - b. Setiap tim mendapatkan:
 - 1 pion
 - 1 kertas poin
 - 1 paket alat tulis.
3. **Mulai Permainan**
Semua tim mulai dari titik **START** (Stasiun Kota Malang).
4. **Giliran Bermain**
 - a. Awal permainan, setiap tim mendapat **+10 poin**
 - b. Setiap tim melempar 2 dadu → maju sesuai jumlah titik dadu
 - c. Pemain maju sejumlah titik sesuai total dadu
 - d. Jika melewati START, tim mendapat **+10 poin**
 - e. Jika berhenti di titik tertentu, lakukan aksi berikut:
 - **Lucky Card** : Ambil dan ikuti instruksinya
 - **Unlucky Card** : Ambil dan ikuti konsekuensinya
 - **Quiz Card (Multiple Choice)** : Jawab 1 soal pilihan ganda
 - **Quiz Card (True or False)** : Jawab 1 soal benar/salah.
5. **Penilaian Kuis**
 - a. Jika benar, tambah **+10 poin**
 - b. Jika salah, tidak mendapat poin.
6. **Kartu yang Sudah Dipakai**
Ditaruh kembali di bawah tumpukan kartunya.
7. **Penjara**
Jika pemain masuk ke **Lapas Malang**, mereka **tidak bisa main selama 1 giliran**, kecuali memiliki **Kartu Bebas Penjara**.

Menentukan Pemenang

- ❖ Pemenang ditentukan berdasarkan jumlah poin tertinggi setelah waktu bermain berakhir (d disesuaikan dengan waktu).
- ❖ Pemenang juga dapat ditentukan apabila sudah ada tim yang sudah memenuhi putaran ke-5 (d disesuaikan dengan instruksi dari guru).

Tips Tambahan

- Mainkan hingga waktu yang disepakati (misal: 30–45 menit) atau sesuai arahan guru pendamping.
- Gunakan kertas poin untuk mencatat skor setiap putaran.
- Guru bisa menjadi moderator untuk membacakan soal dan menilai jawaban.

Figure 2. GEM Gameplay Guide and Winner Determination Mechanism

c. Designing the Visual Media

The visuals of this media were designed using the Canva application in premium mode. Canva was chosen for its user-friendly interface and wide variety of design options. It was used to create the initial layout and select visually friendly color schemes suitable for students. Several of the designs produced can be seen in the images below.



Figure 3. GEM Design

Figure 3 shows the design of GEM (Go Explore Malang), which was created using Canva. The design was made in a 40 x 40 cm format. The same dimensions will be applied during the printing process, using the color composition presented in the table below.

Table 8. Color Composition in GEM

Color	Color Code	Description
Red	#E74C3C	A1,A3,A5,A7
Blue	#3498DB	B1,B3,B5,B7
Yellow	#F1C40F	C1,C3,C5,C7
Green	#2ECC71	D1,D3,D5,D7
Pink	#EB4C89	Lucky Card
Grey	#9E9E9E	Unlucky Card

Color	Color Code	Description
Cyan	#1ABC9C	Quiz Card (Multiple Choice)
Purple	#9B59B6	Quiz Card (True or False)

The selection of the color composition was based on its suitability for the characteristics of junior high school students, who tend to prefer bright and cheerful colors while maintaining differentiation. This differentiation indicates the distinction in meaning and function of each square on the board. The choice of colors for the design **Lucky Card (pink)**, **Unlucky Card (grey)**, **Quiz Card Multiple Choice (cyan)**, and **True/False (purple)** was made in accordance with the visual preferences of junior high school students, who generally respond positively to vibrant colors that can enhance learning motivation and emotional engagement.

The differentiation of colors aims to signify variations in function, description, and purpose of each space, thereby facilitating efficient visual recognition and reducing cognitive load in instructional information processing. The selection of these four distinct colors is supported by the **color-in-context theory**, which emphasizes that color perception influences psychological functions such as affect and cognition, as well as the **color-coding theory** in instructional design, which demonstrates that color variation aids in concretizing concepts, improving memory retention, and enhancing academic performance, particularly among adolescents (Amarin & Al-Saleh, 2020).

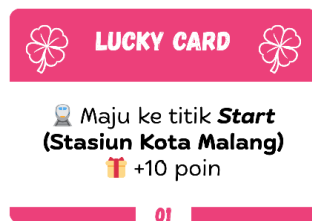


Figure 4. Lucky Card Design (Front View)



Figure 5. Lucky Card Design (Back View)



Figure 6. Unlucky Card Design (Front View)



Figure 7. Unlucky Card Design (Back View)

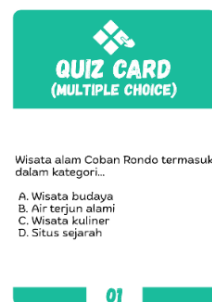


Figure 8. Quiz Card (Multiple Choice) Design (Front View)



Figure 9. Quiz Card (Multiple Choice) Design (Back View)

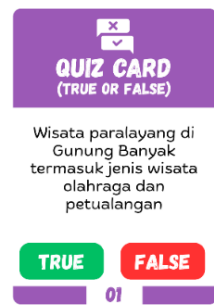


Figure 10. Quiz Card (True or False)
Design (Front View)



Figure 11. Quiz Card (True or False)
Design (Back View)

Next, there is also a list of components required by students to play GEM, as presented in the table below.

Table 8. GEM Components

No.	Equipment/Tools	Quantity	Description
1	Game Board	1	A 40 x 40 cm board displaying the tourism route map of the Greater Malang area.
2	Main Guidebook	1	A manual containing the game rules and instructions for using the media.
3	Backup Guidebook	1	A spare copy in case the main guidebook is damaged or lost.
4	Main Player Tokens	4	Player tokens used to move between points on the game board.
5	Backup Player Tokens	4	Spare tokens to anticipate damage or loss.
6	Main Dice	2	Dice used to determine player moves during turns.
7	Backup Dice	2	Spare dice in case the main ones are damaged or lost.
8	Main Score Sheets	4	Used to record the points earned by each group.
9	Backup Score Sheets	4	Spare sheets in case of damage or writing errors.
10	Main Writing Tools	4	Used for recording scores and answering quiz cards.
11	Backup Writing Tools	4	Spare writing tools to anticipate loss or damage.
12	Stationery Holder	2	A container to keep writing tools organized and tidy.
13	Lucky Cards	18	Cards with positive surprises, such as extra points or moving forward.
14	Unlucky Cards	18	Cards with negative consequences, such as moving backward or losing points.
15	Quiz Cards (Multiple Choice)	15	Multiple-choice question cards based on local tourism potential material.
16	Quiz Cards (True or False)	15	True/False question cards to train quick and critical understanding.
17	Game Board Storage Box	1	A container for storing the game board to ensure portability and durability.
18	Game Equipment Storage Box	1	A container for storing all game components for easy organization and distribution.

d. Conducting Material and Media Validation

Once all the preparations mentioned above were completed, the next step was to conduct validation of the material and media, the results of which can be seen in the table below.

Table 9. Evaluation Results by Material Expert Validator

No.	Aspect	Score Obtained	Maximum Score
1	Relevance	23	25
2	Accuracy	20	20
3	Completeness of Presentation	4	5
4	Conceptual Basis of the Material	5	5
5	Alignment of Presentation with Learning Needs Focused on Students	15	15
Total Score		67	70
Percentage (%)		95.71%	
Criteria		Strongly Agree	
Category		Usable	

The evaluation results from the material expert indicate that this media performs excellently in several key aspects, such as alignment with the curriculum, accuracy of information, and student-friendly presentation. Out of a maximum score of 70, the media achieved 67 points, or approximately 95.71%. This is considered a high score, placing the media in the “highly feasible for use” category. This finding shows that the content of GEM is not only relevant but also presented in an engaging way that matches the comprehension level of junior high school students. The engaging aspect was implemented through interactive activities such as roleplay where students were invited to present their understanding based on given instructions and ice-breaking sessions. The ice-breaking activities were conducted at the beginning and toward the end of the lesson. The initial ice breaker involved rhythmic clapping, while the closing ice breaker used a “focus clap” game to help students regain concentration before taking the learning assessment test.

Table 10. Evaluation Results by Media Expert Validator

No.	Aspect	Score Obtained	Maximum Score
1	Media Efficiency	20	25
2	Media Accuracy	20	25
3	Aesthetics	12	15
4	Media Durability	4	5
5	Safety for Students	5	5
Total Score		61	75
Percentage (%)		81.33%	
Criteria		Strongly Agree	
Category		Usable	

In addition to the content evaluation, an assessment was also conducted by a media expert to ensure that the form and appearance of GEM truly support the learning process. The evaluated aspects included ease of use, clarity of design, aesthetic appeal, and the physical safety of the media for students. As a result, the GEM media obtained a score of 61 out of 75, or approximately 81.33%. Although there were a few suggestions related to aesthetics such as improving color balance and font size other recommendations included correcting minor typographical errors. Overall, the media was considered engaging, safe, and easy to use in classroom learning. This indicates that GEM is not only “good on paper” but also

genuinely ready to be implemented by teachers and students. The term “good on paper” here means that students are not only able to achieve high test scores but also develop collaborative attitudes and time management discipline.

e. Producing the Physical Prototype

All designs were printed on art carton paper and laminated. Components such as the pawns and dice were physically prepared so that the game could be used directly in face-to-face learning.

f. Game Simulation and Revision

Before the trial phase, an internal simulation was conducted by the development team to ensure that the gameplay flow was easy to understand, playtime was efficient, and the game rules were not confusing.

Implementation



Figure 12. Teacher Giving Learning Instructions Using GEM

The GEM board game was implemented with sixteen ninth-grade students as field test subjects. The trial was conducted over one day. The students were divided into small groups and played the board game within the allotted time. Observation results showed active engagement from students throughout the learning process.

Evaluation

To evaluate the success of integrating GEM into Social Studies learning, a final learning assessment was conducted. This assessment took the form of a multiple-choice test administered by the teacher to students via a Google Form questionnaire.



Figure 13. Students Completing the End-of-Lesson Assessment

The figure above documents the moment when students completed the evaluation, which consisted of multiple-choice questions. The test was constructed by determining indicators, Bloom’s taxonomy levels, and scores for each question. The results showed that all sixteen participating students achieved a perfect score of 100 on all questions.

Subsequently, a learning reflection was conducted to assess the overall effectiveness of the media and to make revisions based on the implementation results. Based on feedback from students and teachers, the board game was evaluated according to the following aspects: (1) enjoyment, (2) attention, (3) interest, (4) participation, and (5) concentration. This feedback also served as the students’ evaluation of the GEM media.



Figure 14. Students Reflecting on Learning After Using GEM

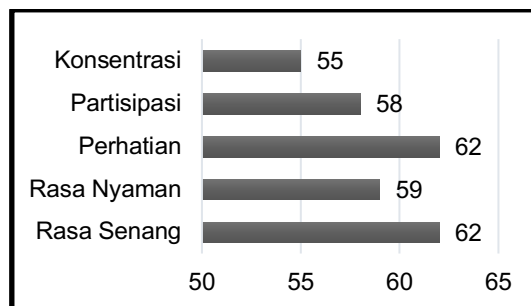


Figure 15. Diagram of Students' Learning Reflection Results Using GEM

The learning reflection was conducted to evaluate the overall effectiveness of the media and to make revisions based on the implementation results. Based on feedback from both students and teachers, the board game was assessed according to the following aspects: (1) enjoyment, (2) attention, (3) interest, (4) participation, and (5) concentration. This feedback also served as students' evaluation of the GEM media.

Discussion

The development of board game-based learning media such as GEM (*Go Explore Malang*) has proven to be an innovative solution for improving the quality of Social Studies learning, which is often perceived as monotonous and lacking contextual relevance. The validation results from material experts showed a feasibility level of 95.71%, and from media experts 81.33%, indicating that this media is highly suitable for classroom implementation. These findings align with the research of Wijaya et al. (2023), which stated that board games are effective in enhancing student engagement through enjoyable and collaborative activities. Furthermore, Srimuliyani (2023) emphasized that gamification elements in learning have great potential to foster students' interest and attention. The GEM media also demonstrated high effectiveness based on students' responses, reflecting affective aspects such as enjoyment, active participation, and high concentration. This was reinforced by reflection results showing that students felt happy and motivated during learning.

These findings are supported by Putra and Mansoor (2023), who found that board games encourage collaboration, critical thinking, and communication among students through direct interaction in gameplay. The effectiveness of board games in developing collaborative skills was also proven by Dahlena and Mulyana (2022), who found increased motivation and learning outcomes in Social Studies after using educational guessing games. The integration of local content in the GEM media is a particular strength, as it helps students understand the material more contextually. This aligns with Kurniawati et al. (2021), who found that locally based monopoly-style games can enhance students' geographical understanding and environmental literacy. Similarly, Hidayati (2020) developed a history-based Social Studies board game that significantly improved students' 4C skills critical thinking, communication,

collaboration, and creativity. From a methodological standpoint, the use of the ADDIE development model has proven effective in ensuring that the learning media were developed systematically and measurably. Each phase from needs analysis to evaluation showed consistency between learning objectives and outcomes. Efendi and Insani (2024) also demonstrated the success of the ADDIE model in developing a Social Studies e-module using Google Sites, which significantly increased students' learning interest. Therefore, the application of the ADDIE approach in developing GEM provides a strong scientific and practical foundation.

Finally, the students' perfect test scores serve as an important indicator of the media's effectiveness in delivering content. This result is consistent with the findings of Dewi et al. (2025), who affirmed that contextual and interactive Social Studies learning significantly improves conceptual understanding and retention. However, such high achievement results require further investigation in large-scale implementations to ensure there is no implementation bias or novelty effect. The integration of this media with cooperative learning approaches such as Teams Games Tournament (TGT) has also been shown to reinforce learning outcomes, as highlighted in Agusta et al. (2025), who emphasized the importance of active strategies in connecting abstract Social Studies concepts to real-life contexts.

4. Conclusion and Suggestions

The GEM (*Go Explore Malang*) learning media has been proven to be valid, feasible, and effective for use in Social Studies learning, particularly on the topic of natural tourism potential in the Greater Malang area. The material expert validation reached **95.71%**, and the media expert validation reached **81.33%**, indicating that the media falls into the "highly feasible" category. The field trial demonstrated active student engagement and improved learning outcomes, with all students achieving mastery. These findings confirm that integrating local content with a board game approach can enhance students' conceptual understanding, learning motivation, and collaborative skills through enjoyable learning experiences. Theoretically, this study strengthens the framework of game-based learning as a relevant model for contextual Social Studies education. Empirically, it demonstrates that locally based media developed through the ADDIE model can be effectively implemented at the junior high school level. The practical implication of this research is that Social Studies teachers can utilize GEM as an innovative learning alternative that not only focuses on knowledge transfer but also fosters 21st-century skills such as collaboration, critical thinking, and environmental awareness. Moreover, the use of this contextual board game can strengthen the connection between Social Studies material and students' real-life experiences. However, the limitation of this study lies in the scope of the trial, which was restricted to a single school with a small number of participants. Therefore, future research is recommended to test the GEM media on a broader scale, involving diverse schools and students with varying characteristics, as well as to explore the potential for digitalizing the board game to make it more adaptive to 21st-century learning needs.

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6. Conflict of Interest

The authors declare that there is no conflict of interest in this research or in the preparation of this scientific article.

7. Author Contribution

All authors confirm that they have read and approved the final version of this paper. The contributions of each author are divided into four parts: B.M.S.E. served as the initiator of the research; A.W. and B.W.P. provided support and actively participated in data analysis and discussion of the findings; while T.M. acted as the advisor throughout the authorization process up to the publication of this research output. The total contribution percentages for the conceptualization, writing, and revision of this paper are as follows: B.M.S.E. (25%), A.W. (20%), B.W.P. (20%), and T.M. (20%), R.R.P (15).

8. Data Availability Statement

All authors declare that the data supporting the findings of this study will be made available by the corresponding author, B.M.S.E., upon reasonable request.

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Author Biography

	Bintang Muhammad Sahara Efendi, S.Pd., Gr., is a graduate of the Teacher Professional Education Program, Graduate School, Universitas Negeri Malang, Malang, Indonesia. His research interests are in education, learning, teaching, and the social sciences. Email: bintang.muhammad.2331747@students.um.ac.id
	Arista Wati, S.Pd., M.Pd., Gr. is a graduate of the Teacher Professional Education Program, Graduate School, Universitas Negeri Malang, Malang, Indonesia. Her research interests are in the topic of social, learning, and education. Email: arista.wati.2431749@students.um.ac.id
	Bima Wahyu Pratama, S.Pd., Gr. is a graduate of the Teacher Professional Education Program, Graduate School, Universitas Negeri Malang, Malang, Indonesia. His research interests are in the topic of social studies learning and education. Email: bima.wahyu.2431747@students.um.ac.id
	Dr. Tuti Mutia, S.Pd., M.Pd. is a lecturer in the Geography Education Study Program, Faculty of Social Sciences, Universitas Negeri Malang, Malang, Indonesia. Her research interests include innovation geography, education, and the environment. Email: tuti.mutia.fis@um.ac.id
	Dr. Ravinesh Rohit Prasad is an Assistant Professor in the Department of Geography, Fiji National University, Suva, Fiji. His research interests include geography education, climate change adaptation and mitigation, sustainable development, and the role of higher education institutions in environmental resilience. Email: ravinesh.prasad1@fnu.ac.fj