

The Development of a Giant Snakes and Ladders Learning Media for English for Specific Purposes: Enhancing Reading Skills and Social Interaction

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Abstract

Reading competence is an essential skill for Management students because they are required to access business-related information, academic references, and professional documents in English. Existing reading materials are generally designed for General English and do not adequately address the specific vocabulary and reading needs of Management students. As a result, students often experience difficulties in understanding business terminology, research articles, financial reports, and other management-related texts. This study aimed to develop and evaluate a Jumbo Snakes and Ladders learning media integrated with reading materials for English for Specific Purposes (ESP) in the Management program. This research employed the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation stages. The needs analysis involved Management students, while product validation was conducted by media, material, and instructional experts. The implementation stage was carried out in four meetings using four business-related reading texts, followed by reading comprehension tests and social interaction assessments. The results indicated that students highly needed business-related vocabulary and reading materials. Expert validation showed that the developed media was highly feasible for learning. The implementation results demonstrated improvements in reading comprehension scores and students' social interaction, particularly in participation, collaboration, discussion, and engagement during learning activities. The developed Jumbo Snakes and Ladders media effectively supported vocabulary learning, reading comprehension, and social interaction, making it suitable as an ESP reading medium for Management students.

Keywords: Giant Snakes and Ladders Learning Media; English for Specific Purposes (ESP); Reading Skills; Social Interaction; University Students.

1. Introduction

Reading is one of the fundamental language skills that plays a significant role in academic success and professional development. Through reading, students acquire knowledge, access information, develop critical thinking



skills, and expand their understanding of various disciplines. In higher education, reading competence becomes increasingly important because students are required to engage with a wide range of academic materials, including textbooks, journal articles, reports, and other scholarly resources. The ability to comprehend written texts effectively enables students to participate actively in academic discourse and supports their lifelong learning process.

In the context of English language learning, reading serves as an essential tool for accessing global knowledge. This role becomes more prominent in English for Specific Purposes (ESP) courses, where students are expected to understand texts related to their academic disciplines and future professions. ESP focuses on developing language skills that meet learners' specific academic and occupational needs. Therefore, students are not only required to understand general English texts but also discipline-specific materials containing specialized vocabulary and concepts. Consequently, reading comprehension is considered one of the most important competencies in ESP learning.

Despite its importance, many university students still experience difficulties in understanding ESP reading materials. Previous studies have reported that students frequently encounter challenges in comprehending specialized vocabulary, identifying main ideas, locating specific information, and interpreting texts according to their academic contexts (Anwar & Sailuddin, 2022; Thao & Tham, 2018). Similarly, Ula et al. (2025) found that students often struggle to understand ESP texts because of limited vocabulary knowledge and inadequate reading strategies. These difficulties hinder students' ability to comprehend academic materials and negatively affect their learning outcomes.

The challenges associated with reading instruction are also influenced by students' learning motivation and classroom engagement. Reading activities are frequently perceived as difficult and monotonous, leading to passive participation during classroom instruction. Many reading classes continue to employ conventional teaching approaches that emphasize individual work rather than collaborative learning. As a result, students have limited opportunities to actively engage with learning materials, discuss ideas with peers, and construct meaning through interaction. Such conditions may reduce students' motivation to read and limit the effectiveness of reading instruction.

In addition to reading competence, social interaction has become an important concern in contemporary education. Effective language learning requires learners to communicate, collaborate, and exchange ideas with others. Social interaction contributes to language development by allowing learners to negotiate meaning, share knowledge, and practice language use in authentic situations. Therefore, social interaction is an essential component of successful language learning, including ESP instruction.

The importance of social interaction has become increasingly relevant in the Society 5.0 era. Technological advancements have transformed educational practices by providing wider access to information and flexible learning opportunities. Digital learning platforms, online resources, and mobile technologies have facilitated independent learning and expanded educational accessibility. However, excessive reliance on technology may unintentionally reduce direct interaction among students. Research has indicated that technology-based learning often encourages individual engagement with digital devices rather than collaborative communication and face-to-face interaction. Consequently, opportunities for discussion, teamwork, and interpersonal communication may decrease in the learning process.

This situation creates a challenge for educators because language learning requires a balance between academic achievement and social engagement. While digital learning offers numerous advantages, it should not diminish opportunities for students to develop communication and collaboration skills. In ESP learning, students are expected not only to understand discipline-specific texts but also to communicate professionally within their academic and occupational communities. Therefore, innovative instructional approaches are needed to improve reading competence while simultaneously fostering social interaction among learners.

To address these challenges, learning media should be designed to promote active participation, meaningful interaction, and student engagement. Educational games have been widely recognized as effective tools for creating enjoyable and interactive learning environments. Game-based learning encourages learners to participate actively, collaborate with peers, and engage with instructional materials in a meaningful way. Moreover, educational games can increase motivation, reduce anxiety, and provide opportunities for experiential learning. These characteristics make game-based learning particularly suitable for language instruction.

Recent studies have highlighted the potential of game-based learning to improve language learning outcomes and student engagement. Digital game-based language learning has been found to facilitate vocabulary development, increase intrinsic motivation, and provide contextualized learning experiences that support reading comprehension (Neville et al., 2024). Furthermore, game-based instructional tools encourage active participation and collaborative learning, which contribute to higher levels of student engagement in language classrooms (Anane, 2024). In addition, social interaction and positive classroom environments play a crucial role in enhancing learner engagement and language development, as students are more likely to participate actively when learning activities promote communication and collaboration among peers (Fathi et al., 2022). These findings suggest that integrating educational games into ESP instruction may simultaneously improve reading competence and social interaction among university students.

Game-based learning in ESP

Game-based learning has received considerable attention in language education because it provides opportunities for students to learn through active participation and collaboration. Educational games can transform conventional

classroom activities into engaging learning experiences that encourage communication, problem-solving, and teamwork. In language learning contexts, games have been shown to facilitate vocabulary acquisition, language practice, and learner motivation.

Among various educational games, Snakes and Ladders has been widely used as a learning medium in English language instruction. Previous research has demonstrated that the game can effectively improve students' vocabulary mastery by providing repeated exposure to target words in enjoyable learning situations. Sugiyatiarman and Sujarwati (2025) reported that Snakes and Ladders positively influenced students' vocabulary acquisition and learning engagement. Similarly, Nurjaman et al. (2024) found that the game supported the development of basic English skills among young learners.

The effectiveness of Snakes and Ladders has also been observed in speaking and listening instruction. Azizah et al. (2025) developed a Snake and Ladder game to improve speaking skills and found that the game encouraged students to communicate more actively during classroom activities. Through game-based interaction, students had more opportunities to practice language use in meaningful contexts. Such findings suggest that educational games can contribute not only to linguistic development but also to learners' confidence and participation.

In reading instruction, previous studies have indicated that Snakes and Ladders can enhance students' reading achievement and classroom engagement. Nisa and Fithriani (2023) reported that game-based activities improved young learners' reading performance, while Widiastuti (2024) found that board-game-based instruction supported students' reading development. These findings suggest that game-based learning can create a more enjoyable learning environment that facilitates reading comprehension.

Another important aspect of reading instruction is vocabulary preparation before reading activities. According to Mujahidah and Ramli (2019), pre-reading activities play a crucial role in activating learners' background knowledge and facilitating reading comprehension. The Pre-Reading Plan (PReP) technique emphasizes the importance of preparing students before engaging with reading texts. When learners possess sufficient vocabulary knowledge and contextual understanding, they are more likely to comprehend texts effectively.

Recent studies have also highlighted the effectiveness of game-based learning in enhancing English language learning outcomes. Game-based learning has been found to increase students' motivation, participation, and academic achievement by creating enjoyable and interactive learning environments (Cahya Susaniari & Santosa, 2024). Furthermore, game-based learning encourages behavioral, emotional, and cognitive engagement through active participation and collaboration among learners (Israfil & Roslaini, 2025). In reading instruction, the use of Snake and Ladder games has been shown to improve students' reading comprehension and generate positive responses toward learning activities, indicating its potential as an effective instructional medium for language learning (Rahayu et al., 2024).

Based on these findings, game-based learning has considerable potential to support ESP instruction. By integrating vocabulary learning, reading activities, and collaborative interaction, educational games can create meaningful learning experiences that address both academic and social dimensions of learning. However, further research is still needed to explore how game-based learning can be adapted to meet the specific needs of university students in ESP contexts.

Research Novelty and Objective

Although previous studies have demonstrated the effectiveness of Snakes and Ladders games in improving vocabulary mastery, speaking skills, listening skills, and reading comprehension, most of these studies have focused on early childhood education, elementary schools, junior high schools, and senior high schools. Limited attention has been given to the use of Snakes and Ladders as a learning medium in higher education settings, particularly in English for Specific Purposes (ESP) courses.

Furthermore, most previous studies have examined the impact of the game on a single language skill. Few studies have attempted to integrate vocabulary development, reading comprehension, and social interaction within a single instructional medium. At the same time, university students continue to face challenges related to reading motivation, vocabulary acquisition, and reduced social interaction in technology-dominated learning environments.

Another limitation of previous research is the lack of discipline-specific content. Most Snakes and Ladders games were developed for general English learning rather than ESP instruction. Consequently, the games did not adequately address students' needs to learn specialized vocabulary and comprehend texts related to their academic disciplines. Considering the unique characteristics of ESP learning, there is a need to develop instructional media that incorporates discipline-specific vocabulary and supports reading comprehension in professional and academic contexts.

The novelty of this study lies in the development of a **Giant Snakes and Ladders Learning Media** as a **pre-reading activity** for English for Specific Purposes instruction. Unlike previous studies, the developed media is specifically designed to introduce and reinforce ESP vocabulary before students engage with reading texts. The game is played collaboratively in groups, allowing students to discuss vocabulary meanings, communicate with peers, and participate actively in learning activities. After the game session, students read ESP texts containing the target vocabulary and work together to answer reading comprehension questions. This instructional sequence is expected to enhance vocabulary mastery, improve reading comprehension, and strengthen social interaction simultaneously.

In addition, this study responds to the growing need for non-digital learning innovations that can balance technological advancement and face-to-face interaction in higher education. By integrating academic achievement and social engagement, the proposed learning media aligns with the goals of impact-oriented higher education and the competencies required in the Society 5.0 era.

Therefore, this study aims to develop and validate a Giant Snakes and Ladders Learning Media for English for Specific Purposes using the ADDIE model of Research and Development. Specifically, the study seeks to examine the validity of the developed media and explore its potential to enhance university students' reading skills and social interaction during ESP learning.

2. Method

This study employed a **Research and Development (R&D)** design to develop and validate a Giant Snakes and Ladders Learning Media for English for Specific Purposes (ESP). The research adopted the ADDIE instructional design model proposed by Branch (2009), which consists of five phases: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model was selected because it provides a systematic framework for developing educational products and ensuring their effectiveness in instructional settings.

The study was conducted at Universitas Sari Mulia, Indonesia. The participants consisted of 35 undergraduate students enrolled in ESP courses from Management Departmen. The research involved both experts and students. Three experts participated in the validation process, including a media expert, a material expert, and a learning expert. The students were involved during the implementation phase to evaluate the practicality and effectiveness of the developed learning media.

Analysis Phase

The first phase aimed to identify students' needs regarding ESP reading instruction. Data were collected through questionnaires and literature review. The questionnaire explored students' perceptions of reading difficulties, vocabulary needs, preferred learning activities, and expectations toward learning media. The results of the needs analysis indicated that students experienced difficulties in understanding ESP texts and required engaging learning media to improve vocabulary mastery and reading comprehension. The findings also revealed the need for instructional activities that could promote collaboration and social interaction among students.

Design Phase

Based on the results of the needs analysis, the researchers designed a Giant Snakes and Ladders Learning Media as a pre-reading activity for ESP instruction. The media incorporated discipline-specific vocabulary and reading-related tasks. The game board, vocabulary cards, instructions, and learning procedures were designed to facilitate vocabulary acquisition, collaborative learning, and reading preparation. The learning sequence was arranged to allow students to engage in vocabulary discussion before reading ESP texts and completing comprehension activities.

Development Phase

During the development phase, the prototype of the learning media was produced and subsequently validated by experts. The validation process involved a media expert, a material expert, and a learning expert. Validation instruments were developed using a Likert-scale questionnaire covering aspects of media design, content relevance, instructional quality, and usability. Suggestions and feedback from the validators were used to revise and improve the product before implementation.

Implementation Phase

The validated product was implemented in ESP learning activities. Students participated in collaborative gameplay using the Giant Snakes and Ladders media. During the activity, students discussed vocabulary meanings, answered questions, and interacted with peers. After completing the game, students read ESP texts containing the target vocabulary and worked in groups to answer reading comprehension questions. Observation sheets were used to collect data on students' participation, communication, collaboration, and social interaction during the learning process.

Evaluation Phase

The final phase focused on evaluating the quality and effectiveness of the developed media. Evaluation was conducted based on expert validation results, students' responses, classroom observations, and reading achievement tests. Quantitative data obtained from validation questionnaires were analyzed using descriptive statistics to determine the validity level of the product. The percentage score was calculated using the following formula:

$$P = \frac{f}{N} \times 100\%$$

where P represents the percentage score, f refers to the obtained score, and N indicates the maximum score. The results were then interpreted using predetermined validity criteria.

To measure the effectiveness of the developed media in improving students' reading skills, a **pre-test and post-test design** was employed during the implementation phase. The pre-test was administered before students participated in learning activities using the Giant Snakes and Ladders Learning Media, while the post-test was conducted after the implementation. Both tests consisted of reading comprehension questions related to ESP texts and assessed students'

ability to identify main ideas, understand specific information, infer meaning from context, and comprehend discipline-specific vocabulary.

The pre-test and post-test scores were analyzed using descriptive statistics by calculating the mean scores and percentage improvement. The comparison between pre-test and post-test results was used to determine the extent to which the developed media contributed to the enhancement of students' reading skills. An increase in the post-test scores indicated the effectiveness of the Giant Snakes and Ladders Learning Media in supporting ESP reading instruction.

In addition, qualitative data obtained from expert suggestions, classroom observations, and students' feedback were analyzed descriptively to support the quantitative findings and provide recommendations for product improvement. Observation data specifically focused on students' participation, communication, collaboration, and social interaction during learning activities.

The final product of this research was a validated Giant Snakes and Ladders Learning Media designed to support ESP instruction by enhancing students' reading skills and social interaction through collaborative and game-based learning activities.

3. Findings and Discussion

Students' Needs Analysis in Reading for Business and Management

As part of the analysis phase of the ADDIE model, a needs analysis was conducted to identify the reading needs of Management students. The questionnaire examined the students' necessities, lacks, wants, and learning preferences regarding English reading materials related to business and management. The findings were subsequently used as the foundation for developing the Business Vocabulary Journey (BVJ) learning media, including the selection of vocabulary categories and reading text genres. The results of the needs analysis are presented in Table 1.

Table 1. Students' Needs Analysis in Reading for Business and Management

No	Statement	Mean	SD	Interpretation
1	I need to read business and management articles in English.	4.0000	1.06458	High
2	I need to understand research journals in management.	4.4839	1.02862	High
3	I need to read company reports in English.	3.6452	1.17042	High
4	I need to understand international business and economic news.	4.5484	0.85005	Very High
5	I need to read business case studies in English.	3.8065	1.13782	High
6	I need to understand English marketing documents.	4.2581	1.03175	High
7	I need to understand Human Resource Management documents in English.	3.9032	1.10619	High
8	I need to understand simple financial reports in English.	4.0645	1.06256	High
9	I need to read English academic references for coursework.	4.1935	1.13782	High
10	I have difficulty understanding business and management vocabulary.	3.8065	1.16674	High
11	I have difficulty understanding economic and financial terms in English.	4.0323	1.22431	High
12	I have difficulty identifying the main idea in reading texts.	3.7097	1.27000	High
13	I have difficulty finding specific information in English texts.	3.9667	1.27261	High
14	I have difficulty understanding English research journals.	4.1935	1.16674	High
15	I have difficulty understanding word meanings from context.	3.7419	1.23741	High
16	I want to improve my ability to read international business articles.	4.6774	0.74776	Very High
17	I want to read management journals without using a translator.	4.7419	0.68155	Very High
18	I want to improve my business and management vocabulary mastery.	4.8710	0.49946	Very High
19	I want to understand international company reports.	4.5161	0.92632	Very High
20	I want to understand research findings in management.	4.8710	0.49946	Very High
21	I want to read business information quickly and effectively.	4.8065	0.60107	Very High
22	I prefer reading texts related to real business situations.	4.4839	0.88961	High
23	I prefer reading company case studies rather than general texts.	3.7333	0.98027	High
24	I learn better when provided with a vocabulary list before reading.	4.1935	1.04624	High
25	I prefer reading independently before discussion.	4.1935	1.04624	High
26	I prefer reading and discussing texts in groups.	4.1935	1.04624	High
27	I prefer using journal articles as reading materials.	3.6452	1.17042	High

Table 1 shows that Management students have strong needs for English reading materials related to their academic discipline. Among the necessity items, understanding international business and economic news obtained the highest score ($M = 4.5484$, $SD = 0.85005$), followed by understanding management research journals ($M = 4.4839$, $SD =$

1.02862). These findings indicate that students recognize the importance of accessing global and academic information in English.

Regarding learning difficulties, students reported challenges in understanding research journals ($M = 4.1935$, $SD = 1.16674$), economic and financial terminology ($M = 4.0323$, $SD = 1.22431$), and locating specific information in English texts ($M = 3.9667$, $SD = 1.27261$). These results suggest that vocabulary knowledge and academic reading skills remain significant barriers to comprehension.

The highest scores were found in the students' wants category. Students strongly expressed their desire to improve business and management vocabulary mastery ($M = 4.8710$, $SD = 0.49946$) and to understand management research findings ($M = 4.8710$, $SD = 0.49946$). They also wished to read business information quickly and effectively ($M = 4.8065$, $SD = 0.60107$) and to read management journals without relying on translation tools ($M = 4.7419$, $SD = 0.68155$).

In terms of learning preferences, students favored authentic materials related to real business situations ($M = 4.4839$, $SD = 0.88961$). They also preferred receiving vocabulary support before reading activities ($M = 4.1935$, $SD = 1.04624$). These findings indicate that reading materials should incorporate authentic business texts and vocabulary-building activities to support comprehension and engagement.

Overall, the findings demonstrate that Management students require ESP-based reading materials that integrate authentic business content, academic reading skills, and discipline-specific vocabulary development. Such materials are expected to better support students' academic studies and future professional needs. Based on the needs analysis, the instructional materials should incorporate vocabulary categories that are closely related to the field of business and management, including **Business and Economics Vocabulary, Marketing Vocabulary, Management Vocabulary, and Financial Vocabulary**. These vocabulary categories should be integrated with authentic reading text genres such as **Economic News, Marketing Articles, Business Reports, and Financial Reports**. The integration of discipline-specific vocabulary and authentic reading materials is expected to enhance students' reading comprehension, expand their professional vocabulary knowledge, and improve their ability to access academic and workplace-related information in English.

Design and Development (Expert Validation)

The developed product, namely **Business Vocabulary Journey (BVJ)**, was validated by three experts consisting of a media expert, a material expert, and a learning expert. The validation process was conducted to evaluate the feasibility, relevance, and practicality of the product before implementation. The results of expert validation are presented in Table 2.

Table 2. Summary of Expert Validation Results

Validator	Total Score	Percentage	Category
Media Expert	137	91%	Very Feasible
Material Expert	141	94%	Very Feasible
Learning Expert	139	93%	Very Feasible
Average	139	92.67%	Very Feasible

Table 3. Criteria Guidelines (Riduwan, 2015)

Percentage	Qualification	Decision
81% – 100%	Very Good	Very Feasible
61% – 80%	Good	Feasible
41% – 60%	Fair	Fairly Feasible
21% – 40%	Poor	Not Feasible
< 21%	Very Poor	Highly Not Feasible

The results indicate that the BVJ media achieved an average feasibility score of **92.67%**, which falls into the **Very Feasible** category. This finding suggests that the developed media is appropriate for use in ESP reading instruction for Management students.

Media Expert Validation

The media expert evaluated six aspects, namely visual appearance, media design, readability, technical quality, learning quality, and overall media feasibility. The evaluation resulted in a score of **137 out of 150 (91%)**, indicating that the media was categorized as **Very Feasible**. The expert highlighted several strengths, including the attractive and

interactive design, the integration of vocabulary, reading activities, and assessment, as well as the ability of the game to encourage collaboration and active participation among students. However, several revisions were suggested, such as adding a time limit for gameplay, clarifying the winner determination rules, and improving the peer-validation procedure and assessment rubric to better match the game mechanism.

Material Expert Validation

The material expert assessed the appropriateness of the vocabulary categories, reading texts, learning activities, and reading comprehension questions. The product obtained a total score of **141 (94%)**, categorized as **Very Feasible**. The expert noted that the BVJ media was relevant to ESP learning for Management students because it successfully connected vocabulary learning, reading texts, and comprehension activities. Nevertheless, several revisions were recommended. These included ensuring consistency between vocabulary categories and reading text genres, improving the alignment of vocabulary items across media components, standardizing word forms, and refining the characteristics of some texts so that they better represent their intended genres. In addition, the distractors in reading comprehension questions needed improvement to enhance the accuracy of reading assessment.

Learning Expert Validation

The learning expert evaluated the product based on six aspects: learning objectives, instructional strategies, student activities, classroom management, learning impact, and implementation feasibility. The validation resulted in a score of **139 (93%)**, which also falls into the **Very Feasible** category. The expert emphasized that the integration of the game board and user guide was systematic and well-structured. Furthermore, the categorization of vocabulary into Business Economics, Marketing, Management, and Finance effectively supported pre-reading activities and vocabulary preparation before reading. The game was also considered capable of promoting active learning, social interaction, and collaborative learning. However, the expert suggested improving the color consistency of the game board to strengthen visual categorization and adding clearer instructions related to spelling and sentence-making activities when players encounter ladders or snakes.

Overall, the expert validation results demonstrate that the **Business Vocabulary Journey (BVJ)** media is highly feasible for ESP reading instruction. The suggestions provided by the experts were used as the basis for product revision before implementation, ensuring that the final product was pedagogically appropriate, technically functional, and aligned with the learning needs of Management students.

Implementation

Jumbo Snake and Ladder Media Implementation

The Jumbo Snake and Ladder media was implemented during four classroom meetings to support students' reading comprehension in English for Business and Management. The learning package consisted of a Jumbo Snake and Ladder board, a Group Vocabulary Worksheet, reading materials, reading comprehension exercises, and a Game Guideline Book that provided detailed instructions on the game procedures, rules, learning objectives, and classroom implementation. The game board consists of 40 vocabulary squares categorized into four areas: Marketing, Management, Finance, and Business & Economics. Each vocabulary item is accompanied by visual illustrations to facilitate learning and increase student engagement.

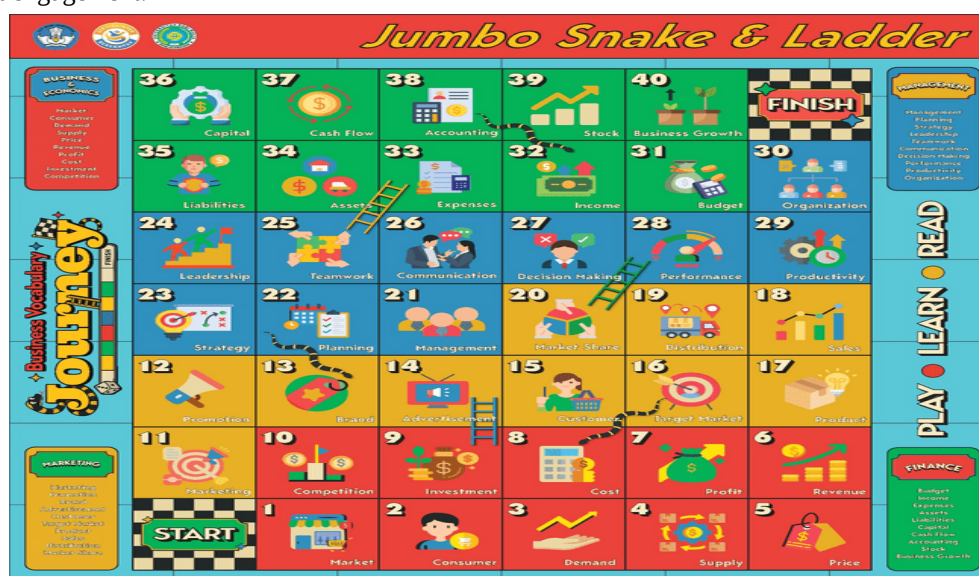


Figure 1. Jumbo Snake and Ladder Learning Media

In addition to the game board, the developed product included a Game Guideline Book that serves as a practical guide for lecturers and students during the implementation process. The guideline book contains the learning objectives, game procedures, game rules, vocabulary activities, reading tasks, and reflection activities. This component ensures that the Jumbo Snake and Ladder media can be implemented systematically and consistently in classroom settings while supporting the achievement of the intended learning outcomes.

The vocabulary categories were aligned with the reading materials used during the implementation, as shown in *Table 4*.

Table 4. Relationship between Vocabulary Categories and Reading Text Genres

Vocabulary Category (Game Board)	Reading Text Genre
Business & Economics Vocabulary	Economic News
Marketing Vocabulary	Marketing Article
Management Vocabulary	Business Report
Financial Vocabulary	Financial Report

The implementation consisted of four stages: preparation, game-based vocabulary learning, reading activity, and reflection. First, the lecturer explained the learning objectives, game procedures, and rules before dividing students into groups. During the game, students rolled the dice, identified vocabulary items, discussed their meanings, and created simple business-related sentences. The results were recorded on a Group Vocabulary Worksheet and validated through peer discussion.

After completing the game, students read the assigned text individually and identified vocabulary items from the worksheet that appeared in the text. They then discussed the content and completed reading comprehension questions both collaboratively and individually. Finally, students reflected on the new vocabulary they learned and discussed how the game helped them understand the reading text.

The game was limited to 30 minutes. The first group to reach the FINISH square was declared the winner. If no group reached the finish line within the allocated time, the winner was determined based on the highest-numbered square reached.

Overall, the implementation demonstrated that the Jumbo Snake and Ladder media effectively integrated vocabulary learning and reading comprehension activities. The game encouraged active participation, collaboration, and vocabulary development, which supported students in understanding business and management reading texts more effectively.

Reading Comprehension Results

The implementation stage was conducted in four meetings involving Management students. The Business Vocabulary Journey (BVJ) media was integrated with four reading texts representing different business topics. During each meeting, students played the board game to learn discipline-specific vocabulary before completing reading comprehension activities.

Table 5. Reading Comprehension Results

Meeting	Vocabulary Category	Reading Text Genre	Mean Score
1	Business & Economics Vocabulary	Economic News	81.33
2	Marketing Vocabulary	Marketing Article	86.67
3	Management Vocabulary	Business Report	88.57
4	Financial Vocabulary	Financial Report	97.42

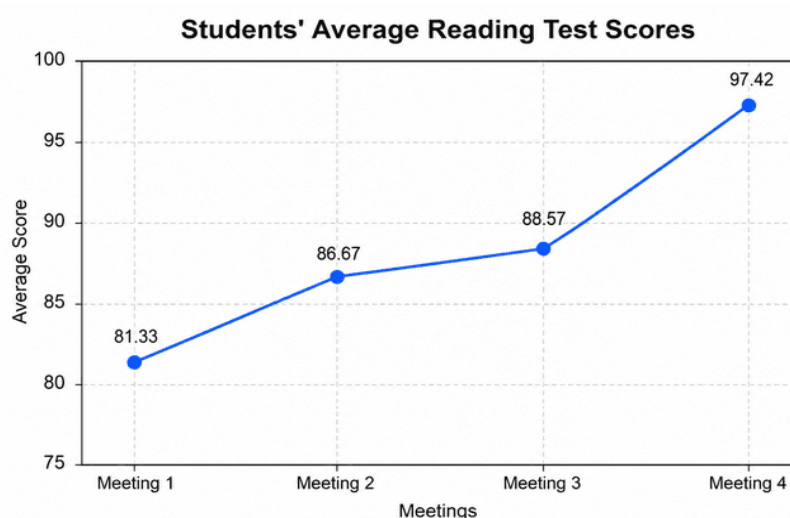


Figure 2. Students' Average Reading Test Score

Table 5 and Figure.2 show that students' reading comprehension scores increased consistently throughout the implementation process. The average score improved from 81.33 in the first meeting to 97.42 in the fourth meeting. This result indicates that students gradually became more familiar with the vocabulary introduced through the BVJ media and were able to apply it while reading ESP-related texts.

Observation Results

To examine the practicality and effectiveness of the developed media during classroom implementation, observations were conducted throughout four learning sessions involving Business Vocabulary Journey (BVJ) media. The observations focused on five aspects of students' learning behavior, namely vocabulary recognition, pronunciation, vocabulary usage, group participation, and teamwork. Data were collected using an observation checklist completed during each implementation session. The results provide information on students' engagement and participation while interacting with the media and completing reading activities based on four business-related reading texts, namely *Economic News*, *Marketing Article*, *Business Report*, and *Financial Report*. The observation findings are presented in Table 6.

Table 6. Observation Result During Implementation of Business Vocabulary Journey (BVJ) Media

Meeting	Vocabulary Recognition	Pronunciation	Vocabulary Usage	Group Participation	Teamwork	Total Score	Category
1	3.125	3.000	2.625	3.500	3.375	15.625	Good
2	3.750	3.000	2.625	3.500	3.375	16.250	Good
3	3.875	3.000	2.750	3.625	3.500	16.750	Good
4	3.875	3.750	3.500	3.625	3.625	18.375	Excellent

The observation results demonstrated a gradual improvement in students' performance throughout the four implementation meetings. During the first meeting, students showed a good level of participation ($M = 3.50$) and teamwork ($M = 3.38$). However, some students still relied on mobile-phone translators to understand unfamiliar vocabulary, several group members remained passive, and difficulties were observed in vocabulary comprehension and sentence construction. Furthermore, the limited time allocation prevented any group from reaching the finish square of the game.

In the second meeting, students showed improvements in participation, collaboration, and vocabulary understanding. Most groups were able to construct sentences more effectively and became more active during discussions. Dependence on mobile-phone translators also began to decrease. With additional playing time, several groups successfully reached the finish square, indicating that the game could be implemented more effectively to support vocabulary learning and reading activities.

The third meeting showed further progress. Students became more engaged in discussions, demonstrated better understanding of vocabulary meanings, and were increasingly able to use vocabulary appropriately in sentences. Group collaboration also improved, while the use of mobile-phone translators continued to decline. Several groups completed the game successfully, suggesting that students had become more familiar with the learning procedures and vocabulary tasks.

The most positive results were observed in the fourth meeting, where the overall observation score increased to 18.375 and reached the *Excellent* category. Students appeared more confident in explaining vocabulary meanings, using business-related vocabulary in context, and participating actively in group discussions. Teamwork became more evenly distributed among group members, and the use of translators was rarely observed. These findings indicate that the BVJ media successfully promoted active learning, collaboration, vocabulary development, and student engagement during ESP reading activities.

Evaluation

Evaluation of Reading Comprehension

To evaluate the effectiveness of the **Business Vocabulary Journey (BVJ)** media, a pre-test and post-test were administered before and after the implementation.

Table 7. Comparison of Pre-test and Post-test Reading Scores

Test	Mean Score
Pre-test	78.14
Post-test	87.43
Improvement	9.29

The results show an improvement in students' reading comprehension after using the BVJ media. The average score increased from **78.14** in the pre-test to **87.43** in the post-test. This finding indicates that the BVJ media helped students better understand business-related reading texts by supporting vocabulary development and reading comprehension simultaneously. Overall, the results suggest that the **Business Vocabulary Journey (BVJ)** media was effective in improving the reading comprehension of Management students.

Evaluation of Students' Social Interaction Result

Table 8. Students' Social Interaction Result

No	Aspect	Pre (%)	Post (%)	Improvement
1	Expressing opinions during discussion	77.63	87.50	+9.87
2	Responding to group members' opinions	75.66	84.87	+9.21
3	Asking questions when facing difficulties	71.05	82.89	+11.84
4	Explaining ideas clearly	74.34	84.21	+9.87
5	Collaborating to complete tasks	81.58	90.13	+8.55
6	Fulfilling responsibilities in the group	80.26	90.13	+9.87
7	Discussing before deciding answers	78.29	88.82	+10.53
8	Completing tasks on time	79.61	88.16	+8.55
9	Active participation in learning activities	76.97	88.16	+11.19
10	Discussing vocabulary and learning materials	75.00	85.53	+10.53
11	Contributing to group answers	76.32	86.18	+9.86
12	Participating in reading comprehension tasks	75.00	87.50	+12.50
13	Helping group members with difficulties	78.95	87.50	+8.55
14	Receiving help from group members	77.63	84.21	+6.58
15	Encouraging peers to participate	75.66	85.53	+9.87
16	Giving feedback to improve answers	73.68	84.21	+10.53
17	Listening to others' opinions	80.92	88.82	+7.90
18	Respecting different opinions	78.29	80.92	+2.63
19	Appreciating members' contributions	80.26	89.47	+9.21
20	Maintaining positive relationships	81.58	87.50	+5.92

The results indicate a positive improvement in students' social interaction after the implementation of the Jumbo Snake and Ladder learning media. All interaction indicators showed higher scores in the post-implementation stage. The most notable improvements were found in participating in reading comprehension tasks (+12.50%), asking questions when facing difficulties (+11.84%), and active participation in learning activities (+11.19%).

The findings revealed that the Business Vocabulary Journey (BVJ) media effectively improved students' reading comprehension in the English for Business course. The increase in students' post-test scores indicates that integrating business-related vocabulary with game-based learning can facilitate comprehension of ESP texts. This finding is in line with Zano (2022), who reported that vocabulary knowledge significantly contributes to reading comprehension achievement. In ESP contexts, mastery of discipline-specific vocabulary helps students understand the content and purpose of specialized texts more effectively. Similar findings were reported by Romadhon (2024), who found that the use of the Grammarian Android Game significantly improved ESP students' reading comprehension by providing interactive and contextualized learning experiences.

The improvement in reading performance may also be attributed to the collaborative learning process embedded in the BVJ activities. During the game, students discussed vocabulary meanings, exchanged ideas, and solved reading tasks together. Such interaction encourages deeper processing of information and supports reading comprehension. This finding supports Erlangga et al. (2024), who found that small-group discussion enhances students' reading performance and strategy use in ESP learning. Likewise, Yahya et al. (2025) reported that game-based collaborative learning

significantly improves reading comprehension, engagement, and collaboration among learners because students actively construct meaning through interaction with peers.

In addition to reading achievement, the results showed improvements in students' social interaction. Students became more active in participating in discussions, asking questions, and communicating with peers during learning activities. The board-game format provided opportunities for meaningful interaction and teamwork, which are important aspects of student-centered learning. Similar findings were reported by Azzahra et al. (2024), who found that game-based learning promotes communication, cooperation, and social engagement among learners. The collaborative nature of educational games encourages students to support one another, share ideas, and participate more actively in classroom activities.

Overall, the findings suggest that BVJ is a promising instructional innovation for ESP learning. By combining vocabulary development, reading activities, and collaborative gameplay, the media supports both cognitive and social aspects of learning. This result is consistent with previous studies demonstrating that game-based learning enhances students' engagement, motivation, and learning outcomes in English language education (Fauzia & Yulia, 2024; Prihandini & Hawa, 2025). Furthermore, recent studies have shown that gamified reading instruction creates a more interactive and motivating learning environment while improving students' participation and confidence during reading activities (Puputri et al., 2025). Therefore, BVJ can be considered an effective alternative medium for improving reading comprehension and social interaction among university students.

4. Conclusion

This study aimed to develop and evaluate the **Business Vocabulary Journey (BVJ)**, a Jumbo Snake and Ladder learning media designed for Management students in an ESP reading course. The needs analysis revealed that students required reading materials that focused on business and management topics, business-related vocabulary, and reading texts such as economic news, marketing articles, business reports, and financial reports. The developed media was validated by media, material, and instructional experts and was categorized as highly feasible for classroom use. During implementation, students demonstrated active engagement in vocabulary learning and reading activities. The evaluation results showed an improvement in reading comprehension, with the mean score increasing from **78.14** in the pre-test to **87.43** in the post-test. In addition, students' social interaction improved across all observed aspects, including communication, collaboration, participation, and mutual support during group activities. These findings indicate that the BVJ media is an effective learning tool for supporting vocabulary development, improving reading comprehension, and enhancing social interaction among Management students in ESP learning.

5. References

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