

Development of Snakes and Ladders Game Media for German Speaking Skills Theme Gegenstände In Der Schule

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Abstract. This research is a development research that aims to develop the Snakes and Ladders game as an innovative learning media in increasing students' interest in learning German speaking skills at SMA Negeri 9 Medan . The development model used in this study is the Plomp model with five phases, namely: investigation, design, realization, evaluation and revision tests , and implementation. This research was conducted at SMA Negeri 9 Medan in class XI Humanities with a sample of 28 students. Based on the validation of material experts and media experts, the snakes and ladders game media is suitable for use as a learning media for students' speaking skills. The results of this study are in the form of snakes and ladders game media using the Genially platform. This game media is designed to create a fun learning experience and encourage student activity. The results of this study are that the snakes and ladders game significantly improves students' German speaking skills as evidenced by an increase in the average speaking skill score from 65 to 80 or 23.08% after using this media.

Keywords: Development, Media, Snakes and Ladders Game, Speaking, German

1 Introduction

Speaking skills are one of the skills in foreign language learning, including German. However, students often face difficulties in developing this speaking skill. The low interest in learning German, the lack of textbooks, and learning media are challenges faced by students at SMA Negeri 9 Medan in class. This is supported by statements from the German language teacher and the deputy head of facilities and infrastructure. The lack of student interest in German is caused by the fact that the language is still foreign to the students, as well as the insufficient use of innovative learning media.

One of the factors that can influence students' interest and speaking ability is the learning media used. Learning media can utilize things that are close to the children's environment and can be related to their daily needs, which can encourage students' interest in studying the material to be taught (Harianja & Sapri, 2022). One type of media that can be utilized is the Snakes and Ladders game (Novita, 2020). This game is specifically designed to assist students in enhancing their attention and concentration, both towards the game and their learning. Through this game, students' speaking skills and vocabulary will also be developed. The word

"game" can evoke feelings of joy and happiness, regardless of age. The renowned philosopher Nietzsche also suggested that games inspire enthusiasm in people of all ages through expression.

The Snakes and Ladders game used in German language learning is designed with visually appealing elements, featuring bright colors, animations, and images relevant to the lesson topic "Gegenstände in der Schule." This makes the presentation more lively and enjoyable. Students not only roll the dice and move but also must answer questions or complete small tasks to move forward or backward in the game. The elements of competition and rewards enhance interactivity and motivate students to complete the game and achieve the learning objectives. Technology-based learning media, such as Genially, is effective in boosting students' enthusiasm for learning. The success of learning media is evaluated based on its attractiveness, usefulness, and ease of access and use. Genially is considered an effective and engaging learning medium for students (Siti Rinjani, 2024).

The Snakes and Ladders game in this study will be developed using the Genially platform. Genially is a platform that facilitates education by providing media as teaching materials and enabling innovative learning. Fatma and Ichsan (2022) state that Genially's learning media features a variety of options, such as presentations, educational videos, educational games, quizzes, and other types of interactive teaching materials. Learning German through the Snakes and Ladders game on the Genially platform will enhance student engagement during the teaching and learning process, resulting in more effective learning (Karakoc, B., Erylmaz, K., Ozpolat, E. T., & Yildirim, I., 2020).

Based on the explanation above, the problem in this study is how to develop the Snakes and Ladders game as a learning media and its outcomes. The benefits of this research are to enhance students' interest and abilities in learning German. Through enjoyable and interactive methods, students can master vocabulary, sentence structure, and gain confidence in speaking German. Additionally, this research contributes to the development of innovative learning media.

1.1 Plomp Development Model

The Plomp development model is a systematic and structured approach to instructional design. This model is particularly suitable for developing educational games, such as Snakes and Ladders. The Plomp development model is utilized because it is considered more flexible, and each step includes development activities that can be tailored to the characteristics of the research. For this research and development project, we have adapted the Plomp model, focusing on four key phases: preliminary investigation, design, realization/construction, and test, evaluation, and revision. The final phase of implementation will follow these stages.

1.2 Snakes and Ladders Game Media

The digital Snakes and Ladders game is a computerized adaptation of the traditional board game, which traditionally involves a physical board and dice. Now, it can be accessed online using a laptop or smartphone. This game is similar to the traditional Snakes and Ladders, but what makes it an educational game is the inclusion of materials and questions on the squares of the board. When a player lands on a square, a question related to the adapted material appears. Rifki Afandi (2015:87) states that using the Snakes and Ladders learning media can increase students' learning outcomes by 45%. This indicates that Snakes and Ladders media has a

significant impact on student understanding. Anjelina Wati (2021) also notes that this media can enhance student learning outcomes by 45%, demonstrating its effect on comprehension. Snakes and Ladders learning media is effective in improving students' absorption and understanding in learning (Rahina, 2017:43).

1.3 Speaking Skills

Language skills consist of four components: listening, speaking, reading, and writing (Nida, 1957: 19). Listening and speaking are key components of oral language proficiency, while reading and writing are fundamental to written language skills. Receptive skills, such as listening and reading, involve understanding and interpreting language, whereas productive skills, such as speaking and writing, require language production. In the context of German language learning at the high school level, educators and students collaborate to implement activities specifically designed to enhance speaking abilities in German. As a result, students should be able to engage in dialogue in German and express their opinions to others.

Language Skills (Sprachfertigkeiten):

- a. Hörverstehen (Listening Skills): The ability to understand spoken German, such as conversations, videos, or audio. This involves recognizing words, grammar, and the context of discussions.
- b. Sprechfertigkeit (Speaking Skills): The ability to express oneself orally in German effectively, such as in conversations, presentations, or discussions. This includes mastery of vocabulary, grammar, pronunciation, and fluency.
- c. Leseverstehen (Reading Skills): The ability to understand written texts in German, such as books, articles, or letters. This requires mastery of vocabulary, grammar, and comprehension of text meaning.
- d. Schreibfertigkeit (Writing Skills): The ability to express ideas, thoughts, or information in written German accurately, such as in letters, essays, or reports. This involves mastery of vocabulary, grammar, sentence structure, and writing style.

1.4 The theme *Gegenstände in der Schule*

The theme of objects within the school context is studied under the topic "Gegenstände in der Schule." This theme includes vocabulary for school items along with their articles and useful phrases. Vocabulary for school items includes words such as Bleistifte (pencils), Stifte (pens), Kugelschreiber (ballpoint pens), Notizbücher (notebooks), Lineale (rulers), Whiteboards, Marker (markers), Radiergummis (erasers), Karten (cards), Globen (globes), Computer (computers), Projektoren (projectors), Drucker (printers), Tablets, Tische (tables), Stühle (chairs), Schränke (cabinets), Bücherregale (bookshelves), Pinnwände (cork boards), Uhren (clocks), Lampe (lamps), and others. The useful phrases in this theme are expressions that are useful for describing, comparing, or asking about various objects found in the school environment.

Objekte zu beschreiben:

- Dies ist ein ... (Substantiv).
- Er/sie ist ... (Adjektiv).
- Es wird verwendet, um ... (Verb).
- Es besteht aus ... (Material).
- Er hat die Form von ... (Form).
- Es hat ungefähr die Größe von ... (Vergleich).

Um Objekte zu vergleichen:

- ... ist größer/kleiner als ...
- ... ist älter/neuer als ...
- ... ist nützlicher/wichtiger als ...
- Im Gegensatz zu ... ist ...
- Ähnlich zu ... ist auch ...

Nach Objekten fragen:

- Was ist das?
- Wozu brauchst du es?
- Aus welchem Material ist es?
- Wie funktioniert es?
- Wo befindet es sich?

Beschreiben Sie ein Klassenzimmer:

- Im Klassenzimmer befindet sich..
- An der Wand hängt ...
- Auf dem Tisch steht ...
- In der Ecke steht ...
- Wenn man nach Gegenständen fragt:
- Kann ich bitte ... haben?
- Könntest du mir bitte geben?
- Ich brauche ...

Beim Ausdrücken von Vorlieben:

- Ich mag ... am liebsten.
- ... finde ich besser als ...
- ... ist mein Lieblingsobjekt.

2 Research Methods

The research and development model employed in this study is the Plomp Model, which includes the phases of preliminary investigation, design, realization/construction, testing, evaluation, and revision, as well as implementation. The Plomp development model is illustrated below.

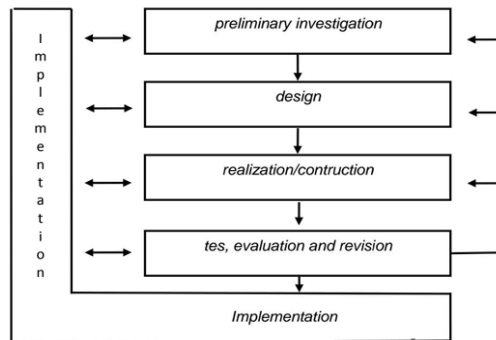


Fig. 1. Phases of the Plomp Model

2.1 Preliminary Onvestigation Phase

The preliminary investigation phase is a crucial first step in the research process. During this stage, the researcher collects data to understand the problems faced by students in learning German. Methods used include interviews with German language teachers and the distribution of questionnaires to students. The interviews with teachers aim to gather their insights regarding the challenges students encounter and the learning media that have been utilized. A needs

analysis is conducted through the distribution of questionnaires to identify what type of learning media students require for learning German.

After identifying the problems, the design phase involves planning the solutions to be implemented. At this stage, the researcher designs the Snakes and Ladders game to be used as a learning media. The game design includes the layout of the game board, including the positions of snakes and ladders that will affect players' paths, as well as questions relevant to the theme "Gegenstände in der Schule" (Objects in School).

The researcher also prepares a game guide that provides clear instructions to students on how to play, the rules, and the assessment criteria. This guide includes the basic rules of the game, how to answer questions, and how the assessment will be conducted based on the number of questions answered correctly. Additionally, assessment instruments are developed to measure improvements in students' speaking skills after participating in the game. With a well-thought-out design, the researcher hopes that the game will not only be enjoyable but also effective in achieving the learning objectives.

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2.3 Realization/Construction Phase

The realization/construction phase is where the prototype of the Snakes and Ladders game is developed based on the previously created design. At this stage, the researcher utilizes the Genially platform to create an interactive game media. Visual elements such as animations, sounds, and videos are added to enhance the learning experience, making it more engaging and enjoyable for students.

2.4 Testing, Evaluation, and Revision Phase

After the initial trial, the testing, evaluation, and revision phase is conducted to ensure that the developed media meets the expected standards. Validation activities are carried out by subject matter experts and media experts to assess the product's feasibility. This assessment

includes evaluating the alignment of the material with the curriculum, the suitability of the media as a teaching aid, and the visual appeal of the game. After receiving feedback from the experts, the researcher revises the media to improve its quality.

3 Results and discussion.

3.1 Development Process

3.1.1 Preliminary Investigation Phase

The preliminary investigation phase aims to collect data and analyze information, define problems, and plan the next steps for the project. This phase involves needs analysis and identifying learning obstacles. From the interviews, it was revealed that students often struggle with understanding vocabulary and sentence structure in German. Additionally, many students express a lack of interest in the subject, largely due to the limited availability of engaging and interactive learning media.

a. Needs Analysis

Results from interviews with German teachers at SMA Negeri 9 Medan indicate a shortage of textbooks and learning media, as students primarily rely on the available school textbooks. Both teachers and students face difficulties with these textbooks due to the material presentation and example questions being too brief, making them hard to understand. Furthermore, neither the teachers nor the students have previously used interactive learning media in their lessons. Based on the needs questionnaire, students expressed a need for supplementary learning materials that are easy to understand. Teachers also indicated the necessity for additional teaching resources to increase students' interest in learning and facilitate comprehension of the material. In response to these needs, interactive learning media in the form of a Snakes and Ladders game using the Genially platform is proposed, aiming to enhance students' interest in learning and help them better understand the material.

b. Learning Obstacle Analysis

The learning obstacle analysis was conducted to identify the obstacles faced by students that hinder their speaking skills in German, particularly regarding the theme "Gegenstände in der Schule." This analysis involved administering a trial test related to the topic. The trial was conducted with 28 students from class XI-9 Humanities at SMA Negeri 9 Medan. The students were given five test questions based on the theme "Gegenstände in der Schule." For questions 1 and 2, which focused on recognizing vocabulary of items found in a bag, 79.8% (22 students) answered correctly. However, for question 3, where students were asked to identify classroom items from images along with their articles, all students struggled to respond due to a lack of vocabulary. For question 4, concerning the articles of nouns found in the classroom, none of the students answered correctly, indicating they were unfamiliar with the articles and vocabulary of classroom items. Similarly, in question 5, regarding vocabulary for school items, students were still unable to identify the relevant words. The results of the trial regarding speaking skills in the theme "Gegenstände in der Schule" indicate that

students have insufficient vocabulary and difficulty answering the questions posed. This suggests that there are learning obstacles affecting the students, primarily stemming from a lack of vocabulary, insufficient German textbooks, and limited understanding of the articles for the items found in school.

3.1.2 Design Phase

In this phase, the Snakes and Ladders game was designed by the researcher using the Genially platform. The first step in designing the game involved creating the game guidelines, followed by coloring the game pieces, arranging the ladders and snakes, and placing the questions related to the theme "Gegenstände in der Schule," as this is central to the overall development of the media. Once the questions were established, the next step was to draft the media concept in the form of a text document written narratively, often referred to as a storyboard. This storyboard outlines the objectives of the media development project, which aims to create interactive and innovative learning media.

3.1.3 Realization/Construction Phase

In this phase, the initial prototype (Prototype I) is produced as a result of the design phase. The snake and ladder game media is developed according to the design created in the design stage.

After that, click on "Web Link" to paste the link to the learning video from YouTube, Google Drive, or others. Finally, save the project, and to watch the learning video, click the play button above the dice, which will automatically switch to the learning video.

- a. The first step in developing this media is to open the Genially platform on Google. After clicking on the Genially platform, click "Log In" to register an account first.
- b. Once logged in, access the Genially platform and click on "Games and Challenges" since the media is in game format. Choose the media you want to use, or more quickly, search for the name of the media you want, which is the snake and ladder game.
- c. Click "Use this template" to start editing the snake and ladder media. Design the snake and ladder game by adjusting the board size, theme, colors, and adding images of snakes and ladders. Add interactive elements from Genially, such as animations, sounds, or videos to make the game more engaging, including buttons for dice and question point elements as desired.
- d. At the question points, add quizzes or challenges for learning activities.
- e. Next, to insert the learning video, first click on the interactive element and select "Show More," then click and drag the dice upward. After that, click on "Web Link" to paste the link to the learning video from YouTube, Google Drive, or others. Finally, save the project, and to watch the learning video, click the play button above the dice, which will automatically switch to the learning video.
- f. Click "All Set" at the blue button on the right end. Finally, click "Copy" and share it on WhatsApp. When the shared link is clicked, it will automatically switch to the developed snake and ladder game media and can be used in learning activities.

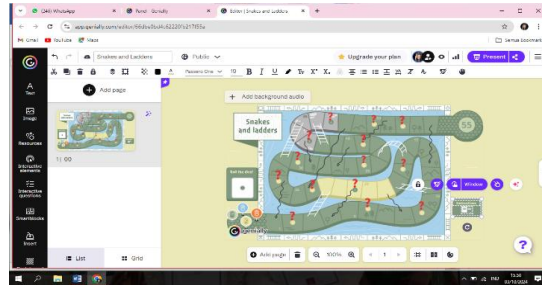


Fig. 2. Appearance of the Snakes and Ladders game media

3.1.4 Test, Evaluation And Revision Phase

In this phase, two main activities are carried out: validation and testing.

a. Validation Activity

Validation is conducted by subject matter experts and media experts. It is the process of assessing whether the developed product is appropriate for testing in the next phase. Validation involves seeking input from two subject matter experts: one lecturer from Universitas Negeri Medan and one teacher from SMA Negeri 9 Medan, both knowledgeable in the content area, as well as one lecturer and one teacher from the same institutions who specialize in design, to evaluate and provide suggestions.

b. Criteria for Assessing Content and Media

Score Weight: 4 = Very Good; 3 = Good; 2 = Fair; 1 = Poor

Description : 90-100 = Very Good

80-90 = Good

70-80 = Fair

c. Result of Validation by Content and Media Experts

The assessments obtained from content and media experts serve as the basis for determining whether the developed product is suitable for testing with students. Comments, critiques, and suggestions from these experts form the foundation for revisions, ensuring that the product is truly ready for trial.

1. Content Expert

Table 2. Aspects of Content Assessment

No	Indicator	Score
1	Alignment of Learning Objectives and	4
2	Competencies	4
3	Presentation of Material in Media	3
4	Relevance of Material in Learning	4
5	Depth of Material according to Level A1	3
6	Presentation of Material in Teaching	4
7	Presentation of Sample Question and Discussions	4
	in Media	
	Display of Images and Videos	

Score Description: 4 = Very Good; 3 = Good; 2 = Fair; 1 = Poor

$$\text{Percentage Score} = \frac{26}{28} \times 100\% = 92,8 \text{ (A)}$$

This learning media is declared:

- Eligible without revision
- Eligible with revisions according to suggestions (if the situation allows)
- Not eligible

2. Content Expert

Table 3. Assessment aspects of media

No	Indicator	Score
1	Function speed	4
2	Product design	3
3	Practicality of using learning media	3
4	Audio quality	4
5	Interactive	3
6	Can enhance motivation to learn German	4
7		4

Score description: 4 = Very Good; 3 = Good; 2 = Fair; 1 = Poor

$$\text{Percentage score} = \frac{25}{28} \times 100\% = 89,3 \text{ (B)}$$

This learning media is declared:

- Eligible without revision
- Eligible with revisions according to suggestions (if the situation allows)
- Not eligible

3.1.5 Implementation

After successful testing and validation of practicality, the educational media in the form of a snakes and ladders game is applied within a broader educational institution context. Below is the development flow of the snakes and ladders game "Gegenstände in der Schule":

a. Trial Activities

In this activity, students analyze and provide feedback on the developed snakes and ladders game media. The trial is conducted to assess the practicality of the media, utilizing questionnaires filled out by the students. The trial will take place at SMA Negeri 9 Medan, Class XI-9 Humanities. The media trial will be a limited trial (small group trial). An ideal number for a limited trial is 10 to 20 students (Restiyowati and Sanjaya; 2012:133-134). Therefore, in this limited trial phase, the research involves 10 students. The selection of trial subjects is conducted using the proportionate stratified random sampling technique. Proportionate stratified random sampling is a sampling technique used when the population consists of heterogeneous elements that are

proportionally stratified (Sugiono; 2016:82-83). The number of students for each skill level can be seen in Table 1 below:

Table 4. Number of students for each skill level

No	Ability	Number of students
1	High	6
2	Medium	10
3	Low	12
	Total	28

Based on the number of students for each skill level, the selected 10 students consist of 4 students with high achievement, 3 students with medium achievement, and 3 students with low achievement, who will serve as subjects for assessing the practicality of the media.

3.2 Result of Development

The snakes and ladders learning media based on the Genially platform has been successfully developed to create an enjoyable and interactive learning experience. The use of this media demonstrates that students are more engaged and motivated in the learning process. Students provided positive feedback regarding the use of this media, with many reporting that they felt more involved and motivated when learning through this game compared to traditional methods. The majority of students stated that the learning experience became more enjoyable and interactive. The snakes and ladders media proved effective in creating an active learning atmosphere. With elements of competition and challenges, students were more enthusiastic about participating in the learning process, thereby enhancing their understanding of vocabulary and speaking skills in German.

3.3 Discussion

Interactive learning media are increasingly important for enhancing students' language skills. This research aims to explore the effectiveness of the Genially-based snakes and ladders game in improving German language speaking skills. One of the key findings of this study is the improvement in students' speaking abilities. Before implementing the game, the average speaking skill score was 65 out of 100. After using the game, the average score increased to 80. This 23.08% improvement indicates that interactive learning media can assist students not only in understanding new vocabulary but also in boosting their confidence while speaking. The Genially-based snakes and ladders game provides a fun and competitive context that encourages students to actively participate in the learning process.

In addition to the improvement in speaking skills, this study also found a significant increase in student engagement. During the trial, 85% of students reported feeling more interested and involved in learning when using the game compared to traditional methods. This data was obtained from questionnaires, which showed that 24 out of 28 students responded positively about their learning experience. The high level of engagement aligns with constructivist learning theory, which emphasizes the importance of active student involvement

in the learning process. By creating an enjoyable learning environment, the game successfully motivated students to learn with greater enthusiasm.

Feedback from students also yielded encouraging results. From the questionnaires distributed after the trial, 90% of students provided positive responses regarding the game. They stated that the game helped them understand vocabulary and sentence structure in a more engaging way. These results indicate that interactive learning media can reduce students' anxiety when speaking a foreign language, thereby boosting their confidence. Students felt that this enjoyable learning experience made it easier for them to absorb the material.

Although the findings of this study indicate the effectiveness of the Genially-based Snakes and Ladders game, there are some limitations to consider. The trial was conducted in only one class with a limited number of students, so the results may not be generalizable to a broader population. Additionally, other factors such as students' backgrounds and different teaching methods could influence learning outcomes. Therefore, further research is needed to explore the effectiveness of this game in various contexts and with larger groups of students.

Overall, this study demonstrates that the Genially-based Snakes and Ladders game is a valid and effective learning medium for improving speaking skills in the German language. The positive results suggest that this media not only aids students in understanding the material but also creates an enjoyable and interactive learning atmosphere. Therefore, we recommend incorporating this game as part of an innovative language learning strategy. By leveraging technology and interactive approaches, it is hoped that students will become more motivated and successful in foreign language learning.

4 Conclusion

This study demonstrates that innovative learning media, specifically the Genially-based snakes and ladders game, is effective in enhancing students' interest and speaking skills in the German language. SMA Negeri 9 Medan faces challenges related to low student interest in learning German, primarily due to a lack of interactive learning media and the perception of German as a foreign language. The snakes and ladders game, designed with engaging visuals and educational features, successfully addresses these barriers. Through trials conducted with XI-9 students, the results indicate an improvement in vocabulary comprehension and knowledge of school-related items. Although there are still challenges in memorizing certain vocabulary, students showed significant progress in their speaking skills. This game has proven effective not only as a source of entertainment but also as an educational tool that enhances understanding of the material, retention, and language skills. The elements of competition and rewards increase interactivity and student motivation, making a significant contribution to the development of engaging and interactive learning media.

Overall, the Genially-based snakes and ladders game is a valuable innovation for teaching German, as it effectively overcomes the limitations of traditional learning and strengthens students' language abilities, especially in speaking skills.

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