

Research Article

The Development of Learning Medium for Vocabulary Learning at A2 Level on the Theme of Sports

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Abstract: This study discusses the development of a German vocabulary learning medium for A2 level on the theme *Sportlich* using the Gimkit platform for students of the German Language Education Program at Universitas Negeri Medan. The study was motivated by students' low vocabulary mastery on the sports theme, the lack of interactive learning media, and limited access to mobile-friendly learning tools. The objectives of this study were to describe the development process and to produce a feasible vocabulary learning medium. The method applied was Research and Development using the Richey and Klein model consisting of three stages: planning, development, and evaluation. The data source was vocabulary and materials from the theme *Sportlich* in the book *Netzwerk Neu A2*. The developed product was an interactive Gimkit learning medium containing 100 exercises in four formats: multiple choice, picture riddles, essays, and flashcards. Validation results showed that the product obtained a score of 89,28 from the material expert and 95 from the media expert, indicating that it was highly feasible and of excellent quality. The findings suggest that Gimkit provides an engaging, flexible, and participatory vocabulary learning environment. Therefore, this learning medium can serve as an effective alternative for improving German vocabulary mastery at the A2 level, especially on the topic of sports.

Keywords: A2 Level; German Vocabulary; Gimkit; Learning Media; Sportlich.

1. Introduction

German is one of the major foreign languages taught in higher education institutions in Indonesia because it provides academic, cultural, and professional opportunities in international contexts. In university-level German language programs, vocabulary mastery plays a central role in supporting the four core language skills, namely listening, speaking, reading, and writing. Without sufficient vocabulary knowledge, learners often experience difficulties in understanding texts, expressing ideas, and participating in communicative activities. At the A2 proficiency level of the Common European Framework of Reference (CEFR), students are expected to comprehend and use vocabulary related to everyday themes, including hobbies, health, routines, and sports. One of the relevant topics at this level is Sportlich (sports-related activities), which introduces students to nouns, verbs, and adjectives associated with physical activities and healthy lifestyles. However, vocabulary acquisition on this topic remains challenging for many learners, especially when instruction relies on memorization-oriented approaches and limited classroom exposure.

Previous studies have highlighted various methods and digital media to improve vocabulary learning outcomes. Conventional techniques such as repetition drills, translation lists, and textbook exercises are still widely used because they are easy to implement and align with formal curricula. Their strength lies in structured delivery and straightforward assessment procedures; however, they often fail to sustain learner motivation and active participation over time. More recent approaches have introduced technology-enhanced vocabulary learning through flashcards, mobile applications, websites, and gamified systems. Research on Quizlet-based learning media reported that interactive repetition and multimodal presentation can improve vocabulary retention. Other studies on Kahoot demonstrated that competitive quizzes increase learner enthusiasm and classroom engagement. In addition, investigations into Gimkit showed that game-based quizzes with reward systems may significantly enhance vocabulary development compared with traditional methods. These

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findings indicate that digital gamification offers promising pedagogical value, although each platform differs in accessibility, feature complexity, and instructional suitability.

Despite these developments, several limitations remain. Traditional vocabulary instruction is efficient for content coverage but tends to be teacher-centered and monotonous. Flashcard systems are useful for memorization but may not sufficiently stimulate contextual language use. Competitive quiz platforms such as Kahoot are highly engaging, yet time pressure can disadvantage slower readers or reflective learners. Some digital tools also require stable internet access, paid subscriptions, or specific devices, which may limit implementation in certain educational settings. Meanwhile, the potential of Gimkit as a vocabulary learning medium for German A2 learners, particularly for the topic Sportlich, has not been extensively explored in the local higher education context. Therefore, a gap exists between available instructional technologies and the need for context-specific, pedagogically appropriate learning media for German vocabulary acquisition.

The present study identifies a concrete instructional problem among students of the German Language Education Program at Universitas Negeri Medan. Based on a questionnaire distributed to 30 students, most respondents had studied the topic of sports, yet a large proportion still reported weak mastery of A2 vocabulary related to that theme. Students also indicated difficulties in memorizing articles, understanding specific sports terminology, and accessing attractive learning media through smartphones. Furthermore, vocabulary familiarity was uneven: common words were better recognized than topic-specific terms such as rudern, Rafting, Freeclimbing, and Schiedsrichter. These findings demonstrate that students require a more engaging, accessible, and systematic learning medium to strengthen topic-based vocabulary mastery.

To address this problem, the study proposes the development of a Gimkit-based learning medium for German vocabulary learning at the A2 level on the topic Sportlich. Gimkit is a game-based learning platform that allows instructors to create quizzes with points, rewards, flexible modes, and collaborative participation. Compared with several alternatives, Gimkit provides varied activity types, device compatibility, asynchronous and synchronous access, and motivational mechanics that can increase learner participation. The study adopts the Research and Development (R&D) approach using the Richey and Klein model consisting of three phases: planning, development, and evaluation. Through this framework, learning needs are first analyzed, then instructional materials are transformed into interactive tasks, and finally the product is validated by experts to ensure content quality and media feasibility.

The main contributions of this paper are as follows. First, it develops a context-specific digital learning medium for German A2 vocabulary focused on the theme Sportlich. Second, it demonstrates how gamification principles can be integrated into foreign language vocabulary instruction in higher education. Third, it provides an empirically validated instructional product assessed by material and media experts. Fourth, it offers practical insights for lecturers seeking flexible mobile-accessible learning tools that can complement classroom teaching. Fifth, it enriches the literature on German language pedagogy in Indonesia, especially concerning technology-assisted vocabulary learning.

The remainder of this paper is organized as follows. Section II reviews theoretical foundations related to vocabulary learning, instructional media, gamification, and Gimkit. Section III explains the research methodology, including the R&D model, data sources, and development procedures. Section IV presents the development results, expert validation outcomes, and discussion of findings. Finally, Section V concludes the study and offers recommendations for future implementation and further research.

2. Literature Review

The Concept of Development

According to Torang Siregar (2023), Research and Development (R&D) in education is a process used to create and validate educational products. The stages usually consist of examining research findings relevant to the product, developing the product based on those findings, and revising the product after testing. Ade Rahayu (2025) states that R&D is a method aimed at determining and testing the effectiveness of a product, whether in the form of software, hardware, learning media, curriculum, or instructional models. Waruwu (2024) explains that research and development is a systematic investigation of design, development, and evaluation processes intended to establish an empirical basis for creating products or models that support learning and non-learning activities. Based on these expert opinions, R&D can

be understood as a systematic method for producing and validating educational products to improve learning quality.

Development Model

The study applies the development model proposed by Richey and Klein. According to Richey and Klein (cited in Hikhmalia et al., 2023), development-oriented research can be carried out through three phases: planning, production, and evaluation. This model is considered systematic and easy to understand. In the planning phase, a needs analysis is conducted to identify learning problems through observation, literature review, and questionnaires. In the production phase, the design is transformed into a concrete product. In the evaluation phase, experts assess the quality and feasibility of the product so that revisions can be made based on the results.

Learning Media

From an educational perspective, media play a strategic role because they influence the success of teaching and learning activities. Nurfadhillah (2021:15) states that the word media comes from Latin and is the plural form of *medium*, meaning intermediary or messenger. Nurul Hasanah (2020) explains that learning media derives from the Latin word *medius*, meaning middle, mediator, or transmitter. Gerlach and Ely (cited in Nurul Hasanah, 2020) define media broadly as people, materials, or events that create conditions enabling students to acquire knowledge, skills, or attitudes. Aisyah Fadila (2023) states that learning media are tools used to make learning processes more effective and optimal. Diana Nur et al. (2022) in Angely et al. (2023:751) emphasize that media are important instruments whose role is strategically significant for successful teaching and learning. Thus, learning media are all tools or intermediaries used to deliver learning content effectively and efficiently.

Criteria of Good Learning Media

According to Pakpahan (2024), learning media can improve the quality of student learning outcomes. Therefore, teachers need to choose appropriate media according to learner needs. Nurrita (2018) mentions several criteria in selecting learning media: (1) alignment with learning objectives, (2) effectiveness, (3) teacher and student abilities, (4) flexibility, (5) availability, (6) usefulness, and (7) quality. Sadiman in Nurrita (2018) also explains the steps of media selection: analyzing learner needs, formulating objectives, preparing learning content, developing evaluation instruments, designing learning media, and conducting trials and revisions.

The Concept of Vocabulary

Vocabulary consists of all words forming a language and mastered by a person for effective communication. Tracy (2023) explains that vocabulary is dynamic and continuously developing, unlike static objects passed from generation to generation. Johar and Hasmawati (2021) define vocabulary as a collection of words in different forms, including single words with or without affixes and combinations of words with specific meanings. Pohl and Ulrich (2022) state that words are the elementary basis of all human language. Santoso (2023) emphasizes that vocabulary mastery, besides grammar mastery, is the foundation of successfully learning a foreign language. Therefore, vocabulary is essential because it supports listening, speaking, reading, and writing skills.

Vocabulary at A2 Level on the Theme “Sportlich”

At the A2 level, vocabulary is broader and more complex than at A1 level. One important topic is *Sportlich* or sports and physical activities. This theme is included in the textbook *StudioExpress A2* and also used in *Netzwerk Neu A2*. The topic introduces learners to various sports such as football, volleyball, swimming, yoga, cycling, and hiking. Through this theme, students are expected to express habits and opinions such as “Ich trainiere dreimal pro Woche” or “Sport ist wichtig für meine Gesundheit.” The topic also helps students understand simple reading texts related to healthy lifestyles and physical activities.

Gimkit

Gimkit is a game-based learning platform developed in 2017 by Josh Feinsilber, a high school student from Seattle, USA. Annisa et al. (2025) explain that Gimkit is a platform that allows teachers to create interactive assessments with point systems, competitions, and immediate feedback. Agustina et al. (2024) define Gimkit as an interactive learning medium with game elements used in classrooms. Widyatno and Wahyuningsih (2024) state that Gimkit is a quiz-based learning website that can be used as an alternative medium for learning German. Gimkit can be accessed through smartphones, laptops, and computers. It offers various templates, team or individual modes, and reward systems that make learning enjoyable and interactive.

The advantages of Gimkit include promoting collaborative learning, increasing student motivation, allowing customized question sets, providing flexible access, and offering a free mode. However, the platform also has limitations, such as dependence on stable internet access and the fact that not all students own suitable devices.

Previous Related Studies

Several previous studies are relevant to this research. Risnovita Sari et al. (2025) found that digital media such as flashcards, Duolingo, and DW Learn German effectively improved German vocabulary mastery. Annisa and Sawitri Retnantiti (2025) reported that the Team Games Tournament method using Kahoot increased students' enthusiasm and vocabulary retention. Syauqi Yasfin Osadhi (2024) found that Gimkit significantly improved vocabulary development compared with conventional learning. Erni Sion Uli Anggi Haloho (2024) developed Quizlet-based vocabulary learning media and obtained validation scores of 95 for material and 92.85 for media. Siti Nur Azizah (2024) concluded that Gimkit significantly improved English vocabulary achievement.

Research Gap

Based on previous studies, digital learning media have proven beneficial for vocabulary learning. However, limited studies focus on the development of Gimkit-based media for German vocabulary learning at A2 level, especially on the theme *Sportlich*. Therefore, this study focuses on developing and validating a Gimkit learning medium specifically designed for German vocabulary learning at A2 level using the Richey and Klein model.

3. Methode

This study employed a Research and Development (R&D) method to develop a German vocabulary learning medium using the Gimkit platform for A2-level learners on the topic *Sportlich*. Research and Development is a systematic method used to produce, test, and validate educational products so that they can be effectively implemented in instructional settings. According to the data in the source document, this study used the development model proposed by Richey and Klein, which consists of three sequential stages: (1) Planning, (2) Development, and (3) Evaluation. This model was selected because it is systematic, practical, and suitable for educational media production.

4. Results and Discussion

Based on the results of the study, it was found that the Gimkit platform is suitable as a medium for teaching German vocabulary at the A2 level. The study focused on the topic *Sportlich* and applied the research method developed by Richey and Klein. The research consisted of three phases: (1) planning, (2) development, and (3) evaluation. The topic *Sportlich* was taken from the textbook *Netzwerk neu A2*.

In the planning phase, the researcher identified students' difficulties in learning German vocabulary at the A2 level based on the teaching material *Netzwerk Neu A2*. This identification was conducted through an online questionnaire distributed in September 2025 to 30 students from the 2023 cohort of the German Study Program at Universitas Negeri Medan. The questionnaire consisted of 8 questions and 50 vocabulary items. The survey results showed that students experienced the greatest difficulties in the topic of sports and that the learning media used were still monotonous and not sufficiently accessible via mobile phones.

In the development phase, the researcher used the Gimkit application as a learning medium. For this topic, three types of vocabulary were developed on the Gimkit platform for A2-level vocabulary learning. The games developed on Gimkit included: (1) multiple-choice questions to practice adjectives and some verbs, (2) picture riddles to practice nouns, (3) essay questions to practice verbs, and (4) flashcards to practice nouns. The questions were designed in various formats, such as multiple-choice items, picture riddles, and short-answer quiz questions.

The evaluation was carried out through validation by subject-matter and media experts. These experts provided assessments, recommendations, and comments in order to improve the materials and media. This ensured that the exercises developed in Gimkit were useful and interactive. In the material validation, there were six assessment aspects. Of these six aspects, the subject expert gave a score of four (very good) for four aspects and a score of three (good) for three aspects. The total score was therefore 89.28. In the media validation, eight aspects

received a score of four (very good) and two aspects received a score of two (good). The total score was therefore 95.

There were several challenges in developing these learning media. The games in Gimkit are only accessible during an active live session, so the researcher first had to activate the games before students could use them. In addition, access to Gimkit requires a stable internet connection, and poor connectivity may disrupt smooth usage.

On the other hand, some features in Gimkit are paid services. To overcome these limitations, the researcher used the Gimkit Pro version in order to access a more comprehensive set of features during development. With the support of experts in instructional content and media, the researcher was able to revise and optimize the learning media so that they could be used effectively.

Based on several relevant previous studies, the study conducted by Siti Nur Azizah entitled *The Effectiveness of Using the GimKit App in Vocabulary Learning* was considered the most relevant. Its relevance lies in the fact that both studies focus on the development of research-based learning media. Both also share the same objective, namely improving vocabulary mastery through the online platform Gimkit, since such learning media can enhance learners' motivation. The difference is that the study by Siti Nur Azizah applied quantitative methods and focused on English language learning.

Based on this evaluation, it can be concluded that the development of learning materials on the topic Sportlich with the help of Gimkit is highly suitable for vocabulary acquisition. Therefore, these learning materials can be used by German major students to learn vocabulary.

5. Conclusion

This study successfully developed a Gimkit-based learning medium for German vocabulary learning at the A2 level on the topic Sportlich. Using the Research and Development model proposed by Richey and Klein, the study was conducted through three systematic stages: planning, development, and evaluation. In the planning stage, the needs analysis revealed that students of the German Language Education Program at Universitas Negeri Medan had difficulties mastering sports-related vocabulary, especially specific lexical items, and considered existing learning media monotonous and insufficiently accessible through mobile devices. These findings confirmed the need for a more interactive and flexible vocabulary learning medium.

In the development stage, the study produced an interactive learning product consisting of 100 exercises in four formats: multiple-choice questions, picture riddles, essay questions, and flashcards. These activities were designed based on vocabulary items taken from *Netzwerk Neu A2* and adjusted to the competence level of A2 learners. The use of Gimkit features such as scoring systems, game modes, checkpoints, and mobile accessibility contributed to a more engaging learning experience and encouraged active student participation.

The evaluation results demonstrated that the developed product was highly feasible for instructional use. Expert validation showed strong scores from both the material expert and media expert, indicating that the content was relevant, accurate, pedagogically appropriate, and technically functional. These results support the research objective of producing a valid and effective learning medium for vocabulary acquisition. Furthermore, the findings strengthen the argument that gamified digital platforms can improve motivation, learner engagement, and vocabulary retention in foreign language learning contexts.

The implications of this study are significant for German language teaching in higher education. The developed product offers lecturers an alternative instructional medium that is flexible, mobile-friendly, and suitable for blended or classroom learning. For students, it provides an enjoyable environment for repeated vocabulary practice. More broadly, this study contributes to the growing body of knowledge on technology-assisted language learning, especially in the context of German as a foreign language in Indonesia.

However, several limitations should be noted. The product depends on stable internet access, some advanced Gimkit features require a paid subscription, and the study mainly focused on one topic (Sportlich) at one proficiency level (A2). Future research is recommended to test the effectiveness of the product experimentally, expand it to other German language topics or CEFR levels, compare Gimkit with other platforms, and investigate long-term impacts on vocabulary retention and learner autonomy.

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