(Research Article)

Developing an Interactive Learning Medium for A1-Level Reading Comprehension on 'Zeit mit Freunden' Using the Baamboozle Application

Like Marissa Veronika Simatupang [1]* , Linda Aruan [2]

[1] Universitas Negeri Medan, Indonesia. Email : likesimatupang2004@gmail.com
[2] Universitas Negeri Medan, Indonesia. Email : aruan3030@gmail.com
* Corespondence author : Like Marissa Veronika Simatupang

Abstract. The objective of this research is to develop interactive learning media using the *Baamboozle* application with the topic "*Zeit mit Freunden*" on reading skill level A1. The present study was conducted in the language laboratory of the Faculty of Language and Arts, State University of Medan. The present research employs the developmental model of Richey and Klein, which comprises three distinct stages: (1) planning, (2) making, and (3) evaluation. The data presented herein were collected through a combination of interviews, observations, and a thorough literature study, with the material drawn from the publication entitled *Netzwerk neu* A1. The result of this research is a digital game-based interactive learning media designed to improve students reading ability at A1 level. The aspects that are assessed include content, interactivity, ease of use, and design. The validation process was conducted by media and material experts, and the result was 92, which is classified as very good.

Keywords: German Language Learning, Baamboozle, Reading Skill, A1 Level, Interactive Learning Media

1. Introduction

The rapid development of information and communication technology has encouraged cross-border integration in education, trade, culture and technology. In this context, the mastery of a foreign language has become an increasingly significant skill. German, as one of the foreign languages studied in higher education, occupies a strategic position in supporting communication skills, cross-cultural understanding, and opening academic and professional opportunities [1].

In the context of learning German, the four fundamental skills listening, speaking, reading and writing are considered to be equally important. However, it is widely acknowledged that reading skills play a pivotal role in laying the foundation for the development of the other skills. However, a multitude of studies have demonstrated that novice students at the A1 level frequently encounter challenges in comprehending German texts, attributable to factors such as a paucity of vocabulary, the intricacy of sentence structures, or the paucity of learning media available [2]. Conventional approaches, which have been shown to be monotonous, also have an impact on the low motivation of students to learn [2].

In response to these challenges, a range of methods have been employed, including repeated reading exercises, an emphasis on grammar, and the application of text-based exercises. Nevertheless, the effectiveness of these approaches is often limited by the lack of interactivity and emotional involvement of students. Consequently, there is an imperative for innovative learning media that can stimulate interest and motivation in learning, particularly in the domain of enhancing fundamental reading skills.

One potential alternative solution is the use of digital game-based interactive learning media. The *Baamboozle* application, for instance, offers an interactive quiz format developed with team game features, visual elements, points, and immediate feedback, which has the potential to stimulate students' understanding of reading material [3]. However, the utilisation of this application specifically in the context of acquiring A1 reading skills on the theme of "*Zeit mit Freunden*" has never been employed before, thus rendering its potential effectiveness as yet unproven.

The objective of this study is to develop learning media in the form of interactive educational games using the *Baamboozle* application, which contains material from the Netzwerk neu A1 book with the theme "*Zeit mit Freunden*". The development is grounded in the research and development (R&D) model proposed by Richey and Klein [4], which comprises three stages: planning, development, and evaluation. This research also underscores the pivotal role of digital media in fostering an engaging, effective and efficient learning environment, while concurrently augmenting students' active engagement.

The primary contributions of this research are as follows: The provision of innovative learning media for German reading skills at A1 level is the first component of the project. The development of interactive game content based on topics relevant to the needs of beginner students is the second component. The validation of the media by material and media experts to ensure its quality is the third component. The fourth component is the analysis of the effectiveness of media use on student motivation and learning outcomes.

2. Literature Review

As the demand for innovative learning media in the field of foreign language education continues to rise, a range of approaches and technologies have been developed to address the challenges encountered in the learning process, particularly in the domain of reading skills. It has been demonstrated by preceding studies that the utilisation of interactive media has the capacity to enhance students' motivation to learn and comprehension of texts. Within the domain of German language acquisition, novice learners at the A1 level encounter significant challenges, primarily characterised by diminished motivation and constrained comprehension of texts, attributable to inadequate vocabulary and intricate language structures.

In order to address these challenges, a number of studies have been conducted to develop and test the effectiveness of various digital learning media. However, it is important to note that there are discrepancies in the context, methodologies and focus of each study. Consequently, a comprehensive review of the extant literature, encompassing the fundamental theories and the findings of preceding research, is imperative to elucidate the position and contribution of the present study with greater clarity. The subsequent section presents the theoretical framework and related literature, which have been classified into several foci.

2.1. Interactive Learning Media in The Context of Foreign Language Acquisition

The integration of learning media constitutes a pivotal element in enhancing the efficacy and efficiency of the teaching and learning process, particularly within the domain of foreign language acquisition. As posited by [5], the utilisation of learning media has been demonstrated to engender interest in learning, elucidate abstract concepts, and facilitate a more contextualised and pleasurable learning process. In the context of learning to read, the use of visual and interactive media has been shown to facilitate text comprehension and maintain learner motivation [6]. One such innovation that has seen a marked increase in usage is that of digital educational games, which have been developed to combine the principles of entertainment and education through the use of an appealing interface.

2.2 *Baamboozle* Application

Baamboozle is a web-based application that presents interactive quizzes in team and individual game formats. *Baamboozle* has several advantages, including an attractive interface, the absence of an account requirement for students, and the capacity to enhance teamwork [3]. Furthermore, the incorporation of features such as points, surprise cards, timers, and engaging visualisations renders it a suitable medium to enhance student participation and comprehension of reading material. Nevertheless, the constraints imposed by the free version of this application constitute a significant impediment to its advancement.

2.3 Interactive Media.

A plethora of preceding studies have appraised the efficacy of interactive game-based learning media, including *Baamboozle*. Discovered that the utilisation of Baamboozle has the potential to enhance the comprehension of folklore texts among junior high school students, employing a one-group experimental approach [7]. Demonstrated in her research in Social Science that *Baamboozle* can increase student participation through enjoyable learning, although it does not focus on foreign languages [8].

A development approach was utilised, drawing upon the Richey and Klein model, to create learning media for A1 level German listening skills [9]. This media was informed by the TestM application. In a similar vein, A1 grammar learning media was developed using the Nearpod application, demonstrating the efficacy of interactive media in enhancing learning motivation and comprehension of grammar concepts [10].

A Quizziz-based learning game for *Essen und Trinken* material in German reading at the high school level was also developed [11]. The integration of game elements within the learning process has been demonstrated to facilitate enhanced comprehension of the text among students.

2.4 Research Gaps

Despite the plethora of studies that have demonstrated the efficacy of interactive media in facilitating learning, there is a paucity of research specifically developing interactive learning media with the Baamboozle application for German reading skills at A1 level on the topic *"Zeit mit Freunden"*. The majority of extant studies concentrate on listening skills, grammar, or local cultural texts, and do not utilise a systematic media development approach.

Furthermore, there is an absence of interactive game media that is specifically comprised of content from the Netzwerk neu A1 book chapter entitled *"Zeit mit Freunden"*. This creates a significant gap for further study, especially in the context of learning media development based on Richey and Klein's theory, which combines the stages of planning, development, and evaluation.

2.5 Theoretical and Practical Implications

Theoretically, this research extends the application of Richey and Klein's development model in the context of foreign language learning. The results of this study are expected to make a significant practical contribution by providing innovative and engaging learning materials that address the specific needs of novice students learning German, particularly in the domain of fundamental reading skills.

3. Methode

The present research employs a research and development (R&D) approach, utilising a model proposed by Richey and Klein as cited in [4]. The model under discussion consists of three main stages, namely: (1) planning, (2) development, and (3) evaluation. The rationale behind this choice is that it is conducive to the production of learning media products that are structured and can be tested systematically.

3.1. Algoritma/Pseudocode

The following section will utilise an algorithm representation in order to illustrate the systematic flow of the interactive learning media development process in this research. This alternative description of the method steps will allow for a more comprehensive representation of the process. Algorithmic writing provides a clear and replicable structure, especially in the context of product development-based research.

The following algorithm delineates the sequence of events from the identification of the problem to the creation of the final product, which is in the form of Baamboozle application-based learning media. This was developed on the basis of material from the *"Zeit mit Freunden"*.section of the Netzwerk neu A1 book. The steps in this process are arranged in a coherent manner and are consistent with the Richey and Klein development model, which comprises three distinct stages: planning, fabrication, and evaluation.

The media development algorithm employed in this study is outlined below:

Algoritma 1. The development of A1 Interactive Learning Media with *Baamboozle* is the subject of this study.

FEEDBACK: The material under discussion is entitled "*Zeit mit Freunden*". The application under review is known as Baamboozle, and the user needs data from both lecturers and students.

OUTPUT: Interactive learning media in the form of digital educational game A1

1: The identification of reading difficulties in university students, categorised as A1 level, is imperative for effective pedagogical strategies.
2: It is imperative that a needs analysis is conducted through the medium of lecturer interviews and student questionnaires.
3: The selected learning theme is entitled "*Zeit mit Freunden*", which is located within the Netzwerk neu A1 book.
4: The creation of exercise questions is required, and these may take the form of multiple-choice, fill-in, match or true/false questions.
5: In order to commence the process, it is first necessary to create an account with Baamboozle. Following this, the user must select a game mode, which can be either free or premium.
6: The input of questions into the Baamboozle application is to be conducted in accordance with the game structure.
7: The integration of visual elements, such as images and icons, along with the incorporation of interactive features, is imperative for the enhancement of the user experience.
8: The process of media validation is initiated by material and media experts.
9: The execution of media trials with small student groups is a subject that merits further consideration.
10: The media has undergone a process of revision, consequent to the receipt of feedback.
11: The results must be summarised and documented as a learning product.

4. Results and Discussions

This section presents the results of the process of developing interactive learning media based on the Baamboozle application to improve German reading skills at A1 level on the topic "*Zeit mit Freunden*". The results obtained are organised in accordance with the three primary stages outlined in the method, namely planning, development, and evaluation.

The analysis is conducted in stages, commencing with the identification of hardware and software utilised, followed by the preparation of textbook-based materials, expert validation, and culminating in preliminary trials with students. A thorough discussion of the results is then conducted in order to provide a response to the initial hypothesis, namely that the utilisation of interactive media has the capacity to substantially enhance the motivation and reading comprehension of novice students.

4.1 . Hardware and Software

The development of this learning media is carried out using hardware in the form of:
1. Laptop with minimum specification of Intel i5 processor, 8GB RAM, and stable internet connection.
2. LCD projector and active speakers for classroom testing.

The software utilised in this context encompasses the following:
1. The Baamboozle web application (https://www.baamboozle.com) is the primary platform for the creation of interactive learning media.
2. This paper sets out the case for the use of Google Forms as a survey tool for user needs analysis and media validation.
3. Microsoft Word and PowerPoint should be used for the creation of material design before the material is input into Baamboozle.
4. The utilisation of Canva and Pixabay is recommended for the creation and adjustment of visual support illustrations for use in the game.

4.2 Dataset and Data Source

The game materials and content are based on The book Netzwerk neu A1 by Stefani [12], specifically Chapter 6: "*Zeit mit Freunden*" (pp. 64-79), is the primary source of content.

The user requires data to be collected through the following means:

1. Aseries of interviews were conducted with lecturers who were teaching the Lesen A1 course.
2. This study utilised a closed questionnaire, administered to a sample of twenty-eight students enrolled in the UNIMED German Language Study Programm, specifically the class of 2023.

The questionnaire under consideration is designed to assess various aspects of the participants' motivation, comprehension of the material, and evaluation of the efficacy of the media employed in the study. The subsequent section will present a summary of the initial data.

Table 1. Results of User Needs Questionnaire

Aspects measured	Percentage of students
Lack of motivation to read A1 text	82,1%
Reading learning media is considered uninteresting	71,4%
Difficulty understanding the theme "*Zeit mit Freunden*"	78,6%

4.3 Development of Interactive Media

The creation of interactive game media involves the compilation of competency-based questions from textbooks and their subsequent input into the *Baamboozle* application, following the following format:

1. Multiple Choice
2. Richtig/Falsch (True/False)
3. Lückentext (Fill in the blank)
4. Zuordnen (Matching)

The following example illustrates the manner in which questions are presented:

(a)   (b)
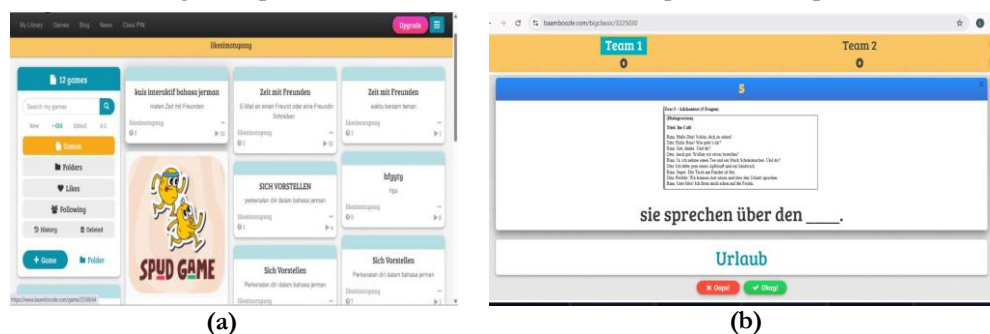
Fig. 1. (**a**) Creation of the interactive educational game; (**b**) Example of an interactive media question.

4.4 Results of Expert Validation

The media was validated by two experts:

1. Material experts: evaluating the suitability of the content with A1 learning standards.
2. Media experts: assessing aspects of appearance, interactivity, and usability.

The assessment used a scale of 1-5 (1 = very unfit, 5 = very fit). Results:

Table 2. Expert Validation Results

Aspects	Average Score
Appropriateness of material content	4,6
Media interactivity	4,5
Display and design	4,7
Ease of use	4,4

4.5 Discussion of the Findings

The results demonstrated that the development of Baamboozle-based interactive media was significantly associated with:

1. It is vital to enhance the learning motivation of novice students (A1), thereby supporting the findings that emphasise the importance of enjoyable media in the learning process [8].

2. In accordance with previous findings, it is recommended that reading material be improved to enhance comprehension. This is because the utilisation of game media has been demonstrated to enhance retention and learning focus [11], [9].

Nevertheless, in comparison to other studies, the distinctiveness of this research is characterised by the following aspects:

1. This text has been specifically developed for the reading skill theme "*Zeit mit Freunden*", a topic that has not been examined in previous studies.

2. The development structure of the Richey & Klein model was explicitly utilised in the process.

The findings serve to reinforce the initial hypothesis that interactive media can serve as an effective solution to increase motivation and foreign language reading comprehension for beginners.

5. Comparison with State-of-the-Art

This research can be compared with several previous studies that have developed interactive learning media for foreign language learning, especially German, with a digital approach. A number of the aforementioned parties elected to utilise digital platforms such as Mtestm, Quizziz, and Nearpod. Despite the common ground in terms of objectives, namely the enhancement of motivation and learning outcomes, there are substantial discrepancies in the areas of skill focus, technical approach, and teaching materials.

Table 3. Comparison with State-of-the-Art Research

Researcher(s)	Media/Paltform	Skill Focus	Topic/Profiency Level	Methodology	Main Contribution
Nazli & Sari (2024)	*MtestM*	Listening	A1/Sich Vorstellen	R&D	Interactive listening media for A1 students using self-introduction theme
Manurung & Pujastuti (2024)	*Nearpod*	Grammar	A1/Sentence Structure	R&D	Digital grammar learning media for German language students
Lestari (2021)	*Quizziz*	Reading	Essen & Trinken	R&D	Game-based reading quiz for vocabulary and context
This Study	*Baamboozle*	Reading	A1/Zeit mit Freunden	R&D	Educational game based on the *Netzwerk neu A1* textbook content

As illustrated in the above table, the distinguishing contribution of this study is evident in the following aspects:
1. The emphasis is on reading skills within a designated A1 learning context.
2. The present study investigates the utilisation of the Baamboozle application in the German language context, a phenomenon which has not been widely explored to date.

3. The present study investigates the authentic content-based development of Netzwerk neu A1 textbooks, focusing on the theme "*Zeit mit Freunden*". This theme has not been previously studied in similar research.
4. The development approach is predicated on the Richey and Klein model, which is characterised by its structured nature and replicability.

Consequently, this study contributes to the diversification of interactive learning media in the field of German, while concurrently addressing a research gap concerning reading media for specific themes that had not been previously examined.

6. Conclusion

This study aimed to develop an interactive learning media using the Baamboozle application, focused on the topic *"Zeit mit Freunden"* to enhance reading skills in German at the A1 level. Based on needs analysis, expert validation, and development evaluation, the resulting educational game was deemed feasible for implementation. The media successfully integrates interactive quiz elements, visual support, and gamification features that improve students' motivation and reading comprehension.

The findings align with the research objectives, confirming that the developed media addresses the limitations of conventional learning methods, which are often monotonous and lack contextual engagement. Expert validation yielded high scores in terms of content relevance, design, interactivity, and usability supporting the hypothesis that digital media such as Baamboozle can serve as an effective learning tool for beginner-level reading comprehension.

The main contribution of this study lies in offering a practical and replicable instructional media model based on the Netzwerk neu A1 textbook. It extends the application of digital platforms in foreign language learning particularly German and provides a structured development framework using the Richey and Klein model, which can be adapted to other language skills or topics.

However, the study has limitations, including the absence of large-scale quantitative effectiveness testing and constraints in the free version of Baamboozle. Future research is recommended to conduct experimental or quasi-experimental studies to measure learning outcomes and expand the media to cover other skills, such as listening or speaking, at the A1 level.

Referensi

[1] Br. Manurung and S. Pujiastuti, "Pengembangan Media Pembelajaran Untuk Mata Kuliah Tata Bahasa A1," *JIC: Jurnal Intelek Cendikiawan*, vol. 1, no. 8, pp. 3753–3766, 2024.

[2] Latif, W. Rohmiyanti, I. Syafira, S. Wahiddatul, and A. D. Haryanto, "Penggunaan Media Pembelajaran berbasis Game Edukasi sebagai Upaya Meningkatkan Minat Belajar Siswa Sekolah Dasar," in *Seminar Nasional PGMI*, Kajen, 2022.

[3] P. Nazli and R. Sari, "Pengembangan Media Pembelajaran dengan Bantuan Aplikasi MtestM Kemampuan Mendengar A1," *Jurnal Insan Pendidikan dan Sosial Humaniora*, vol. 2, no. 4, pp. 11–19, 2024.

[4] Sa'diyah, A. Savitri, S. F. Gading Widjaya, F. Wicaksono, and A. D. R. Wibisono, "Peningkatan Keterampilan Mengajar Guru SD/MI melalui Pelatihan Media Pembelajaran Edugames Berbasis Teknologi: Quizizz dan Baamboozle," *Jurnal Publikasi Pendidikan*, vol. 11, no. 3, pp. 198–204, 2021.

[5] D. Kusyani and S. A. Ray, "Efektivitas Baamboozle terhadap Kemampuan Memahami Teks Cerita Rakyat Sumatera Utara pada Siswa Kelas VII SMP," *Ghancaran: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, pp. 463–480, 2023.

[6] D. Widyaningrum and T. Alamsyah, "Implementasi Gamifikasi dalam Pembelajaran Bahasa Asing Menggunakan Platform Interaktif," *Jurnal Inovasi Teknologi Pendidikan*, vol. 6, no. 1, pp. 44–53, 2022.

[7] H. Paggara, A. Syawaludin, W. Krismanto, and S., *Media Pembelajaran*, Gunungsari: Badan Penerbit UNM, 2022.

[8] H. S. Tarigan, "Penggunaan Baamboozle sebagai Media Interaktif dalam Peningkatan Keterampilan Membaca Bahasa Jerman," *Jurnal Bahasa dan Sastra Asing*, vol. 3, no. 1, pp. 22–30, 2024.

International Journal of Education and Literature 2025 (April), vol. 4, no. 1, Simatupang et al.

292 of 292

[9]   K. Sihotang, *Entwicklung eines digitalen Comics mit dem Thema 'Ab in den Urlaub' als Lernmedium für die deutsche Sprache auf A1-Niveau*, Medan: Universitas Negeri Medan, 2024.

[10]   L. Aruan, R. Dallion, H., and R. Evianty, "Development of Canva For Education-Based Learning Media to Improve German Reading Ability (Lesen) Level A1," in *European Union Digital Library*, Medan, 2023.

[11]   L. Susanty and S. Pujiastuti, *Development of Digital Comic "Putri Tujuh" for Reading Course A2*, Medan: Universitas Negeri Medan, 2024.

[12]   R. Amalinda, "Penggunaan Media Interaktif Baamboozle Pada Pembelajaran Ilmu Pengetahuan Sosial di SMP Negeri 24 Malang," *Jurnal Pembelajaran, Bimbingan, dan Pengelolaan Pendidikan*, vol. 4, no. 7, pp. 1–7, 2024.

[13]   R. R. Silalahi and M. C. Simanjuntak, "Penerapan Augmented Reality dalam Media Pembelajaran Bahasa Jerman untuk Siswa SMA," *Jurnal Teknologi Pendidikan*, vol. 24, no. 2, pp. 88–97, 2023.

[14]   S. Dengler, T. M. Sieber, P. Rusch, and H. Schmitz, *Netzwerk A1*, German: Klett, 2021.

[15]   W. P. Lestari and A. Pujosusanto, "Materi Pembelajaran Essen Und Trinken Dalam Game Wildschlange Untuk Keterampilan Membaca Kelas XI Semester 2," *Laterne*, vol. 10, no. 2, 2021.