Improving A2-Level German Syntax And Morphology Via Learningapps.Org: a Web-Based Approach

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Abstrak

Perubahan zaman yang cepat membuat bahasa asing menjadi penting di era revolusi industri 4.0, termasuk bahasa Jerman yang diajarkan di pendidikan formal. Pembelajaran bahasa Jerman menghadapi tantangan dalam perbedaan sistem tata bahasa antara bahasa Jerman (bahasa infleksi) dan bahasa Indonesia (bahasa aglutinatif). Kesulitan ini sering menyebabkan kebosanan dan kurangnya semangat belajar. Tujuan penelitian ini adalah untuk menciptakan media pembelajaran bahasa Jerman tingkat A2 berupa kuis berbasis Learningapp.org. Penelitian ini merupakan penelitian pengembangan dengan metode Educational Design Research (EDR). Subjek yang terlibat dalam penelitian ini adalah satu ahli materi dan satu ahli media. Metode pengumpulan data yang digunakan adalah wawancara, observasi, dan kuesioner sedangkan instrumen yang digunakan adalah lembar kuesioner. Setelah data dikumpulkan kemudian dianalisis menggunakan metode analisis data deskriptif kualitatif dan kuantitatif. Hasil penelitian menunjukkan bahwa berdasarkan data validasi yang diberikan oleh ahli materi dan ahli media, materi mencapai skor validasi sebesar 90%. Hal ini menunjukkan bahwa materi dinilai layak untuk digunakan dalam media pembelajaran dan masuk dalam kategori Sangat Baik. Selain itu, validasi yang dilakukan oleh Learningapp.org menghasilkan persentase akhir sebesar 92,85%, yang menegaskan bahwa media Learningapp.org memang layak untuk digunakan dalam kategori Sangat Baik. Sehingga dapat disimpulkan bahwa, media Learningapp.org layak untuk digunakan. Penelitian ini diharapkan dapat membantu peserta didik dalam memperluas morfologi, membangun kalimat, dan meningkatkan pemahaman sintaksis secara interaktif.

Kata Kunci: Bahasa Jerman, Media Pembelajaran, Learningapp.org.

Abstract

The rapid change of times made foreign languages necessary in the era of the Industrial Revolution 4.0, including German, which is taught in formal education. German language learning faces challenges due to the difference in grammatical systems between German (inflectional language) and Indonesian (agglutinative language). This difficulty often causes boredom and a lack of enthusiasm for learning. This research aims to create an A2-level German language learning media through Learning app. org-based quizzes. This development study uses the educational design research (EDR) method. The subjects involved in this research are one material expert and one media expert. The data collection methods used were interviews, observations, and questionnaires, and the instrument used was a questionnaire sheet. After the data was collected, it was analyzed using descriptive qualitative and quantitative data analysis methods. The results showed that based on validation data provided by material and media experts, the material achieved a validation score of 90%. This indicates that the material is suitable for learning media and falls into the Very Good category. In addition, the validation conducted by Learningapp.org resulted in a final percentage of 92.85%, confirming that Learningapp.org media is suitable for use in the Very Good category. So, Learningapp.org media is ideal for use. This research is expected to help learners expand morphology, building sentences, and improve syntactic understanding interactively.

Keywords: German, Learning Media, Learningapp.org.

1. INTRODUCTION

The rapid changes of the times make foreign languages one of the essential aspects that must be learned in this Industrial Revolution 4.0 era (Butt et al., 2020; Taufik, 2020). A foreign language is a language that is not the native language of the country itself but is essential to understand. German is one of the foreign languages taught almost worldwide, including in Indonesia. We can see this in implementing German in formal education in Indonesia. Learning German allows individuals to improve their professional quality of life,

such as cultural understanding, opportunities to study and work in Germany, and understanding of tourism and hospitality, as German tourists prefer tour guides who can speak German (Roth et al., 2021; Walther et al., 2021). When learning a foreign language like German, the difference in grammatical systems between the native language and the target language is a challenge that learners must overcome. The difficulty arises due to the difference in grammatical systems. German is an inflected language, while Indonesian is an agglutinative language. There are two factors underlying the inflectional word forms in inflected languages, namely declension and conjugation. Declension refers to the change in word form caused by differences in gender, number, and case. Conjugation, on the other hand, involves changes in word form due to changes in person, number, and tense. Agglutinative languages are languages where the structure of words is formed by combining main elements with additional elements, main elements with main elements, or repetition of main elements (Azhary Tambusai, 2020; Msonda, 2021). Therefore, the morphological prosody applied in agglutinative languages includes affixation, reduplication, and repetition (Abdullah & Amin, 2020; Atintono & Issah, 2022; Bekarystankyzy & Mamyrbayev, 2023; Körtvélyessy & Štekauer, 2024).

Mastering the A2 level also provides learners with the ability to expand their morphological knowledge, understand more complex syntactic patterns, and develop better listening and reading skills. Additionally, the A2 level is often a requirement for purposes such as further studies, employment, or living in German-speaking countries. Many educational institutions and companies expect their employees to have at least A2-level proficiency in the German language. Thus, achieving the A2 level in German provides learners with a solid foundation to continue their journey in learning the language. It opens doors for them to further develop language skills, expand their understanding of German culture, and enhance academic and professional opportunities in the future. The use of modern learning media can make students more interested in the learning process and make the learning process more effective in overcoming students' boredom during the learning process because one of the functions of learning media is to direct students to gain diverse learning experiences. Other researchers state that learning media functions as objects, technical equipment, or configurations that facilitate learning communication. It should be noted that, currently, learners are more interested in learning through playing games because they do not feel bored and enjoy the learning process.

One of the main gaps between expectations and reality lies in the challenges learners face in understanding and applying German grammar rules. German is an inflective language with complex morphological and syntactic structures, while the mother tongue of many learners, such as Indonesian, is agglutinative. This fundamental difference causes difficulties in learning the rules of German morphology and syntax. The use of case declination and the different forms of verbs and nouns become significant obstacles for learners who are used to simpler language structures. This gap has a direct impact on motivation and learning effectiveness. Learners often feel frustrated when they struggle to understand and apply German rules in real communication contexts. This frustration can reduce their motivation to learn and hinder their language mastery. This suggests an urgent need for research that can bridge the gap between expectations and realities in German language learning. This research is highly urgent considering Germany's crucial role in this modern era. To overcome the gap between expectations and realities in German language learning, an innovative and adaptive approach is needed to adjust to diverse learners' needs and characteristics. This research aims to explore learning strategies and methods that can facilitate the understanding and application of German rules and increase learner motivation. By understanding the challenges learners face and developing effective solutions, this research can significantly contribute to

creating more efficient and enjoyable methods of teaching German (Hauck et al., 2020; Hofer et al., 2021; Vladova et al., 2021).

This will improve learner outcomes and strengthen the role of German as a global communication tool in the digital age. One solution that can overcome this is to develop learning media. Several studies are relevant to the current research. The first researcher stated that German language students developed listening learning media to increase B1 vocabulary and improve listening skills using the Proprofs platform with good results. The second researcher stated that interactive website-based learning media using LearningApps has great potential to enhance the mastery of German vocabulary at the A1 level. Furthermore, research states that learning media with Blooket is considered effective in supporting German vocabulary learning. From various existing studies, learning media is considered capable of helping students learn German (Maya Aristia & Risnovita Sari, 2024; Monica & Harahap, 2024; Pane et al., 2024). Although there are several similar studies, there is novelty from the current research.

The novelty is that this research creates a web-based platform that functions as an easy-to-use German language learning tool. The application is Learningsapp.org, which can be accessed via PC and smartphone. As stated on its official website, Learningsapp.org is a web-based application that provides various interactive learning exercises and activities. The app is designed to be used by teachers in the context of learning, both in the classroom and distance learning. Learningsapps.org allows teachers to create and share various types of exercises, such as quizzes, puzzles, flashcards, multiple choice questions, and many more, easily and quickly. Based on the explanation, this research aims to create an A2 level German language learning media in the form of Learningapp.org-based quizzes. Therefore, it is hoped that this research can be used to explore innovative and adaptive learning strategies and methods and help reduce the difficulties students face in understanding and applying German grammar rules.

2. METHODS

This research focuses on developing a product intended for implementation in learning activities, aiming to enhance the learning experience by utilizing interactive learning media. The chosen method for this research is Research and Development (R&D), which involves a systematic approach to improve and refine an existing product through specific procedures, resulting in an enhanced product (Lamsihar et al., 2020; Okpatrioka, 2023; Sugiyono, 2019). The development process employed in this research utilizes the Educational Design Research (EDR) methodology. This research design is particularly well-suited for creating digital modules. Educational Design Research is a research approach employed to systematically design, plan, and evaluate interventions in education (such as products, programs, learning strategies, teaching materials, and systems) to address complex educational issues and advance knowledge through the process of design and development (Putri & Suryani, 2024; Rahma et al., 2024). Based on the aforementioned perspective, it can be concluded that Educational Design Research is a research method aimed at designing and developing solutions to educational challenges. Therefore, it is highly relevant in supporting the product development process that will be undertaken. This research follows the research and development process established by Plomp. An illustration of the EDR process model in this study is presented in Figure 1. Based on the EDR process model by Plomp in this article, the validation instrument for materials and media is in the form of a checklist, which is a list that contains the validation of observed subjects according to the assessment aspects used. In this research article, it is used to assess the suitability and accuracy of the learning materials and media used. The suitability of the quiz with the achievement indicators and the learning

objectives of German language at the A2 level in GER/CEFR is considered. The analysis technique used to determine the suitability of the media involves validation by subject matter experts and media experts.
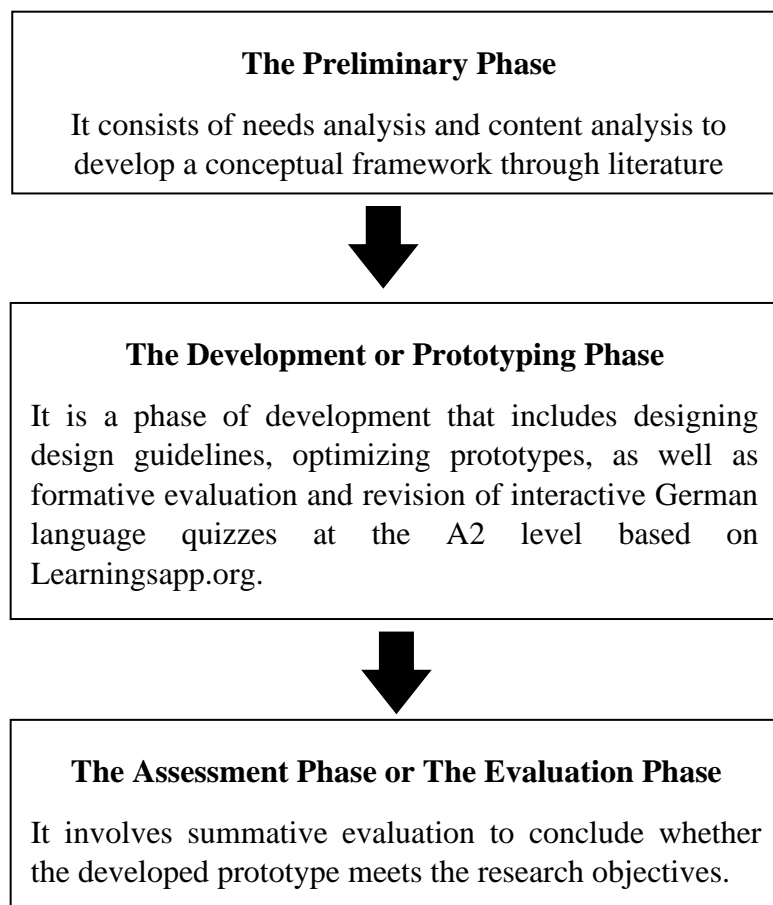
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The Preliminary Phase

It consists of needs analysis and content analysis to develop a conceptual framework through literature

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The Development or Prototyping Phase

It is a phase of development that includes designing design guidelines, optimizing prototypes, as well as formative evaluation and revision of interactive German language quizzes at the A2 level based on Learningsapp.org.

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The Assessment Phase or The Evaluation Phase

It involves summative evaluation to conclude whether the developed prototype meets the research objectives.

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Figure 1. Stages Of The EDR Process Model

The data collection methods used are observation, interviews, and questionnaires. In addition, there is a data collection instrument used, namely a questionnaire sheet. The validation aspect includes an assessment instrument that uses a Likert. The following is a material expert validation grid presented in Table 1 and a media expert validation grid presented in Table 2.

Table 1. Material Expert Validation Grid

No	Material Instrument Assessment Aspects	Rating Category				
		1	2	3	4	5
1.	The suitability of the topic with the learning material.					
2.	The suitability of the material with the basic competence on German morphology and syntactic in the German language standard GER (CEFR) A2.					
3.	The suitability of the material with the achievement indicators for learning morphology and syntactic in GER (CEFR) level A2.					
4.	The suitability of the material with the learning objectives of morphology and syntactic in GER (CEFR) level A2.					

No	Material Instrument Assessment Aspects	Rating Category				
		1	2	3	4	5
5.	The use of language in related materials can be understood by A2 level German learners.					
6.	The accuracy of choosing morphology and syntactic in the material presented.					

Table 2. Media Expert Validation Grid

No	Assessment Aspects of Media Instruments	Rating Category				
		1	2	3	4	5
1.	Accuracy supports the content of the lesson.					
2.	Growing interest and attention of students.					
3.	Language suitability with students' thinking level.					
4.	Ease of use of Learningapp.org media.					
5.	Learningapp.org's media design gives an attractive and positive impression.					
6.	The quality of the visual display of Learningapp.org media.					
7.	The letters used are clear and legible.					
8.	Color contrast in Learningapp.org media design.					
9.	Learningapp.org media suitability with student character.					
10	Can increase the mastery of morphology and syntactic.					
11	Learningapp.org media suitability with the material being taught.					
12	Ease of access.					
13	Conformity with learning objectives.					
14	Student involvement in the media					

After the data is collected, it is analyzed using qualitative and quantitative data analysis methods. The results in the form of statistical data will be analyzed to obtain the percentage of suitability and the materials used. The validation results obtained from media experts will indicate the criteria for the suitability of the media used.

3. RESULTS AND DISCUSSION

Result

The following are the results of research conducted in accordance with the ADDIE stage. The study began with a preliminary phase, where the researcher conducted initial research through interviews and evaluations to identify learners' learning needs and difficulties in mastering German morphology and syntax at the A2 level. Interviews were also conducted with A2 German teachers to recognize the challenges during the learning process. In addition, observations were made while learners were still in the learning process in class A2. In addition to the needs analysis, the researcher also conducted a documentation study, which included examining the curriculum used for learning German at the A2 level, the availability of teaching materials, and the facilities provided by Medan University. Based on interviews with A2 German learners and teachers, as well as classroom observations, it was found that learners have difficulties in various aspects of German syntax, such as verb-noun combinations, imperative sentences, modal verbs, compound connectives, prepositions, adjective declensions, sentence structure, and formal and informal time expressions. They

also face challenges acquiring morphology related to clothing, media, food and drink, colors, and body parts. These difficulties indicate that understanding German morphology and syntax at the A2 level still requires improvement. Learning app. org-based learning media was chosen to develop interactive quizzes on German syntax and morphology to address instructional development needs. Learningapp.org is a digital learning platform that allows the creation of interactive quizzes with various features. This medium will enable learners to practice German syntax and expand their morphology interactively. Quizzes created on this platform can be customized according to learners' needs and difficulty levels, thus providing a more engaging and effective learning experience. Through the development of interactive quizzes on German syntax and morphology, learners are expected to become more actively involved in their learning, improve their understanding of German syntax, and increase their morphology proficiency. By using interesting and interactive learning media like this, learners will be more motivated to learn German and overcome their syntax and morphology challenges. Here is a look at the interactive quiz design using Learningapp.org presented in Figure 1.
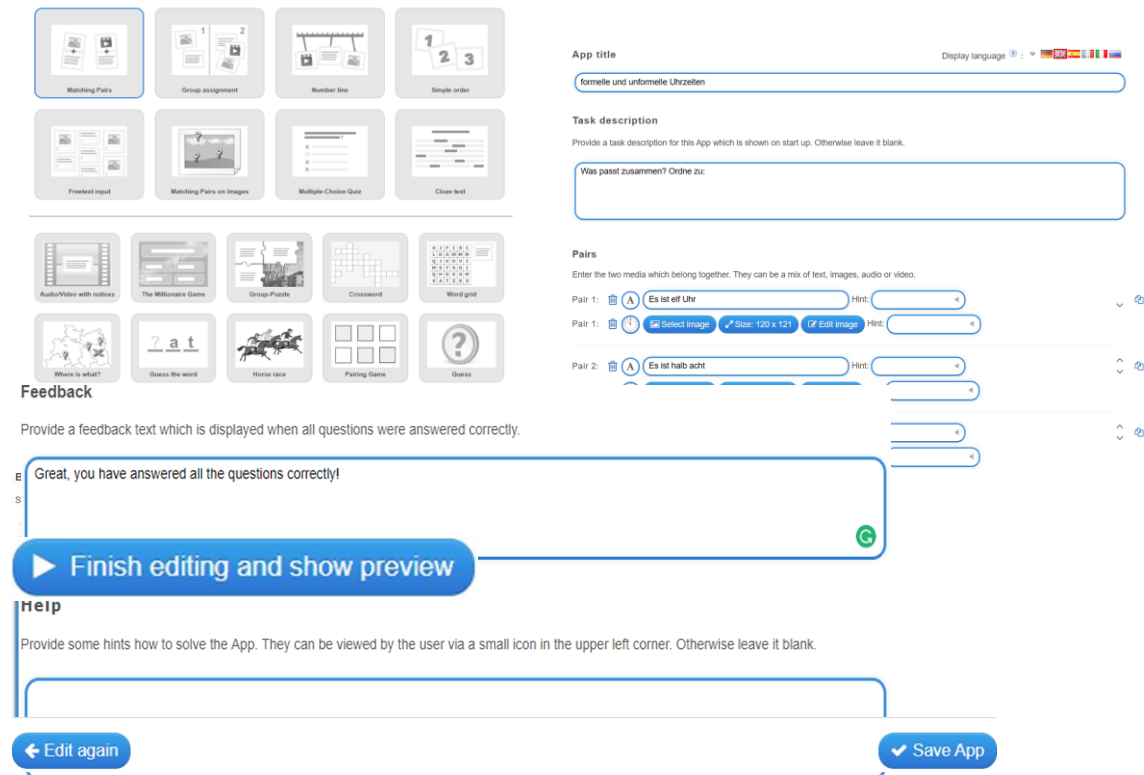

Figure 1. The Interactive Quiz Design Using Learningapp.Org

After obtaining the needs analysis results, the product design process began using Learningapp.org. The design stages of the interactive quiz include creating an account, selecting an activity type, determining the number of pairs to match, entering item pairs, adding background images, and typing feedback information. The quiz was then pilot-tested and saved when satisfactory. The material and media feasibility validation results of Learningapp.org show that this media is suitable for use with minor revisions. Material validation shows that the assessment instrument meets the excellent category, a category with a range of values of 81% -100%, so the material is suitable for use by adding verben classification with Verb-Nomen-Verbindung. The media validation showed that the media assessment aspects also met the excellent category, with the recommendation to add

background sound during the game. Thus, the quiz-based learning media on Learningapp.org is very feasible for educational purposes, helping learners improve their understanding of German syntax and morphology interactively.

Discussions

Learning German at the A2 level requires a strong command of morphology and syntactic to enable learners to express their opinions and intentions effectively. However, the ongoing pandemic has made the learning process monotonous, posing a significant challenge for educators to ensure that learning remains engaging and enjoyable for students. To tackle this issue, utilizing technology as a learning medium is an effective solution. Please note that, that, the field of education has entered the age of media, where traditional learning approaches are being replaced by various media formats that emphasize process skills and active learning. In this context, interactive digital learning resources play a crucial role in helping learners memorize and apply morphology and syntactic while communicating. Web-based learning platforms like Learningsapp.org offer accessible and flexible learning experiences, accessible via smartphones or PCs. These platforms provide a wide range of quiz formats that cover A2-level German syntactic and morphological, incorporating captivating visuals and allowing for repetitive practice. This study has several significant advantages in German language learning media development.

First, using Learningapp.org, this research utilizes innovative digital technology to create interactive quizzes, increasing students' learning engagement and motivation (Astindari et al., 2024; Budiman et al., 2021). These interactive quizzes make the learning process more interesting and allow students to practice and deepen their understanding of German syntax and morphology in a practical and fun way (Astari, 2022; Kurniawan & Ika Yatri, 2022; Manda et al., 2023; Resti Nur Lailia Qodriani et al., 2022). Secondly, this research is based on an in-depth needs analysis, including interviews with learners and teachers and direct classroom observations. This approach ensures that the learning media developed is truly suited to the needs and difficulties faced by A2-level German learners. Thus, the materials and activities presented in the interactive quiz are more relevant and can answer the challenges encountered in learning German (Evi Nurus Suroiyah, 2020; Sasmi et al., 2022; Wabula et al., 2021).

Third, the validation conducted on the materials and media ensures that the final product is high quality and suitable for learning. Feedback from expert validators on verb writing and classification helped to improve the materials, while the suggestion to add background sound improved the interactive aspect of the learning media. This shows that this research not only focuses on developing innovative media but also pays attention to the quality and effectiveness of its use. Finally, this research offers a significant practical contribution to the field of language education, particularly in the context of German language learning in Indonesia. By providing more effective and enjoyable learning tools, this research is expected to help overcome learners' difficulties, improve their competence in German, and ultimately strengthen global communication skills in the digital era. This study has some limitations that need to be recognized and addressed. First, the use of Learningapp.org as an interactive learning platform is limited to the availability of stable internet access. Learners may experience difficulties accessing and using this application optimally in areas with inadequate internet connection. The solution to this problem is to provide offline learning alternatives that can be downloaded and used without an internet connection, such as PDF learning materials or desktop applications that can function offline. Also, the effective use of Learningapp.org is highly dependent on the active engagement and motivation of the learner. Less motivated learners may not take full advantage of the interactive features available. A possible solution is to involve teachers more actively in

monitoring and providing feedback on learner progress and create a supportive and motivating learning environment. In addition, gamification and rewards can be implemented to increase learner participation and motivation.

Therefore, by recognizing and addressing these limitations, this research can contribute more effectively to improving the learning of A2-level German syntax and morphology and providing a better learning experience for learners. This study has significant implications for German language learning at the A2 level. First, using Learningapp.org as an interactive learning medium can overcome the difficulties learners face in understanding and applying the rules of German morphology and syntax. By providing quizzes that can be customized according to learners' needs and difficulty levels, Learningapp.org allows learners to learn more actively and engage. This is expected to increase their motivation to learn, reduce frustration, and accelerate their understanding of German. Secondly, this study also shows that interactive digital learning media can effectively teach foreign language learning, especially in overcoming linguistic differences between the mother tongue and the target language. Implementing such learning media can improve teaching quality and outcomes and provide a model for developing digital teaching materials in other language fields. In addition, the results of this research can encourage educational institutions to adopt more technology in the learning process to align with the demands of the digital era and the Industrial Revolution 4.0. Thus, this research provides practical solutions for A2-level German learners and offers a broader contribution to innovation in language education.

4. CONCLUSION

Learningapp.org is an engaging and educational quiz-based digital learning platform that effectively supports students in improving their understanding of German morphology and syntax practice. Specifically, this web-based application serves as an interactive learning tool for A2-level German learners. By facilitating the organization of morphology into sentence structures that conform to standard German syntax rules, the app proves to be a suitable and valid learning resource. Revisions to the material, including writing small prefixes on verbs and using verb-noun combinations, have added to the app's educational value. Learningapp.org's media validation also confirmed its suitability for educational purposes. Thus, Learningapp.org is a valuable resource for A2-level German learners, helping them expand their understanding of morphology, construct sentences, and improve their interactive knowledge of syntax.

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