

Harmonizing Imagination and Technology: Emmas Fröhlicher Tag-A Fusion of Printed Picture German Storybook and Digital Web Experience on Google Sites

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Abstract

This study aims to develop a hybrid educational tool, combining a printed picture German storybook with a digital web experience, to assess the effectiveness of the hybrid tool in enhancing German language learning for beginners, specifically focusing on language acquisition and imaginative skills. This research adopts the Research and Development (R&D) approach, employing the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. The study involves the creation of "Emmas Fröhlicher Tag," starting with the analysis of educational needs, design and development of content, implementation in an educational setting, and finally, evaluation of its effectiveness through qualitative measures. The fusion of traditional and digital learning tools in "Emmas Fröhlicher Tag" demonstrates the potential to harmonize imagination and technology for German learners. The integration of printed and digital elements provides a holistic learning experience, catering to diverse learning styles and enhancing language acquisition and imaginative skills. Further research can explore the scalability and adaptability of this hybrid model across different cultural and linguistic contexts. Additionally, continuous updates and improvements to the digital component can ensure the tool remains relevant and engaging for evolving educational needs.

Keywords: Educational Technology, German language, Imagination, Printed Storybook

Introduction

Learning requires several crucial roles to support its smooth process, including the roles of teachers, students, materials, media, and facilities, as well as evaluation (Falah, 2015). By specifying these aspects, it becomes clear that instructional media plays a key role in achieving learning objectives. Media is defined as any form used to convey a message. Specifically, instructional media encompasses various elements such as objects, individuals,

and environments used to deliver learning materials, aiming to facilitate the learning process and achieve learning goals (Aini et al., 2023). In addition to these roles, it is also important to understand the impact of globalization in the context of learning. Globalization has significantly influenced learning approaches, including how materials are presented and how instructional media can be cross-cultural. When integrating the roles of instructional media, the dynamics of globalization need to be considered to ensure relevance and effectiveness in the learning experience.

Globalization is a dynamic phenomenon in human civilization that continuously moves within society and becomes part of the life process (Suneki, 2012). In line with technological advancements, print and electronic media can quickly disseminate information from all corners of the world. This information or news can be received in both Indonesian and its original language. Therefore, proficiency in foreign languages is crucial in the exchange of information at present (Angreany & Syukur, 2017). In the current era of globalization, proficiency in English as an international language alone is not sufficient. Proficiency in a second, third, and even subsequent foreign languages, including proficiency in German is required (Kudriyah, 2012).

Currently, the pathway to Europe is facilitated by the European Union, with German as the primary language of instruction. Germany stands as the largest economic power in the European Union and one of the largest globally. Many German multinational companies seek employees proficient in the German language. Mastery of this language can lead to excellent career opportunities in various sectors, including business, engineering, science, and the creative industry.

Proficiency in a foreign language, in this case, the German language, can enhance communication and broaden insights (Tamaela et al., 2022). The ability to speak in a language understood by the interlocutor facilitates effective communication, creating opportunities to share ideas, information, and emotions more efficiently. Language and culture are inseparable. By learning a foreign language and understanding the culture, values, and ways of thinking of others, one can gain insights into a diverse world.

In meeting human needs effectively, learning is essential, and effective and efficient learning must utilize various learning resources, one of which is technology. Technology has made significant contributions to the learning process. In the context of learning, technology has endeavored to develop, design, and utilize various learning resources, aiming to facilitate and simplify an individual's learning process (Warsita, 2013). Technology has opened opportunities for lifelong learning, anytime and anywhere, with various learning resources and methods tailored to individual needs and conditions.

The use of technology in education is an effort to enhance meaningful and high-quality learning (Ardiansyah & Nana, 2020). Technology enables students to access unlimited online learning resources. This includes e-books, instructional videos, online platforms, and other educational resources that can be accessed anytime and anywhere. Technologies such as mobile applications are often equipped with features that allow students to learn at their own pace. This means that students can review challenging materials or progress faster if they have already grasped the content.

The utilization of technology as a learning medium generally offers something engaging in education (Mitha, 2022). Technology enables the incorporation of multimedia elements such as video, audio, and images in the learning process. The integration of these multimedia elements can make the learning process interesting, enjoyable, and easily understandable, thereby assisting students in comprehending and retaining the material more effectively.

Mobile applications are designed to be interactive and appealing, aiding active student engagement through games, quizzes, simulations, and gamification elements.

The process of learning German language materials often relies solely on lecture methods, leading to boredom and passive student participation (Ardiansyah & Nana, 2020). The implementation of a free curriculum, where the learning process is student-centered, compels educators to develop students' potential through creative learning approaches.

Based on the **(this)** background, the aim of this research and development is to develop a hybrid educational tool by combining a printed German picture storybook with a digital web experience. The objective is to assess the effectiveness of this hybrid tool in enhancing German language learning for beginners, with a specific focus on language acquisition and imaginative skills. The illustrated storybook and the website "Emmas Fröhlicher Tag" serve as instructional media for learning the German language by utilizing a picture storybook integrated with a learning website.

Method

The research design employed is the Research and Development (R&D) approach using the ADDIE model (analysis, design, development, implementation, and evaluation) (Gafur, 2019; Gustiani, 2019). This model is utilized to develop a product, a picture storybook integrated with an interactive web platform based on Google Sites. The development process is limited to five stages: analysis, design, development, implementation, and evaluation. These stages are conducted to understand the students' needs for the development product and design the product based on the analysis results of those needs.

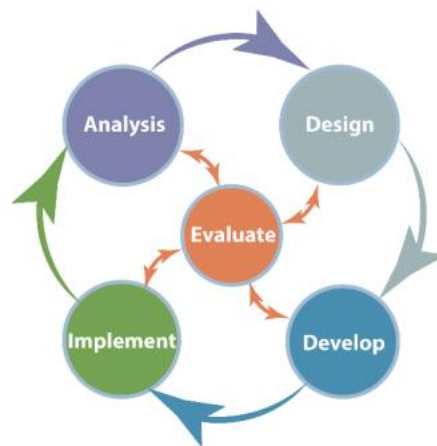


Figure 1. Development Model Chart ADDIE

The detailed procedure for the research and development process is outlined as follows:

1. Analysis

This stage is conducted to analyze the needs by identifying issues, assessing the alignment of the product with objectives, gathering feedback on the product, and considering the students' conditions and curriculum content.

2. Design

The design phase involves the conceptualization and alignment of the product concept with the results of the previously conducted analysis. The product generated in

this research is an integrated illustrated storybook with a Google Sites-based web platform.

3. Development

The development phase encompasses the product that has been created and will undergo validation. In this study, the Emmas Fröhlicher Tag illustrated storybook product will be validated based on two aspects: the media aspect and the content aspect (Sungkono, 2012).

4. Implementation

This stage involves the implementation of the learning program by applying the design or specifications of the learning program.

5. Evaluation entails assessing the learning program and evaluating learning outcomes.

The research is oriented towards a qualitative descriptive method with a literature study approach. The literature study is conducted in the context of examining reading sources or documentation used for data analysis from the research object. Data analysis is performed using a descriptive analysis technique, namely by narrating the issues in textual form. The steps in this literature study are carried out with (1) the determination of issues or problems, (2) the collection of sources, (3) data corroboration, and (4) presenting the results of the review and data analysis (Mirzaqon, 2018).

The data for the research consist of questionnaires on the analysis of needs for the development of products and the content of the developed learning materials. The data collection for this research is gathered based on questionnaire and documentation techniques. The questionnaire is conducted in the analysis phase to determine the validation of the developed product. The numbers in this questionnaire adopt the Likert scale model 1-5 to avoid respondent data neutrality, ensuring accurate data translation (Likert, 1932; Pranatawijaya et al., 2019). Meanwhile, documentation is carried out to analyze the needs and issues underlying the development and content of the material, specifically the material within the scope of the Tagesablauf and Wochenendaktivitäten themes in German language learning.

Results

Technological Innovation

"Emmas Fröhlicher Tag" is a product consisting of an illustrated storybook integrated with an interactive Google Sites web platform. This product is developed as a German language learning tool for high school students. The text of the storybook "Emmas Fröhlicher Tag" narrates the daily routine of a cheerful little girl named Emma. In this book, Emma is portrayed as a lively girl living in a positive social environment. The language and narrative in the book are written in German, allowing learners to read fiction while acquiring vocabulary and grammar skills. The book is accompanied by a Google Sites-based web feature containing pages related to German vocabulary and assessments, all adapted explicitly from the "Emmas Fröhlicher Tag" storybook.

Based on its form, content, and function, the illustrated storybook "Emmas Fröhlicher Tag" has the following specifications:

1. Product Form

- a. This product package is named "Emmas Fröhlicher Tag."

- b. It takes the form of a fiction genre illustrated storybook.
- c. "Emmas Fröhlicher Tag" is a printed illustrated storybook integrated with the Google Sites digital web application.
- d. The web pages of "Emmas Fröhlicher Tag" can be accessed using the barcode within the book.
- e. The integration of Google Sites is used to access materials, assignments, and assessments adapted or aligned with the storybook.
- f. "Emmas Fröhlicher Tag" can be accessed both offline (for reading the illustrated story) and online (for accessing learning activities and assessments) on computers, laptops, tablets, or smartphones.

2. Product Content

- a. The content of the material is a development of German language learning materials on the themes of Tagesablauf and Wochenendaktivitäten.
- b. This storybook text is divided into three parts, namely einföhrung, inhalt, and abschluss. The einföhrung section consists of: a) cover page; b) table of contents, and; c) book usage instructions. The inhalt section is the core of the product, namely a narrative of illustrated fictional stories. This story is written in German and intended as a reference for learning activities on the web. Meanwhile, in the abschluss section, the book contains the developer's biography.
- c. The website pages are divided into five sections: a) Einföhrung, b) Lernmaterial, c) Lernspiele, d) Aufgaben, and e) Abschluss.
- d. The "Einföhrung" section is the homepage that contains information about the page, instructions for using the page.
- e. The "Lernmaterial" section is developed based on the content in the illustrated storybook, limited to the themes of Tagesablauf and Wochenendaktivitäten.
- f. The "Lernspiele" section is organized into several categories to prevent students from getting bored while exploring. Some game categories in this section include Crossword, blank text box, missing letter, match up, missing word, and word search. In programming the games, the developer utilizes the educational game development website, Wordwall. Later, these games will be linked in link or link format on the Google Sites page.
- g. The "Aufgaben" section will be designed using Google Form to collect students' answers to questions or problems given.
- h. The "Abschluss" section contains the table of contents and the developer's biography.
- i. Animated characters in the Emmas Fröhlicher Tag storybook and its web product are designed using the ibisPaint X application.
- j. The illustrated storybook of this product is processed using the Canva application.
- k. The interactive web linked as part of this storybook is developed on the Google Sites software platform.

3. Product Functions

- a. The illustrated textbook "Emmas Fröhlicher Tag" can be utilized as a supporting tool for German language learning, specifically focusing on the themes of daily routine (Tagesablauf) and weekend activities (Wochenendaktivitäten).
- b. The development of this product aims to be an innovative and interactive learning resource.
- c. It is anticipated that the development of this product will facilitate a better understanding and delivery of learning materials to students.

- d. The gamification learning model adapted in this product is believed to prevent students from easily becoming bored during the learning process.
- e. Its appealing design enables students to be interested in reading and studying the content.

The development of illustrated storybooks is not a new endeavor; however, modifications and innovations make the development intriguing. There are numerous examples of illustrated storybook development; for instance, Apriliani and Radia (Apriliani & Radia, 2020) in their research, developed a storybook focusing on Theme 1, "The Beauty of Togetherness," with the Subtheme "Cultural Diversity of My Nation" to enhance the reading and writing abilities of fourth-grade students. Similarly, a similar study was conducted by Paramita et al. (Paramita et al., 2022) to create an illustrated storybook to improve reading skills in Indonesian language subjects for third-grade elementary school students.

Both studies share a common goal, which is to produce an illustrated storybook to enhance reading and writing skills. This objective aligns with the development of the "Emmas Fröhlicher Tag" illustrated storybook. However, the primary distinction between the two previous studies and this development lies in the addition of an interactive web feature based on Google Sites, encompassing various main menus, such as gamified assessments. Therefore, the uniqueness of the "Emmas Fröhlicher Tag" product lies in the integration of offline and online teaching resources presented in an engaging and interactive learning theme.

Discussion

Aplicability and Utility in real life

The Development of "Emmas Fröhlicher Tag" and its Potential in German Language Learning

This section elaborates on the stages of the three steps adapted in the development research model, namely analysis, design, and development. In the analysis phase, it was identified that several main issues in German language learning stem from the lack of available learning resources and media, monotonous teaching methods, as well as the time-consuming nature of the learning process, coupled with a lack of interest and motivation among learners (Pabumbun & Dalle, 2017).

Many fundamental aspects of German language learning have not been explored in-depth, despite their potential as learning resources. In line with this statement, the researcher in this study aims to map the development opportunities for the Tagesablauf and Wochenendaktivitäten materials in the high school curriculum. Tagesablauf and Wochenendaktivitäten materials are related to daily learning or activities, making them contextual and easier for learners to understand, especially in the era of the Merdeka Curriculum, which allows teachers the freedom to manipulate and explore various learning resources and tools (Al-Tabany, 2017; Lestari et al., 2023).

The design phase in this development research resulted in a picture storybook and an interactive web, constituting a unified product package named "Emmas Fröhlicher Tag." The picture storybook was designed on A4-sized paper (21×29.7 cm) in landscape orientation using the Canva application (fig. 2), while the design of the Emmas Fröhlicher Tag web utilized Google Sites software (fig. 3). All animation and image designs in both the Emmas Fröhlicher Tag book and web were edited using ibisPaint X via a smartphone. All fictional

characters in the animations in the Emmas Fröhlicher Tag storybook were intentionally designed to be simple and colorful to enhance visual appeal.

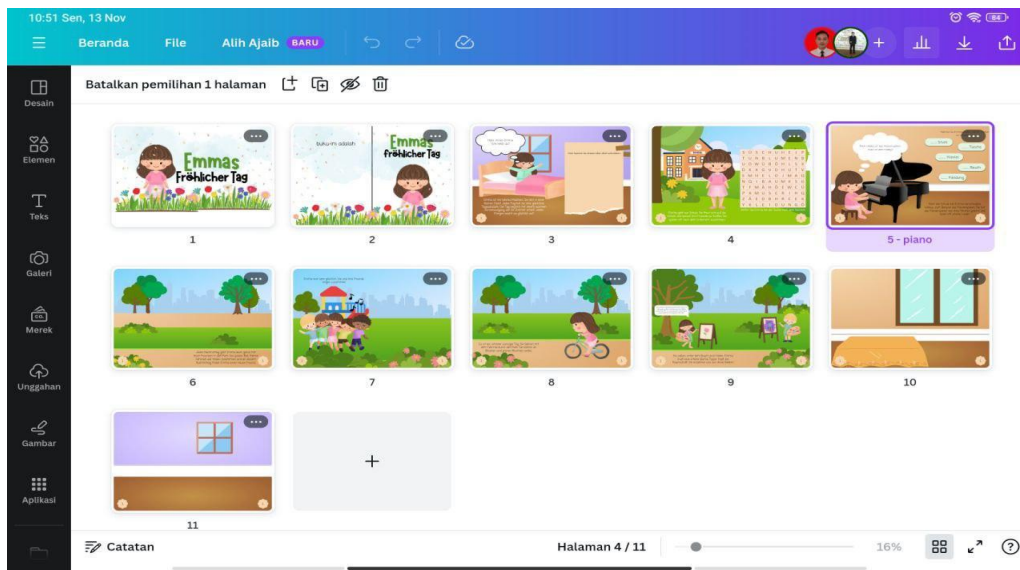


Figure 2. Initial design of the Emmas Fröhlicher Tag picture storybook

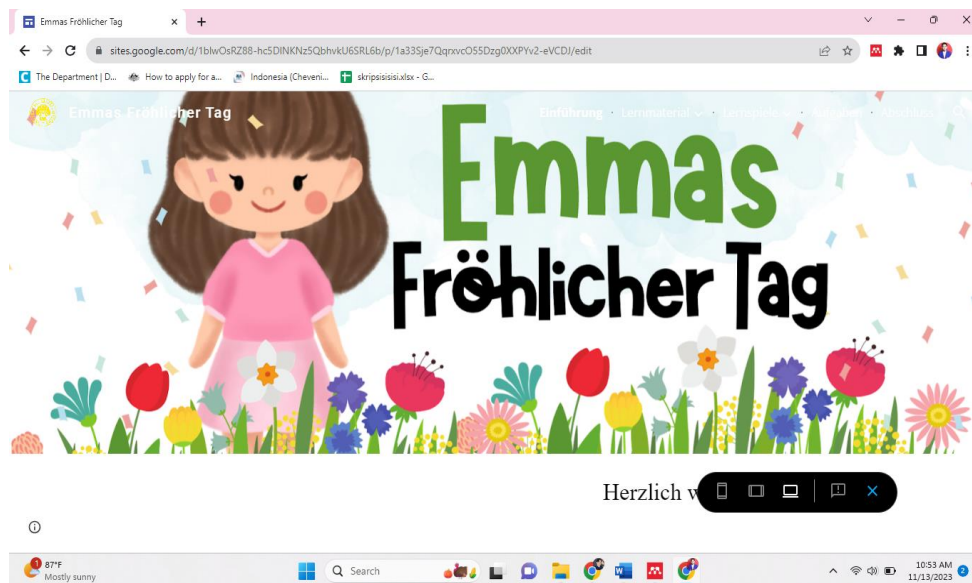


Figure 3. Initial design of the Emmas Fröhlicher Tag web (laptop version)

The final stage in this research is development or implementation. Development, in this context, is related to product validation by experts. This developmental research utilized two types of validation questionnaires: material validation and media validation. Expert and media validations were conducted to ensure that the picture storybook and web of Emmas Fröhlicher Tag were appropriate before being tested on students. The products tested with validators were the final designs considered suitable for the intended developmental purposes. The parameters and criteria for product validity can be seen in the table below.

Tabel 1. Media feasibility category

Percentage	Criteria	Description
81-100%	Highly valid	Very suitable for use
61-80%	Valid	Can be used with minor revisions
41-60%	Moderately valid	Can be used with major revisions
21-40%	Less valid	Cannot be used
00-20%	Invalid	Cannot be used

The results of the validation test for the "Emmas Fröhlicher Tag" storybook are depicted in the following table.

Tabel 2. Material Expert and Media Expert Validation Results

Validator	Percentage	Validity
Material	96.15	Very good
Media	92.11	Very good

After undergoing validation by experts, both the illustrated storybook and the "Emmas Fröhlicher Tag" website were deemed suitable as learning media, with several improvements implemented based on critiques and suggestions from the expert validators. According to content experts, both the illustrated storybook and the website were considered engaging and aligned with needs, although there was a need to improve instructions before starting exercises. On the other hand, media experts provided feedback and suggestions related to the accessibility aspect of the book through the web. In response to this input, the researcher made revisions in line with the provided suggestions and feedback.

From the results of the experiment with a small group, it was found that both the illustrated storybook and the "Emmas Fröhlicher Tag" website are feasible as learning media. During the learning activities, students gave positive feedback on the illustrated storybook. One notable instance was the 90% percentage in the first question, measuring students' interest in using the illustrated storybook and the "Emmas Fröhlicher Tag" website for beginner German language learning. In conclusion, the illustrated storybook and the "Emmas Fröhlicher Tag" website can be considered as attractive alternatives for learning media in classroom activities. This finding aligns with the argument (Jannah & Hasmawati, 2017), stating that the utilization of learning media in the classroom can stimulate students' interest and understanding of the taught material.

Conclusion

The combination of a printed German storybook with a dynamic digital web experience demonstrates the potential to blend imagination and technology for German learners, particularly beginners. Using the Research and Development (R&D) approach and the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model, the research not only developed a new educational tool but also evaluated its effectiveness in improving language acquisition and imaginative skills.

The results indicate that merging traditional and digital elements in "Emmas Fröhlicher Tag" offers a comprehensive learning experience, meeting the varied preferences of young learners. The seamless integration aims to maximize the educational impact of both printed and digital media. Looking ahead, it is crucial to explore how well this hybrid model can adapt across different cultural and linguistic contexts. Regular updates and enhancements

to the digital component are vital to ensuring the tool stays relevant and engaging, addressing the changing needs of educational environments. This research contributes to the ongoing discussion on effective educational tools and lays the groundwork for further exploration and innovation in the realm of hybrid learning experiences.

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