Development of *D-Lesen* Android Application as a Medium for Learning to Read German at a Basic Level

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Abstract

German language learning in the Kurikulum Merdeka is a group of elective subjects in phase F. There are four elements of learning outcomes, namely listening (Hören), speaking (Sprechen), reading (Lesen), and writing (Schreiben). There is a problem in German reading comprehension learning process in the school. To overcome these problems, media is needed to help the learning process. This research aims to develop a product in the form of D-Lesen android application. The method used is Research & Development (R&D). The result of this research is D-Lesen android application as an independent reading learning media which contains four main themes namely Meine Familie, Essen & Trinken, Wohnung, and Kleidung. D-Lesen android application was validated by two lecturers as learning experts and assessed by teachers and students of class XII-G at SMA Negeri 16 Bandung using a Likert scale questionnaire. The first learning expert gave a score of 76.47% (Good), the second learning expert gave a score of 97.64% (Very Good), the teacher gave a score of 91.76% (Very Good) and the average student gave a score of 77.90% (Good). From the results of the studies can be concluded: 1) D-Lesen android application can be developed using the research and development method. 2) D-Lesen android application got very good responses from teachers and good from students. So, the D-Lesen android application can be used as a medium for learning basic reading independently.

Keywords: Media, Development, D-Lesen Android Application

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1. INTRODUCTION

One of the foreign languages studied at the high school, vocational, MA, and college levels is German. In learning German, students are expected to be able to master four language skills. The four language skills are listening (*Hören*), speaking (*Sprechen*), reading (*Lesen*), and writing (*Schreiben*).

Reading (*Lesen*) is one of the important skills for students to master. However, while learning to read, there are still various obstacles, namely low student motivation. Based on the narrative of one of the German language teachers at SMA Negeri Bandung, the limited facilities of German books and the lack of learning media used are some of the causes of low student motivation and reading comprehension. Therefore, media is needed to help the learning process. Along with the development of technology in this day and age, app stores and Websites can be utilized to find learning media because of the practical characteristics of using a smartphone. One of the learning media innovations is an android-based learning application or Mobile Learning with the display of audio-visual or multimedia elements that can attract the attention of its users because when reading there is a connection between the reader's knowledge and understanding of the meaning of a text. This means that students need to read interesting texts in the reading-learning process. Therefore, this innovation in learning to read German can help students' learning process independently.

Attractive learning media is expected to support students in achieving the learning objectives of German language subjects in the independent curriculum at the end of phase F which is equivalent to the GER (*Gemeinsamer Europäische Referenzrahmen*) standard or the A2 level European language competency standard. There is also a description of one of the learning outcomes of German language subjects from the reading element, namely, students can understand general, selective, and or detailed information from various types of simple written texts about daily life and the surrounding environment. This research will develop an android-based digital learning application that focuses on the themes of Meine Familie, Essen & Trinken, Wohnung, and Kleidung specifically to support the reading skills of high school students independently.

2. LITERATURE REVIEW

Media is used as a link to provide material to students in the learning process. Hasanah (2020, p. 36) suggests that terminologically, the word "media" comes from the Latin "medius", which means "middle", "intermediary", or "introduction". On the other hand, in Arabic, "media" means an intermediary that connects messages from sender to receiver. Then, Putra & Hartati (2023, p. 10) suggest that media can be used to convey teaching messages. In addition, the National Education Association (NEA) suggests that media as objects that can be manipulated, seen, heard, read, or talked about and used properly for teaching and learning activities, have the potential to affect the quality of teaching programs (Ainni, 2020, p. 2). From the views of Hasanah, Putra, and Hartati, media can be interpreted as an intermediary for delivering learning materials, while Aini defines media as objects used to improve the quality of learning.

This is in line with the statement of Firmadani (2020, p. 94) which explains learning media as a tool to convey facts, and concepts of certain principles or steps for more reality, so that it can foster a positive attitude of students toward the material and the learning process becomes more interesting with the use of appropriate media. In addition, Fadilah, et al. (2023, p. 4) also emphasize that learning media is a means used to support the learning process more efficiently and optimally. Based on the explanation above, it can be concluded that learning media is a means of containing material to provide information in the form of material to students who can foster attention and

assist learning with various systems of interconnected elements, namely learning objectives, material, students, teachers, situations, and evaluation to encourage an efficient and optimal learning process.

By the definition described above the media is a tool that contains material to be given to students so that the learning process becomes efficient and optimal, the media has an important function in the learning process. Fathoni, et al. (2023, p. 7) suggest the function of the media, namely:

1) As a tool for learning,
2) As a way to improve learning,
3) As a way to make abstract concepts more tangible,
4) As a way to enhance students' mental processes,
5) As a way to improve student understanding, and
6) As something that is integrated with the learning objectives.

Then, the function of media as a supporter of foreign language learning, namely:

1) Lernmedien als Mittel lassen sich Inhalte darstellen, ohne dass die Lehrkraft eine besondere fachliche Kompetenz besitzen muss, 2) Lernmedien can der Fremdsprachenerwerb beschleunigt werden, 3) Previous knowledge can be utilized in any form and is especially productive for the development of Sprachenlernen.

Based on the above quote, it can be understood that the function of media as learning media is to present content without special technical expertise owned by the teacher, learning media can also shorten foreign language learning, and media can be used effectively as knowledge to support language learning.

In addition, the function of learning media for students is divided into four, namely:

1) Attention Function

   A function that can attract students' attention and center their focus on the teaching material.

2) Affective Function

   Functions that make students feel comfortable in the learning or reading process, such as with illustrated text.

3) Cognitive Function

   Functions that help students understand and recall information.

4) Compensatory Function

   The function of assisting slow or weak students in understanding lessons given verbally or textually.

From the three expert views above that suggest the function of the media, it can be concluded that the function of learning media is a tool, method, and concept to improve the quality of understanding and attract students' attention in the learning process. In addition, by fulfilling the attentional, affective, cognitive, and compensatory functions of learning media, it is hoped that it can help the learning process and objectives to be achieved so that students can understand the material appropriately.

Learning media has various types to be used based on the functions of learning media previously described. The selection of the right type of media needs to be considered according to the needs and learning objectives. Isnaeni & Hildayah (2020, p. 154) divide the types of learning media into four, namely:

a) Visual media, media that can be seen by the eye, consisting of photographs, drawings, posters, magazines, and so on. Images must be seen very clearly so that students can understand.

b) Audio media, media that can be heard and has a clear sound so that the learning process is fit for purpose. Consists of music, radio broadcasts, and so on.

c) Audio-visual media, media that can be seen and heard simultaneously, for example, dramas and performances, and so on.

d) Multimedia, media that combines visual and audio media. The internet usually consists of various types of media.

In contrast to the previous view, Alm (2007, p. 18) argues about the existence of new learning media in foreign language learning from the perspective of motivation theory, namely:

> *Neue Medien bieten sich als Lernmilieu an, nicht (nur), weil sie neu und aufregend sind, sondern weil sie aufgrund ihrer ihrer interaktiven Kommunikationsstruktur, ihrer Materialvielfalt und ihrer Adaptivität ideale Voraussetzungen zur Unterstützung der Grundbedürfnisse liefern.*

Based on the above quote, it can be understood from the point of view of motivation theory that the use of new media in the learning environment is not only new and interesting but provides ideal conditions to support the basic needs of interactive communication structure, variety of materials and adaptability of teachers and students. In other words, new media is more effective than conventional programs. The explanation is clarified by Agustina & Karsam (2023, p. 106), which states that the use of media increases along with the existence of digital media, therefore, the media is divided into two categories, namely analog media and digital media. Digital media such as the internet, smart whiteboards, interactive whiteboards, and printed books are examples of analog media.

With the rapid development of technology today, there needs to be innovation and transformation in learning (Amaluddin & Machali 2022, p. 277). One of these innovations is the use of digital-based learning media using smartphones as learning devices. Smartphones are mobile devices that can be accessed by the public and almost everyone has them (Sari, 2019, p. 10).

Based on some of the above understandings, it can be concluded that new types of learning media will continue to develop along with technological developments. Digital type learning media has multimedia elements that can be used as independent learning support, besides the use of digital media can be used in smartphone devices, this can be an innovation and transformation in the learning process.

In the world of education, digital media has an important role in helping the learning process become more interesting as technology develops. The increase in digital media in education can also facilitate the teaching and learning process. This is in line with Scheiter's statement (2021, p. 1041), namely:

> *Die zunehmende Digitalisierung verändert Bildung aber auch im Hinblick aufdie Gestaltung ihr zugrundeliegender Lehr und Lernprozesse. Hier stands the question in the background, how digital media can be used, so that the Erreichen fachlicher und überfachlicher Bildungsziele erleichtern und verbessern. Die Nutzung digitaler Medien dient hier weniger dem Selbstzweck, sondern ist der Erwartung eines Mehrwerts für Lehren und Lernen verknüpft.*

Based on the above quote, it can be concluded that increased digitization is essentially, changing education as it relates to the design of the teaching and learning process. The focus here

is on the question of how digital media can be used to facilitate and enhance the achievement of specific and interdisciplinary educational goals. Not only that, the purpose of using digital media is also related to the hope that it can add value to teaching and learning.

In addition, digital media has characteristics to be implemented, as mentioned by Stegmann, et al. (in Gräsel, et al., 2020) these characteristics include:

(1) Digitale Medien werden nicht nur von einzelnen Akteur*innen verwendet, sondern erreichen die Schule bzw. den Unterricht in größerem Umfang. (2) Digitale Medien verändern die technischen und pädagogisch/didaktischen Kompetenzen und Handlungsmuster von Lehrpersonen. (3) Das Kollegium macht sich die Verwendung digitaler Medien zu eigen. This is done not only in the context of the establishment, but also by the fact that the responsibility for its use and further development is defined. (4) Die Nutzung digitaler Medien erfolgt nachhaltig, also über einen längeren Zeitraum.

Based on the above quote, it can be understood the characteristics of digital media to be implemented, including digital media, can reach schools or lessons on a larger scale, not only used by individuals, digital media can change technical skills and teacher behavior patterns, universities also adopt the use of digital media because they are responsible for further development that has been determined and digital media in use has a sustainable nature, namely use over a longer period.

From the explanation above, it can be understood that digital media can add value and can be proposed for learning support as digitalization develops. The media proposal, for example, is a learning program that can be implemented. Therefore, digital media to assist the student learning process. In this research, we will develop a learning application that can be used independently outside or inside the classroom.

Applications are programs in the form of software used on computers and smartphones. Software is a program in the application to facilitate human work in doing its duties (Mufidianto, et al., 2023 p. 68). In addition, Kadir (in Lubis, et al., 2023, p. 53) suggests that application is the use of a concept that is the subject matter or a computer program that is produced to help humans carry out certain tasks. From the views of Mufidianto and Kadir, it can be understood that an application is a program that can help human tasks. This is clarified by Syam, et al. (2024, p. 90) applications are a combination of special instructions given to computers to perform certain tasks and software applications made to make human work easier so that it can speed up work more easily, and produce more appropriate solutions to various problems.

From the explanation above, it can be concluded that an application is a software program on computers and smartphones that contains a combination of special instructions to facilitate the process of human work with several categories of programming languages including word processing, number processing, data processing, desktop applications, graphics applications, web browser applications, multimedia applications, communication applications and DMS applications.

Applications also have various forms based on their usage devices. The following Pujianto, et al. (2020, p. 18) suggest applications consist of three types, namely:

1) Desktop Application
   Applications used on PC (Personal computer) or laptop devices.
2) Website Application
   The application is used through a web browser and must be available on the internet.
3) Mobile Application
   Applications are used on smartphone devices that have many users.

Of the various forms of applications above, of course, there are several bases for making an application, namely: Android, IoS, Desktop, and HTML5 Web (Faqih, 2020, p. 28). Android-based applications provide an open program for developers to create applications that can help activities in various fields. Android is a Linux-based operating system made for tablet computers and smartphones (Khaliq, et al., 2021, p. 30). In addition, Islamiyah & Puapasari (2021, p. 393) suggest that Android is a complete platform for mobile devices because there are tools that build software so that it continues to grow rapidly and is an opportunity for application development. Based on the explanation above, a learning application is a type of media that can be used to deliver content on mobile devices, such as Android-based cell phones used by high school / vocational/equivalent students, by using learning technology wisely can increase the effectiveness and efficiency of education. An android-based learning application can be defined as a platform that can be developed based on needs and can be used to deliver information or lessons to encourage students to learn.

In helping the learning process, the characteristics of an android-based learning application need to be known more deeply to be developed into an interesting learning media. Besides being interesting, the application can display new experiences in learning activities based on student needs (Yolida, 2019, p. 38).

Riyan (2021, pp. 211-212) suggests the characteristics of Android-based learning applications in their use, namely the features in Android are easy to use, can support the delivery of learning material in a way that makes it easier for students to understand, there are features for making free applications, learning becomes more interactive, efficient, and effective, and can improve students' psychomotor, affective, and cognitive abilities, and display interesting content and contain learning material so that students remain interested and not bored.

Then, the characteristics of learning applications with six interactive multimedia criteria, namely:

1) Ease of navigation, which means the media program should be designed in the most accessible, clean, and beautiful way possible.
2) Cognition content (thought process).
3) Knowledge and presentation of information. The above two criteria are used to evaluate the program content and meet students' learning needs.
4) Media integration, meaning that the media should incorporate learning objectives, teaching materials, different methods used, and student skills.
5) The media program should offer artistic displays to attract attention.
6) Overall function, which means that the developed program must provide learning by the learning objectives so that students feel learning is comfortable and fun.

The content of the Android-based learning application has the characteristics of a Flowchart or flowchart in its development. This flowchart contains the pages in the application as learning media consisting of:

a) Opening page that contains the title of the application.
b) The home page contains the main navigation buttons. The button function can direct the user to move to the next page.
c) Instruction page, which is a page that contains the functions of the buttons in the learning application.
d) Profile page, which is a page that contains a brief profile of the developer,
e) Competency page, which is a page that contains a brief explanation of the application, basic competencies, objectives, and indicators.

f) The main menu page, contains the topic of the material you want to learn.
g) The learning material page contains the material to be discussed.
h) The learning video page contains learning videos.
i) Quiz page, which is a page that contains a quiz in the form of multiple-choice question exercises. (Susanto, et al., 2023, pp. 137-138).

Based on the explanation above, it can be concluded that the characteristics of Android-based learning applications based on their use can make it easier for students to use and understand learning. Then, learning becomes interactive, efficient, and effective because it displays interesting and artistic content. In addition, android applications that are intended to be used as learning media must have characteristics that motivate students, encourage them to remember what they have learned and give them motivation to learn. Meanwhile, to develop an Android-based application, a flowchart is needed which contains pages to be loaded on the application.

Learning apps allow students to learn in multiple places at the same time, which tends to make learning more effective (Malik, et al., 2023 p. 69).
Much more in-depth Nazruddin (in Hanadwiputra et al., 2022, p. 10) suggests the advantages of Android-based learning applications:

1) Complete (Complete platform): Android is a secure operating system because there are many instruments for compiling software and opening up application development opportunities.
2) Open Source Platform: The Android platform is available through an open source license linux kernel 2.6 is used by Android, so developers can create applications freely.
3) Free Platform: an application development program that is free and free. Developing applications on this medium does not require license fees or royalties. Android applications can be distributed in any format.

Based on the explanation above, it can be concluded that learning media in the form of Android-based applications has advantages including complete instruments, having a license, and can be used freely and for free so that it can make it easier to find material, application content is more creative, and the learning process becomes more effective. Therefore, by making an Android-based learning application, it is necessary to develop the application according to user needs.

The process of transforming existing potential into something greater is an explanation of development, while research and development is the process of transforming a product into a product that can be accounted for (Ritonga, et al., 2022, p. 344). One of the latest innovations in learning media that has been described previously is to develop applications that can be used on Android-based student android phones, which can help in the context of teaching and learning German reading skills.

"Educational Research and Development (Educational R&D) is an industry-based development model in which the findings of the research are used to design new products and procedures, which are then systematically field-tested, evaluated, and refined until they meet specified criteria of effectiveness, quality, or similar standards"

From the explanation above, it can be concluded that developing a learning application requires stages to create new products as learning media by meeting standards and procedures. The Android-based learning application developed in this study will focus on helping students learn independently in basic level German reading skills which are limited to class XI material on the themes of Meine Familie, Essen & Trinken, Wohnung, Kleidung & Mode.

Reading is comprehension that aims to make connections. Influenced by text structure, prior knowledge, experience, and reader tendencies.

Das Lesen ist eine Verstehenstätigkeit, die darauf abzielt, sinnvolle Zusammenhänge zu bilden. This is done both by the text and its structure and by the reader, der sein Vorwissen, seine Erfahrungen, seine Neigungen and sein Interesse in den Text ein-bringt.

In addition, Wahyuni (2023, p. 331) argues that the meaning of reading means seeing and understanding the contents of what is written, and can be spoken aloud or silently or spelling or pronouncing what is written.

The skills in learning German are divided into four, namely listening skills (*Hören*), reading skills (*Lesen*), speaking skills (*Sprechen*), and writing skills (*Schreiben*).

Students' German reading skills are expected to be by the *Gemeinsamer Europäischer Referenzrahmen (GER)*. The GER standards aim for students to be able to understand simple words and sentences related to their family and environment. The GER standard is divided into six levels namely A1, A2, C1, C2, B1, and B2.

3. METHODOLOGY

The research and development method, also known as Research and Development (R&D), will be used in this research. R&D is a research method used to produce products and test how effective they are. The function of research and development is to validate and develop products. Validating the product means that the product already exists, and the researcher only tests how good or correct the product is. Developing products can mean changing existing products to be more practical, effective, and efficient, or making new products (Sugiyono, 2022 p. 28). Richey and Klein (Sugiyono, 2022, p. 39) suggest that "The focus of Design and Development Research can be on front-end analysis. Planning, Production, and Evaluation (PPE)" which means that front-end analysis, which includes design, production, and evaluation, is the focus of design and development research.

To develop learning products or media some steps need to be taken. The process of developing a simplified product is as follows:

1) Research and Information Collecting, which is gathering information through literature research to develop a research framework.
2) Planning, namely making a research plan that includes the formulation of expertise and skills, objectives, design, and research procedures.
3) Develop a Preliminary Form of the Product, which is making the initial form of the product by preparing the necessary parts and other additional tools.
4) Product Testing, which is used by distributing products for trials in learning.
5) Main Product Revision, which is making improvements to the initial product that has been tested, this improvement can be done repeatedly until the product is ready to be tested more widely.

4. RESULTS AND DISCUSSION

The process of developing the *D-Lesen* android application as a support for learning outside the classroom is based on finding solutions to the problems of high school students who are constrained in learning to read German. The results of interviews with German teachers at SMA Negeri 16 Bandung, in learning to read, students often have difficulty understanding a German

reading text so students' motivation in the learning process decreases. Broadly speaking, the cause is found to be the lack of German book facilities and the lack of learning media used. To increase student learning motivation efficiently and optimally can use media in the learning process (Fadhillah, et al., 2023, p.4). The use of *D-Lesen* android application learning media is expected to help students' difficulties in the learning process and can be used as a support for learning to read German. Reading is a process of conveying messages. This is in line with Harianto (2020, p.2) who puts forward the definition of reading which is a thinking process that includes understanding, telling stories, and interpreting symbols through memory, eye movements, vision, and inner conversation.

To help the learning process of reading can use Android applications as learning support because based on the characteristics of Thorn W (in Sanaky, 2013, p.208) there are six interactive multimedia criteria, namely: ease of navigation, ease of cognition (Thinking process), knowledge and presentation of information, media integration (Combining learning objectives and methods) and can attract students' attention. The *D-Lesen* android application is a reading learning media that has these six criteria and can be downloaded via an Android phone. In the learning process, this android application can be used by students to learn to read independently outside and inside the classroom. In the *D-Lesen* application, there are simple reading texts that have been designed with various kinds of images as supporting illustrations to attract attention and make it easier for students to understand simple German reading texts. In addition, there are also supporting quizzes as student exercises that can be played repeatedly. By using the *D-Lesen* application independently, it is hoped that it can also increase student motivation in the German language learning process.

The development of the *D-Lesen* android application as a medium for learning to read German at the elementary level uses the research and development (R&D) method. "What is research and development? It is a process used to develop and validate educational products" which means research and development is a method/process used to validate and develop products. Products in the field of education here mean that they can be used to develop learning methods and media, teaching materials, modules, and so on. The stages of research and development in this study consist of five stages, namely: Research and information collecting, Planning, Developing a preliminary form of product, Product testing, and Main product revision. In the first stage of research and information collecting, the researcher gathered information by conducting observations and interviews with German language teachers at SMA Negeri 16 Bandung. Then, a literature study was also conducted to prepare the formulation of the research framework. Furthermore, researchers analyzed the needs of students in learning German to consider the media to be developed. Thus, the media to be developed is an android application as a support for learning to read German. After that, researchers analyzed German reading learning in the independent curriculum by conducting literature studies for the formulation of learning objectives achieved in the content of the application. Learning objectives and indicators of achievement of learning objectives can be seen in Table 4.1.

In the second stage, Planning is carried out to compile the initial design of the *D-Lesen* android application with four main steps, namely: the first step, researchers chose Das Leben A1 book, Super Deutsch A1 book, and Netzwerk A1 book as a reference for the content of reading material included in the *D-Lesen* application. The books were chosen because they are simple reading texts with various themes that are adjusted to the indicators of achievement of learning objectives for students. The main themes chosen are Meine Familie, Essen & Trinken, Wohnung, and Kleidung. Then, the second step is to create a flowchart to convey the structure of the material

presented in the *D-Lesen* android application and the flowchart image can be seen in Figure 4.6. After that, the third step is to create a storyboard or sketch image which is a description of the pages created in the *D-Lesen* application and the storyboard can be seen in Figure 4.2. The last step is to design a data collection instrument using a questionnaire with a Likert scale made for learning experts, teacher responses, and student responses regarding the *D-Lesen* android application.

In the third stage Develop a preliminary form of the product, and prepare the parts needed for the application including making background designs, reading text illustrations, and button icons with the Canva application. The Canva application was chosen because many graphic design features can attract attention and there are also Canva web color wheels that can make it easier for researchers to determine interesting color combinations. In addition, researchers also prepared some audio needed for the application. The process of making audio by making various sounds using the Super sound application in the Voice changer feature. After the application parts are collected, MIT App Inventor Software is used to create an Android application.

In the fourth stage Product testing (Product testing) the *D-Lesen* android application was validated by two learning experts. Learning expert I gave a score of 65 out of a maximum score of 85. Then, the score is sought for the percentage value and categorized based on the assessment percentage table. The percentage results learning expert I obtained 76.47% results included in the "Good" category and concluded that the media was "Suitable for use with revisions according to suggestions". Furthermore, the application was also validated by Learning Expert II and got a score of 83 out of a maximum score of 85. The score was presented and got a result of 97.64% including the category "Very Good". Learning expert II also concluded that the media was "Worth using with revisions as suggested". After getting validation results from learning experts, the *D-Lesen* android application was revised according to the suggestions given by learning experts. After that, the *D-Lesen* android application was assessed by the German language teacher by giving a score of 78 out of a maximum score of 85 and an assessment percentage of 91.76% with an assessment percentage category of "Very Good". The German teacher concluded that the media was "Worth using without revision". Furthermore, the *D-Lesen* android application was tested by students in class XII-G SMA Negeri 16 Bandung and received an assessment with a score of 1449 out of a maximum score of 1860 and an assessment percentage of 77.90% in the "Good" category based on the assessment percentage category table. It can be concluded that the *D-Lesen* android application received positive responses from experts, teachers, and students.

In the fifth stage Main product revision is the final stage in this research. There were improvements to the audio to improve audio quality and improvements to the design of the Thema button on the main menu page based on suggestions given by learning experts. After making improvements, the *D-Lesen* application was assessed by the teacher and was ready to be tested by students. When the application was successfully downloaded on students' smartphones, students were very enthusiastic about using the *D-Lesen* application.

The final product of the *D-Lesen* application is designed by the results of expert tests and media trials by students of class XII-G SMA Negeri 16 Bandung. However, the effectiveness of using the *D-Lesen* android application is not yet known due to limited research time. Based on the results of this study, the advantages and disadvantages of the application were found, namely:

    a. The advantages of the *D-Lesen* android application:
1) The content of the material in the application is compiled based on the learning objectives of German in the independent curriculum for Phase F.
2) Reading texts are adjusted to the basic level of students in grade XI.

3) Illustrative images are presented to help reading comprehension of simple German texts.
4) Audio as support can help students in pronouncing simple German reading texts.
5) In increasing learning motivation, this application can be used by students as a learning media independently outside the classroom.
6) This application can continue to be developed.
   b. Disadvantages of the *D-Lesen* android application:
1) There is no search feature for themes.
2) The application cannot be used on a smartphone with an iOS system (Only Android system).
3) The application can only be downloaded on the APK file created by the author (not yet downloadable on Playstore).

5. CONCLUSION

Based on the results of the development of the *D-Lesen* android application as a medium for learning to read German at a basic level, things can be concluded are the development of the *D-Lesen* android application as a medium for learning to read German at a basic level, especially for high school students, and can be done using the research and development method (Research & Development) which is limited to media assessment by learning experts, teachers, and students.

The results of validation from Learning Experts I got an assessment of 76.47% including in the category "Good" and concluded that the media was "Worth using with revisions according to suggestions" while Learning Experts II got an assessment of 97.64% including the category "Very Good". After that, the teacher's assessment of the *D-Lesen* android application is 91.76% including the category "Very Good" and the results of the average student assessment of 77.90% including the category "Good". From this assessment, it can be concluded that the Android application gets a positive response from teachers and students, so it can be used as a medium for learning to read independently outside the classroom.

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