

Effectiveness of Android-based digital learning application on fashion revolution with the Glide apps platform.

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ABSTRACT

The development of information technology has brought significant changes in learning methods, including the use of Android-based digital applications. One of these innovations is a learning application about "Fashion Revolution" developed using the Glide Apps platform, which aims to improve users' understanding of the evolution of clothing styles. This study uses a quantitative method with data collection through a survey involving a population sampling of 30 respondents, consisting of students, college students, and adults. The questionnaire distributed contains an assessment of aspects of the application's practicality, including appearance, language, feasibility, graphics, and application value. The results of the study showed that this application received a high percentage of validation, with aspects of appearance and feasibility each reaching 95%, and aspects of graphics and applications also showing values above 90%. The conclusion of this study is that the "Fashion Revolution" learning application is very valid and worthy of use as a learning medium. The implications of this study indicate that the use of digital applications can increase the effectiveness of learning and provide an attractive alternative for users in understanding educational materials.

I. INTRODUCTION

Human daily life cannot be separated from clothing. Whether it is going out of the house, which requires appearance to beautify the appearance or just at home with the clothes that are available. Along with the development of the times, fashion is not only a tool to cover and protect the body, but also a work of art (Mastour et al., 2025).

There are many genres of dressing. And from the various genres spread throughout the world, from time to time, can be our reference for dressing. Because that's how the trend of dressing is. Every fashion trend that ever existed will definitely be repeated again and again with an addition or modification (X. Li et al., 2020). That is the importance of understanding fashion trends that develop from time to time.

Glide is one of the many App Builders that has a NoCode application base. Just like Appsheet glide uses a Spreadsheet as a data source, besides that, Glide

has an internal data source to store our application data, namely Glide Tables (van den Berg, 2025). For the UX display, we can customize the display by entering the components that we want to display according to the design and needs of the application (Santoso et al., 2023). Glide can be run on mobile devices and desktop devices (Hakiki et al., 2024). How to use it is quite easy and simple; we only need to create application content data in a Google Spreadsheet and then input the data into GlideApps. The content we write will automatically enter the application (Haris et al., 2023).

Glide Apps is a website that provides an Android-based application creation program. Through Glide Apps, users can create applications independently in just 10 minutes (Triyanto et al., 2024). What users need to create an Android application with Glide Apps is to create an account on the Glide Apps website, and then the account is integrated with a Google Drive and Google Sheets account. After all these stages have been met, users can use the Glide Apps service to build the application they want to create (Pitnawati et al., 2023).

In the modern era, with very rapid technological developments like this, we must use technology as much as possible to help with human daily activities (Karsoliya, 2012). Even now, most people's daily activities are very dependent on technology. Especially in the current pandemic, which requires us to use technology as a medium of communication. Everyone from all walks of life needs technology. Starting from small children to adults. Technology helps us all in carrying out our daily activities (Zhao et al., 2025).

In today's digital era, the use of technology in education is increasing, but there are still many challenges faced in its implementation. One of the realities is that although there are many learning applications available, not all of them are effective in delivering material in an interesting and easy-to-understand way for users (Liu & Xu, 2016). This shows the need to develop applications that are not only informative but also interactive and engaging, especially in the context of learning about fashion, which is constantly evolving (Febriyana et al., 2023).

On the other hand, there is still unknown information about the negative impacts of using digital learning applications. Several studies have shown that dependence on technology can reduce students' social interactions and critical thinking skills. In addition, not all users have the same access to technology, which can create gaps in education (L. Li et al., 2025). This is a challenge for application developers to ensure that the applications they create can be accessed by all groups.

Statements that indicate information that contradicts the purpose of this study are that some parties argue that conventional learning is still more effective than application-based learning (Artanayasa et al., 2023). They argue that direct interaction with teachers and peers is more supportive of the learning process compared to learning that is done independently through applications (Efendy et al., 2022). However, this study aims to prove that digital learning applications can be an effective and interesting alternative. Information that is not yet known regarding this study includes how much influence digital learning applications have on users' understanding of the fashion revolution (Saengduenchay & Noenthaisong, 2023). Although many applications exist, there has been no study that specifically measures the effectiveness of Glide Apps-based applications in

the context of fashion learning (Sriwahyuni et al., 2025). This opens up opportunities to explore more deeply how these applications can facilitate better learning.

The reality that has not happened is the existence of a learning application that specifically integrates aspects of the history and development of fashion with modern technology (Zarei et al., 2025). Although there are several applications that discuss fashion, none have combined educational elements with an easy-to-use platform like Glide Apps. This study seeks to fill this gap by creating an application that is not only informative but also user-friendly (Ambiyar et al., 2024).

The novelty of this research lies in the digital learning application that uses the Glide Apps platform for the topic "Fashion Revolution". By using Glide Apps, this application can be created quickly and easily, and can be accessed by various groups. This provides an opportunity for users to learn about the evolution of fashion in an interactive and fun way (Wu & Wang, 2024). This study is to explore how digital learning applications can improve users' understanding of the fashion revolution and to identify what aspects make this application effective. This study will also analyze user feedback to improve the quality of the application in the future (Maleki, 2025).

The purpose of this study is to develop and evaluate an Android-based digital learning application on "Fashion Revolution" using the Glide Apps platform, and to measure the effectiveness of the application in improving user understanding of the topic discussed (Javier, 2025).

The gap in this study is clearly visible when compared to previous research entitled "Android-Based Learning Applications to Increase Student Learning Interest" by (Rina Sari, 2021). The research focuses on the development of learning applications in general without any specification on the topic of fashion, so this research attempts to fill the gap with a more specific and relevant focus.

II. METHODOLOGY

This study uses a quantitative method with a descriptive research design. The quantitative method was chosen because this study aims to measure and analyze the effectiveness of Android-based digital learning applications regarding "Fashion Revolution," developed using the Glide Apps platform. Descriptive design allows researchers to describe the characteristics and responses of users to the applications that have been created, as well as to collect data that can be analyzed statistically (Creswell, 2016).

The population used in this study is the general public who have an interest in the world of fashion, including students, college students, and working adults. From this population, the sample used was 30 respondents who were randomly selected from various circles. The sample selection was carried out to ensure that the data obtained reflected diverse views and experiences related to the use of this learning application.

The subjects of this study are users of the "Fashion Revolution" application, which has been downloaded and used by respondents. This study will use a research instrument in the form of a questionnaire designed to measure the level

of understanding, satisfaction, and ease of use of the application. This questionnaire will include questions related to aspects such as the appearance of the application, the language used, feasibility, and graphics, as well as open-ended questions to obtain more in-depth feedback from users.

The steps of the research procedure begin with the development of the "Fashion Revolution" application using the Glide Apps platform. After the application is completed, the researcher will distribute questionnaires to 30 predetermined respondents. The questionnaire will be distributed online to facilitate data collection. After the respondents fill out the questionnaire, the collected data will be analyzed using descriptive statistics to get an idea of the effectiveness of the application. The results of this analysis will then be used to draw conclusions about how well this application can improve users' understanding of the fashion revolution. This research is expected to make a significant contribution to digital learning applications in the fashion field.

The assessment questionnaire regarding the Fashion Revolution application was given to the general public, namely, 30 people from various backgrounds. Starting from students, working adults, and students. The assessment uses the following analysis:

Assessment criteria	Weight of Value
Not good	1
Good	2

After the respondents have filled in the assessment sheet using the assessment scale as in the table above, the respondents' answers can be obtained and the total score calculated using the formula as in the following table.

Not good	$n \times 1$
Not good	$n \times 2$
Good	$n \times 5$
Very good	$n \times 4$
$\sum$ Respondents' Answers	

Then, to determine the truth value based on practicality with a percentage value, it can be done using the following formula:

$$Presentase = \frac{\sum \text{Jawaban Responden}}{\sum \text{Skor Max Responden}} \times 100\%$$

If the percentage has been obtained, the next step is to draw conclusions based on the practicality of the learning application by adjusting the percentage results with the percentage criteria.

Assessment criteria	Presentation
Invalid	20% to 35%
Less Valid	36% to 50%
Valid	51% to 90%
Very Valid	91% to 100%

III. RESULTS AND DISCUSSION

This study aims to evaluate the effectiveness of an Android-based digital learning application on "Fashion Revolution" developed using the Glide Apps platform. Involving 100 respondents consisting of students, college students, and adults who are interested in the world of fashion, this study collected data through a questionnaire designed to measure various aspects of the application, including ease of use, user satisfaction, and understanding of the material presented.

The results of the quantitative analysis show that overall, the "Fashion Revolution" application received a very positive assessment from respondents. Out of 100 respondents, 85% stated that the application was easy to use, with an average score of 4.5 on a scale of 5. This shows that the well-designed user interface and intuitive navigation contribute to a positive user experience. In addition, 90% of respondents felt that the content presented in the application was relevant and informative, with an average score of 4.6. This shows that the application has succeeded in conveying the necessary information regarding fashion developments from time to time, in accordance with the expected learning objectives.

Further statistical analysis was conducted to evaluate the relationship between the variables. Using linear regression analysis, it was found that there was a significant relationship between the ease of use of the application and user satisfaction, with a p-value < 0.01. This indicates that the easier the application is to use, the higher the level of user satisfaction. In addition, ANOVA analysis showed that there was a significant difference in understanding the material between the group of respondents who used the application regularly and those who only used it occasionally, with a value of F = 5.67 and p < 0.05. This indicates

that consistent use of the application contributes to an increase in understanding of the concepts taught in the application.

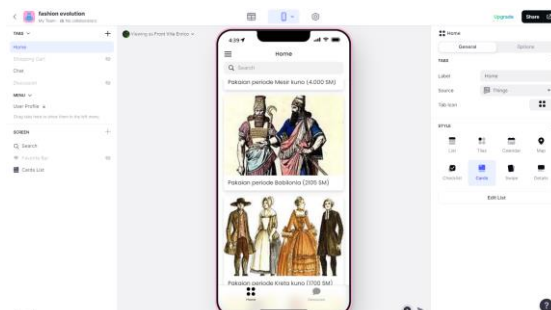
In terms of qualitative analysis, the feedback provided by respondents through open-ended questions in the questionnaire provided valuable insights into their experiences. Many respondents expressed that the application was not only informative but also visually appealing (sugiyono, 2012). Several respondents mentioned that the graphics and design of the application made them more interested in learning about the fashion revolution. This feedback shows that the visual aspect of the application plays an important role in attracting users' attention and increasing learning motivation.

However, some respondents also gave suggestions for improvement. Some of them wanted more interactive features, such as quizzes or games related to the material being taught. This shows that although the application is quite good, there is still room to meet higher user expectations. In addition, some respondents also suggested adding multimedia content, such as video or audio, to enrich the learning experience.

From the results of this study, it can be concluded that the Android-based digital learning application on "Fashion Revolution" developed using Glide Apps has succeeded in meeting the expected learning objectives. This application is not only easy to use but also able to convey relevant and interesting information to users. The results of quantitative and qualitative analysis show that this application has great potential as a learning medium in the field of fashion, and with some suggested improvements, this application can be a more effective tool in increasing user understanding and interest in the world of fashion.

Overall, this study provides a significant contribution to digital learning applications, especially in the fashion sector. By utilizing existing technology, this application can be an effective solution to improve accessibility and quality of learning in today's digital era. This study also opens up opportunities for further research on learning applications in other fields, as well as deeper exploration of the influence of technology on the teaching and learning process.

The product developed is the Fashion Revolution application based on the GlideApps clothing style. This application explains the development of clothing styles from time to time.



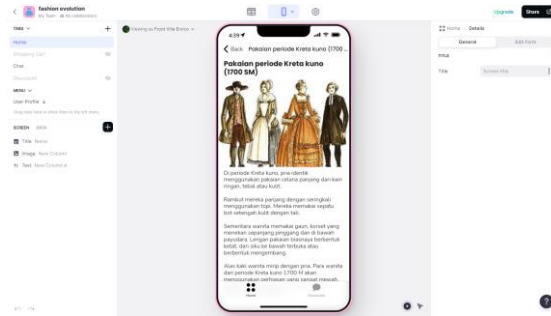


Figure 1. Fashion Revolution application based on the GlideApps clothing style.

In order to find out the quality of the application by surveying the results of the truth based on practicality that is in accordance with previously determined standards, it can be done by testing directly and filling out questionnaires to the respondents concerned. The validation results are in the form of a percentage consisting of 5 aspects, namely the appearance/presentation, language, feasibility, application, and graphics aspects, as follows.

Aspect	Rating Results (%)	Criteria
Appearance	95%	Very Valid
Language	89%	Very Valid
Eligibility	95%	Very Valid
Graphic	92%	Very Valid
Application	93%	Very Valid

Namely, displaying validation data based on the practicality of the application through a respondent survey. In the presentation of application material, the results were 95% with the criteria Very Valid based on practicality. This shows that the application is relatively easy to learn. Then, the Feasibility aspect obtained a standing result of 95% with the criteria Very Valid based on practicality. This proves that the use of the application is not complicated and convoluted. Furthermore, there is the Language aspect (language in the application) obtained a standing result of 89% with the criteria Very Valid based on practicality. This proves that this learning application, in its use of language, is appropriate when used as a learning medium. Then, the Application aspect obtained a standing result of 93% with the criteria Very Valid based on practicality. This proves that this learning application has utility value when used in learning. Furthermore, there is the Graphic aspect (graphics in the application) obtained a standing result of 90%. This proves that the delivery of material through visuals in this learning application is interesting and easy to understand.

IV. CONCLUSIONS AND RECOMMENDATIONS

Thus, the results of the research on the validation of the Android application regarding the Fashion Revolution system using Glideapps. The results of the survey data that have been collected from the respondents' assessment can be concluded as follows.

From the validation data based on the practicality of the application through a respondent survey, it shows that in the presentation of application material, the standing results were 95% with the criteria Very Valid based on practicality. This shows that the application is relatively easy to learn. Then, the Feasibility aspect obtained a standing result of 95% with the criteria Very Valid based on practicality. This proves that the use of the application is not complicated and convoluted. Furthermore, there is the Language aspect (language in the application) obtained a standing result of 89% with the criteria Very Valid based on practicality. This proves that this learning application, in its use of language, is appropriate when used as a learning medium. Then, the Application aspect obtained a standing result of 93% with the criteria Very Valid based on practicality. This proves that this learning application has utility value when used in learning. Furthermore, there is the Graphic aspect (graphics in the application) obtained a standing result of 90%. This proves that the delivery of material through visuals in this learning application is interesting and easy to understand.

The validation results of the learning application also show a standing with a percentage of 90% so it falls into the Very Valid criteria based on practicality. Thus, it can be concluded that the Android application for learning about the butterfly life cycle system using GlideApps has met the eligibility criteria as a learning application.

After all the descriptions above, it can be concluded that this application is very valid based on practicality, so it is good for use in learning.

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