

Development of PowerPoint Based on Mobile Education for Reading Material Grade XI

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ARTICLE INFO	ABSTRACT
Keywords: Expo Genius Application; Mobile Education; Reading	This research aims to develop an educational mobile-based PowerPoint for grade XI reading material by producing the Expo Genius application. The research and development (R&D) used in this study involved five stages, namely analysis, design, development, implementation, and evaluation (ADDIE). The process of developing this application is relatively easy because it utilizes existing supporting platforms and applications, such as PowerPoint, iSpring Suite 9, and Website 2 APK Builder. Observations at SMA Negeri 3 Ponorogo show that the English teaching method for reading material still uses the lecture method without supporting media so learning outcomes are less than optimal. Expo Genius, which is designed to support the learning of Analytical Exposition text, has gone through validation by media experts (96.06%), material experts (79.16%), and language experts (90.95%), with the results being very feasible to use.
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INTRODUCTION

Education is the main foundation in shaping the younger generation to face the complexities of today's globalized world.¹ English, as an international language, plays a vital role in expanding knowledge horizons, opportunities and facilitating cross-cultural

¹ Nelly P. Stromquist, *Education in a Globalized World: The Connectivity of Economic Power, Technology, and Knowledge* (Rowman & Littlefield, 2002),
<https://books.google.com/books?hl=id&lr=&id=Hi8bdyTzlsC&oi=fnd&pg=PR7&dq=Education+is+the+main+foundation+in+shaping+the+younger+generation+to+face+the+complexities+of+today%27s+globalized+world.&ots=iVkXUFOPqH&sig=mJf4d0NyIArtFCvArprxWuFD31o>.

communication.² Therefore, learning English, especially reading skills, is crucial at all levels of education. However, traditional teaching methods are often less effective in activating student participation and generating genuine interest in learning. The monotonous lecture-based approach tends to create a passive learning experience that can reduce students' motivation.³

This is in line with the results of interviews conducted by researchers with class XI students at SMAN 3 Ponorogo that learning is less varied and tends to focus on theory. The impact of monotonous teaching methods causes a decrease in student interest in learning, resulting in boredom and lack of motivation to take part in lessons. The researcher also conducted an interview with the English subject teacher at SMAN 3 Ponorogo regarding the learning media used and the source of learning materials. The result is that teachers do not utilize technology related to learning that involves interactive content and visual elements that can support the learning process.

To address these challenges, innovative, effective and engaging educational strategies are required. The integration of technology in learning, particularly through mobile education, offers a solution by capitalizing on the widespread use of mobile devices to provide flexible, accessible, and up-to-date learning experiences.⁴ One prominent innovation in the mobile education space is the development of PowerPoint-based learning materials optimized for mobile applications. This approach not only modernizes the way reading is delivered but also enhances interactivity and adds an element of fun to the learning process. At SMA N 3 Ponorogo, most students are accustomed to using smartphones every day, this large number of smartphone users provides an excellent opportunity to utilize mobile education as an effective learning tool. With the integration of mobile education, students can access learning materials, practice questions, video tutorials, and various other learning resources anytime and anywhere, overcoming space and time limitations.⁵ In this study, researchers have designed an application that is a development of PowerPoint-based mobile

² Abdelrahman A Salih and Lamis I Omar, "Globalized English and Users' Intercultural Awareness: Implications for Internationalization of Higher Education," *Citizenship, Social and Economics Education* 20, no. 3 (December 2021): 181–96, <https://doi.org/10.1177/20471734211037660>.

³ Vera Gehlen-Baum and Armin Weinberger, "Teaching, Learning and Media Use in Today's Lectures," *Computers in Human Behavior* 37 (2014): 171–82.

⁴ Cathy Cavanaugh, Dorit Maor, and Aidan McCarthy, "Mobile Learning," in *Handbook of Research on K-12 Online and Blending Learning* (Carnegie Mellon University: ETC Press, 2018), 575–91, https://researchportal.murdoch.edu.au/esploro/outputs/bookChapter/Mobile-learning/991005542002107891?skipUsageReporting=true&skipUsageReporting=true&recordUsage=false&recordUsage=false&institution=61MUN_INST.

⁵ Made Hery Santosa, Intania Harismayanti, and Inaj Putra, "Technology in Action: Developing Gamification Handbook in English Teaching and Learning for the 21st Century Learners," *Tesl-Ej* 26, no. 1 (2022): n1.

education called the "Expo Genius" application. Therefore, researchers are interested in researching "Development of PowerPoint Based Educational Mobile for Reading Material Grade XI"

By utilizing the advantages of portability and easy access to mobile education, this approach aims to better engage students in the learning process and improve their understanding of reading materials. The main objective of this research is to develop a mobile education PowerPoint to overcome the limitations of conventional teaching methods by presenting diverse content that can be accessed anytime and anywhere according to student's needs. In addition, this research also aims to evaluate the effectiveness of this innovative approach in improving students' learning experience and academic outcomes.

RESEARCH METHOD

At the research stage, the data collection technique uses interviews, observations, tests, and documentation. The research data analysis technique uses development and implementation analysis. This type of research uses the RND (Research and Development) method using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The ADDIE model is widely used to describe a systematic approach to instructional development, and one of its functions is to serve as a guide in building training program tools and infrastructure that are effective, dynamic, and support the training work itself.⁶

In the analysis stage, the researcher conducted a needs analysis, namely the curriculum, reading teaching methods by teachers, and learning materials. At the planning stage, the researcher develops the application structure consisting of navigation design and flowchart design. Navigation and flowchart design are used to ensure the flow of the learning application is smooth and intuitive.⁷ In the development stage, researchers prepared materials, made questions, applications, and revisions. In this development stage, the feasibility test was also carried out by media experts, material experts, and language experts. The stages of data analysis are changing the assessments from material experts, materials

⁶ Dr Shabbi Luthra and Scot Hoffman, *R&D Your School: How to Start, Grow, and Sustain Your School's Innovation Engine* (American School of Bombay, 2015).

⁷ Nathan Yau, *Visualize This: The FlowingData Guide to Design, Visualization, and Statistics* (John Wiley & Sons, 2024), <https://books.google.com/books?hl=id&lr=&id=MLUFEQAAQBAJ&oi=fnd&pg=PT5&dq=Navigation+and+flowchart+design+are+used+to+ensure+the+flow+of+the+learning+application+is+smooth+and+intuitive.&ots=WYERqzYmhH&sig=rAIDXNApJe0nEXHMI2rjccM4cKU>.

experts which were originally qualitative data into quantitative data using Likert Scale rules.⁸ The Likert scale data table is shown in Table 1.

Table 1 Likert Scale

Statement	Value
Disagree	1
Somewhat Agree	2
Agree	3
Strongly Agree	4

Source: Sugiyono (2018).

Furthermore, the results of the percentage are qualified based on the level of feasibility which has the following criteria:⁹

**Table 2 Learning Application
Feasibility Criteria**

No	Achievement Level	Qualifications
1	$80\% < P \leq 100\%$	Very Feasible
2	$60\% < P \leq 80\%$	Feasible
3	$40\% < P \leq 60\%$	Less Feasible
4	$0\% < P \leq 40\%$	Not Feasible

Source: International Journal of Contemporary Studies in Education (IJ-CSE) 3, no. 1 (2024): 61–68.

Result

Process of Development

The result of developing innovative learning materials with a gamification-based learning model is the Expo Genius Application. The process of developing this learning application can be categorized as quite easy. This is because the development process involves platforms and supporting applications for existing application makers. In accordance with Cahyo Prianto's statement that to facilitate the development process, it can be done by utilizing

⁸ Sugiyono, *Metode Penelitian Bisnis : Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D* (Alfabeta, 2018).

⁹ Eva Pasaribu, Sukardo Sitohang, and Sondang Simanjuntak, "Development of a Jigsaw Type Cooperative Learning Model Based on 6C to Improve Social Attitudes and Interpersonal Skills Students' Civics in Primary Schools," *International Journal of Contemporary Studies in Education (IJ-CSE)* 3, no. 1 (2024): 61–68.

existing websites or platforms.¹⁰ This utilization allows developers to focus more on innovation and improving product quality without having to build all components from scratch. In addition, using existing platforms can also speed up the development process, reduce costs, and minimize the risk of errors, as many of these platforms have already been tested and have extensive community support.

According to Robert, the app development process is getting easier especially since it involves platforms.¹¹ With the platform, developers can utilize ready-made templates, frameworks, and modules that have been tested and refined by a large community. This not only saves time and money but also improves the quality and stability of the developed applications. Thus, the process of developing learning apps like Expo Genius can be efficient.

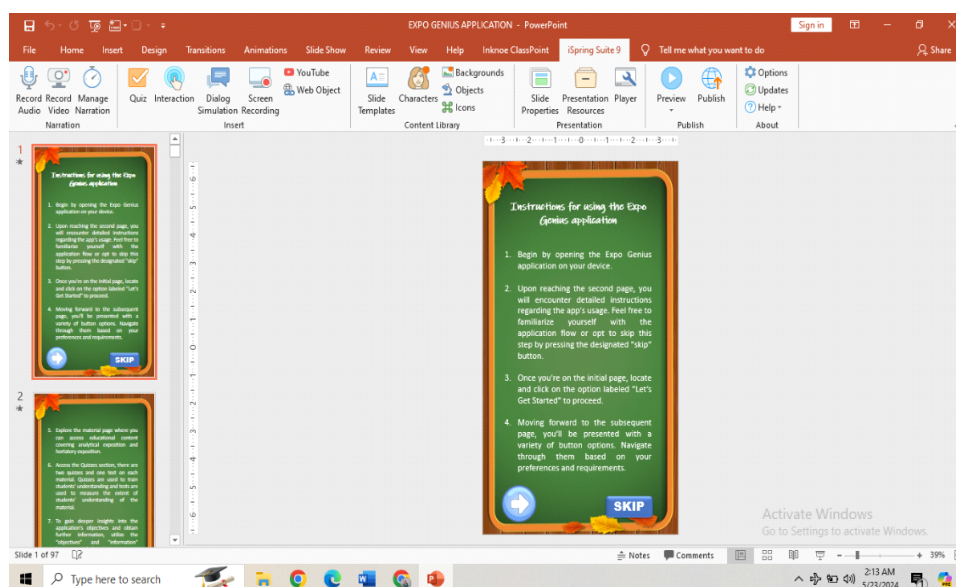


Figure 1. Development Process in PowerPoint and iSpring Suite 9

- a. PowerPoint to design applications after making flowcharts.

To develop a design in PowerPoint according to the flowchart that has been made. Make it as interesting using the features in PowerPoint. To function the button, hyperlink each button to the slide to which it is directed. The display appears as in Figure 1.

- b. I-Spring Suite 9 to create tests and convert ppt files into HTML 5 files

In the iSpring Suite 9 section, PPT slides can be added to quizzes and various sounds and

¹⁰ Cahyo Prianto and Sulpadianti Bunyamin, *Pembuatan aplikasi clustering gangguan jaringan menggunakan metode K-Means clustering* (Kreatif, 2020).

¹¹ Robert Godwin-Jones, "Mobile Apps for Language Learning," 2011, https://scholarspace.manoa.hawaii.edu/bitstream/10125/44244/1/15_02_emerging.pdf.

videos. To convert ppt files into HTML 5, the completion is done by publishing the results in iSpring Suite 9. In the name field, can be given an application name. Users can set it according to their needs. In the folder section, choose where the HTML 5 file is saved. The display appears as in Figure 2.

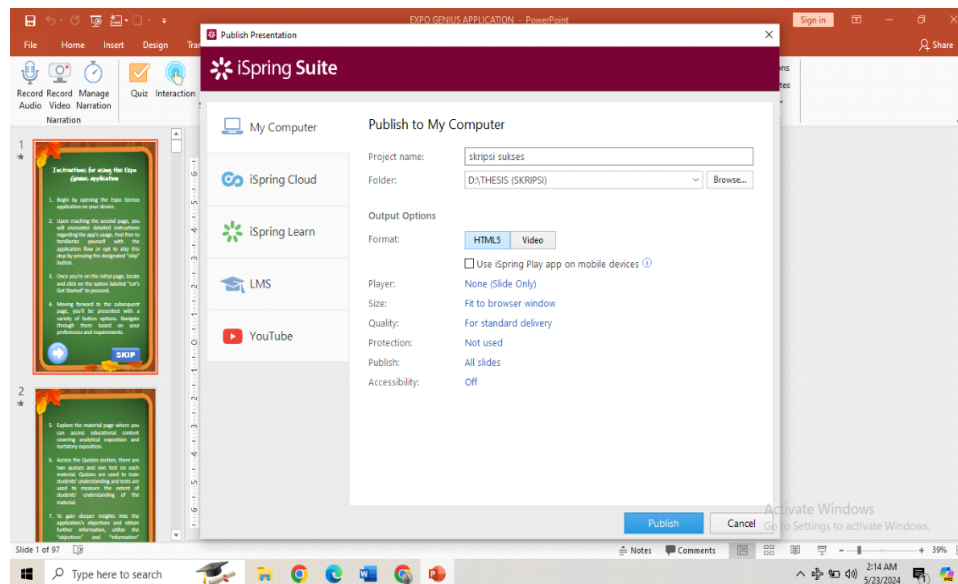


Figure 2 View after Clicking the Publish Submenu

c. Web 2 Builder APK version 4.1 to export HLML 5 files into the application.

Open the Website 2 APK Builder v4.1 application. Make sure before opening the application, that Java Windows 64-bit is installed. This is because the application helps run the Web 2 APK Builder application. The display opening the Website 2 APK Builder v4.1 is shown in Figure 5. Select Local HTML Website for the website type to convert. Then, pay attention to the application icon's appearance and ensure the maximum size is 512x512 Pixels. For other filling options, fill in according to what is needed. Click "Generate Apk" to convert the HTML 5 file into an Application.

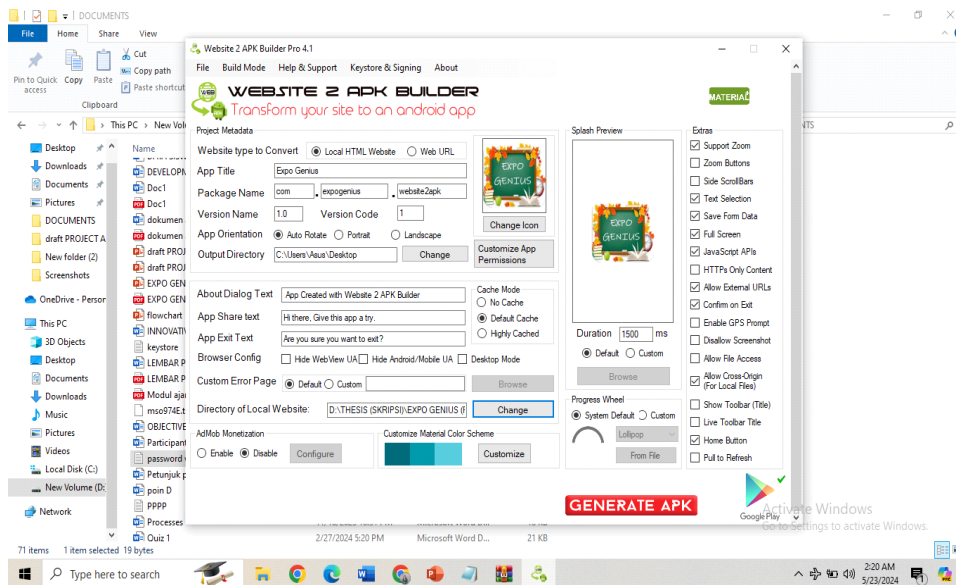


Figure 3 The process of Turning HTML 5 into an App on a Website 2 APK Builder v4.1

d. Java Windows to help the Web 2 Builder application run.

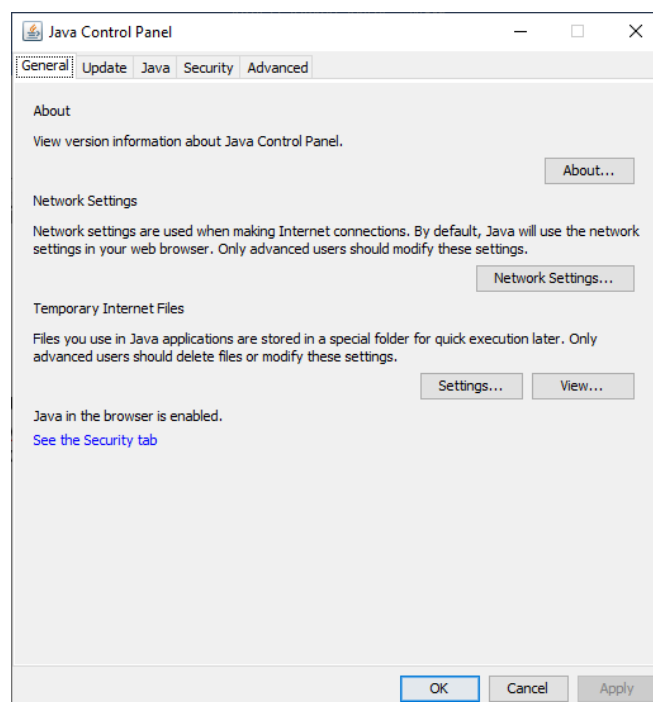


Figure 4 Windows Java View Installed

- e. Wordwall and Quizizz to create quizzes.

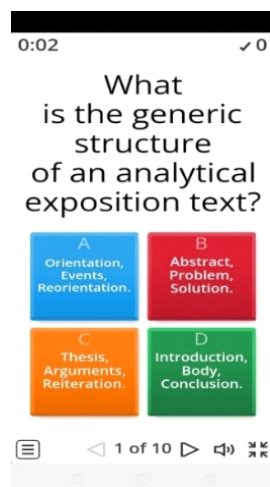


Figure 5 Wordwall Quiz View

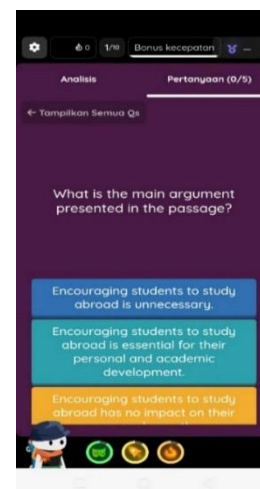


Figure 6 Quizizz

Feasibility of Expo Genius Application

The validation results show that the development of educational mobile-based PowerPoint for class XI reading material in the form of Expo Genius Application is declared feasible to be implemented in schools. The validation process was carried out by three experts, namely media experts, material experts, and language experts through questioners. Media experts obtained 96.06% which means very feasible, material experts obtained 79.16% which means feasible and language experts obtained 90.95% which means very feasible. From the results of the three experts, it can be concluded that the feasibility of the Expo Genius application is reliable enough to be implemented in the learning process at school. The following are the results of the validation recapitulation from the three experts:

**Table 3 Recapitulation of Media Expert
Validation Results**

No	Aspect assessed	Score	Feasibility Level	Percentage
1	Graphic	41	Very Feasible	93,18%
2	Quality	19	Very Feasible	95%
3	Effectiveness	9	Very Feasible	100%
Average number				96,06%

Classification	Very Feasible
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Based on Table 3, media validity can be categorized as feasible to use. According to Ali Muhson, well-designed media can greatly influence the way people respond to and interact with the content.¹² With a high level of feasibility, this indicates that the Expo Genius learning app has the ability to effectively communicate the intended message and influence the audience well. This high feasibility covers several aspects, including an attractive user interface design, relevant and easy-to-understand content, and interactive features that can increase user engagement. Good media design utilizes visual, audio and interactivity elements to create an enjoyable and immersive learning experience.

**Table 4 Recapitulation of Material Expert
Validation Results**

No	Aspect assessed	Score	Feasibility Level	Percentage
1	Material	42	Feasible	75%
2	Presentation Component	20	Very Feasible	83,3%
Average number				79,16%
Classification				Feasible

Based on Table 4, material expert validation testing which assesses the material aspects and presentation components, indicates that the product is feasible to continue. Sa'dun Akbar's view states that the material aspects include suitability to the curriculum, clarity of learning objectives, material descriptions, exam questions, and the ability to motivate students.¹³

¹² Ali Muhson, "Pengembangan Media Pembelajaran Berbasis Teknologi Informasi," *Jurnal Pendidikan Akuntansi Indonesia* 8, no. 2 (December 1, 2010), <https://doi.org/10.21831/jpai.v8i2.949>.

¹³ Yulisara Yulisara, Prabowo Prabowo, and Nadi Suprpto, "Validity Analysis of Science Learning Devices Integrated Learning Model Connected Type on Light Topics," *IJORER: International Journal of Recent Educational Research* 3, no. 2 (2022): 147–61.

Table 5 Recapitulation of Language Expert

Validation Results

No	Aspects Assessed	Score	Feasibility Level	Percentage
1	Straightforward	11	Very Feasible	91,6%
2	Communicative	3	Feasible	75%
3	Interactive	7	Very Feasible	87,5%
4	Development	4	Very Feasible	100%
5	Language	4	Very Feasible	100%
6	Symbol	11	Very Feasible	91,6%
Average number				90,95%
Classification				Very Feasible

Based on Table 5, by conducting language testing, we can ensure that the text or application can be understood clearly and effectively by users. According to Feri Hari Utami and Asnawati, language testing is a critical step in ensuring the quality and conformity of a text or application with applicable language standards.¹⁴

CONCLUSION

This research aims to develop PowerPoint-based mobile education on reading material in class XI by producing the Expo Genius application. The process of developing this application is quite easy and efficient because it utilizes existing platforms and various supporting applications, such as PowerPoint for content creation, iSpring Suite 9 to enrich presentations with interactive elements, and Website 2 APK Builder to convert presentations into mobile applications that can be accessed on Android devices. The Expo Genius application has gone through a series of feasibility validation processes. This validation involved media experts, material experts, and linguists. The results of this validation process show that the Expo Genius app is very feasible to use in learning activities. Thus, this application is expected to be a significant tool in improving the quality of reading learning in grade XI.

¹⁴ Feri Hari Utami dan Asnawati, *Rekayasa Perangkat Lunak* (Deepublish, 2015).

REFERENCES

- Asnawati, Feri Hari Utami dan. *Rekayasa Perangkat Lunak*. Deepublish, 2015.
- Cavanaugh, Cathy, Dorit Maor, and Aidan McCarthy. "Mobile Learning." In *Handbook of Research on K-12 Online and Blending Learning*, 575–91. Carnegie Mellon University: ETC Press, 2018.
https://researchportal.murdoch.edu.au/esploro/outputs/bookChapter/Mobile-learning/991005542002107891?skipUsageReporting=true&skipUsageReporting=true&recordUsage=false&recordUsage=false&institution=61MUN_INST.
- Gehlen-Baum, Vera, and Armin Weinberger. "Teaching, Learning and Media Use in Today's Lectures." *Computers in Human Behavior* 37 (2014): 171–82.
- Godwin-Jones, Robert. "Mobile Apps for Language Learning," 2011.
https://scholarspace.manoa.hawaii.edu/bitstream/10125/44244/1/15_02_emerging.pdf.
- Luthra, Dr Shabbi, and Scot Hoffman. *R&D Your School: How to Start, Grow, and Sustain Your School's Innovation Engine*. American School of Bombay, 2015.
- Muhson, Ali. "Pengembangan Media Pembelajaran Berbasis Teknologi Informasi." *Jurnal Pendidikan Akuntansi Indonesia* 8, no. 2 (December 1, 2010).
<https://doi.org/10.21831/jpai.v8i2.949>.
- Pasaribu, Eva, Sukardo Sitohang, and Sondang Simanjuntak. "Development of a Jigsaw Type Cooperative Learning Model Based on 6C to Improve Social Attitudes and Interpersonal Skills Students' Civics in Primary Schools." *International Journal of Contemporary Studies in Education (IJ-CSE)* 3, no. 1 (2024): 61–68.
- Prianto, Cahyo, and Sulpadianti Bunyamin. *Pembuatan aplikasi clustering gangguan jaringan menggunakan metode K-Means clustering*. Kreatif, 2020.
- Salih, Abdelrahman A, and Lamis I Omar. "Globalized English and Users' Intercultural Awareness: Implications for Internationalization of Higher Education." *Citizenship, Social and Economics Education* 20, no. 3 (December 2021): 181–96.
<https://doi.org/10.1177/20471734211037660>.
- Santosa, Made Hery, Intania Harismayanti, and INAJ Putra. "Technology in Action: Developing Gamification Handbook in English Teaching and Learning for the 21st Century Learners." *Tesl-Ej* 26, no. 1 (2022): n1.
- Stromquist, Nelly P. *Education in a Globalized World: The Connectivity of Economic Power, Technology, and Knowledge*. Rowman & Littlefield, 2002.
<https://books.google.com/books?hl=id&lr=&id=Hi8bdyTzlkSC&oi=fnd&pg=PR7&dq=Education+is+the+main+foundation+in+shaping+the+younger+generation+to+face+the+complexities+of+today%27s+globalized+world.&ots=iVkJXUFOPqH&sig=mJf4d0NyIArtFCvArprxWuFD31o>.
- Sugiyono. *Metode Penelitian Bisnis : Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D*. Alfabeta, 2018.
- Yau, Nathan. *Visualize This: The FlowingData Guide to Design, Visualization, and Statistics*. John Wiley & Sons, 2024.
<https://books.google.com/books?hl=id&lr=&id=MLUFEQAAQBAJ&oi=fnd&pg=PT5&dq=Navigation+and+flowchart+design+are+used+to+ensure+the+flow+of+t>

he+learning+application+is+smooth+and+intuitive.&ots=WYERqzYmhH&sig=rAIDXNApJe0nEXHMI2rjccM4cKU.

Yulisara, Yulisara, Prabowo Prabowo, and Nadi Suprpto. "Validity Analysis of Science Learning Devices Integrated Learning Model Connected Type on Light Topics." *IJORER: International Journal of Recent Educational Research* 3, no. 2 (2022): 147–61.

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