

**DESIGNING AN INTERACTIVE LEARNING MEDIA:  
“ASKING AND GIVING SUGGESTION” BY USING  
MACROMEDIA FLASH FOR XI GRADE OF SMA SRIJAYA  
NEGARA PALEMBANG**

**A Thesis**

by

**Dia Puspita Sari**

**06011281823071**

**English Education Study Program**



**FACULTY OF TEACHER TRAINING AND EDUCATION  
SRIWIJAYA UNIVERSITY INDERALAYA**

**2022**

**DESIGNING AN INTERACTIVE LEARNING MEDIA: “ASKING  
AND GIVING SUGGESTION” BY USING MACROMEDIA  
FLASH FOR XI GRADE OF SMA SRIJAYA NEGARA  
PALEMBANG**

A thesis by

**DIA PUSPITA SARI**

Student Number: 06011281823071

English Education Study Program

Department of Language and Arts Education

**FACULTY OF TEACHER TRAINING AND EDUCATION**

**SRIWIJAYA UNIVERSITY**

2022

Approved by,

Advisor



**Eryansyah, MA., Ph.D.**  
NIP. 196907181995121001



Certified by,

**Coordinator of English Education Study Program**



**Hariswan Putra Jaya, S.Pd., M.Pd.**  
NIP. 197408022002121003

**DESIGNING AN INTERACTIVE LEARNING MEDIA: "ASKING  
AND GIVING SUGGESTION" BY USING MACROMEDIA  
FLASH FOR XI GRADE OF SMA SRIJAYA NEGARA  
PALEMBANG**

**DIA PUSPITA SARI**


**Student Number: 0601128123071**

**This thesis was defended by the writer in the final program examination and  
was approved the examination committee on:**

**Day : Saturday**

**Date: May 28 ,2022**

**1. Chairperson : Eryansyah, MA.,Ph.D.**



**2. Member : Dedi Kurniawan, S.Pd.,M.Pd.**



**Indralaya, May 31<sup>st</sup> 2022**

**Certified by,**

**Coordinator of English Education  
Study Program,**



**Hariswan Putera Jaya, S.Pd., M.Pd.**

**NIP. 197408022002121003**

## DECLARATION

### DECLARATION

I, the undersigned,

Name : Dia Puspita Sari

Student's Number : 06011281823071

Study Program : English Education

Certify that thesis entitled "*Designing an Interactive Learning Media: "Asking and Giving Suggestion" During Pandemic Era by Using Macromedia Flash for XI Grade os SMA Srijaya Negara Palembang*" is my own work and I did not do any plagiarism or inappropriate quotation against the ethic and rules commended by the Ministry of Education of Republic Indonesia Number 17, 2010 regarding plagiarism in higher education. Therefore, I deserve to face court if I am found to have plagiarized this work.

Indralaya, May 2021

The undersigned,



Dia Puspita Sari

NIM 06011281823071

## **DEDICATION**

This thesis dedicated to:

Allah SWT who has given me physically and mentally health to finish my thesis.

I also thank to half of my soul, my parents,  
Sutiono and Zulhernita who always give wholehearted love and endless support to  
me.

Also thank you so much for my brother, Supriadi, Sunarto, my sweet little sister,  
Ayu Lestari,

and my support system, Aziz Abdillah who always cheer me up.

They gave me strength, motivation, and facility to finish my thesis.

## **MOTTOS**

There is only one thing that makes a dream impossible to achieve. The fear of  
failure

- Paulo Coelho, The Alchemist

Seguir Adelante

## ACKNOWLEDGEMENTS

### ACKNOWLEDGEMENTS

This thesis was written to fulfill one of the requirements to accomplish S1 degree at the English Education Study Program, Language and Arts Education Department, Faculty of Teacher Training and Education, Sriwijaya University. Firstly, the writer would like to express her greatest attitude to Allah SWT, the Almighty for all the wonderful opportunities she has had. This thesis also would not be done properly without any help and support from people around me. Therefore, I would like to deliver the wholehearted gratitude to:

1. My parents, my brother, my little sister, and my support system. Thank you for always supporting me, believing in me, praying for me, and loving me sincerely and unconditionally. I cannot even put into words how much I am grateful to have them in my life. All of this journey would not have been possible if not for them, I dedicate this to them.
2. I would like to express my great gratitude to my advisors, Eryansyah, MA., Ph.D. for his encouragement, advice, guidance, and patience during the process of writing this thesis. And I would like to express my gratitude to the Head of Language and Arts Education Department, Dr. Didi Suhendi, M. Hum., and the Coordinator of English Education Study Program, Hariswan Putera Jaya, S. Pd., M.Pd. I'm also thankful for their guidance during the process of finishing my thesis.
3. My best friends since SMP until now Riska who always support me. My best friends since SMA until now Riska, Anisa, Anin, Dwi who always cheer me up. My best friends at college Lalak, Pratiwi, Fatimah, Yuwita, Winnie, Meliza, Farah, Fisyah, Selni thanks for surviving together during conducting the research and for making every single day become unforgettable. My friends at college Erma who always give me information and help me, Zahratul, Permata who always looking for a damri chair and patiently helping me. Last but not least, my seniors at college kak Hesti for her advice and support to complete this thesis.
4. SEESPA UNSRI 2018 Indralaya, for the support, memories, and help during the study at Sriwijaya University and for whose name I possibly can't mention here.
5. 12 students who have participated in this study. and 3 Expert that helped me validate the feasibility of my Macromedia Flash product.

Palembang, May 2022

The researcher,



Dia Puspita Sari

## TABLE OF CONTENTS

|  |            |
|--|------------|
| <b>COVER .....</b>   | <b>i</b>   |
| <b>APPROVAL .....</b>                                      | <b>ii</b>  |
| <b>DECLARATION.....</b>                                    | <b>iv</b>  |
| <b>DEDICATION.....</b>                                     | <b>v</b>   |
| <b>ACKNOWLEDGEMENTS.....</b>                               | <b>vi</b>  |
| <b>TABLE OF CONTENTS.....</b>                              | <b>vii</b> |
| <b>LIST OF TABLE .....</b>                                 | <b>ix</b>  |
| <b>LIST OF FIGURE .....</b>                                | <b>x</b>   |
| <b>LIST OF APPENDICES .....</b>                            | <b>xi</b>  |
| <b>ABSTRACT .....</b>                                      | <b>xii</b> |
| <br>   |            |
| <b>CHAPTER I INTRODUCTION.....</b>                         | <b>1</b>   |
| 1.1 Background of the study.....                           | 1          |
| 1.2 Problems of the study .....                            | 6          |
| 1.3 Objectives of the study .....                          | 6          |
| 1.4 The Significance of the Study .....                    | 6          |
| <br>   |            |
| <b>CHAPTER II LITERATURE REVIEW.....</b>                   | <b>7</b>   |
| 2.1 Learning Media .....                                   | 7          |
| 2.1.1 What is learning media? .....                        | 7          |
| 2.1.2 Benefits of learning media .....                     | 8          |
| 2.2 Interactive Learning Media .....                       | 9          |
| 2.3 Macromedia Flash .....                                 | 10         |
| 2.3.1 What is Macromedia Flash? .....                      | 10         |
| 2.3.2 The Advantages of Macromedia Flash .....             | 11         |
| 2.3.3 Macromedia flash in language learning.....           | 11         |
| 2.3.4 The use of Macromedia Flash during the pandemic..... | 13         |
| 2.4 Development Research.....                              | 15         |
| 2.4.1 Definition of Development Research .....             | 15         |
| 2.4.2 Rowntree Product Development Model .....             | 15         |
| 2.5 Tessmer Evaluation Procedure .....                     | 16         |
| 2.6 Previous Related Studies .....                         | 17         |
| <br>   |            |
| <b>CHAPTER III METHOD AND PROCEDURES.....</b>              | <b>19</b>  |
| 3.1 Research design.....                                   | 19         |
| 3.2 Subject of The Study .....                             | 20         |
| 3.2.1 Respondents of needs survey.....                     | 20         |
| 3.2.2 Respondents of the survey on the design product..... | 20         |

|  |           |
|--|-----------|
| 3.3 The Procedure of The Study.....              | 21        |
| 3.3.1 Planning Stage .....                       | 21        |
| 3.3.2 Development Stage .....                    | 21        |
| 3.3.3 Evaluation Stage .....                     | 22        |
| 3.4 Data Collection.....                         | 25        |
| 3.4.1 Walkthrough .....                          | 25        |
| 3.4.2 Questionnaire .....                        | 25        |
| 3.5 Technique For Analysing The Data .....       | 26        |
| 3.5.1 Data Analysis Walkthrough.....             | 26        |
| 3.5.2 Questionnaire Data Analysis .....          | 27        |
| <b>CHAPTER IV FINDINGS AND DISCUSSION .....</b>  | <b>29</b> |
| 4.1 Findings .....                               | 29        |
| 4.1.1 Planning Stage Results.....                | 29        |
| 4.1.1.1 Needs Analysis.....                      | 29        |
| 4.1.1.2 Learning Formulation Objectives .....    | 29        |
| 4.1.2 The result of the development stage .....  | 32        |
| 4.1.2.1 Topic Development.....                   | 32        |
| 4.1.2.2 Multimedia Design.....                   | 32        |
| 4.1.2.3 Prototype Production.....                | 33        |
| 4.1.3 The result of the evaluation stage .....   | 34        |
| 4.1.3.1 The Result of Self-Evaluation.....       | 34        |
| 4.1.3.2 The Results of Expert Review.....        | 34        |
| 4.1.3.3 One-to-One Evaluation Results.....       | 40        |
| 4.1.3.4 Small Group Evaluation Results .....     | 41        |
| 4.2 Research Discussion.....                     | 43        |
| 4.2.1 Planning Stage .....                       | 44        |
| 4.2.2 Development Stage .....                    | 44        |
| 4.2.3 Evaluation Stage .....                     | 44        |
| <b>CHAPTER V CONCLUSION AND SUGGESTION .....</b> | <b>46</b> |
| 5.1 Conclusions .....                            | 46        |
| 5.2 Suggestions.....                             | 47        |
| <b>REFERENCES .....</b>                          | <b>48</b> |



## LIST OF TABLE

|   |    |
|---|----|
| Table 3.1 Expert Validation instrument Grid.....  | 25 |
| Table 3.2 Questionnaire Grid.....   | 26 |
| Table 3.3 Category of expert validation results .....   | 27 |
| Table 3.4 Practical categories of One-to-One and Small Group (HEOS)<br>results.....                             | 28 |
| Table 4.1 Learning formulation Objectives .....   | 30 |
| Table 4.2 Interactive Learning Media Program Menu.....  | 32 |
| Table 4.3 Expert Review Assessment Results .....  | 35 |
| Table 4.4 Expert comments and Suggestions .....   | 37 |
| Table 4.5 The revision results of expert review stage.....  | 38 |
| Table 4.6 Results of Students Response Questionnaires on Prototype-1 .....                                      | 40 |
| Table 4.7 Students Comments and Suggestions at Stage One-To-One<br>Evaluation.....                              | 41 |
| Table 4.8 Results of Student Response Questionnaires in the Small Group<br>Evaluation Stage .....               | 42 |
| Table 4.9 Recapitulation of Student Response Questionnaire Results at the<br>Small Group Evaluation Stage ..... | 42 |
| Table 4.10 Comments and Suggestions of Students on the Small Group<br>Evaluation Stage .....                    | 42 |

## **LIST OF FIGURE**

|  |    |
|--|----|
| Figure 2.1 Rowntree product development model stages ..... | 16 |
| Figure 2.2 Tessmer evaluation design flow .....            | 17 |
| Figure 3.1 Learning Media Development Procedure .....      | 24 |
| Figure 4.1 Prototype 1 Interactive Learning Media .....    | 33 |

## **LIST OF APPENDICES**

|  |     |
|--|-----|
| Appendix A Research Tools .....          | 54  |
| Appendix B Research Instruments.....     | 59  |
| Appendix C Research Administration ..... | 107 |
| Appendix D Research Documentation.....   | 119 |

**DESIGNING AN INTERACTIVE LEARNING MEDIA: “ASKING AND GIVING SUGGESTION” DURING PANDEMIC ERA BY USING MACROMEDIA FLASH FOR XI GRADE OF SMA SRIJAYA NEGARA PALEMBANG**

---

---

**ABSTRACT**

The coronavirus outbreak that occurred in March until now has harmed education. In the current situation some schools have done their online learning. In the online learning process, there are many obstacles experienced by students, which causes a lack of interest in optimally participating in English learning. In this regard, interactive learning media has been designed for valid and practical asking and giving suggestions during the pandemic era by using Macromedia Flash for XI grade of SMA Srijaya Negara Palembang. This learning media was developed using the Rowntree development model which consists of three stages, namely the planning stage, the development stage, and the evaluation stage where this evaluation stage uses the Tessmer formative evaluation stage which has four stages, namely self-evaluation, expert review, one-to-one evaluation. and small group evaluations. This learning media development research uses two data collection techniques, namely walkthrough, and questionnaire data. The results of the expert review on the aspects of content, design, and language, respectively, are 96.92%, 85.45%, and 92.5% which meet the very valid category. In the one-to-one evaluation stage, the student's responses to the interactive learning media used were with an average score of 81.33% and included in the practical category. In the small group evaluation trial stage, the average score obtained was 87.44% and met the very practical category. Thus, based on the research data, it can be said that the instructional media design developed by the researcher is very valid and very practical.

***Keywords:*** *Learning Media, Macromedia Flash, Covid-19 Pandemic, Asking and Giving Suggestion*

---

---

## **CHAPTER I**

### **INTRODUCTION**

This chapter presents: (1) the background of the study, (2) the problems of the study, (3) the objectives of the study, and (4) the significance of the study.

#### **1.1 Background of the study**

The outbreak of a pandemic disease caused by the coronavirus (COVID-19) in early 2020 has affected not only human health but also the education sector. Zanke et al., (2021) state that the World Health Organization (WHO) has concluded that COVID-19 has been designated as a worldwide pandemic. The coronavirus that is spreading in the world, has caused a country to make several prevention efforts and strategies. In Indonesia, for example, one of the efforts made by the Indonesian Ministry of Education and Culture is to replace face-to-face activities with online learning activities. This effort aims to break the chain of transmission of COVID-19, Abidah et al., (2020) said that based on UNESCO data in Indonesia as of Wednesday (25/3/2020), as many as 68,265,787 students were affected by COVID-19. On March 24, 2020, the Ministry of Education and Culture of the Republic of Indonesia issued Circular Letter Number 4 of 2020 regarding the implementation of education policies in the emergency period of the spread of Corona Virus Disease (Covid-19), in the circular letter explaining the implementation of the home learning process is expected to continue to provide meaningful experiences, as well as varied learning activities. Unfortunately, students who are required to study from home get some negative impacts such as losing interest in learning and easily getting bored with the methods and learning media provided by the teacher. A study conducted by Hammerstein et al., (2021) pointed out that school closures have a negative impact on student achievement, especially for students from poor families and those who are younger. Kustyarini et al., (2020) also state that the lack of interactive multimedia-based learning is one of the causes of low learning outcomes, especially in online conditions during this pandemic.

In the implementation of home learning or distance learning, the teacher can no longer act as the only informant or source of information for students. Teachers need media assistance that can be used as a source of independent learning and also as a media for disseminating effective and efficient learning information that is used when learning from home or distance learning. Sardiman (2012) says that Learning media can overcome the limitations of the experience that students have, go beyond class boundaries, produce uniformity or similarity of observations, motivate and encourage students to learn.

In the 21st century, advances in information technology have a very big influence on people's lives, one of which is in the world of education, namely the teaching and learning process. In the 21st century, society uses technology that has spread all over the world (Inderawati et al., 2019). The use of technology has spread to almost all aspects of human life, including education (Inderawati et al., 2019). Where students are required to be able to master information technology such as computers in the learning process that is useful as a learning media. The demands on the current curriculum development are to change the learning approach model which was originally from learning (Teacher-Centered Learning) to (Student-Centered Learning). According to Kelana (2018), learning is not a process that is always dominated by the teacher, but requires students to be active and creative in carrying out their activities. Thus, teachers must innovate in learning activities by using learning media that can make students active and easy to understand in English. A study conducted by Sad and Goktas (2014) pointed out that pre-service teachers consider laptops to be potentially more powerful than mobile phones as learning media tools. The use of computers as learning media provides considerable benefits for the world of education, with this media students can study at home whenever they want. This is very helpful for students to be able to better master learning materials independently, therefore teachers need to develop interactive learning media.

The hope is how the subject matter delivered can be mastered by students completely, because in the future students are required to have skills in communicating and learning. In pursuance of Yu Tan Xin et al., (2019) these skills

are known as the 4C's. It emphasizes four key elements, namely communication (talking to others), collaboration (working with others), creativity (thinking out of the box), and critical thinking (finding solutions of problems). 4C skills are 21st-century skills, these skills are also called learning skills. This can be owned by students if teachers can develop learning plans that can lead to the ability of students to be more active in speaking and communicating. Students who are active in speaking and communicating will be able to help themselves and others in solving the problems they face. It is useful for those who will become future leaders in achieving goals, facing life's challenges and problems. People need to learn communication skills to fulfill their ambitions, goals, and desires (Rao & Parupalli, 2019).

In essence, learning media is a component part of the learning system. Media as a component should be adapted to the overall learning process. According to Dharyadi Siwi (2019), learning media is a tool used to convey learning messages. Based on the opinion above, it can be concluded that learning media are everything that can be used in channeling messages and can stimulate the thoughts, attention, feelings and willingness of students so that the learning process can occur. In the learning process, learning media is needed so that teachers can distribute material to students and make it more meaningful. Teachers do not only convey material in the form of only words or with the lecture method, but educators can guide students to understand the material presented in real terms.

With the advances in digital technology, teachers in delivering material must be able to apply current developments of the technology. This is because the use of technology in education contributes a lot to the pedagogical aspect where the application of technology will result in effective learning with the help and support of elements and components of technology (Jamieson-Proctor et al., 2013).

Nowadays, During the pandemic students are asked to study at home and cannot interact face-to-face with the teacher concerned. According to Kustyarini et al., (2020), the use of multimedia can foster teacher creativity and support distance learning efforts. One of them is the use of interactive learning media that can be used by teachers as an effort to develop distance learning. Teachers use various

media to support online learning during this pandemic. For example, virtual classes use the services of Google Classroom, Edmodo, Schoology, and instant messaging applications such as WhatsApp (Sicat and Ed, 2015). However, some of the media used are not very interesting and interactive for students, for example, such as Google Classroom. The appearance of the Google Classroom application is still very simple and unattractive. A simple interface is good for teachers because it makes it easier for them to manage Google Classroom, but for students, such a view is a little boring because it is too simple. One of the main reasons why Google Classroom has not been able to completely replace the learning management system is that it does not provide automated quizzes and tests for students. Setiadi (2020) explains that Google Classroom is better suited for a mixed learning experience than a fully online program. During the current pandemic, teachers have also used learning media such as PowerPoint and YouTube to help make learning more interesting and not boring because PowerPoint and YouTube have featured varied slides, audio, images, animations, sounds, music, and videos. However, learning media such as Google Classroom, PowerPoint, and YouTube are still not interactive because when learning students only see and listen to what the material is conveyed through the learning media, and students cannot do automatic quizzes because the media does not have interactive buttons. Therefore, researchers want to design learning media using Macromedia Flash program because according to Vega et al., (2020) Macromedia flash is a program designed to create animations, games, animated cartoons, and applications such as interactive multimedia product demos and interactive tutorials. Macromedia flash is a combination of learning concepts with audio-visual technology that can produce new features that can be used in the world of education. It also provides a kind of quiz that will make the teaching and learning process more interesting than ever, students will feel happy, relaxed, enjoy, and they will find it easier to master the material (Hasibuan and Fatmawati, 2021).

Teachers are required to be able to use learning media that is more interesting, fun and by the learning needs of students, so it is hoped that students can easily accept the learning materials provided by educators. Sanaky (2009) mentions that the benefits of learning media are, 1) the teaching process attracts the



attention of students more so that it can foster motivation in learning, 2) the meaning of the learning material will be more meaningful, making it easier for students to understand, 3) the variety of learning methods, and 4) learning activities will be carried out more by students because students do not only listen but there are other activities carried out by students such as observing, doing and demonstrating and others.

Therefore, the development of learning media that will be used in learning in the 21st century must refer to the objectives in the curriculum that foster students' speaking and communication skills. One of the learning media that can be developed is using Macromedia Flash program. Where this program is one of the right applications for making media such as videos, animations, images, and sounds that can foster curiosity and foster a sense of student interest in learning.

On August 14th, 2021 researchers collected data regarding the analysis of student needs for Macromedia Flash learning media in several senior high schools in Palembang. Based on the results of the analysis of student needs that has been carried out, from 72 respondents from various XI high school classes in the city of Palembang, it was found that as many as 97.2% of students use cell phones in daily activities, and applications that are often used are 76.4% to access social media. With the average time spent by students playing on smartphones, which is 41.7% more than 5 hours. Furthermore, from the survey results, students' knowledge of interactive learning media is 44.4% have heard, 41.7% of students know and as many as 13.9% of students do not know about the media. Then 90.3% of students have not received and used Macromedia Flash to study. The average student barrier in learning English are 56.9% because it is difficult to identify written or spoken texts that contain asking and giving suggestions.

Based on the analysis results of students' needs, it can be concluded that students in some of these schools have not received and used Macromedia Flash for learning. Therefore, the researcher will try to develop interactive learning media using Macromedia Flash entitled "**Designing an interactive learning media: "asking and giving suggestion" during pandemic era by using Macromedia Flash for XI grade of SMA Srijaya Negara Palembang**".

## **1.2 Problems of the study**

The research problem of this study is "How to designing an interactive learning media on the material "Asking and Giving suggestion" which is valid and practical for the material of SMA Class XI?

## **1.3 Objectives of the study**

Based on the research problem, the purpose of this research is to produce interactive learning media for Asking and Giving Suggestion material using Macromedia Flash that is valid and practical.

## **1.4 The Significance of the Study**

This research is expected to be useful:

1. For researchers, increasing knowledge in how to make and produce valid and practical learning media.
2. For teachers, as a learning media that can be used in the learning process in the classroom so that it can help facilitate students in understanding the subject matter.
3. For students, as a choice of media for independent learning in the form of learning media.
4. Other researchers, reference materials for making learning media using Macromedia Flash.

## REFERENCES

- Abidah, A., Hidaayatullaah, H. N., Simamora, R. M., Fehabutar, D., & Mutakinati, L. (2020). The Impact of Covid-19 to Indonesian Education and Its Relation to the Philosophy of “Merdeka Belajar.” *Studies in Philosophy of Science and Education*, 1(1), 38–49. <https://doi.org/10.46627/sipose.v1i1.9>
- Alkhezzi, F., & Al-Dousari, W. (2016). The impact of mobile learning on ESP learners’ performance. *Journal of Educators Online*, 13(2), 73–101. <https://doi.org/10.9743/JEO.2016.2.4>
- Arsyad, A. (2011). *Learning Media*.
- Aslam, F. (2020). COVID-19 : The Critical Importance of Social Distancing and Working from Home. *Preprints 2020, April*, 1–6. <https://doi.org/10.20944/preprints202004.0078.v1>
- Bagshaw, S. (2009). Culture and youth development. *Adolescent Medicine: State of the Art Reviews*, 20(3), 988–1004.
- Berk, R. (2011). Research on PowerPoint®: From basic features to multimedia. *International Journal of Technology in Teaching and Learning*, 7(1), 24–35.
- Boroujeni, S. A., Fard, F. M., & In, M. A. (2013). A Needs Analysis of English for Specific Purposes (ESP) Course For Adoption Of Communicative Language Teaching:( A Case of Iranian First-Year Students of Educational Administration). *International Journal of Humanities and Social Science Invention ISSN*, 2(6), 35–44. [www.ijhssi.org](http://www.ijhssi.org)
- Chick, A & Ho, J. (2017). *Learn a language for free: Recreational learning among adults*.
- Claros, I., & Cobos, R. (2013). Social Media Learning: An approach for composition of multimedia interactive object in a collaborative learning environment. *Proceedings of the 2013 IEEE 17th International Conference on Computer Supported Cooperative Work in Design, CSCWD 2013*, 570–575. <https://doi.org/10.1109/CSCWD.2013.6581024>
- Deiniatur, M. (2019). Developing Learning Media through Macromedia Flash Application for English Phonology Class. *Jurnal Smart*, 5(1), 45–59. <https://doi.org/10.26638/js.781.203X>
- Dharyadi Siwi, M. (2019). International Journal of Active Learning How to Cite. *International Journal of Active Learning*, 4(1), 45–58. <http://journal.unnes.ac.id/nju/index.php/ijal>

- Hammerstein, S., König, C., Dreisörner, T., & Frey, A. (2021). Effects of COVID-19-Related School Closures on Student Achievement-A Systematic Review. *Frontiers in Psychology*, 12(September), 1–8. <https://doi.org/10.3389/fpsyg.2021.746289>
- Hasibuan, A. M., & Fatmawati, F. (2021). The Effect of Macromedia Flash Interactive Learning Media on Mathematical Critical Thinking Skills of Students IV SD Negeri 101788 Marindal I. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 4(4), 7861–7869.
- Hayati, R., Anggraini, H. W., & Jaya, H. P. (2021). ICT and Learning Attitude towards Students' Academic Paragraph Writing in College Level. *ENGLISH FRANCA : Academic Journal of English Language and Education*, 5(1), 149. <https://doi.org/10.29240/ef.v5i1.2059>
- Hehakaya, R., Sastromiharjo, A., & Cahyani, I. (2020). Development of Active Learning Model Type Reading Guide Assisted with Macromedia Flash in Learning Reading Exposition Text for Grade 8th MTS / SMP Students. *International Journal of Multicultural and Multireligious Understanding*, 7(10), 213. <https://doi.org/10.18415/ijmmu.v7i10.2086>
- Hosnan. (2014). *Digital Learning Landscape in Indonesia*.
- Inderawati, R., Petrus, I., & Jaya, H. P. (2019). Exploring and Identifying Technology-Based Dynamic Learning Through Social Media in Academic Writing. *English Community Journal*, 3(1), 317. <https://doi.org/10.32502/ecj.v3i1.1697>
- Jainal, S., & Louise, I. S. Y. (2019). The Effect of a Macromedia Flash-based Guided Inquiry on Students' Critical Thinking Skill and Self-Regulated Learning. *Journal of Physics: Conference Series*, 1397(1). <https://doi.org/10.1088/1742-6596/1397/1/012039>
- Jamieson-Proctor, R., Albion, P., Finger, G., Cavanagh, R., Fitzgerald, R., Bond, T., & Grimbeek, P. (2013). Development of the TTF TPACK survey instrument. *Australian Educational Computing*, 27(3), 26–35.
- Kelana, J. B. (2018). the Effect of the Learning Media and the Ability To Think Creative of To the Ability To Science Literacy Student of Elementary School. *PrimaryEdu - Journal of Primary Education*, 2(2), 79. <https://doi.org/10.22460/pej.v2i2.1008>
- Korhonen, H. (2010). Comparison of playtesting and expert review methods in mobile game evaluation. *ACM International Conference Proceeding Series*, 18–27. <https://doi.org/10.1145/1823818.1823820>
- Kustyarini, K., Utami, S., & Koesmijati, E. (2020). the Importance of Interactive Learning Media in a New Civilization Era. *European Journal of Open Education and E-Learning Studies*, 5(2), 48–60. <https://doi.org/10.46827/ejoe.v5i2.3298>

- Laksana, D. N. L., Dhiu, K. D., Jau, M. Y., & Ngonu, M. R. (2020). Developing Early Childhood Cognitive Aspects Based on Anderson And Krathwohl's Taxonomy. *JPI (Jurnal Pendidikan Indonesia)*, 8(2), 219. <https://doi.org/10.23887/jpi-undiksha.v8i2.19481>
- Lisda, W., Rahman, M. A., & Atmowardoyo, H. (2016). The Use of Macromedia Flash Animation to Enhance Students' English Writing Skill at the Seventh Grade of SMP Yapis 1 Fakfak-West Papua. *ELT Worldwide: Journal of English Language Teaching*, 2(2), 45. <https://doi.org/10.26858/eltww.v2i2.1687>
- M. Tessmer. (2013). *Planning and conducting formative evaluations, 1st ed. Routledge: Routledge.*
- Mayana, I., Sthephani, A., Effendi, L. A., & Yolanda, F. (2021). Motivasi Belajar Siswa Terhadap Penggunaan Macromedia Flash 8 Dimasa Pandemi Covid-19. *Kognitif: Jurnal Riset HOTS Pendidikan Matematika*, 1(2), 144–155. <https://doi.org/10.51574/kognitif.v1i2.109>
- Molich, R., Dumas, J. S. (2008). *Comparative Usability Evaluation.*
- Morrison et al. (2019). *Designing effective instruction.*
- Musfiqon. (2012). *Development of learning media and sources.*
- Ponimin, P., & Suryani, H. (2019). Instructional Media and English: Using Macromedia Flash to Teach EFL Writing. *Edukasi: Jurnal Pendidikan Dan Pengajaran*, 6(2), 311–319. <https://doi.org/10.19109/ejpp.v6i2.3971>
- Rahdiyanta, D., Anggoro, Y., Wijanarka, B. S., & Sasongko, B. T. (2020). The development of interactive learning media by manufacturing helical gear using milling machine. *Journal of Physics: Conference Series*, 1446(1). <https://doi.org/10.1088/1742-6596/1446/1/012012>
- Ramdhani, M. A., & Muhammadiyah, H. (2015). Proceeding International Conference of Islamic Education: Reforms, Prospects and Challenges Faculty of Tarbiyah and Teaching Training The Criteria of Learning Media Selection for Character Education in Higher Education. *Proceeding International Conference of Islamic Education: Reforms, Prospects and Challenges Faculty of Tarbiyah and Teaching Training The Criteria of Learning Media Selection for Character Education in Higher Education*, 174–182.
- Rao, Parupalli, S. (2019). The Importance of Speaking Skills in English Classrooms. *Alford Council of International English & Literature Journal(ACIELJ)*, Vol 2(Issue 2), 18. [www.acielj.com](http://www.acielj.com)
- Rosell-Aguilar, F. (2018). Autonomous language learning through a mobile application: a user evaluation of the busuu app. *Computer Assisted Language Learning*, 31(8), 854–881. <https://doi.org/10.1080/09588221.2018.1456465>
- Şad, S. N., & Göktaş, Ö. (2014). Preservice teachers' perceptions about using

- mobile phones and laptops in education as mobile learning tools. *British Journal of Educational Technology*, 45(4), 606–618. <https://doi.org/10.1111/bjet.12064>
- Sanaky, H. A. (2009). *Learning media*.
- Sardiman. (2012). *Teaching and learning interaction & motivation*.
- Setiadi, M. A. (2020). Students' Perception on the Use of Google Classroom in Language. *ResearchGate*, August, 1–10.
- Setyawan, A. A., & Wahyuni, P. (2019). Pengembangan Modul Ajar Berbasis Multimedia Pada Mata Kuliah Statistika Pendidikan. *Jurnal Penelitian Dan Pembelajaran Matematika*, 12(1), 94–102. <https://doi.org/10.30870/jppm.v12i1.4857>
- Sicat, A. S., & Ed, M. (2015). Enhancing College Students' Proficiency in Business Writing Via Schoology. *International Journal of Education and Research*, 3(1), 159–178. [www.learnnc.org](http://www.learnnc.org),
- Sidik, G. T., Kelana, J. B., Altaftazani, D. H., & Firdaus, A. R. (2020). the Effect of Macromedia Flash Based Learning Media To Improve the Ability To Calculate of Students in Elementary School. *PrimaryEdu - Journal of Primary Education*, 4(2), 241. <https://doi.org/10.22460/pej.v4i2.1805>
- Siregar, A. C., Adisaputera, A., & Yus, A. (2009). *The Development of Interactive Media Assisted by Macromedia Flash to Improve the Ability of Understanding the Fiction Story Information in Elementary School Students*. 1200–1208.
- Surbakti, A. H. (2015). Needs analysis in teaching learning process for developing teaching Arabic language syllabus of Islamic Religion Education of STAIS Sumatera. *Journal of Education*, 8(1), 66–70. <https://journal.uny.ac.id/index.php/joe/article/view/9614>
- Suyanto, K. K. . (2008). *English for Young Learners*.
- Syofii, I., Sari, D. P., & Rukiyah, R. (2021). Development of Interactive Multimedia Using the Macromedia Flash and Science Approach for Engineering Materials Courses in Mechanical Engineering Education Universitas Sriwijaya. *Journal of Mechanical Science and Engineering*, 7(2), 035–038. <https://doi.org/10.36706/jmse.v7i2.40>
- Taherdoost, H. (2016). Validity and Reliability of the Research Instrument ; How to Test the Validation of a Questionnaire / Survey in a Research Hamed Taherdoost To cite this version : HAL Id: hal-02546799 Validity and Reliability of the Research Instrument ; How to Test the. *International Journal of Academic Research in Management*, 5(3), 28–36.
- Tessmer, M. (2013). *Planning and conducting formative evaluations*. 1st ed. Routledge: Routledge, 2013.
- Trisna, A., & Nasution, R. S. (2018). Developing Macromedia Flash for Teaching

- Speaking Materials for Students. *Aicll: Annual International Conference on Language and Literature*, 1(1), 21–26. <https://doi.org/10.30743/aicll.v1i1.3>
- Tsany, U. N., Septian, A., & Komala, E. (2020). The ability of understanding mathematical concept and self-regulated learning using macromedia flash professional 8. *Journal of Physics: Conference Series*, 1657(1). <https://doi.org/10.1088/1742-6596/1657/1/012074>
- Vega, N. De, Tarakan, U. B., Rafiq, S., & Tarakan, U. B. (2020). *THE IMPLEMENTATION OF INTERACTIVE LEARNING MEDIA USING March*.
- Wijaya, A. M., Suryani, N., & Sudianto. (2017). Digital Media Based on Macromedia Flash to Increase the Historical Learning Interest of Senior High School Students. *American International Journal of Social Science*, 6(2), 71–77.
- Yu, T. X., & Wan Mohammad, W. M. R. (2019). Integration of 21st Century Learning Skills (4C Elements) in Interventions to Improve English Writing Skill Among 3K Class Students. *International Journal of Contemporary Education*, 2(2), 100. <https://doi.org/10.11114/ijce.v2i2.4498>
- Yuliana, D., & Azzubair, A. F. (2020). the Implementation of Interactive Multimedia With Macromedia Flash 8.0 in Biological Learning At Smk Ibrahimy 2 Sukorejo. *Jurnal Teknologi Informasi Dan Pendidikan*, 13(2), 62–68. <https://doi.org/10.24036/tip.v13i2.333>
- Zanke, A. A., Thenge, R. R., & Adhao, V. S. (2021). A Pandemic Declare by World Health Organization: COVID-19. *Technological Innovation in Pharmaceutical Research Vol. 11*, 47–61. <https://doi.org/10.9734/bpi/tipr/v11/3766f>