

# CHAPTER I

## INTRODUCTION

This chapter is intends to explain the core issues in the research which include the background of the research, identification of problems, research limitations, research questions, research objectives and significance of the research

### 1.1 Background of Research

At this time the world is in the era of the industrial revolution 4.0 with technological advances that have an impact on human life. Many changes occur in human life caused by technology such as the perspective and lifestyle of humans both in the fields of industry, government, health, and education. The increased quality of human resources has led to the creation of new technologies that have made technology continue to develop to date, this is what makes human life more modern, fast, and practical.

According to Budiman (2017), rapid technological advances demand that the world of education can follow suit in order to improve the quality of education. In addition, education must have a great interest in keeping pace with technological developments. The role of technology that helps in improving the quality of education is by utilizing technology in the learning process. The development of information and communication technology offers various facilities in learning that allow a shift in learning orientation from the process of presenting various knowledge to a guidance process in conducting individual exploration of science (Merliana, 2019). The development of information technology that is growing rapidly allows one to explore data and information more effectively and practically.

The development of science and technology has also brought rapid changes in aspects of human life to find and obtain information easily and not constrained by space and time. These developments have been used in various countries, institutions, and experts for various purposes including for education or learning. The use of technology in the learning process will make it easier for teachers to convey information to students easily and effectively. One of the

important parts in the learning process is learning media. One of the important parts in the learning process is learning media. Learning media is an inseparable element of the learning system. According to Daryanto and Karim (2017) learning media is a communication process, that is the process of delivering messages from the source of the message through certain channels or media to the recipient of the message. The learning process is a communication process and takes place in a system, so the learning media occupies a fairly important position as one of the components of the learning system.

Learning media is an element or component of a learning system, so learning media is an integral part of learning. This means that without learning media, learning activities cannot take place. The function of learning media is quite important in learning. According to Malapu (cited in Mudlofir, 2021), the use of media in learning has advantages because it can stimulate learners to learn new things and activate learning responses because they can provide immediate feedback on learning outcomes. In this case, the researcher sees the lack of use of representative learning media as a teacher's tool in delivering the material and making it easier for students to understand the material, this will be the cause of the non-optimal learning achievement. In addition, according to Rusman (2013) media is a tool to foster student learning motivation, allowing direct interaction between students and learning resources. Therefore, together with technology, it is important for teachers to develop a technology-based learning media to convey information easily in order to achieve learning objectives. Therefore, it is important to develop a learning media that is more effective, innovative, and efficient. Along with the times, the development of technology is increasingly advanced and learning can be done remotely without having to be influenced by space and time.

The use of innovative, creative, and interesting teaching materials must be used in all subjects and should also be used in one of the subjects in junior high school, that is English. English is one of the subjects in junior high school that has urgency to be taught to students.

Web-based learning media is used as an alternative choice of learning media to convey information to students easily and effectively. The web can also be used as a learning tool to increase the positive impact of internet users. One of the world's largest multinational companies, Google provides a website that can be used for free by users, that is Google sites.

One of Google's products is Google Sites, a website building tool. One media website that can be utilised in the educational process is Google Sites. Google Sites is a product from Google that is used for educational needs which is used to create websites, be it personal, group or company websites (Arief, 2017).

The advantages of the Google web sites besides being able to be used as distance learning media and can be accessed through any media device while connected to the internet. Google's web sites also have other advantages, that is it is easy to access the information you want quickly, because you can add attached files and other Google information such as google docs, sheets, from, calendar, awesome tables, videos from youtube and others (Ferismayanti, 2012, cited in Maskar, Puspaningtyas, Fatimah, & Mauliya, 2021). In addition, Google sites are easy to use for beginners because they can be accessed for free and do not use a programming language (Taufik, Sutrio, Ayub, Sahidu, & Hikmawati, 2018). Utilization of the importance of implementing Google web sites on learning media, that are uploading learning materials, giving assignments, giving announcements, and downloading and viewing student assignments.

Previously, several have conducted research on the development of Google Sites as learning media, one of which was research conducted by Raffa Fitra Ramadannisaa & Mellyana Mega Hartinab with the title "The Design of Web-Based Learning Using Google Sites for Teaching Heat and Temperature Topic". The results of the research said that the use of the Google Site was appropriate to be used as a learning media with its ease of use, but in this research there were shortcomings, that is in the quality of the media aspect, so Thus, it demonstrates that further researchers are still able to create Google Site learning materials that can improve learning, experience, and motivation. Another research entitled *"Pengembangan Website Menggunakan Google Sites Materi Produksi*

*Pada Tumbuhan Dan Hewan Untuk SMP/MTs Pada Masa Pandemi Covid 19*". What was done by Ririn Husniyah, Asri Widiatsih, Fajarisman, Kunrozazi, Nurhafit Kurniawan. The results of the research said that information about the material being taught can be accessed by students easily, by using smartphones or computers with access to the internet and students can learn on their own whenever and wherever they are.

The use of web-based as learning media allows a flexible learning system where students can learn the material made by the teacher independently. Students can repeat the material given by the teacher anywhere at any time. Students who do not physically attend class can still learn, no need to worry about being left behind because the material can be accessed online. The use of online media in learning can also help teachers convey learning even though they are not in the same place. So web-based learning media can be used as effective and efficient media for students to learn, both for learning with a remote system or directly. The use of web-based learning media in English subjects is expected to be a solution to increase motivation or new learning experiences and make it easier for students to understand the subject matter, so that this media can be used to help improve student learning outcomes.

Based on the background explanation above, so that researchers consider it necessary to do research Web-based Google Sites used in learning. Therefore, the researcher conducted a research with the title **"DEVELOPING WEB-BASED DIGITAL MEDIA FOR LEARNING ENGLISH IN JUNIOR HIGH SCHOOL"**.

## **1.2 Identification of the issue/phenomenon**

Based on the description of the background above, there are several problems which can be identified as follows:

- 1) A website is an informative type of digital media, but few teachers have created one to aid in student learning.
- 2) The high use of students in accessing the internet but the lack of learning media that supports and directs students in effective independent learning.
- 3) Lack of electronic learning media, which are used in the learning process.

- 4) It is prohibited to bring mobile phones into the classroom unless the subject teacher gives permission, making it challenging to use web-based learning tools.

### **1.3 Limitation and focus of the research**

Based on some of the main problems that have been identified, to make the research more specific and focused, this research is limited by considering the ability of the researcher. The limitations of this research can be described as follows:

- 1) This research only develops digital web-based learning media, with appropriate teaching materials, practice questions, and evaluation of learning in the form of tests.
- 2) The English material used in this research is Procedure text in grade 9.
- 3) This research is a research that produces a limited product. Therefore, this research only carried out 3 of the 5 stages of R&D development. The three stages include: Analysis, Design, and Development.

### **1.4 Research questions**

Based on the description of the problem limitations above, then the research question of the problem in this research is as follows:

- 1) What are the characteristics of the web-based digital as a learning media?
- 2) What are the characteristics of the web-based as a learning media needed by students?
- 3) How to develop web-based media for learning?

### **1.5 Aims of the research**

Based on the research questions that the researchers have designed to fulfill the research that the researchers are studying. Then the research objectives are made that will answer the questions that the researchers have designed in the research questions. The research objectives are as follows:

- 1) To find the need of students in learning English.
- 2) To find the good characteristics of the web as learning media.
- 3) To develop web-based learning media for teaching English.

## **1.6 Significances of the research**

This research is significant in providing an innovative online learning platform for students, offering an accessible and engaging medium to support independent learning. For teachers, the website serves as an additional tool to enrich teaching practices and integrate technology into the learning process. Furthermore, this study can be a useful reference for future researchers and developers interested in creating or improving technology-based learning media, particularly by applying the R&D method with the ADDIE model.

### **1.6.1 Theoretical**

It is hoped that this research will create progress in learning, in order to create more complex and engaging learning phases. directed by an institution's level of competency. It is also anticipated that they will be able to support the advancement of science and technology in the study of English. Especially in product development web-based google sites.

### **1.6.2 Practical**

The practical benefits in this research is expected to be useful for various parties, including:

- 1) For researchers, it is hoped that they can provide experiences and insights, which relate to how to utilize technology in the learning process, especially in learning English.
- 2) For educators, it is hoped that they can provide insights and references on how to use technology. Where will it be used as media learning.
- 3) For students, it is hoped that they can provide new circumstances or atmosphere in learning and evaluation. So, it can develop the desire, interest, and motivation in the process of learning.
- 4) For schools, it is hoped that it can be a directive so that can develop and improve quality, especially in the implementation of learning English

## **1.7 Theoretical Foundation**

To strengthen the arguments conveyed in relation to this research some theoretical principles are reviewed as the foundation.

### 1.7.1. Learning Media

Media is a word that comes from the Latin word *medius*, which literally means 'middle', 'intermediary' or 'introduction' (Arsyad, 2002 cited in Jalinus, 2016). Media can be interpreted as a tool or intermediary from the sender of the message to the recipient of the message. Referring to the notion of media, it can be interpreted that learning media is one of the methods or tools used in the teaching and learning process. One of the methods or tools used in the teaching and learning process is called learning media. According to Dinata (2020) Learning media are everything that can be used to convey messages or information in the teaching and learning process so that it can affect students' attention and interest in learning. It can be said that learning media is an introduction in a learning process. The notion that is not much different from the understanding put forward by the Association of Education Communication Technology (AECT), cited in Mahnun (2012) where media is defined by all forms and channels that can be used for the message provider process. From these two opinions, it can be understood that the media is related to intermediaries who function to distribute messages and information from sources that will be received by the recipient of the message that occurs in the learning process.

In addition to the opinions above regarding the media, there are several other opinions that provide different meanings. According to Heinich (1982) cited in Mahnun (2012) argues that the term medium is an intermediary that delivers information between the source and the recipient. So the media in the form of television, films, photos, radio, audio recordings, projected images, printed materials, and the like are communication media. In accordance with the previous explanation, the author argues that learning media is an intermediary tool in conveying messages or information in the teaching and learning process. According to Djamarah & Zain (2010) cited in Darodjat (2021) that in a teaching and learning process the presence of the media has a fairly important meaning. Because in these activities the ambiguity of the material to be delivered can be helped by presenting the media as an intermediary. Where, learning media is an important tool in the teaching and learning process where in this case the teacher conveys the subject matter of the lesson.

### 1.7.2 The Function of Learning Media

Learning media certainly has an important function in the learning process. According to Jalinus (2016) learning media is a factor that affects the effectiveness of learning, both are interrelated in achieving the expected learning objectives. Therefore, learning media is an important tool in the teaching and learning process where in this case the teacher conveys the subject matter of the lesson. According to Sadiman et al., (1990) cited in Jalinus (2016) media has five functions in learning. The following explains the function of the media, there are:

- 1) Reduce the occurrence of verbalism.

The use of media helps the teacher in explaining material that cannot be explained verbally by the teacher. The use of media can be an effective tool in clarifying the learning material delivered by the teacher.

- 2) Encouraging from the limitations of space, time, energy, and senses.

The use of media can encourage the limitations of space, time, energy, and senses. For example, when the teacher wants to display an event or incident, media is needed to display it so that the teacher can be more practical and efficient in delivering the material.

- 3) Generating passion for learning, more direct interaction between students and learning resources.

Learning becomes more varied when media is used. in order for teachers to use media as a substitute to encourage students' enthusiasm to learn. In addition, with the media, students can interact directly with learning resources, this makes students not passive when learning.

- 4) Allows students to learn independently according to their visual, auditory and kinesthetic talents and abilities.

The use of multimedia in learning can help students who have visual, auditory, and kinesthetic learning abilities. Students can learn independently and be active in learning, because with multimedia students will do something so that there is direct interaction between students and teaching materials.

- 5) Gives the same stimulus, equates the experience and creates the same perception.



The use of media in learning can provide the same stimulation to students in understanding the material. The use of media makes students have new learning experiences so that they can motivate students to learn.

Not much different, according to Sudjana and Rivai (1992) in Jalinus (2016) which states that the function of the media in the learning process is 4. The following is an explanation of the function of the media, that are:

1) Can foster student learning motivation.

The use of media in learning can foster the enthusiasm of students in learning. The use of a variety of media can attract the attention of students so that they will not get bored easily in learning.

2) Teaching materials will become clearer.

The use of media in learning makes learning clearer because it is through adjustments to the material to be taught.

3) Teaching methods will be more varied.

The use of media in learning makes learning more varied. So that the use of media can be used by teachers as a means to develop learning methods.

4) Students do more activities during learning activities.

The use of media in learning can increase student activity during learning activities.

Based on the function of learning media that has been described above, the use of learning media makes it easier for teachers to deliver material and helps students understand the material presented by the teacher. So the use of media is expected to help influence the achievement of better student learning outcomes.

### **1.7.3 Classification of Learning Media**

There are currently many types of media created that can be used by teachers as an alternative to carry out learning. Each learning media has a function that must be adapted to the subject matter in order to achieve the expected learning objectives. According to Satrianawati (2018) the classification of learning media is generally divided into four types of media. The following is a general media classification:

1) Visual Media.

Visual media is media that can be seen. This media relies on the sense of sight. Examples of visual media such as photos, pictures, books, props and so on.

#### 2) Audio Media.

Audio media is media that can be heard. This media relies on the sense of hearing as a channel. Examples include sound media, music and songs, musical instruments, sound cassettes.

#### 3) Audio Visual Media.

Audio-visual media is media that can be heard and seen simultaneously. Examples include drama, film, television, VCD and so on.

#### 4) Multimedia.

Multimedia is the use of computers that use various types of media that are integrated in one activity such as text, sound, images so that they become interactive media.

### **1.7.4 Web-based learning.**

The World Wide Web (www) or often called the web or websites was introduced in the 1990s. According to Rusman, Kurniawan, & Riyana (2013) web learning media is a learning that utilizes media websites that can be accessed via the internet. This facility is the largest collection of documentation stored in various servers connected to one network. This document was developed in hypertext format using HTML (Hyper Text Markup Language). Through this format, it is possible to link from one document to another (Uno & Ma'ruf, 2016).

Websites can also be interpreted as a collection of pages that display text data information, still or motion image data, animation data, sound, video and or a combination of all of them, both static and dynamic which form a series of interrelated buildings where each is linked with hyperlinks (Nurmi, 2017).

While learning is a process of interaction of students with educators and learning resources in a learning environment. According to Uno & Ma'ruf (2016) learning is a great help given by educators so that the process of acquiring knowledge and knowledge can occur, mastery of skills and character, forming attitudes and beliefs in students. Therefore, learning is a process to help students

become better. As for web-based learning, according to Rusman, et al., (2013) web-based learning which is popularly known as web-based training (WBT) or sometimes called web-based education (WBE) can be defined as the application of web technology in the world of learning for a educational process. Therefore, web-based learning is a learning that can be done using a hyperlink web browser, where the web browser presents a material to be studied.

It can be said, according to Ningrum (2017) web-based learning media are media that use computers or smartphones. Thus web-based learning media is included in computer-based learning media and can also be used on smartphones that can be connected to the internet.

If web-based learning is designed properly and appropriately, then web-based learning can be fun learning, has a high element of interactivity, causes students to remember more subject matter, and reduce the costs that are usually incurred by learners to take part in a lesson.

It can be concluded, web-based learning is learning that uses the internet network, which is packaged in one part of website-based learning media to make it easier for students to understand learning material.

#### **1.7.5 Characteristics of Web-Based Learning**

The use of the web is learning that utilizes technology in its implementation. Bringing students to learn independently by interpreting the knowledge they have gained. According to Rusman, Kurniawan, & Riyana (2013) web-based learning has 4 characteristics. The following are the characteristics of the web as a learning medium:

##### **1) Interactivity.**

The availability of more communication channels, either directly (synchronous), such as chat or messenger or indirectly (asynchronous) such as forums, mailing lists or guest books.

##### **2) Independency.**

Flexibility in terms of providing time, place, teaching, and teaching materials. This causes learning to be more student-centered learning.

3) Accessibility.

Learning resources become more accessible through distribution on the internet network with wider access than the distribution of learning resources in conventional learning.

4) Enrichment.

Learning, presentation of lecture materials, and training materials as enrichment, allow the use of information technology tools such as video streaming, simulation, and animation.

### **1.7.6 Advantages of Web-Based Learning**

The advantages of web-based learning According to Rusman, Kurniawan, & Riyana (2013) web-based learning has advantages. The advantages that exist in web-based learning are as follows:

- 1) Allows anyone anywhere, anytime, to learn anything.
- 2) Learning can learn according to its own characteristics and steps because web-based learning makes learning individual.
- 3) The ability to create links, so that learners can access information from various sources, both inside and outside the learning environment.
- 4) Very potential as a learning resource for learners who do not have enough time to study.
- 5) Can encourage students to be more independent and active in learning.
- 6) Provide additional learning resources that can be used to expand learning materials.
- 7) Provide a search engine that can be used to find the information they need.
- 8) The content of the course material can be updated easily.

The advantages of web-based learning media can be implemented if web based learning has been designed and planned to be implemented as well as possible.

### **1.7.7 Google Sites**

According to Taufik, Sutrio, Ayub, Sahidu & Hikmawati (2018) Google Site is an online application launched by Google since 2008 to make creating a class, school or project website as easy as editing a document. Google Sites is a product of Google as a tool for creating sites.

Google sites are very easy to use, especially to support learning by maximizing features such as google docs, sheets, forms, calendars, awesome tables, and so on (Ferismayanti, 2017, Novemby, 2021).

The use of google sites makes it easier for someone to manage the web, especially for ordinary users. According to Taufik et al., (2018) users can manage their access control easily and most importantly, no programming knowledge is needed, because it only uses drag and click.

### **1.7.8 Utilization of Google Sites**

Learning using Google sites has benefits for educators or students. According to Azis (2019) the benefits of using the google site are as follows:

1) Learning is more interesting.

By using google sites learning will be completer and more interesting because it can take advantage of the features in the google sites. Such; google docs, sheets, forms, calendars, awesome tables, and so on.

2) It's easier to get learning materials.

With the google sites, learning materials will be uploaded to google sites so that students or educators do not need to use flash drives which can cause many viruses to enter the computer.

3) Learning material is not easy to lose.

Materials that have been uploaded to the google sites will remain on the google sites and will not be affected by viruses or other interference.

4) Learners can get learning information quickly.

By using google sites, both students and educators can get information about learning quickly by using information uploaded by educators.

5) Can save syllabus on google sites.

The learning syllabus can be uploaded by educators into google sites, students know the topics and themes of learning at each subsequent meeting.

6) Assignments via google sites.

Learning assignments can be given by educators through Google sites, so that students don't miss out on information and assignments. School assignments can be given and collected through the google sites.

### **1.7.8 Advantages of Using Google Sites**

There are advantages in using google sites, according to Novemby (2019), the advantages include:

Google sites can be used for free.

- 1) Ease of making google sites for beginners because it does not use a programming language.
- 2) Stored in the Google.com domain, so that search engines can easily index the installed web pages.
- 3) Allows users to collaborate in its use.
- 4) Google sites can be accessed through various internet-connected devices, such as Smartphones, Tablets, Laptops, and Personal Computers.
- 5) Provides 100 MB of free online storage.

### **1.7.9 Disadvantages of Using Google Sites Web**

There are disadvantages in Google sites, according to Novemby (2019), the shortcomings include:

- 1) Does not provide drag-n-drop feature for designing web pages.
- 2) Changing the settings must be done manually.
- 3) Does not support scripts and iframes on the page, users must find ways or use certain gadgets to use iframes. However, the lack of scripts and frames on google sites can be overcome by using the google app script and wordpress applications.

## **1.8 Previous Research**

The development of web-based learning media as an alternative learning media in English subjects is expected to help students with the aim that students

can easily understand the material and can increase students' reading interest. In order to complete the theoretical study that has been described above, here are some research results that are relevant to this research.

Research conducted by Raffa Fitra Ramadannisa & Mellyana Mega Hartina, entitled “The Design of Web-Based Learning Using Google Sites for Teaching Heat and Temperature Topic”. The research that has been done aims to produce web-based learning using Google Sites on the topic of Heat and Temperature for high school students. The development of the media uses a 4D model with the following stages: 1) Define, 2) Design, 3) Develop. The stages of media design and development involve experts who assess two aspects, material and media design. The media expert's average validation result is “very decent”. The average effect of material expert validation is "appropriate". The results of the research that has been carried out indicate that the use of Google Site media on Heat and Temperature material is feasible to use. The researcher concludes that the use of the web as a learning resource for students independently and can facilitate students.

Research conducted by Ike Ismawati, Nila Mutia, Nurhikmah Fitriani, Salma Masturoh with the title “*Pengembangan Media Pembelajaran Fisika Berbasis Web Menggunakan Google Sites Pada Materi Gelombang Bunyi*”. The purpose of the research that has been done is to test the feasibility of web-based physics learning media using the google site on sound wave material in helping students to learn independently and also more easily during online learning. In this study, research and development (R&D) method used. Website-based learning media developed, the results of the average score by media experts and material experts are included in the "feasible" criteria to be used and tested for students.

Research conducted by Afifah Fadhilahn Hasna, Sabar Nurohman, Allesius Maryanto with the title “The Development of Interactive Learning Media on Android Platform Assisted By Google Sites”. This research that has been done aims to produce interactive learning media on Android the right Google Sites-assisted platform for SMP IPA learning the respiratory system and producing

practicum media for studied respiratory system science in high school. This research using 4D models (Define, Design, Development, and Dissemination). The results of his research show that the media is feasible to use both in terms of material and in terms of media showed that it was very feasible, then from the results of the practicality of the media it was found that it could be used practically. The results of this study indicate that the use of the Google site as a learning media is very feasible.

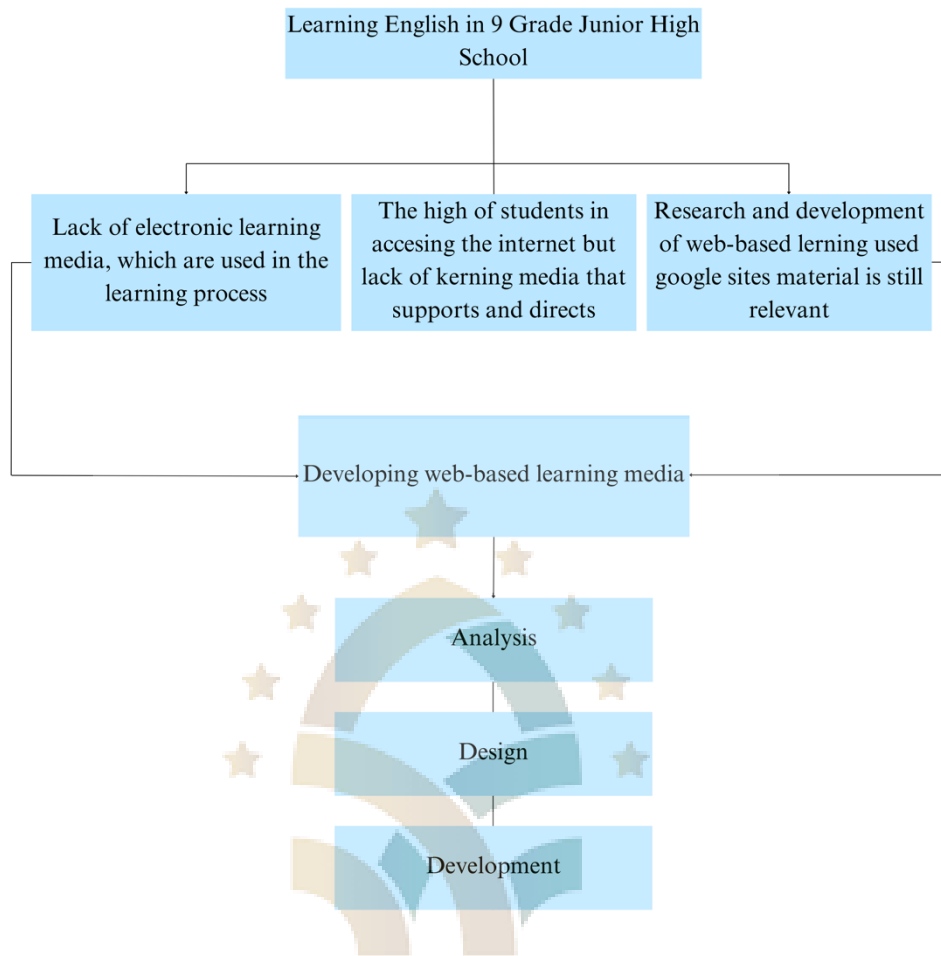
### **1.9 Frame of thought**

Based on the background of the problem, it has been explained that the lack of use of representative learning media as a teacher's tool in delivering material and making it easier for students to understand the material, this will be the cause of not optimal learning achievement. In addition, teachers rarely involve students in the learning process, this causes students to become passive in class. With such problems, teachers need to make some changes to improve student learning and increase student activity. What teachers can try is to develop their teaching methods, especially in the use of teaching materials as a companion tool for student learning.

The use of web-based as learning media allows a flexible learning system where students can learn the material made by the teacher independently. Students can repeat the material given by the teacher anywhere at any time. Students who do not physically attend class can still learn, no need to worry about being left behind because the material can be accessed online. The use of online media in learning can also help teachers convey learning even though they are not in the same place.

This research uses the ADDIE development model. This model is often used in the development of learning media, especially in the field of education. Thus, this model can be used as a source of ideas and development procedures in developing learning tools for teachers to convey to students in a well-structured learning process so that the learning process becomes more enjoyable and the material being studied will also be easy to understand. The steps of this research process will be described in the following framework:





## 1.10 Research Method

This research employs a Research & Development (R&D) method to developing a web-based learning as a English learning media aimed at enhancing the teaching and learning process. Further details of each stage in research method are presented in the following points.

### 1.10.1 Research design and steps of the research

The research design used Research and Development (R&D). According to Borg & Gall (2002), this research is at developing and validating educational products. In this research the educational product implies learning materials. Sugiono (2010) research and development are methods used to produce certain products, and test the effectiveness of these products.

The steps taken in developing the product adapt the steps of the development model

ADDIE proposed by Lee and Owens (2004). The development model includes the Analysis, Design, Development, Implementation, and Evaluation stages. However, the research on the development of the ADDIE model carried out in this research only reached the Development stage, because the purpose of this research was only to develop and produce a learning media.

The steps for developing web-based media consist of three stages, as follows:

#### **1.10.1.1 Analysis**

At this stage, it is carried out to determine the product to be developed. The researcher analyzes the competencies which include an analysis of the Core Competencies (KI) and Basic Competencies (KD) that are published in this media. Furthermore, the instructional analysis which includes the description of the Basic Competencies (KD) that have been selected at the competency analysis stage becomes a learning indicator that allows it to be presented in web-based Learning Media. This learning media has the concept that learning can also be fun, so that students are interested in paying attention to the learning process.

#### **1.10.1.2 Design**

At the product design stage, the purpose of this research is to make detailed specifications regarding the initial product design, style, and the need to develop Google Sites Web-based learning media products. The product design designs in the Google Sites Web learning media include: front page, materials, assignments, tests, and bibliography.

#### **1.10.1.3 Development**

This third step is to develop learning media based on the initial media design. The steps taken by researchers in developing the google site as a learning medium are making learning media using the google site. The making of this media is seen in terms of design and in terms of material.

### **1.10.2 Source and type of data**

In this research the researcher uses a type of field research, this research is also considered a broad approach in qualitative research or can be said as a method for collecting qualitative research data. In this case, the most important thing is that the researcher jumps in or goes directly to the field to make observations about the problem being studied (Moleong, 2013). Where in general qualitative research. This research also uses descriptive data in the form of words or spoken words that appear, so it can be concluded that this research uses a qualitative approach.

The data source is the subject in the research that comes from the data or sources obtained. The main data sources in this research are divided into two, that are primary data sources and secondary data sources which include the following:

#### **1.10.2.1 Primary Data**

Primary data is data that originate and are obtained from informants in a research. Here are subject teachers, students are informants who are used as data in this research by researchers. So the primary data source here is the English subject teacher who seeks to validate the materi. To collect data, researchers used the questioners in exploring research data sources.

#### **1.10.2.2 Secondary Data**

Secondary data from primary data is in the form of journals and related books about the research that the researcher is researching. that are books and journals about developing digital learning media and methods that make it easier for researchers to research.

### **1.10.3 Data collection techniques and instruments**

Instrument is a measuring tool or facility used to collect data carefully, completely, and systematic so that it is easy to process with better results. The data collection instruments used in this research are described as follows:

#### **1.10.3.1 Critical Thinking**

Observation is a systematic observation and recording the investigated phenomena. In psychological research, observation or what is also called observation, includes activities loading attention to an object by using all senses. So, observing can be done through sight, smell, hearing, touch, and taste (Suharsimi, 2013).

#### **1.10.3.2 Questionnaire**

Questionnaire is a tool to collect and record data or information which is done by giving a set of questions to respondents, that is Teachers who expert in English material. Questionnaire was used to measure program indicators related to learning design, content, and language.

#### **1.10.4 Data analysis techniques**

Analyzing data is a process of processing and interpreting data with the aim of placing various information according to its function so that it has clear meaning and meaning in accordance with the research objectives (Wina Sanjaya, 2013). In this research the data analysis using qualitative. The ultimate goal of qualitative data analysis is to obtain meaning, generate understandings, concepts and develop new hypotheses or theories. Qualitative data analysis is the process of systematically searching and compiling data obtained from interviews, field notes, and other materials so that they are easy to understand so that they can be informed to others.

Miles and Huberman (1984) in Sugiyono (2012) suggested that activities in qualitative data analysis include data collection, data reduction, data presentation, and data inference.

##### **1.10.4.1 Data collection**

This data was obtained during the research, that is in the form of field notes by researchers when making observations regarding the learning media and activities carried out by students, both supporting factors, inhibiting factors,

difficulties during the learning process. In this research, the data was taken by researchers during the process of using the learning media.

#### 1.10.4.2 Data reduction

Reducing data is the same as summarizing, choosing the main things, focusing on the things that are important. The data that has been collected from the observations are then summarized to find the main points or focus of the problem.

#### 1.10.4.3 Display data

The data are presented in brief descriptions or in the form of tables and descriptive explanations. This is to make it easier to understand what happened and to plan further activities. Researchers present descriptive data from observations and questionnaires.

#### 1.11 Research timeline

Research process is expected to span approximately four months, beginning with the formulation and submission of the research proposal and concluding with the completion of the thesis revision. This timeline encompasses several critical phases, including initial literature review, data collection and analysis, drafting of the thesis chapters, and incorporation of feedback from the supervisor and examiners. The proposed schedule allows sufficient time for thorough investigation, reflection, and refinement, ensuring the research meets the academic standards required for successful thesis submission.

This research begins from January to April 2025 as shown in the following table

No.	Activity	January 2025				February 2025				March 2025				April 2025			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

1.	Writing Research Proposal and consultation																		
2.	Proposal Seminar and Research Instrument																		
3.	Conducting research Sample, validity, and reliability of data																		
4.	Collecting of data																		
5.	Data Analysis																		
6.	Finishing thesis writing																		
7.	Thesis examination																		
8.	Thesis revision																		