


# SUBSTITUTION, AUGMENTATION, MODIFICATION AND REDEFINITION (SAMR) MODEL TO TECHNOLOGY INTEGRATION FOR ENGLISH TEACHERS AT SMP NEGERI 2 SUNGGUMINASA

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Article Info	Abstract
<p>Received: January 25, 2023  Revised: March 16, 2023  Accepted: April 23, 2023  Published: June 28, 2024</p> <p><b>Keywords:</b>  SAMR Model</p> <p><b>Technology integration</b></p> <p><b>English teacher</b></p>	<p>This study aims to determine the dominating level of substitution, augmentation, modification and redefinition (SAMR) use by the teachers in teaching English and the reasons of the English teachers use that level, namely substitution, augmentation, modification and redefinition (SAMR). This research was conducted in January 2023 from 3 English teachers at SMP Negeri 2 Sungguminasa. This research used descriptive qualitative method, and the instruments used are observation and interviews. The findings of this study indicate that of the four levels of the SAMR model, the most dominant used by English teachers is at the substitution level. And the lowest usage is redefinition. The second finding is the reason why the English teachers are at this level is due to a lack of IT-related knowledge, insufficient school facilities, and a lack of spaces that can assist teachers in improving their IT skills.</p> <p>This is an open access article under the CC BY-SA license.</p>
	
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## INTRODUCTION

Generally, technology is a tool used to make and comfort human life. The use of technology can make it easier for everyone and bring benefits to humans. Especially in the world of education, technology plays an important role and contributes a lot, such as changing the way of thinking about teaching and learning and making it easier for teachers to get learning references and the process of providing materials and assignments, as Howard et al., (2006) who said that the extent to which ICT has taken an important role in increasing the effectiveness of the teaching and learning process.

Especially in this condition where schools place more demands on teachers to integrate ICT (Information and communication technology) into education or learning processes in schools. Along with the rapid development of technology, it also affects the world of education

and of course places great demands on teachers, Lai, C.-C., & Kritsonis, (2006). However, on the other hand, there are still many teachers who have not applied ICT in their learning process. This is because there are many teachers who think that the learning that has been applied so far has been running effectively and according to what is expected. Not a few teachers who apparently do not understand the use of technology and how to integrate technology into learning. Aldosemani, (2019) argue that integrating technology into learning is one of the difficulties experienced by some teachers today, they still find it difficult to integrate ICT into the learning process.

In fact, returning to the definition or purpose of the existence of technology is to provide convenience and comfort to humans from all aspects of life, including education. Because it is undeniable that currently humans live side by side with technology, technology has taken a big role in all lines of life. This statement is in line with the opinion of Devedžić, (2004) who say that in the field of education there is an extraordinary development caused by ICT, especially in the learning process in the classroom, and this continues to be one of the teacher's tasks to continue to be developed. In line with this opinion, Herring et al., (2016) added that the cause of these difficulties is due to the dynamic nature of technology and continues to develop so that teachers must adapt to these developments to be applied to learning activities.

In learning English, the use of technology starts from the use of tape, radio, and video. Along with the development of the times, and the increasingly sophisticated technology, the teachers have then used a lot of conventional technology tools and the latest technology so that education and quality are getting more advanced from here the use of smartphones, computers, internet, social media and the use of other technological tools to support the learning process. The students were asked to understand the use of ICT. However, it is a known fact that the ability of teachers to use technology is still very lacking. This means that the integration of technology into learning still cannot run optimally according to the expectations of the Indonesian minister of education. The teachers turned out to experience many challenges and obstacles in the application of technology as a digital tool and the SAMR model in the learning process Projects & Theses, (2015).

Therefore, teachers need to be given digital literacy and special training so that they can apply technology properly to support the teaching and learning process effectively. Tunjera & Chigona, (2019) said that one of the goals of using technology is as an art in applying digital

resources into the world of education in order to achieve goals in the classroom. One of model of technology by teachers in the classroom is using SAMR (Substitution, Augmentation, Modification and Redefinition). The SAMR model is to optimize classroom activities. This model is designed to inspire teachers. Wahyuni & Mujiyanto, (2020) Augmentation, Substitution, Modified, Redefinition (SAMR) is one of the models used as a framework to develop technology integration into learning by Puentedura in Nyayu et al., (2019).

## LITERATURE REVIEW

There was some research that investigated the same area, as stated below:

The first is Aldosemani, (2019) using data analysis methods. This study shows that teachers and students have used various types of technology in learning ranging from substitution, augmentation, modification and redefinition. A series of technologies used by student teachers can help them in the learning process and make it easier for teachers to deliver learning in class, besides that it can help teachers to increase creativity and innovation.

The second research Muktiarni, (2021) SAMR model has been widely applied in education and has many advantages in its application, not only in general education but has spread to vocational education. This indicates that the SAMR model has a positive impact on students, namely to motivate students, collaborate more and other benefits. As well as providing a new nuance in the teaching-learning process.

The third study, Budiman, Rahmawati & Ulfa (2018) states that teachers are still at the substitution and augmentation stage in integrating ICT into learning, and there are even some teachers who are still having trouble reaching the modification and redefinition stage. However, it is an improvement because previously there were no teachers who could operate the technology at all. This is due to the lack of training provided to teachers in the area. Therefore, the ability to operate technology is also different and uneven.

Related to the findings above, the researcher has similarities in conducting this research, it is the research out what is dominating model use by the teacher in teaching English of substitution, augmentation, modification and redefinition (SAMR) Model use by the teachers in teaching. However, the difference between this study and the three studies above is that this study is more specific about what the is part of Substitution, Augmentation, Modification,

Redefinition (SAMR) Model using by the teachers in Teaching English and what are the reason of English teacher use the level (Substitution Augmentation, modification and redefinition).

## METHODS

This study used a qualitative descriptive with a special study design to determine the extent to which language teachers integrate technology into learning, especially in the use of the SAMR Model. The instrument used was observation and interview. The data conducted by documents, observation Checklist, or excerpts from videotapes, audiotapes, or electronic communications are used to present research findings using the transcription model. Furthermore, the kinds of interview used was semi structure interview. The researcher prepared some questions, by using this type of interview, the researcher developed from each of these questions to get more about the answers and to get complete and specific information

## RESULT AND DISCUSSION

The findings of this research were collected based on the observation and interview. The observation was conducted during the respondents taught in the classroom, the type that has been use by the researcher was observation checklist which is the researcher pay attention the activity of the respondents and then find out the media used by the respondent in the classroom. Then, interview was conducted directly namely face to face to the respondents. This research used semi structured interview, which is the researcher asked some questions to the respondents. In addition to using the media to record important points which asked and the answers to these questions. The researcher also recorded the answers from the respondents. To make it easier for researchers to re-listen the answers from respondents during the process of describing data.

Below is data that has been collected by researchers regarding the types of media used by English teachers at SMP Negeri 2 Sungguminasa

### 1. The results of observations in teaching English at SMP Negeri 2 Sungguminasa

#### a. Observation Teacher 1

In the observation activities carried out by researchers, on January 13 in class VIII. 1 researcher observed the activities carried out by respondent 1 where he used several media during the learning process. There are several media used by the respondents including:

### 1) LCD (Liquid Crystal Display)

This media is applied to laptop screen products, cellphone screens, digital clock screens, computer monitors and so on. Like its function to display images, videos and the like, the media is also very supportive when used in the teaching and learning process. In the observations made by the researcher, the teacher displayed a medium, namely the LCD to convey material in class, when the media was displayed the students looked very enthusiastic, it was seen that the teacher displayed a power point related to the material report text. the students observed the LCD display carefully. the students were so focused and attentive when the teacher explained the points on the LCD display.

### 2) Microsoft Power Point

Microsoft Power Point or PPT is a Microsoft Word program that is used to display slides, images, videos, and so on. Currently Power Point is popularly used by various groups such as businessmen, students, lecturers, teachers and even students. When making observations the researcher saw that the respondent displayed a Power point using LCD media. The respondent conveyed his teaching material that had been made in the form of power point, making the material look more attractive, this sparked interest and enthusiasm from the students in the class.

### 3) Whiteboard

In the learning process carried out by respondent 1, she still used the whiteboard for writing. Even though she has used an LCD that displays power point. However, when she instructed students to do some questions, she wrote them down on the whiteboard.

### 4) Book

Based on observation made by researchers, it can be seen that Respondent 1 continued to use the book packages provided by the school during the learning process. he opened the book especially when giving assignments to students he took questions from the book package.

### 5) Internet

During the lesson, Respondent 1 was also seen opening the goggle application to look for examples of the report text being taught, after which he showed various examples of simple report text on the LCD display.

b. Observation Teacher 2

In the observation activities carried out by researchers in class IX. 2, the researcher found that Respondent 2 used several media:

1) Audio (speaker)

In the learning process in the classroom. It can be seen that respondent 2 gave one sheet of paper to each student. The contents of the paper are the lyrics of an English song, it looks like an old song maybe so that the student doesn't search for the lyrics on Google, the respondent also doesn't include the title of the song used as a question.

2) Mobile Phone

Respondent 2 connects the song being played to the speaker using his personal cell phone via a Bluetooth connection. The respondent looks agile in operating the two objects. After 2 minutes a song is played, the respondent gives instructions to the students. Where students are asked to fill word for word missing from the lyrics of the song. Respondents also asked students to look for sentences that are present perfect tense, because at that time they were studying tenses. After playing twice. Respondents asked students one by one to answer the questions that had been provided on the blackboard, namely the missing words from the lyrics of the song. They all enthusiastically raised their hands and came forward to answer. The researcher saw that the students were very enthusiastic about learning by using speaker media

c. Observation Teacher 3

In the observations made by the researcher on respondent 3, the researcher found that the teacher used a mobile phone as the main medium during the learning process. Respondent 3 directed students in the class to open a video on the YouTube application. The link of the video is first sent to the Whatsapp group so students can access it. The video contains an explanation of the 16 tenses that students must read carefully and record in their notebooks.

After this activity which lasted about 30 minutes, respondent 3 instructed that the notes made by the students be collected at the teacher's desk.

2. The results of interview the English teachers at SMP Negeri 2 Sungguminasa

a. The dominating level of substitution, augmentation, modification and redefinition used by the English teachers

1) Substitution Level

The substitution level is the lowest level in the use of technology used by students and teachers, at this level the technology is used only to replace the equipment (media) used previously. For example, in the previous activity a teacher used paper and pen to write with the presence of technology the teacher could replace the tool previously used with a computer or laptop for typing.

**Extract 1**

*T2 : In the past, I only focused on books when teaching, now it's good because I already have a cell phone or internet. so I take teaching materials or references from there. I usually take the material on Google, then I copy it into Microsoft word, then I print out and then I study it and I use it as a reference when teaching."*

From the statement above the researcher can be concluded that the teacher made teaching materials using books and the internet. He combines the use of conventional media, namely books and the internet to find a wide range of references. Starting from looking for material in books and the internet and then putting it together in text form to then bring it into the classroom.

**Extract 3**

*T1 : I often use the media that I mentioned before, for materials that are rather broad in scope because they are more practical and flexible. if the LCD is often sufficient actually Maybe if the frequency of use in one semester is ten times, often enough.*

From the statement above it can be concluded that the teacher quite often uses LCD Media to display Power Point in the classroom. Apart from making the lessons more interesting, the teacher said that she really enjoyed the process of making the material “because I like editing” according to her statement.

**Extract 4**

*T2 : Using goggle application is very frequent, almost every time before teaching I use the goggle application to find teaching materials because if it's monotonous in books, the material is usually limited. But I still use textbooks as the main source material. For audio such as speakers, usually only certain material, I usually get creative, for example for tenses lessons, I look for songs that have simple present tense, or past tense.*

From the statement above, it can be concluded that the teacher uses the Google application more often to make teaching materials, then transfers them to Microsoft Word and prints them. As for the use of speakers several times, but it was quite rare because he had to adjust it to the material to be conveyed.

2) Augmentation Leel

Technology as a substitute for the previous tool is used to replace the media previously used by the teacher. However, at this level there is an increase in the level where if previously the teacher only used media to write at this level there will be additional or improved functions such as using a feature to check grammar in writing or adding images, audio, video to the writing.

**Extract 1**

*T1 : The material that I teach I usually make in Power Point. so there are two ways of making the first one I take the material in a book then I type it into Microsoft Power Point then I add some pictures, I copied it to Microsoft word and then I transferred it to Microsoft Power Point*

From the statement above it can be concluded that T1 makes more use of the use of technology in the manufacture of materials or teaching materials. Starting from Microsoft word, Microsoft Power Point to making videos which are then distributed to



students. The teacher feels happy when he is in direct contact with technology during the process of making materials because he believes that this can make his work easier.

### 3) Modification Level

The point of modification is sharing a job with others. so at this level the teacher can share an article that allows other people to access the text. The writing can also be in the form of an assignment made by the teacher in the form of a Goggle form or a Google document that allows other people to access it.

#### **Extract 1**

*T1 : And also there are times I ask for a photo and then put it in the Google Classroom so I can immediately evaluate it. And for the daily test I used the Goggle form so they could answer the test questions right away.*

From the statement above it can be concluded that in addition to writing answers on test paper. students can also access google form and google classroom provided by the teacher.

### 4) Redefinition Level

Technology makes it possible to create new innovations that were never even thought of before. after going through various stages from substitution, augmentation, modification to the redefinition level.

#### **Extract 2**

*T1 : I've made videos but only occasionally. Even then, I only sent it to the class WhatsApp group.*

Based on the statement above, it can be concluded that the teacher once made a video which was then shared with the students' WhatsApp group to be listened to and studied.

## b. The Reason of the English Teachers Use the Level (Substitution, Augmentation, Modification, and Redefinition) SAMR Model

In practice, of course, English teachers have different reasons for choosing to use this media, while there are other media that are considered to be quite effective and can make students more comfortable and excited. But it turns out that these teachers have different views and reasons regarding this matter.

**Extract 1**

*T1 : I said earlier that using laptop media, LCD cellphones can actually make students more enthusiastic about learning. although we as teachers can also be said to be lacking when compared to students in operating IT. the level of progress is still below, maybe due to a lack of self-awareness to upgrade the skills you have, so the progress is still the same*

From the statement above, the researcher can conclude that the teacher uses technology as a new nuance in learning because students are often bored when the learning process takes place. He also said that he had tried to apply all his knowledge related to technology. However, he admits that he still needs to learn a lot and update his ability to integrate technology into learning.

## Discussion

### 1. The dominating level of Substitution, Augmentation, Modification and Redefinition (SAMR) Use by The Teacher in Teaching English at SMP Negeri 2 Sungguminasa

In the research conducted by researchers at SMP Negeri 2 Sungguminasa, especially the 3 English teachers who taught different classes. The findings show that the English teachers have integrated technology into learning English known as the SAMR model, a learning model that was first introduced by Dr. Ruben Puentedura, 2006. Where the SAMR model is a learning model that describes a person's level of maturity in using technology.

From the four levels which describe the maturity level of English teachers in using technology, it turns out that the one that dominates is still at the Substitution level. Of the three teachers studied, all used Goggle Classroom, but that only lasted during a pandemic. While the lowest use is at the level of redefinition. this can be seen from the media used, how the teacher makes learning materials, daily test questions and the frequency of use of a particular media. Budiman, Rahmawati & Ulfa (2018) states that teachers are still at the

substitution and augmentation stage in integrating ICT into learning, and there are even some teachers who are still having trouble reaching the modification and redefinition level.

T1 also said that he had made a video to share with students to study but only once because he admitted that it took preparation if he had to do the same thing. And what is most often used by these teachers is simply copying material from Goggle/the internet and then transferring it to Microsoft Word which is then used as a Power Point or printed out. As was done by T1 who said that he often uses LCDs as learning media, where in the process he takes material from books and also takes additional material from Google then typed into Microsoft word, and made points via Microsoft Power Point. The teacher also said that for the daily test questions he made the questions in the form of Goggle forms to distribute to students, but the other two teachers still used the conventional method where they wrote the test questions on the white board. And according to what was conveyed by T1 that in learning English what he paid the most attention to was the students' own speaking ability. Because often the benchmark for a person being able to speak English or not is his or her speaking ability. This was also stated by (Hijrah & Umar, 2021) that speaking is one of the four basic skills that must be considered by the teacher, because this is a very important thing because it is an act of conveying information and expressing ideas and thoughts through spoken language so that good communication is established between students and others.

At the substitution level, especially in the T2 listening field, speakers are often used to play songs to stimulate students' listening skills. Because according to him, listening is just as important as writing and reading, which must be taught from junior high school so that they get used to it and don't experience too many difficulties later. as said by (Abdul & Hijrah, 2013) Listening is one of the basic skills in a foreign language that students must get used to from an early age.

Although in its application there are some difficulties that will be experienced by teachers and students. But, it depends on the material to be taught, for example the class that will be taught the material has arrived at the present perfect tense material usually the teacher will find a suitable song, besides filling in the empty lyrics the teacher also asks him to determine which of these lyrics are included in the present sentence perfect tense according to the formula that has been learned. This was what the teacher did when the researcher

observed the class he was teaching. Besides that, he also uses Microsoft Word to type material that has previously been copied from the internet/google.

In the observations and interviews conducted on T3, the researcher found that the teacher used cellphones and books and whiteboards as the main media in teaching. In the interview the teacher did say that he preferred to direct students to watch videos on YouTube, then asked students to conclude the contents of the video. Because in addition to training their understanding and focus, this can also train their confidence to speak in front of their friends. And for the material to be taught apart from taking material from YouTube, he also makes books the main source of tools in the process of taking teaching materials. Besides that, they also use the internet/google to get additional material. So he took material from Google and then copied it to Microsoft Word and then printed it. The findings of the study are related to the findings of research conducted by (Sari, 2016) who found that the types of online media used by teachers when teaching English were Google classroom, Youtube, Google form and WhatsApp (WA).

As for doing assignments, they sometimes use Goggle Classroom but because they are already in face-to-face school, this is rarely done. So usually, they collect their assignments directly to the teacher concerned. Actually, in various learning materials English teachers have used various technologies ranging from Substitution to redefinition. This is related to research conducted by Aldosemani, (2019) the title was "Inservice Teachers' Perceptions of a Professional Development Plan Based on SAMR Model: A Case Study" Therefore, the researchers concluded that the English teacher at SMP Negeri 2 Sungguminasa was still at the Substitution level in implementing the SAMR model.

## 2. The Reason of the English Teachers Use the Level namely Substitution, Augmentation, Modification and Redefinition (SAMR)?

The reasons given by T1, T2, and T3 why they chose to use the media, including:

1. There is still a lack of knowledge by teachers in integrating technology into learning, so that they are at the same point. He also added that the lack of awareness possessed by teachers is also a major factor, because they are aware that they are still lacking in integrating technology into learning. However, some of them are still reluctant to upgrade their knowledge.

2. Inadequate school facilities. According to the interview conducted by the teacher, he said that the facilities and infrastructure provided by the school were not proportional to the number of teachers available. Where there are 5 English teachers while the available LCD for one subject is only 1 LCD. This is clearly not ideal, coupled with the teacher's teaching schedule which is almost the same.
3. The learning space or training that is carried out still pays little attention to the teacher's ability to integrate technology. Many trainings have been carried out but those related to the SAMR model are still lacking, so teachers have no other way than independent learning.

## CONCLUSION

The conclusions are presented based on the data that have been collected by the researcher from the previous chapter from all the data analysis about SAMR model to technology integration for English teachers. The data that the researcher gained from the interview participants can be concluded as follows:

First, the level of technology use applied by English teachers is described in a learning model, namely the SAMR model. In the previous discussion, indicators of the use of substitution, augmentation, modification and redefinition have been explained. And based on the results of observations and interviews conducted by researchers at SMP Negeri 2 Sungguminasa. Actually, it has reached the modification stage but it is still lacking, and what this research wants to see is which level dominates the most of the 4 levels previously mentioned. And the most dominating one used by English teachers at SMP Negeri 2 Sungguminasa is at the first level, namely Substitution.

Second, the reasons why English teachers are more dominant at the substitution level are as follows:

1. The ability of teachers to apply technology is still lacking and there is a lack of awareness to improve their abilities.
2. The facilities provided by the school are inadequate.
3. Lack of space provided for teachers to improve their IT skills.

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