

# Development of Flipped Learning Model Based on Animated Videos to Teach Students' English-Speaking Skills

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## Abstract

This study examines the development of a flipped learning model integrated with animated videos as a learning medium aimed at teaching speaking skills at the vocational high school level. In this model, students can access learning materials outside the classroom through animated videos designed in a contextual and communicative manner, allowing classroom time to be focused on collaborative and participatory oral activities. The research and development model used is based on the Borg and Gall model, which includes ten stages, ranging from Research and Information Gathering to Dissemination and Implementation. The study involved 40 tenth-grade students. The instruments used included expert validation, pre-tests and post-tests, and student satisfaction questionnaires. The validation results showed that the instrument validation achieved a validity score of 80%, media validation 88%, and material validation 98%, categorized as "Very Valid". Learning outcomes showed a 6% improvement after the implementation of media in the classroom. Additionally, the student satisfaction level reached 73,85%, categorized as "Feasible". This study demonstrates that the flipped learning model based on animated videos has a positive impact and serves as an innovative solution that can support and assist in the development of speaking skills in a more active and meaningful manner.

**Keywords:** Flipped Learning; Speaking Skills; Video Animation

## INTRODUCTION

Communication is one of the important aspects in the continuity of human life. Since the dawn of humanity, spoken language has been the primary tool for interacting with one another. Before the existence of writing, humans communicated through gestures, sounds, and facial expressions. This shows that speaking skills are one of the foundations of all forms of human communication. The ability to speak can make it easier to explain and effectively express our thoughts, ideas, and even feelings to others (Bashir, 2011). Speaking skills are the ability to express and articulate thoughts, feelings, and information effectively through spoken language, which involves complex cognitive processes such as word choice, sentence formation, and adaptation to social media (Nair & Yunus, 2021). Based on social constructive theory, the social construction that shapes our understanding of the world and ourselves is language (Vygotsky, 1978). Therefore, it is important to develop speaking skills as a tool for more effective communication and social interaction. Because English is a global language, learning English is very important for students to interact confidently in various contexts (Santuri et al., 2022). Learning English is one of the most important subjects in the education curriculum in Indonesia. As an international language, English provides opportunities to advance careers in various fields such as Educational Institutions, foreign companies, and overseas offices (Boy Jon et al., 2021). Therefore, having good English-speaking skills is essential for improving job opportunities and enhancing the quality of life. However, in practice, English language learning in Indonesia still faces several issues. One of the most common problems is the lack of English-speaking skills among students. They still feel confused when asked to speak in English, feel shy, and lack confidence (Widiarini et al., 2023). This problem is

caused by two factors. The first is internal factors, such as a lack of confidence, limited vocabulary, weak grammar mastery, lack of practice frequency, and psychological barriers such as social anxiety. The second is external factors include the lack of a supportive environment, limited opportunities for interaction and practice, and a lack of motivation. By identifying these factors, it is very helpful in overcoming and improving students' speaking skills in English.

The subject of this research is the TSM (Motorcycle Engineering) department at SMK Islam 1 Blitar. Mastering English skills has become an important aspect and is widely used in the automotive industry. First, access to manuals and global technology. Most of the motorcycle technical manuals issued by leading automotive companies are written in English. The technical manuals contain vehicle specifications, repair procedures, and instructions for using diagnostic tools. Second, certification and job opportunities. The automotive industry demands a workforce that possesses technical skills as well as proficiency in English as their primary language. Many professional certifications, such as Automotive Service Excellence (ASE). Therefore, by mastering English, students have a greater opportunity to obtain certifications and can enhance their competitiveness in both the national and international job markets (Wahyudi & Jufriзал, 2023). Third, Computer-Based Technology and Diagnostics. The development of automotive technology today is leading towards the use of computer-based systems to diagnose and repair vehicle damage. Diagnostic scanners often display messages and instructions in English. Therefore, understanding English is essential so that students can comprehend diagnostic reports and take appropriate corrective actions without confusion in translating technical terms. Fourth, Career and Entrepreneurship Opportunities Mastery of English is not only useful for those who want to work in official workshops or multinational automotive companies but also for students who want to become entrepreneurs.

The urgency of this research arises due to the challenges faced by students in learning speaking skills. The initial research used two methods: classroom observation or surveys and questionnaire methods. Initial data from the questionnaire shows that 70% (40 students) have an interest in using speaking skills. This shows positive potential that needs to be further developed. Although there is interest, 80% (40 students) have difficulty applying speaking skills. This shows a gap between interest and ability that needs to be addressed so that students can be more confident and competent in speaking. Observations show that most of the class time is spent explaining the material, while the time for speaking practice is limited. This indicates the need for improvements in teaching methods to provide more opportunities for students to practice so that they can be active and focused in speaking practice. This aligns with the constructive theory pioneered by figure such as Vygotsky, which explains that in the context of speaking skills, students must engage in clear and interactive speaking practices to enhance their own abilities (Idaresit Akpan et al., 2020).

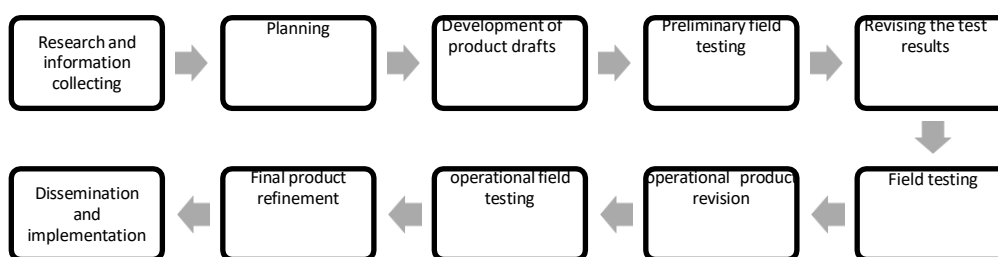
Flipped learning is a learning model that reverses the traditional learning process by utilizing digital media. If students usually learn new material in class and do assignments at home, in flipped learning, students will first study new material at home through prepared learning videos, and then in class, they will discuss, practice, and solve problems related to that material. According to (jessica yabro, 2014), flipped learning is when direct instruction moves from group learning spaces to individual learning spaces, and the resulting group spaces are transformed into dynamic and interactive learning environments where educators apply concepts to students and engage creatively with the subject matter that teaches you to work on it. Theoretically, flipped learning can help students learn independently according to their own pace and learning style, increase student engagement, deepen understanding, and enhance students' critical thinking skills. This is in line with the communicative learning theory that should focus on authentic communication and be student-oriented (Richards & Rodgers, 2021). As explained in the presentation of the flipped learning model above, it can be indicated that this learning will provide several benefits, including improved student learning performance due to high student engagement, increased motivation to learn independently, student readiness in cognitive aspects, and increased participation in the

learning process.

In its implementation, the researcher used video animations as supporting media in the development of the flipped learning model. Video animation is the combination of audio-visual media with animated images that can move accompanied by audio (Rahmayanti & Istianah, 2018). From that statement, it can be concluded that video animation media is an educational medium that uses moving images accompanied by sound to create an engaging impression like a film. Several researchers have previously conducted studies related to flipped learning-based education. Sari (2019) highlights the impact of flipped learning on students' understanding of mathematical concepts. The study shows that the flipped classroom model with interactive videos has a higher average comprehension score than the conventional model. Based on the presentation of the above facts, the researcher is interested in developing a learning model based on flipped learning. Therefore, "Development of Flipped Learning Model Based on Animated Videos to Teach Students' English-Speaking Skills " was chosen as the title of this research.

**METHOD**

This research uses a type of study known as research and development (R&D), following the Borg and Gall research model. According to them, research and development in the field of education is a process or activity used to develop a product and validate that product. (borg & gall, 1983:772).



**Figure 1.** Borg and gall development model

The subjects of this study were tenth-grade students at SMK Islam 1 Blitar, selected using purposive sampling, a method aimed at obtaining specific data from a more relevant group (Sugiyono, 2013). This is based on the recommendation of the class teacher, who believes that the class has issues that need to be researched. Additionally, to ensure the quality of the research media, validation by experts such as instrument experts, media experts, and subject matter experts is required. The research approach used in this study involved two approaches: qualitative and quantitative. Qualitative data was obtained through direct observation in the field to record qualitative data containing observations, descriptions, and reflections experienced by the researcher in the field, which were written down in field notes. Meanwhile, quantitative data was obtained through a set of questionnaires calculated using a social research measurement tool known as the Likert scale. To ensure consistency and transparency, the evaluation test results were assessed based on a scoring rubric. The purpose of this study was to assess student responses during learning and measure the speaking skills of 10<sup>th</sup> grade students at SMK Islam 1 Blitar using valid and accurate instruments (Sugiyono, 2017).

**Table 1.** Likert Scale (Sugiyono, 2017)

Category	Score
Strongly Agree	4
Agree	3
Less Disagree	2
Disagree	1

To determine the percentage results of the questionnaire to students, validators, and student satisfaction questionnaire using the calculation formula is determined by the following formula:

$$P = \frac{x}{n} \times 100\%$$

Information:

P: Percentage

x : Totalscore

n : Maximum score

The developed products were then validated by experts, including instrument experts, material experts, and media experts. The results of the validation were then calculated in the form of a validity percentage, which was then categorized according to the following guideline labels:

**Table 2.** Validity category (Feri & Zulherman, 2021)

No.	Percentage (%)	Legibility Category
1	< 21%	Very Invalid
2	21 – 40 %	Invalid
3	41 – 60 %	Less Valid
4	61 – 80 %	Valid
5	81 – 100 %	Very Valid

After the implementation process in the field, researchers compiled student satisfaction instruments to determine the description of experiences, satisfaction, and feedback from students for further development. The results of this process were then calculated as percentages and classified into categories of feasibility in the following labels:

**Table 3.** Qualification criteria for eligibility (Arikunto, 2010).

No	Percentage %	Eligibility Category
1.	81%-100%	Very Feasible
2.	61%-80%	Feasible
3.	41%-60%	Moderately Feasible
4.	21%-40%	Less Feasible
5.	<21%	Not Feasible

## RESULTS AND DISCUSSION

### Results

#### Analysis

Researchers conducted direct observations in the field to analyze the circumstances and needs of students and formulate learning objectives to be achieved by students at school. This analysis

process includes observing school facilities, student activities in the classroom, and distributing questionnaires to gain a deeper understanding of the characteristics and learning styles at the school. The focus of this research is the 10<sup>th</sup> grade TSM class at SMK Islam 1 Blitar, which was selected based on coordination and joint consideration with the class teacher.

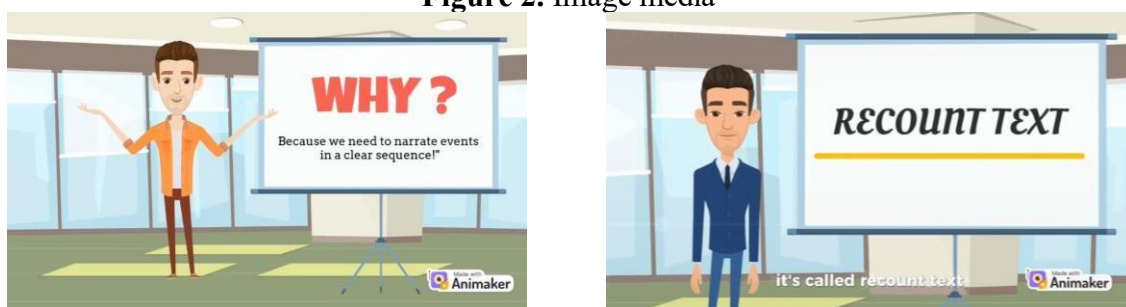
**Design**

At this stage, researchers began to carry out development plans such as developing learning models, teaching materials, and media concepts used. the media designed in this development are in the form of animated videos by adopting a flipped learning model and focusing on recount text material. the results of the animated video media are uploaded on the digital platform “tiktok” so that they can be easily accessed by students.

**Development**

In the early stages of media development, researchers systematized the recount text material to make it easy for students to understand. After the material was compiled, the researcher prepared a script for audio narration, then made a recording using the Eleven labs application. In the next stage, researchers edited the video by inserting prepared materials such as materials, audio recordings, backsound, and elements that support and strengthen the effectiveness of learning. In this process, we used Animaker and Capcut applications.

**Figure 2. Image media**



After all elements are integrated, validation testing by material experts, media experts, and instrument experts is required. This stage is crucial to ensure the quality and effectiveness of the developed product before it is implemented to students.

**Table 4. Instrument Validation Result**

No.	Indicator	Score	Category
1.	The instrument is in accordance with the research objectives and can measure the desired variables	4	Valid
2.	The instrument covers all important aspects to be researched.	4	Valid
3.	The instrument has questions and instructions that are digestible and easy to understand.	4	Valid
4.	The instrument includes elements that are appropriate to the subject of research	4	Valid
5.	The instrument can measure the expected theoretical construct	4	Valid
6.	The instrument shows the same consistency of results in different trials.	4	Valid
7.	The instrument uses a format that is easy to use	4	Valid

8.	The suitability of the instrument with the applicable guidelines in the research	4	Valid
9.	The instrument uses language that is easily understood by participants	4	Valid
10.	There is a mechanism to get feedback from respondents about the instrument	4	Valid
<b>Total score</b>		<b>40</b>	
<b>Percentage</b>		<b>80 %</b>	<b>Very Valid</b>

**Table 5.** Media Validation Result

No.	Indicator	Score	Category
1.	The suitability of the images/video displayed with the material presented.	5	Very Valid
2.	Presentation of sentences with straightforward language and easy to understand	4	Valid
3.	Animated media is equipped with supporting components that facilitate understanding of the material.	5	Very Valid
4.	Clarity and Simplicity of Language	4	Valid
5.	Supported by visuals that help audiences understand information more clearly	5	Very Valid
6.	Animated media has a visual design that is consistent and attractive.	5	Very Valid
7.	Animation and Transition Quality	4	Valid
8.	The flow of information in the animation should be logical and follow an easy-to-understand sequence.	4	Valid
9.	Clear Intonation and Narration	4	Valid
10.	Interactivity to Improve Understanding	4	Valid
<b>Total score</b>		<b>44</b>	
<b>Percentage</b>		<b>88%</b>	<b>Very Valid</b>

**Table 6.** Material Validation Result

No.	Indicator	Score	Category
1.	Materials are aligned with the competencies set out in the CP and ATP.	5	Very Valid
2.	The order in which the material is presented follows a logical learning structure.	5	Very Valid
3.	Fact-based materials that are correct and in line with academic standards	5	Very Valid
4.	materials reflect recent developments in science and technology	5	Very Valid
5.	The language used is appropriate to the learners' level of understanding?	5	Very Valid
6.	presentation of the material follows a clear and systematic structure?	5	Very Valid

7.	The grammar in the material is correct and does not cause ambiguity	5	Very Valid
8	Presentation of material using visual or interactive techniques that reinforce understanding?	5	Very Valid
9	The material effectively combines theory and examples.	5	Very Valid
10	the quality of images or animations is good enough to support understanding of the material.	4	Valid
<b>Total score</b>		<b>49</b>	
<b>Percentage</b>		<b>98 %</b>	<b>Very Valid</b>

### Implementation

Before implementing the media, the initial process involves conducting observations, distributing initial questionnaires, and administering a pretest to students to measure their learning interests and assess their initial understanding of the material prior to using the flipped learning model based on animated media. Following this, the animated videos are distributed to students via the TikTok platform according to the learning scheme outlined in the flipped learning teaching module provided. The final process involves evaluating students' interest and learning outcomes after implementing the media (post-test) and distributing questionnaires to assess the effectiveness of the learning model and media. The following are the results obtained from the pre-test and post-test:

**Table 7.** Pre-test and Post-test Result

<b>Responden</b>	<b>Pre-test</b>	<b>Post-test</b>
R1	75	80
R2	70	75
R3	65	65
R4	70	75
R5	65	75
R6	65	70
R7	80	80
R8	65	75
R9	65	70
R10	75	80
R11	60	75
R12	80	80
R13	70	80
R14	65	75
R15	70	70
R16	65	75
R17	65	65
R18	80	85
R19	70	80
R20	70	75
R21	60	70
R22	70	75
R23	60	70
R24	65	70
R25	65	75
R26	65	65
R27	75	80

R28	70	75
R29	75	80
R30	65	65
R31	80	80
R32	60	75
R33	70	75
R34	65	65
R35	60	70
R36	70	80
R37	60	70
R38	70	75
R39	70	80
R40	65	70
<b>Total</b>	<b>2730</b>	<b>2970</b>
<b>Average</b>	<b>68,25</b>	<b>74,25</b>
<b>Percentage</b>	<b>6%</b>	

Based on the results of the assessment process, it was found that after using the flipped learning model with animated video media, students achieved test results that were 6% higher than their initial test results. The following is the level of student satisfaction with the developed product:

**Table 8.** Student Satisfaction Result

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	
<b>S1</b>	4	4	4	3	3	4	5	3	5	4	<b>39</b>
<b>S2</b>	3	4	4	4	3	4	4	4	5	3	<b>38</b>
<b>S3</b>	3	3	4	4	4	3	4	4	3	5	<b>37</b>
<b>S4</b>	3	4	4	4	4	5	5	4	4	3	<b>40</b>
<b>S5</b>	4	3	4	5	4	4	4	4	4	4	<b>40</b>
<b>S6</b>	3	4	4	3	4	4	4	4	4	4	<b>38</b>
<b>S7</b>	4	4	4	3	3	3	3	3	3	3	<b>33</b>
<b>S8</b>	4	5	4	4	4	4	4	4	4	4	<b>41</b>
<b>S9</b>	3	3	4	3	4	4	4	4	4	4	<b>37</b>
<b>S10</b>	4	4	4	4	4	4	4	4	4	4	<b>40</b>
<b>S11</b>	3	2	4	3	3	3	3	3	3	3	<b>30</b>
<b>S12</b>	3	3	4	4	3	3	3	2	4	3	<b>32</b>
<b>S13</b>	2	2	3	3	4	4	4	2	4	4	<b>32</b>
<b>S14</b>	1	1	2	3	3	3	3	3	4	4	<b>27</b>
<b>S15</b>	3	4	3	4	3	4	4	4	4	3	<b>36</b>
<b>S16</b>	4	3	3	4	5	5	5	4	5	3	<b>41</b>
<b>S17</b>	3	4	4	4	5	3	4	4	3	4	<b>38</b>
<b>S18</b>	1	1	1	3	3	3	3	3	4	3	<b>25</b>
<b>S19</b>	4	3	3	4	3	4	3	3	3	3	<b>33</b>
<b>S20</b>	3	3	4	4	3	2	4	3	3	4	<b>33</b>
<b>S21</b>	4	4	4	4	4	4	4	4	4	4	<b>40</b>
<b>S22</b>	3	2	4	4	4	3	3	3	4	4	<b>34</b>
<b>S23</b>	4	4	4	5	5	4	5	5	5	4	<b>45</b>

S24	4	3	4	4	4	4	4	4	4	4	39
S25	3	4	4	4	4	4	4	4	4	4	39
S26	5	5	5	5	5	5	5	5	5	5	50
S27	4	4	4	4	4	4	4	4	4	4	40
S28	4	4	4	4	4	4	4	4	4	4	40
S29	4	4	3	3	3	3	4	4	3	4	35
S30	3	2	2	4	3	3	3	3	4	4	31
S31	1	1	2	3	4	4	4	3	5	4	31
S32	4	4	4	4	4	4	4	4	4	4	40
S33	4	3	3	5	5	5	5	3	4	3	40
S34	2	2	2	4	4	4	4	4	4	4	34
S35	5	5	5	5	4	4	4	4	4	4	44
S36	4	5	4	4	4	4	4	3	4	3	39
S37	5	4	4	4	4	4	4	2	4	4	39
S38	3	3	4	4	4	5	4	3	3	4	37
S39	2	3	3	3	3	3	3	3	4	4	31
S40	4	4	4	4	3	3	4	5	4	4	39
<b>Total</b>	<b>134</b>	<b>134</b>	<b>144</b>	<b>154</b>	<b>151</b>	<b>151</b>	<b>157</b>	<b>143</b>	<b>158</b>	<b>151</b>	<b>1477</b>
<b>Percentage: 73,85%</b>											

### Evaluation

At this stage, researchers conduct evaluative activities to assess the effectiveness of the developed product in meeting learning objectives, which is determined through research stages such as expert validation, post-test results, and student responses to the developed product. The feedback obtained from this process is analyzed in depth and comprehensively to identify aspects that need improvement. Based on the results of this analysis, researchers make relevant improvements to ensure that the developed product contains accurate information and is able to provide a calming and engaging learning experience tailored to students' needs.

### Discussion

Consistently, this study shows that the use of flexible teaching models accompanied by engaging media can influence student success in the teaching and learning process. The development of this teaching model is designed to support the English language learning process with a focus on speaking skills. The use of the flipped learning model and animated videos as learning media is an effective combination in the digital age. Access to learning videos is easier, and the flexible teaching model can be accessed anytime and anywhere. Additionally, students can indirectly develop other skills such as listening and writing.

Researchers followed the Borg and Gall model in the development process, as this model is known to produce products or models with high validity through a series of field tests and expert validation. In addition, this model encourages continuous product innovation, resulting in products that are up-to-date and in accordance with the demands of the times.

In this study, the researchers simplified the Borg and Gall model into eight steps, due to the small scale of the study. In the initial stage, literature studies and field analyses were conducted to identify student problems and needs. The results showed that students had difficulty in

speaking skills due to limited learning time and lack of interesting learning media. The second stage is planning, where researchers develop learning objectives, teaching models, materials, and initial design of media developed according to student needs. In the third stage, researchers innovate and develop flipped learning strategies as a teaching model, and animated videos as learning media which in the process includes making materials, scripts, video flow, and elements that support the learning process. The fourth stage is expert validation; this stage aims to ensure the quality and feasibility of the media before being implemented to students. The results of this stage show 80% instrument validation, 88% media validation, and 98% material validation which shows it is in the “very valid” category. In the fifth stage, researchers made initial revisions related to input and suggestions from validators for product improvement. Next, researchers combined the sixth and seventh stages because this research was small-scale. At this stage, researchers implemented the product in the classroom, where researchers conducted tests before implementing the product (pre-test) and after implementing the product (post-test). The results of this stage showed that 6% experienced an increase in grades. Then the researchers gave questionnaires to students to assess their response to the learning model and learning media. The last stage is the preparation of the final product. This product has gone through several stages of validation, trial and revision which resulted in this product being suitable for use in the learning process. This study is in line with previous studies related to the effectiveness of the flipped learning model and animated videos in developing speaking skills. According to (Julinar & Yusuf, 2019), the flipped learning model allows students to have more time for practice and interaction in the classroom and increases student engagement in productive development such as improving speaking skills. Additionally, (Mariam, 2021) also explains that the implementation of the flipped learning model in the classroom can foster student independence in learning with flexible learning times, both offline and online, and learning materials can be accessed anywhere and anytime. The use of animated videos as a learning medium is supported by (Mayer, 2009), who states that presenting visual and audio channels simultaneously enhances students' understanding and learning retention. This theory is reinforced by the positive responses of 73.85% of students (feasible) and a 6% increase in students' pre-test and post-test results. Additionally, the combination of the flipped learning model and animated videos is an appropriate integration of technology, pedagogy, and content and is in line with the TPACK (Technological Pedagogical Content Knowledge) framework proposed by (Koehler et al., 2013).

## CONCLUSION

Based on the results of the study, it can be concluded that the flipped learning model and animated videos as learning media are proven to be valid and effective as a means of teaching speaking skills in high schools. Through the stages of analysis and observation, design, development, implementation, and evaluation, it was demonstrated that the developed product is valid and successful in meeting the characteristics of an effective learning medium, achieving a high level of validity as assessed by experts. The 6% increase in post-test results serves as a strong indicator that the developed media is effective in supporting the development of speaking skills among high school students. Additionally, student satisfaction with the developed media reached 73,85%, categorized as “feasible”. This indicates that the developed product is not only functional but also practical for use in classroom instruction.

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