

Developing Interactive Digital Comic Media for Teaching Speaking Skills in Elementary School

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Abstract: *Mastering English at an early stage is considered crucial in equipping younger generations to face international competition. Among the four essential language abilities, speaking is regarded as the most fundamental and therefore requires consistent and structured development. Nevertheless, the oral proficiency of Indonesian elementary school learners remains relatively low, creating a demand for more engaging and innovative teaching strategies. This research was conducted to design interactive learning resources in the form of a digital comic, intended to support fifth-grade pupils in studying English as a second language (ESL). The study adopted a research and development (R&D) framework to construct instructional media that are tangible, visually oriented, and aligned with the developmental characteristics of children in their early learning stages. The validation process yielded a mean score of 3.7 out of 4, which fell into the “very good” category. Moreover, effectiveness for the concern and the result was investigated by comparing pre-test and post-test differences, yielding an N-Gain score of 0.87, which is classified as “high.” These results prove that the interactive digital comic not only is user-friendly but is also effective in developing students' speaking skills. The implications extend beyond classroom practice, where teachers can utilize the media as an engaging instructional resource. Additionally, curriculum developers may consider the findings as input in designing syllabi that integrate interactive media, while educational media producers can adopt the principles demonstrated in this study to create child-friendly learning content that supports language acquisition.*

Keywords: *speaking skill; speaking strategy; comic; elementary*

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INTRODUCTION

English proficiency is an essential skill in the era of globalization. The language is widely used across various domains such as education, technology, economics, and social interaction. The EF English Proficiency Index (EF, 2023) reports that Indonesia ranks 80th out of 116 countries with an average score of 468, indicating that the English proficiency of Indonesian society remains relatively low. Yet, mastering English, particularly speaking skills, is a crucial foundation for global communication and an important component of professional competence in the future (Laila et al., 2023; Marisah & Robiasih dalam Yaniafari et al., 2023; Andriani et al., 2025). Therefore, speaking skills need to be cultivated from an early age through elementary education as the primary foundation for language development.

In reality, however, elementary students' English-speaking skills remain far from optimal. Even simple materials such as the introduction of body parts, which should be easily understood, are still difficult for some students to master. This challenge may be attributed to the limited availability of engaging learning media that suit the characteristics of young learners. At this golden stage of development, children possess a high potential to acquire fluency in a new language if they receive sufficient exposure (Harmer in Bravo & Cisterna, 2020). This fact illustrates a gap between the ideal condition and the actual situation in the field.

Previous studies have emphasized that English learning media in elementary schools remain dominated by printed materials, which are often less interactive and fail to fully capture students' attention. Children tend to learn more effectively through visual, concrete, and interactive media (Widayanti, 2013; Sudrajat & Hani, 2022; soliyev Y, 2024). Other research also demonstrates that the use of interactive activities, games, stories, songs, and visual media can increase student engagement (Genishi & Dyson in Taula'bi', 2022; Scott & Ytreberg in Aslamiah, 2022). In line with this, the integration of technology into learning has become a 21st-century imperative, as teachers need to master digital competencies to deliver relevant instruction (Carretero et al., 2017; Gunawan et al. in Nurzaman et al., 2020; Fraillon et al., 2020; Lohr et al., 2024). Nevertheless, most available comics are still print-based, lacking digital interactivity, and have not been explicitly designed to stimulate speaking skills. This gap underscores the need for further research.

Against this background, this study was conducted to develop an interactive digital comic tailored to the characteristics of elementary students and effective in enhancing their English-speaking skills. The objectives of the research are: (1) to design and develop interactive digital comic media that support the speaking skills of fifth-grade elementary

students, and (2) to examine the impact of the developed medium on students' speaking performance. Employing a research and development (R&D) approach, this study is expected to contribute to the innovation of English learning media that are not only engaging and interactive but also effective in fostering students' oral communication skills in a meaningful way.

LITERATURE REVIEW

Interactive Learning Media

Interactive learning media are designed to stimulate students through direct engagement with the presented content. Such media enable learners to respond to the stimuli provided, thereby creating interactivity between students and the learning materia (Asril, 2022). Its primary function is to serve as an informational bridge between teachers and students. Several studies have demonstrated that interactive media exert a positive influence on learning outcomes, including improvements in digital literacy, adaptation to the digital era, readiness to meet 21st-century educational demands, conceptual understanding, academic achievement, and critical thinking skills (Putra & Salsabila, 2021). Accordingly, interactive media hold considerable potential for enhancing the overall quality of education.

Learning Theory

Constructivism, an educational perspective deriving heavily from the theories of Piaget and Vygotsky, sees students as active builders of knowledge through meaningful experiences and interactions with their environments (Fosnot & Perry in Apoko & Waluyo, 2025). In language learning, such meaningful language development is achieved through real-life activities (Vygotsky & Cole, 1978). One such emphasis of the approach is on the active involvement of all students in and with the learning process in order to create more meaningful experiences. Constructivist theory lays the logical foundation that suggests learners achieve deeper comprehension when using interactive media, as they are able to investigate, try out, and build their own knowledge through direct engagement with the subject matter.

Digital Comic

A digital comic refers to an electronic form of visual storytelling that delivers a narrative through a series of illustrated frames. As a branch of animated art, comics not only serve as a source of amusement but also function as a medium to communicate messages using sequential imagery (Riwanto & Wulandari in Suprpto et al., 2024). This medium has

great potential to be applied effectively in interactive learning activities. Moreover, comics are understood as meaning-making tools that can foster curiosity and enjoyment in the learning process (Bahl, 2015). In addition, comics are considered capable of capturing and representing individuals within their social contexts (Doherty in Bertella & Tomassini, 2024). Thus, digital comics function not only as a medium of information delivery but also as a means of providing imaginative and contextual learning experiences.

Speaking Skill

Speaking skill serves as the primary means of communication and is inseparable from social life. Through speaking, individuals can express ideas, opinions, and emotions across various situations (Agung in Aufa et al., 2020). Therefore, speaking becomes an essential competence that learners must master. Speaking techniques are classified into seven categories: fluency (rhythm, intonation, and clarity), strategies for maintaining interaction, focus on grammatical accuracy, message modification, the use of non-verbal indicators, strategies of message avoidance, and thinking in English to improve fluency (Nakatani in Kameswara et al., 2023). The benchmarks of oral proficiency encompass smoothness, precise word choice, grammatical arrangement, vocal rhythm, and expressive delivery (Permana, 2015). In order to attain such standards, learners must acquire strong command of word stock, linguistic rules, sound articulation, verbal flow, and message clarity. Therefore, the ability to speak is not merely significant in academic learning, but also becomes a key factor influencing how students engage and communicate successfully in social settings.

METHOD

This research was carried out in a public elementary school in Indonesia, involving 21 fifth-grade students who consistently participated throughout the study. The project extended over five months, from January to May 2025, and was situated within the school's formal learning environment. The methodological design adopted was Research and Development (R&D), aimed at producing a specific educational medium. In particular, the study employed the Borg & Gall, (1983) model, which delineates ten consecutive phases: collecting preliminary information, planning, constructing an initial prototype, conducting early trials, revising the primary draft, implementing broader field testing, modifying the operational version, executing operational testing, refining the final product, and finally disseminating and applying the outcomes. Within the scope of this research, focus was directed toward the processes of data gathering, media creation, expert assessment,

classroom implementation, and product refinement to guarantee that the developed digital comic was both viable and effective for teaching English oral communication skills.

The process of development commenced with a needs assessment carried out through classroom observations, interviews, and direct evaluations of both students' and teachers' requirements in relation to English oral proficiency. The preliminary prototype was designed around the theme *Parts of the Body*, tailored to align with the learning characteristics of elementary school children. In the digital comic, three main characters—Mika, Nino, and Grandma Lily—were introduced through colorful illustrations, simple dialogues, and an engaging storyline. A notable innovation integrated into this medium was the inclusion of audio support, allowing learners to listen to and imitate correct pronunciation directly from the narrative. This feature was considered crucial, as previous studies (Musfiroh, 2018; Damayanti et al., 2021; Wahid et al., 2021; Susanti, 2023) repeatedly demonstrated that digital comics could improve learners' storytelling ability, classroom engagement, and speaking confidence, but often lacked direct tools to promote pronunciation accuracy. Therefore, this product was specifically developed to address that gap by combining strong visual appeal with auditory reinforcement.

Before the product was ready to be used in class, it was first checked by a group of experts to make sure it actually worked well and made sense for students. These experts came from different areas—some focused on the content, others on media, and some on language. They went through the product carefully, looking at whether it was accurate, practical, easy to follow, clear to read, and visually appealing. Their feedback then became the main reference point for improving the product, so that the design, the material, and the style of language really matched what teachers and students would need in the classroom. On top of that, the researcher also talked directly with teachers and several students through structured interviews. This step was important to hear real experiences from the classroom—like how the product fit into the curriculum, how well the students were handling English, and what kinds of challenges usually came up during lessons.

To collect the data, I didn't just rely on one method. The process involved watching the class directly, having structured chats with teachers and students, handing out questionnaires, and also giving tests to see how well the learners were doing. Observations were conducted in an unstructured manner to capture natural dynamics in the classroom, including teacher–student interactions, teaching strategies, and the use of learning media. Interviews with English teachers and students were structured using a protocol to elicit information about the curriculum, minimum mastery criteria, learning difficulties, and

instructional resources. Questionnaires were administered particularly for validation, where experts and teachers provided ratings of the product using a four-point scale.

The classification for expert and teacher validation is shown below:

Table 1.
Expert and Teacher Validation Requirements

Average Skor	Category Classification
$3,25 \leq \bar{x} \leq 4,00$	Very Good
$2,50 \leq \bar{x} \leq 3,25$	Good
$1,75 \leq \bar{x} \leq 2,50$	Less
$1,00 \leq \bar{x} \leq 1,75$	Very Poor

To measure students' speaking performance, pre-tests and post-tests were conducted focusing on vocabulary mastery, pronunciation, fluency, confidence, sentence structure, and speaking interaction. The assessment rubric is shown below:

Table 2.
Product Assessment Sheet Grids by Students

No.	Indicator	Criteria	Score 1-4
1.	Vocabulary	Students are able to mention Part of Body vocabulary.	
2.	Pronunciation	Students pronounce the vocabulary with the correct pronunciation.	
3.	Fluency	Students speak without hesitation.	
4.	Confidence	Students speak confidently without fear and embarrassment.	
5.	Sentence Structure	Students are able to use simple sentence structure correctly.	
6.	Speaking Interaction	Students are able to answer or respond to others.	
Amount			
$N - Gain = \frac{score\ posttest - score\ pre - test}{score\ ideal - score\ pre - test}$			
Description:			
4: Very Good			
3: Good			
2: Less			
1: Very Poor			

To further analyze the effectiveness of the developed media, the N-Gain score was calculated. The classification for this analysis is presented in Table 3.

Table 3.
N-Gain Category Classification

No.	N-Gain Score	Category
1.	$(<g>) > 0,7$	High
2.	$0,7 > (<g>) > 0,3$	Medium
3.	$(<g>) < 0,3$	Low

The product underwent iterative refinement through expert validation, revisions, and field testing. During the classroom trial, students used the digital comic in real learning situations, and their performance outcomes as well as teachers' feedback were collected. These data guided further revisions until the product reached its final form. The final version of the product brought together fun stories, interactive features, and built-in audio support, turning it into a complete learning tool. With this mix, students could pick up new vocabulary, practice correct pronunciation, and get more fluent in speaking, all while enjoying a format that felt engaging and perfectly suited to their age.

RESULTS AND DISCUSSION

Results

This research and development project came up with an interactive English learning tool, built especially to help elementary school kids get better at speaking. The product is a digital comic that doesn't just get students talking, but also comes with audio features so they can hear real examples of how words and phrases are actually pronounced in conversation. Students are encouraged to copy how the characters speak, which helps them get used to saying things with the right pronunciation and natural intonation. To push them to be more independent, some of the dialogues are purposely left blank so they can try creating their own sentences. With this approach, kids aren't just passively taking in information—they're actively building knowledge while having fun with the story.

Using digital comics gives learners a unique way to strengthen important parts of speaking skills in a way that's often more effective than traditional methods. Fluency becomes the main focus, since students are guided to speak more spontaneously and with less hesitation. At the same time, repeatedly seeing and hearing vocabulary in real contexts makes their word choice more accurate. The comic also reinforces grammar patterns, which helps students absorb sentence structures that sound closer to real-life conversations. On top of that, the audio feature helps them tune their speech to sound more natural, and the character illustrations give extra cues for expressions and social context. Altogether, these different elements combine to improve students' speaking abilities in a more interactive and communicative way. Beyond just language learning, the comic also sparks imagination and creativity, making it not only a teaching tool but also a source of motivation that keeps students engaged.

The next section shows instances of the interactive digital comic medium deployed in skill instruction for speaking.



Figure 1. Comic Cover

The picture shows the cover of an interactive digital comic book titled “The Mystery Behind the Old Door”. The design emphasizes visual appeal by featuring the two main characters positioned in front of a mysterious door, depicted with expressions of curiosity that invite readers into the storyline. The title is rendered in a striking combination of yellow and red, strategically chosen to capture attention, particularly that of young learners. As the first visual element encountered, the cover functions not only as an introduction to the comic but also as an important means of stimulating interest and engagement before readers begin exploring the narrative



Figure 2. Comic Figure "Read to Me"

This image illustrates a special feature in the interactive digital comic, namely *Read to Me*. Through this feature, the application is able to automatically read the comic's content aloud. It is particularly useful for children who are not yet fluent in reading English or are unfamiliar with the correct pronunciation of words. In addition to fostering students' interest in reading, this feature also supports the development of speaking skills, especially by strengthening listening abilities and providing opportunities to imitate accurate word pronunciation.



Figure 3. Reading Display

The picture shows the display screen for reading the digital comic. This offers users the option of either the single-page display, whereby one page is fully presented to the user, or the side-by-side display, which presents two pages simultaneously. This is intended to allow maximum flexibility and convenience in the reading experience. A one-page viewing mode enables readers to explore the material on a single sheet in greater detail, while the dual-page layout recreates the sensation of flipping through a printed comic, thereby enhancing its attractiveness to users.

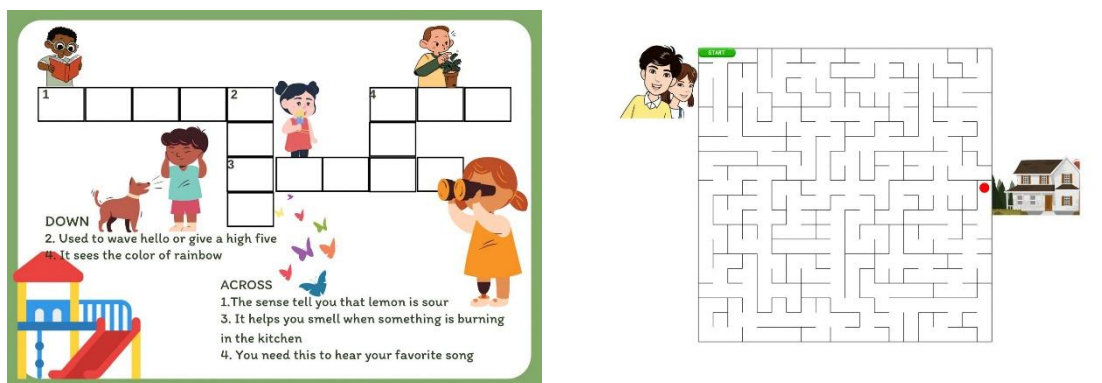


Figure 4. Activities Page

Adding fun learning games like maze challenges and crossword puzzles makes the whole “learning through play” idea way more exciting in this medium. Mazes help kids train their logic and concentration, while crosswords give them a playful yet effective way to pick up and strengthen new vocabulary. Combined with bright, colorful pictures, these simple

activities turn into engaging tools that keep students motivated and interested throughout the learning process.

One of the biggest takeaways from this study is that interactive digital comics really do make a difference in helping fifth graders practice their English speaking. Not only are they practical for everyday classroom use, but they also show strong potential as a main tool for teaching language at the elementary level. This medium supports a student-centered approach, letting kids practice speaking while also having fun with stories that are lively, interactive, and easy to connect with.

Product Eligibility Validation Result

In the end, a research team was put together to check how good and practical the media really was. They did this by handing out validation questionnaires to a group of selected experts. For the review process, three different kinds of specialists were brought in to give their assessments. The first was media, who have assessed the interactive digital comic in all its aspects, including its effectiveness in conveying the material, its relevance in improving students' speaking skills, and other significant components providing this medium in language learning.

Table 4.

Percentage of Assessment Result on Design Product Eligibility Aspect

No	Assessment components	Score	Criteria
1	Efficiency	3,7	Very Good
2	Effectiveness	3,7	Very Good
3	Display	3,7	Very Good
Average			Very Good

The assessment results on the design product eligibility aspect are presented in Table 4. The findings show that the product design obtained a score of 3.7 in all three components assessed efficiency, effectiveness, and display each categorized as "Very Good." This indicates that the product design is efficient in its use, effective in supporting the intended learning objectives, and attractive in its visual presentation. The cumulative mean score of 3.7, which falls under the "Very Good" classification, indicates that the designed product is suitable and viable for application as an instructional tool.

Based on suggestions from the media specialist, several revisions were implemented, one of which related to the visual layout. The positioning on the left side was improved to guarantee accessibility both for individuals with standard eyesight and for those relying on corrective lenses.



Figure 5. Chat Bubbles Before and After Validation

The instructional medium proved to be notably effective, as specialists highlighted that its design enabled students to learn without excessive obstacles. Moreover, the organized framework and repeated exposure were considered far more beneficial in reinforcing the learning process than hindering it. This synergy ensured that learners not only acquired knowledge through the activities but also increased their involvement, which in turn fostered advancements in their spoken English abilities. The arrangement, color schemes, character designs, and general functionalities of the media were assessed as very good, declaring a high factor of appeal from the visual standpoint as well as didactic suitability in the context of classroom use.

Besides endorsement from a media expert, the research team sought the view of a subject-matter expert who appraised the accuracy and relevance of the interactive digital comic's textual content. The tasks of the content expert were to determine if the content was appropriate for the students' level and the curriculum standards, to assess the extent in which the content was detailed to achieve the learning objectives, and to evaluate the accuracy of English language content used in the comic.

Table 5.
Percentage of Assessment Result on Material Eligibility Aspect

No	Assessment components	Score	Criteria
1	Suitability of material	3,7	Very Good
2	Depth of material	3,7	Very Good
3	Accuracy of material	3,7	Very Good
Average			Very Good

The results of the assessment on the material eligibility aspect are presented in Table 5. The table shows that all three components assessed namely the suitability of material, depth of material, and accuracy of material obtained the same score of 3.7, which falls into the "Very Good" category. This indicates that the material developed is already considered appropriate in terms of its alignment with learning objectives, sufficiently deep to support

students' understanding, and accurate in terms of content validity. The average score of 3.7 further confirms that the material as a whole meets high eligibility standards and is ready to be implemented in the learning process.

Qualitative evaluation completed during the validation tests confirmed that findings of the materials expert were consistently rated with very good impressions. Against the relevance of the subject to the material, very good was the mark, meaning that it is equally appropriate for integration into fifth-grade social sciences textbooks and curricula. The expert mentioned that the comic introduced essential vocabulary from practically beneath the surface, providing room for students to practice target language use in social and academic situations throughout the "Parts of the Body" unit.

Furthermore, cartoon-based dialogues were considered appropriate by the language experts within the digital comic. Their assessment relied on three principal factors: appropriateness of language, clarity and readability, and overall student interest. These criteria were regarded as essential in safeguarding the linguistic integrity of the material, since language functions to deliver error-free content that remains accessible to a broad spectrum of readers, including those relying on visual representations. Additionally, attention was directed toward maintaining the appropriate level of linguistic difficulty in accordance with students' proficiency. In other words, the complexity of the language was not to surpass the interpretive ability typically expected of an eighth-grade learner, such as managing varied punctuation and diverse sentence structures. For purposes of refinement, several minor adjustments were applied across the comic.

Linguistic specialists further recommended incorporating certain expressions commonly employed by native speakers, so that learners could encounter informal patterns that authentically represent natural communication in daily interactions.



Figure 6. Comic Conversation
The author wrote "watch out" instead of "be careful."

Table 6.

Percentage of Assessment Result on Language Eligibility Aspect

No	Assessment components	Score	Criteria
1	Language Appropriateness	3,7	Very Good
2	Clarity and Readability	3,7	Very Good
3	Language Appeal	3,7	Very Good
Average			Very Good

The findings of the evaluation concerning the linguistic feasibility dimension are displayed in Table 6. The three measured elements—namely suitability of language, comprehensibility and readability, as well as linguistic attractiveness—each achieved a score of 3.7, categorized as “Very Good.” These outcomes demonstrate that the wording employed within the product aligns with the learning context, is straightforward to grasp, and is delivered in a manner that captivates students. The cumulative mean score of 3.7 in the “Very Good” range further confirms that the language component of the product satisfies eligibility standards and effectively facilitates the communication of instructional content.

The experts validated that the English used was appropriate for the target age group regarding sentences being simple but effective and well-suited to the learners' proficiency. The linguistic quality may be regarded as outstanding, characterized by straightforward and comprehensible dialogues as well as instructions that support the growth of learners' oral fluency. Moreover, the comic received a “Very Good” rating for employing an appealing language style that merges simplicity with an energetic tone, thereby maintaining students' focus and encouraging their active participation in speaking practices.

In addition to the specialists, a classroom instructor also assessed the interactive digital comic to determine its practicality and relevance within a real teaching environment. The evaluation was done using a standard rubric that covered three aspects-integration of media, language, and content, with a number of measurable indicators rated on a scale ranging from Very Poor (1) to Very Good (4). The teacher's appraisal dealt with issues concerning visual quality, ease of handling for students and teachers, interactivity to engage students' attention, and design fit for the target age group. All indicators received a grade of Very Good; the teacher specifically noted that the medium is nice to look at, easy to use, and very accessible to young learners. The interactive features were especially powerful in inciting students' motivation and participation in classroom activities.

The textual components were also studied by the teacher, looking at clarity, appropriateness, and accuracy. Overall, the rating is Very Good, as the text was simple, clear, and appropriate for fifth-grade readers. The teacher noted just some minor misspellings and no grammatical issues, emphasizing that the linguistic design invites mutual understanding and communicative practice.

The instructor gave highly appreciative feedback on the content. The comic was found fitting very well within the core competencies and learning objectives of the curriculum. It was said that it could improve their speaking skills in realistic usages embedded in contexts related to their daily lives. There were also painting/illustration as pedagogically effective features to help students connect abstract knowledge with concrete experiences they can relate to.

Table 7.
Teacher and Student Assessment of the Product

No	Assessment components	Score	Criteria
1	Suitability of Material	3,7	Very Good
2	Depth of Material	3,7	Very Good
3	Accuracy of Material	3,7	Very Good
Average			Very Good

The results of the teacher and student assessment of the product are shown in Table 7. The findings indicate that the product gained a score of 3.7 in all three components assessed suitability of material, depth of material, and accuracy of material. Each score falls into the “Very Good” category. This suggests that both teachers and students perceived the material as appropriate to the learning objectives, sufficiently deep to foster understanding, and accurate in terms of content reliability. The aggregate mean score of 3.7, categorized as “Very Good,” reflects that the product is regarded as highly practical and positively received by its intended users. This outcome indicates that the medium is suitable for classroom integration and holds substantial instructional value. It offers an engaging and purposeful learning experience, enabling students to acquire English in a manner that is both enjoyable and educationally beneficial.

Product Effectiveness Validation Result

To ascertain the effectiveness of the interactive digital comic, the researchers administered tests on students prior to and after the digital comic's implementation. This would make for a measurable improvement of some dimension of students' spoken English proficiency. Attention was given to six specific speaking performance areas in assessment, namely: vocabulary, pronunciation, confidence, interactional engagement, comprehension of the material, and sentence organization. All these were looked into during the pre-test evaluation as well as the post-test evaluation, to ascertain the impact of the medium on learners' oral skills.

Table 8.
Student Effectiveness Assessment Sheet Grid

No.	Name	Pre-Test						Post-Test					
		Vocabulary	Pronunciation	Confidence	Speaking Interaction	Sentence Structure	Content Understanding	Vocabulary	Pronunciation	Confidence	Speaking Interaction	Sentence Structure	Content Understanding
1.	ADD	1	1	1	1	1	1	3	2	3	3	3	3
2.	AN	1	2	1	1	2	1	4	3	4	4	3	4
3.	AAP	2	1	2	2	1	1	4	3	4	4	4	4
4.	AKS	3	2	1	3	2	2	4	4	4	4	4	4
5.	AJR	2	1	2	1	1	1	4	3	4	4	3	4
6.	CC	2	1	1	2	2	1	4	3	4	4	4	4
7.	FP	2	1	1	2	1	2	4	2	3	4	3	4
8.	HAF	2	1	1	2	1	2	4	3	4	4	3	4
9.	HKA	3	2	2	2	2	2	4	4	4	4	3	4
10.	JRL	2	2	1	1	1	1	4	2	4	4	4	4
11.	KRF	2	1	2	3	2	2	4	4	4	4	3	3
12.	MNAG	2	2	1	2	1	1	4	2	4	3	3	4
13.	MIA	2	1	1	2	1	1	4	3	4	4	3	4
14.	MR	2	1	1	2	1	2	4	3	4	4	3	4
15.	NS	2	1	2	1	1	1	4	2	4	2	2	3
16.	NNA	1	2	1	2	1	1	4	3	4	4	3	2
17.	PRE	2	1	1	1	1	1	3	2	3	4	3	4
18.	RAF	2	2	2	2	1	2	4	4	4	3	3	3
19.	RSR	2	1	1	1	1	1	3	2	3	4	3	4
20.	SAF	1	1	2	1	1	1	4	3	4	4	2	3
21.	ZAR	1	2	2	1	1	1	4	3	4	4	3	4
Average		2	1	1	2	1	1	4	3	4	4	3	4
Amount		8						22					

The results of the student effectiveness assessment are presented in Table 8. The data show that students' performance in all six indicators vocabulary, pronunciation, confidence, speaking interaction, sentence structure, and content understanding significantly improved from the pre-test to the post-test. In the pre-test, most students only reached scores between 1 and 2, which indicates very low mastery. However, in the post-test, the average score for each indicator increased to 3 or 4, categorized as "Good" to "Very Good." This improvement demonstrates that the use of the developed product had a positive impact on students' English speaking skills, not only in terms of linguistic aspects (vocabulary and pronunciation) but also in communicative competence (confidence and interaction).

Therefore, the product can be considered effective in enhancing students' speaking performance.

Across the board, significant improvements surfaced in almost all aspects of speaking skills, as indicated by the test result. Overall, the average pre-test score of all components stood at 8, while the average scores for the post-test jumped to such levels as 22. Therefore, this enormous jump evidently shows that the media developed have indeed aided students in improving their proficiency in oracy.

To evaluate performance in greater depth, the N-Gain index was computed. Basically, this formula was used to see how much progress students made from the pre-test to the post-test compared to the maximum score they could possibly get. The analysis showed that the N-Gain result landed in the "high" category, as shown in Table 9. In simple terms, any N-Gain score above 0.7 counts as high—and the results of this study successfully reached that level.

Table 9.

Result of Students Effectiveness Assessment

No	Assessment components	Pre-Test	Post-Test
1	Vocabulary	2	4
2	Pronunciation	1	3
3	Confidence	1	4
4	Speaking Interaction	2	4
5	Sentence Structure	1	3
6	Content Understanding	1	4
Amount		8	22

$$N - Gain = \frac{22-8}{24-8}$$

$$N - Gain = \frac{14}{16}$$

$$N - Gain = 0,87 \text{ (high)}$$

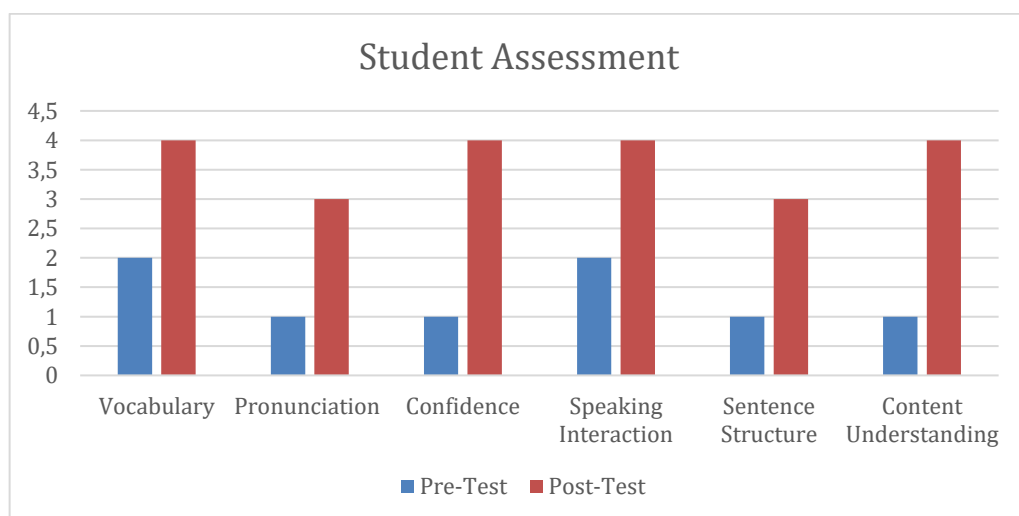


Figure 7. Students Effectiveness Assessment

The results strongly back up the idea that the interactive digital comic created in this study works really well as a tool to boost students' English speaking skills. Big improvements could be seen in areas like vocabulary, correct pronunciation, and confidence when communicating. These gains show that interactive media like this has real potential to support language learning in a way that's fun, engaging, and focused on the students themselves.

Discussion

The present study found that the design of interactive digital comics effectively improved the speaking skills of fifth graders. These results carry both theoretical and practical implications for language learning. Theoretically, the effectiveness of this medium aligns with constructivist approaches, which emphasize that children learn most effectively when they are actively engaged with meaningful content (Fosnot & Perry, 2023; Vygotsky & Cole, 1978). Through its interactive features, students not only received information passively but also participated in conversations, made decisions within the storyline, and practiced speaking in contexts resembling real-life situations.

The field findings reinforced these theoretical perspectives. Observations revealed that students were more responsive to teacher instructions, engaged in dialogues using simple English expressions, and demonstrated enthusiasm when asked to continue conversations based on the comic's storyline. Some students, who did not attempt to utter any words before, started trying to pronounce vocabulary words related to body parts more accurately. This was evident from the observation notes showing that, in the pre-test, most students scored only 1–2 in vocabulary and pronunciation, but after the intervention their scores increased to 3–4, categorized as "Good" to "Very Good." Teacher comments during interviews confirmed that visualization and storyline made understanding the context of language easier for students. One teacher explicitly stated that students who previously avoided speaking began to "dare to try" because the images and stories gave them clues to use the right expressions. This finding is in support of Genishi and Dyson cited in Taula'bi', (2022), who cited collaboration, telling stories, and using visuals as very important to children's learning.

Not only could it enhance their speaking skills, but the questionnaire's results also revealed that most students became more confident in speaking English after using the interactive digital comic. They feel "less afraid of making mistakes" because this medium provides learning opportunities that are fun. For instance, 85% of the questionnaire responses indicated that students felt more confident to practice English aloud, which aligns

with observation data showing higher participation rates in class discussions. These findings line up with what Putra & Salsabila, (2021) pointed out, that using interactive media doesn't just help students understand concepts better, but also trains them to think more critically.

In this study, the fact that students were willing to speak up and share their ideas out loud can be seen as a sign that they were not only thinking critically but also actively engaging in communication. From a practical angle, there are a few important takeaways. Teachers mentioned that using the interactive digital comic didn't require any special training and could be slipped easily into daily lessons—a big plus for schools that don't have much time or fancy tech. The mix of multimedia and interactive features also made the kids more excited about the material. Another interesting finding was that the comic seemed to ease students' fear of speaking English. Some who usually stayed quiet actually started to give short answers, showing a shift toward a more positive attitude about learning the language. Even so, the study wasn't without its limits. It mainly looked at short-term results, so whether these improvements in speaking can last over the long run still needs to be explored.

To determine whether the advantages gained from the interactive digital comic can be sustained over time, additional longitudinal investigations are necessary. Another limitation identified in this research is its confinement to a single setting, which restricts the extent to which the results can be generalized. Future inquiries could also explore the use of this medium in schools with varied sociocultural contexts and integrate supplementary features, such as speech recognition tools, to deliver immediate feedback on pronunciation accuracy.

The main takeaway from this study is pretty clear: interactive digital comics can really help students get better at speaking while also making them feel more positive about learning English. For elementary schools—especially those with limited resources—this kind of approach opens up a fresh, new way of teaching languages. The findings here could serve as a solid stepping stone for wider use of digital learning media and encourage schools to move toward teaching methods that are more dynamic, hands-on, and centered around the students themselves.

CONCLUSION

It has been proved that the interactive digital comic media developed for teaching speaking skills to the students of the fifth grade of elementary school is effective. The final product has been validated and tested within the classroom practices by experts. Based on

the feedback from experts, teachers, and the students' own performance, the media developed in this study can be considered valid, practical, and effective. The interactive design and engaging visuals of the comic made students more curious and motivated, which in turn boosted their willingness to join speaking activities.

The findings clearly show that the digital comic works well as a learning tool. Experts confirmed its validity, teachers found it easy to apply in class, and students—who might usually hold back—started to take part more actively. They also felt more at ease when speaking. Test results strengthened these observations, showing noticeable improvements in areas like pronunciation, vocabulary, and speaking confidence. All of this highlights how powerful interactive comics can be in supporting English learning.

The success of this digital comic shows that modern, technology-based media can truly enhance the language learning experience, especially for younger learners who are studying English as a foreign language. This gives a bright outlook for the future of interactive comics in TESL, as they are proving to be increasingly useful in building children's speaking skills—something that today's curriculum is paying more and more attention to.

For future development, the product could be upgraded with advanced features like speech recognition, automatic feedback, or even links to online learning platforms. Long-term studies are also needed to check whether the positive effects last and to see how well the tool works across different educational settings. These findings underline the importance of expanding the use of multimedia innovations, especially in schools that don't have many resources. In the bigger picture, this study encourages a move away from old-fashioned, teacher-centered methods toward a more flexible, student-focused style of learning that's enriched by digital innovation.

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Appendix 1.

Global comments as written corrective feedback to the participants

universal problem in the teaching of English as a second language. ...
 Identify research gap
 ...
 According to the students, the strategies can be done inside or outside the classroom. From the researcher's observations of the ...

There are some relevant studies of High School Students' Strategies for Reducing Speaking Anxiety in EFL that related to this research. First study is conducted by Young (1990) this study is investigated students' perspective on anxiety and speaking in foreign and second language. To examine students' reaction to speaking skills, researchers develop four-page questionnaire to identify different activity, and speaking oriented of the students. Young (1990) took 135 students that enrolled in three first semesters Spanish universities students and 109 high school Spanish students enrolled in one first-year and three-second year Spanish classes in high school in Austin city. The results are students' level of anxiety may not reflect the level of anxiety experienced by students that less motivated, less enthusiastic, and less experienced teachers. Limitation of this study is the ability of the researchers to reduce anxiety is a factor in evaluating other teachers as "master."

The second study is about reasons Leading to FLSA that conducted by He (2018), this study is to investigate the major reasons leading to FLSA in China. This is quantitative study to employing statistical methods complemented with qualitative approaches. The researchers took 322 participants (302 students and 30 teachers). The data were collected by interviewing

CHAPTER II
LITERATURE REVIEW
2.1. Teacher Cognition
Teacher cognition, which is initially shaped by a teacher's schooling and professional experiences, refers to cognitive constructs such as knowledge, beliefs, and thoughts (Boag, 2003, 2013). Boag (2003) defines teacher's cognition as many general mainstream educational research on teacher cognition, language teacher cognition is here discussed with reference to three main themes: The first point is cognition and prior language learning experience, which defines early cognition as extensive experience in the classroom and shapes teachers' perceptions of initial training. The second point is cognition and teacher education, when professional coursework is unacknowledged these may limit its impact, therefore may affect existing cognitions. The third point is cognition and classroom practice,

CHAPTER I
INTRODUCTION
This chapter presents an overview of this research. It consists of a background of the research, identification of the problem, limitation of the problem, formulation of the problem, objective of the study and significance of the research.
1.1 Background of the Research
Code-mixing practice has been a common practice for language speakers in EFL context. According to Naitalon (1994), code mixing is the situation where the speakers mix the language or kind of language in a speech act without a situation or condition based a mixing of language. Holmes (1992) explained that code mixing is the use of two languages in a speaking. The employment of two or more languages inside speech is known as code-mixing. On a daily basis, code-mixing is a common occurrence in many communities and on informal media programs in many areas of the world, and some research on various elements of this has been undertaken in many parts of the world. Many people or communities use two languages in conversation, and this practice is inspired by the fact that people in modern societies are expected to know more than just one language (Wahyuni, 2017). In order to attain the best communication effect, the speaker then will mix the codes (Fauziah, A., & Ma'n, J. A. R. Z.,

Astri Hapsari, SS, ...
Perlu diperbaiki pemahaman mengenai competence dalam model communicative competence dan skills.
Untuk beragam terkait language skills dan communicative competence perlu mengutip sumber referensi yang dapat dipercaya.

Astri Hapsari, SS, ...
Tidak boleh disebutkan tempat penelitiannya

Astri Hapsari, SS, M.TESOL ...
metri ada penjelasan yang lebih detail mengenai three types of performance anxiety

Astri Hapsari, SS, M.PE...
komponen cognition stage yang dipakai?

Astri Hapsari, SS, M.TES...
Dari beragam definisi gigit kompres? kompres kognitif dan keterampilan. Rangkaian dipaparkan sampai komponen-komponennya.

Commented [A5F5M2]: Definisi? atau, inside

Commented [A5F5M2]: Cari referensi? atau, inside yang mendefinisikan code-mixing practice