



From Silence to Speaking Up: Students' Affective and Cognitive Exploration of Interactive Digital Media in EFL Speaking Learning

Dari Diam Menjadi Berani Berbicara: Eksplorasi Afektif dan Kognitif Mahasiswa terhadap Media Digital Interaktif dalam Pembelajaran Berbicara Bahasa Inggris sebagai Bahasa Asing (EFL)

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Abstract

This study aims to explore students' affective and cognitive experiences in learning EFL speaking through interactive digital media, focusing on their transformation from passive and anxious learners to more confident speakers. Using a qualitative method with a descriptive phenomenological design, the research was conducted in class XI IPA 2 at SMAN Paiton. Participants were selected purposively. Data were collected through semi-structured interviews, classroom observations, and documentation, and analyzed thematically. The findings indicate significant affective and cognitive changes. Students experienced reduced anxiety, increased motivation, and stronger self-confidence. Interactive digital media created a safer and more engaging learning environment. Cognitively, students showed improved comprehension, pronunciation awareness, idea development, fluency, and autonomous learning strategies. The study concludes that interactive digital media functions as both affective and cognitive mediation in EFL speaking instruction. It is recommended that teachers integrate digital tools systematically to support students' emotional readiness, active participation, and long-term communicative competence.

Kata Kunci:

Transformasi
Afektif;
Perkembangan
Kognitif;
Media Digital
Interaktif;
Berbicara EFL.

Abstrak

Penelitian ini bertujuan untuk mengeksplorasi pengalaman afektif dan kognitif siswa dalam pembelajaran berbicara bahasa Inggris sebagai bahasa asing (EFL) melalui media digital interaktif, dengan fokus pada transformasi mereka dari pembelajar yang pasif dan cemas menjadi penutur yang lebih percaya diri. Dengan menggunakan metode kualitatif berdesain fenomenologis deskriptif, penelitian ini dilakukan di kelas XI IPA 2 SMAN Paiton. Peserta dipilih secara purposif. Data dikumpulkan melalui wawancara semi-terstruktur, observasi kelas, dan dokumentasi, kemudian dianalisis secara tematis. Temuan menunjukkan adanya perubahan afektif dan kognitif yang signifikan. Siswa mengalami penurunan kecemasan, peningkatan motivasi, dan kepercayaan diri yang lebih kuat. Media digital interaktif menciptakan lingkungan belajar yang lebih aman dan lebih menarik. Secara kognitif, siswa menunjukkan peningkatan dalam pemahaman, kesadaran pengucapan, pengembangan gagasan, kefasihan, dan strategi belajar mandiri. Penelitian ini menyimpulkan

bahwa media digital interaktif berfungsi sebagai mediasi afektif dan kognitif dalam pengajaran berbicara bahasa Inggris sebagai bahasa asing (EFL). Disarankan agar guru mengintegrasikan alat digital secara sistematis untuk mendukung kesiapan emosional siswa, partisipasi aktif, dan kompetensi komunikatif jangka panjang.

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INRODUCTION

Background of the Problem

Speaking is one of the most essential language skills in English as a Foreign Language (EFL) learning because it enables learners to communicate ideas, opinions, and feelings effectively in authentic situations (Huy et al., 2024; Wang et al., 2024). Unlike receptive skills, speaking requires learners to integrate linguistic knowledge, cognitive processing, and affective readiness simultaneously (Portugal-Toro et al., 2025; Bhar, 2026). Consequently, speaking competence is widely regarded as one of the primary indicators of language proficiency and communicative competence in EFL contexts. In the era of globalization and digital communication, the ability to speak English has become increasingly important, not only for academic achievement but also for students' future educational and professional opportunities. Therefore, developing students' speaking skills has become a major objective of English language instruction in many countries where English is learned as a foreign language (Lee & Chiu, 2023).

Despite its importance, speaking remains one of the most difficult language skills for EFL learners to master. Numerous studies have reported that students often experience considerable difficulties when they are required to communicate orally in English classrooms (Ork et al., 2024). These difficulties are not merely linguistic but also involve affective and cognitive dimensions that influence speaking performance (Ma, 2022). Students frequently experience communication apprehension, fear of making mistakes, low self-confidence, and speaking anxiety, all of which discourage them from actively participating in classroom interactions (Diana et al., 2024). Such emotional barriers reduce learners' willingness to communicate and often result in passive classroom participation despite adequate knowledge of grammar and vocabulary.

From a cognitive perspective, EFL learners also encounter challenges related to limited vocabulary, insufficient grammatical competence, pronunciation difficulties, and problems organizing ideas during spontaneous communication (Chou, 2024). These cognitive constraints increase learners' mental workload while speaking because they must simultaneously retrieve vocabulary, construct grammatically acceptable sentences, organize ideas logically, and produce comprehensible pronunciation within a limited time. As a result, many students hesitate before speaking, produce fragmented utterances, or avoid oral participation altogether. Previous research has indicated that cognitive processing difficulties significantly influence learners' speaking performance and communicative effectiveness (Mao, 2022).

The affective dimension is equally important in speaking instruction. According to the affective perspective in second language acquisition, emotions such as anxiety, confidence, motivation, and self-efficacy substantially influence learners' language performance. Students with high speaking anxiety tend to avoid communication

opportunities even when they possess adequate linguistic competence (Quvanch et al., 2024). Conversely, students with greater confidence and positive emotional experiences demonstrate higher willingness to communicate and participate more actively during speaking activities (Lin & Wang, 2025). Therefore, successful speaking instruction requires teachers not only to develop linguistic competence but also to create supportive learning environments that reduce anxiety and promote positive emotional engagement (Dong et al., 2022).

The rapid development of educational technology has created new opportunities to address both affective and cognitive barriers in speaking instruction (Madhavi et al., 2023). Interactive digital media have become increasingly popular because they provide engaging, student-centered, and collaborative learning environments (Kerimbayev et al., 2023). Various digital platforms allow students to practice speaking through multimedia resources, interactive tasks, audio-visual recordings, collaborative discussions, and immediate feedback. Compared with conventional classroom activities, interactive digital media offer more opportunities for repeated practice, self-reflection, peer interaction, and autonomous learning. Consequently, these technologies are expected to reduce speaking anxiety while simultaneously improving learners' cognitive engagement during speaking activities (Bashori et al., 2022).

Several previous studies have demonstrated the positive impact of interactive digital media on English speaking development. Technology-enhanced language learning environments have been shown to improve learners' motivation, confidence, and willingness to communicate by providing flexible opportunities for language practice and interaction (Sun, 2023; Qiao & Zhao, 2023). Similarly, AI-supported and computer-assisted learning environments have contributed to reducing speaking anxiety and increasing students' engagement through personalized interaction and immediate feedback (Ding & Yusof, 2025). These findings indicate that digital technology has considerable potential to improve speaking instruction by facilitating both linguistic development and learner engagement.

However, previous studies have predominantly focused on measuring students' speaking achievement or evaluating the effectiveness of particular digital platforms through quantitative approaches. Relatively few studies have explored how students emotionally and cognitively experience interactive digital media during speaking learning. In other words, limited attention has been given to understanding students' affective responses, cognitive processes, and personal learning experiences while interacting with digital media in EFL speaking classrooms. This gap is particularly evident in Indonesian senior high school contexts, where students' voices and lived experiences remain underrepresented in existing research.

This research gap highlights the need for qualitative exploration that examines students' affective and cognitive experiences simultaneously. Understanding how students perceive, experience, and respond to interactive digital media can provide deeper insights into why certain technologies facilitate speaking development beyond merely improving speaking scores. Such understanding is expected to contribute to the development of more learner-centered pedagogical strategies that integrate technological innovation with students' psychological and cognitive needs.

The present study offers a novel contribution by exploring students' affective and cognitive experiences in learning English speaking through interactive digital media within the context of Indonesian senior high schools. Unlike previous studies that primarily investigated learning outcomes, this research focuses on students' lived experiences, emotional responses, cognitive engagement, and perceptions of interactive digital media during speaking activities. This perspective provides a more

comprehensive understanding of how technology supports speaking development from learners' viewpoints.

Preliminary observations conducted at SMAN Paiton, particularly in Class XI Science 2, revealed that many students remained reluctant to speak English during classroom activities despite having learned English for several years. Most students demonstrated low participation in speaking tasks, lacked confidence when expressing ideas orally, and frequently switched to their first language during classroom interactions. Interviews with the English teacher also indicated that students often experienced anxiety, limited vocabulary, and difficulty organizing ideas while speaking. These classroom realities suggest that innovative instructional approaches are needed to encourage students' active participation and improve both their emotional readiness and cognitive engagement in speaking learning.

Based on these considerations, this study aims to explore students' affective and cognitive experiences in learning English speaking through interactive digital media. Specifically, the study seeks to investigate how interactive digital media influence students' emotions, confidence, motivation, cognitive engagement, and speaking participation during EFL learning. The findings are expected to contribute to the development of technology-enhanced speaking instruction that not only improves students' communicative competence but also supports their emotional well-being and cognitive development in English language learning.

Identification of Problems

Based on the background of the study, several problems were identified in EFL speaking learning at SMAN Paiton, particularly in Class XI IPA 2:

1. Students experience speaking anxiety, lack confidence, and fear making mistakes when communicating in English.
2. Students face cognitive difficulties, including limited vocabulary, low fluency, and difficulties in organizing and developing ideas spontaneously during speaking activities.
3. Most students remain passive and reluctant to speak English during classroom learning activities.
4. The effects of interactive digital media on students' affective and cognitive aspects, such as speaking anxiety, confidence, and cognitive engagement, have not been clearly explored.
5. Conventional teacher-centered learning approaches that emphasize mechanical practice provide limited opportunities for students to actively participate in meaningful speaking activities.
6. Students' affective and cognitive experiences in interactive digital media-based speaking learning remain insufficiently investigated.

Formulation of the Problem

How do students experience affective and cognitive changes when learning EFL speaking through interactive digital media at SMAN Paiton class XI IPA 2?

1. How do students experience affective changes when learning EFL speaking through interactive digital media?

2. How do students experience cognitive changes when learning EFL speaking through interactive digital media?
3. How does interactive digital media encourage students to transform from passive learners into active English speakers?

Objectives and Benefits of Research

Research Objectives

This study aims to explore students' affective and cognitive experiences in learning EFL speaking through interactive digital media at SMAN Paiton Class XI IPA 2. Specifically, this study seeks to:

1. Explore students' affective experiences, including speaking anxiety, confidence, motivation, and emotional responses, when learning EFL speaking through interactive digital media.
2. Investigate students' cognitive experiences, including vocabulary development, idea organization, speaking processes, and cognitive engagement during EFL speaking activities using interactive digital media.
3. Examine how interactive digital media support students' transformation from passive learners into more active and confident English speakers.

Research Benefits

This research is expected to provide a deeper understanding of how interactive digital media contribute to students' affective and cognitive development in EFL speaking learning. The findings may provide practical insights for English teachers in designing learning activities that encourage students' confidence, participation, and engagement in speaking practices. Furthermore, this research is expected to contribute to the development of technology-enhanced EFL learning approaches that consider both students' emotional experiences and cognitive processes.

THEORETICAL AND CONCEPTUAL FRAMEWORK

Theoretical Framework

The theoretical framework of this study is based on the relationship between EFL speaking skills, students' affective and cognitive experiences, and the integration of interactive digital media in English language learning. Speaking skills represent an essential component of communicative competence because they enable learners to express ideas, opinions, and meanings through oral interaction. However, EFL learners frequently encounter affective barriers, including speaking anxiety, limited confidence, and reluctance to communicate, which influence their participation in speaking activities. In addition, cognitive challenges related to language processing, vocabulary retrieval, and organizing ideas may affect learners' fluency and oral performance (Zhou, 2023; Cai & Zhang, 2023).

To address these challenges, interactive digital media has increasingly been integrated into EFL speaking instruction. Digital learning environments provide learners with opportunities for meaningful interaction, autonomous practice, multimodal input, and immediate feedback. Previous studies indicate that AI-supported and technology-enhanced language learning environments can improve speaking performance, promote

self-regulated learning, and increase students' engagement through personalized learning experiences (Wei, 2023). Furthermore, digital storytelling, online language exchange platforms, and interactive AI applications have been reported to enhance learners' willingness to communicate, reduce speaking barriers, and encourage active participation in English communication (Bai & Xian, 2024).

This study adopts an affective and cognitive perspective to explore students' experiences in learning EFL speaking through interactive digital media. The affective dimension focuses on learners' emotional experiences, including anxiety, confidence, motivation, and willingness to communicate, while the cognitive dimension emphasizes learners' mental processes, including language processing, idea construction, self-regulation, and engagement during speaking activities. Through this framework, the study seeks to understand how interactive digital media supports students' transformation from passive learners into more active and confident English speakers.

Conceptual Framework

This study begins with the recognition that EFL students experience affective and cognitive challenges in developing speaking skills. Affective challenges include speaking anxiety, lack of confidence, fear of making mistakes, and limited willingness to communicate, while cognitive challenges involve difficulties in vocabulary retrieval, language processing, and organizing ideas during oral communication. These challenges may influence students' participation, engagement, and ability to communicate effectively in English (Xuan Mai et al., 2024). These conditions are also identified among students of Class XI IPA 2 at SMAN Paiton, where many students remain passive and reluctant to speak English during classroom activities.

Interactive digital media are considered as a learning approach to address these challenges because they provide students with opportunities for repeated speaking practice, interactive communication, personalized feedback, and autonomous learning. The integration of artificial intelligence and digital learning platforms in language education has been shown to support students' speaking development by improving oral performance, enhancing self-regulation, and increasing learner engagement during communication activities (Qiao & Zhao, 2023). Furthermore, AI-based speech evaluation systems and interactive digital environments allow learners to receive immediate feedback and practice speaking in a more supportive learning context, which may contribute to increased confidence and active participation in English communication (Zou et al., 2023). Similarly, social network-based and technology-supported language learning environments provide additional opportunities for learners to engage in meaningful speaking practice and develop communicative competence (Zou et al., 2023).

Through students' experiences with interactive digital media, this study explores how learners perceive affective and cognitive aspects during EFL speaking learning. The affective dimension focuses on students' emotional experiences, including anxiety, confidence, motivation, and willingness to communicate, while the cognitive dimension examines students' learning processes, including language processing, speaking strategies, self-regulation, and cognitive engagement. Using a qualitative phenomenological approach, this study seeks to understand how interactive digital media contributes to students' transformation from passive learners into more active and confident English speakers.

RESEARCH METHODS

Research methods refer to the systematic strategies and procedures used by researchers to collect and analyze data to answer research questions or test hypotheses. This section of a research article details how the research was conducted, allowing readers to understand and evaluate the validity and reliability of the findings. The choice of research method is heavily influenced by the type of research question, the research objectives, and the nature of the data to be collected (Pyo et al., 2023).

Several important aspects related to research methods include the research approach, research design, population and sample, data collection techniques, and data analysis techniques. Research approaches are broadly divided into quantitative (focusing on numbers and statistical analysis), qualitative (focusing on in-depth understanding of experiences and meanings), and mixed (combining quantitative and qualitative elements). The research design details the plan or structure of the research, such as experiments, surveys, case studies, ethnography, or action research (Wagenaar et al., 2022).

Furthermore, the research methods section also describes the population (the entire group the research focuses on) and sample (a small portion of the population selected for study), including the sampling technique used (e.g., simple random, stratified, purposive), and sample size. Data collection techniques detail the instruments used to gather information, such as questionnaires, interviews, observations, document studies, or tests. Each instrument has advantages and disadvantages that researchers need to consider (Cheong et al., 2023).

Finally, research methods describe the data analysis techniques applied to process and interpret the collected information. For quantitative research, this might involve descriptive statistics, inferential statistics, or econometric modeling. For qualitative research, data analysis techniques might include thematic analysis, content analysis, or discourse analysis. Clarity and precision in explaining each aspect of the research method are crucial to ensuring the transparency and credibility of the research (Byrne, 2022).

RESULTS AND DISCUSSION

Result

This section presents the findings of a phenomenological inquiry into students' affective and cognitive experiences in learning English speaking through interactive digital media in Class XI Science 2 at SMAN Paiton. The findings are organized thematically to capture the essence of participants' lived experiences. Data were collected through semi-structured interviews, classroom observations, and documentation of students' digital speaking activities. Interview excerpts are presented to preserve the authenticity of participants' voices and enhance the credibility of the analysis.

Before presenting the thematic findings, the demographic characteristics of the participants are summarized in table 1.

Table 1. Demographic Characteristics of Participants

Participant	Gender	Age (Years)	Occupation
P1	Female	16	Senior High School Student
P2	Female	16	Senior High School Student
P3	Female	17	Senior High School Student
P4	Female	16	Senior High School Student

P5	Female	17	Senior High School Student
P6	Male	16	Senior High School Student
P7	Male	17	Senior High School Student
P8	Male	16	Senior High School Student
P9	Male	17	Senior High School Student
P10	Male	16	Senior High School Student

Table 1 shows that ten students participated in this phenomenological study. The participants consisted of five female students and five male students aged between 16 and 17 years. All participants were senior high school students from Class XI Science 2 at SMAN Paiton who had experienced learning English speaking through interactive digital media for one semester. They were purposively selected because they were able to provide rich descriptions of their affective and cognitive experiences throughout the learning process.

The thematic analysis revealed two major experiential domains: (1) affective transformation and (2) cognitive development. These two domains collectively demonstrate students' gradual transformation from passive and anxious learners into more confident, engaged, and strategic English speakers.

Affective Transformation in Digital Media Based Speaking Learning

Pre-Intervention Emotional Conditions: Anxiety, Insecurity, and Reluctance

Prior to the implementation of interactive digital media, participants described speaking English as an emotionally challenging activity. Most students reported experiencing speaking anxiety, low self-confidence, and fear of making grammatical or pronunciation errors. These emotional barriers discouraged them from actively participating in classroom speaking activities.

One participant reported:

"Before using interactive digital media, I felt that I didn't understand English very well." (Participant P1, Interview, January 15, 2026).

Another participant stated:

"I had little self-confidence and was unable to speak English." (Participant P2, Interview, January 18, 2026).

Similarly, another participant explained:

"I found it difficult when asked to speak English because I was initially a shy person before becoming familiar with interactive digital media." (Participant P3, Interview, January 22, 2026).

The interview findings were also supported by classroom observations, which showed that students tended to avoid speaking voluntarily, hesitated before responding to teachers' questions, and frequently switched to their first language during speaking activities.

Affective Transformation in Interactive Digital Media-Based Speaking Learning

Emotional Shift: Increased Comfort and Psychological Safety

Following the implementation of interactive digital media, participants consistently reported positive emotional changes during English speaking activities. The learning environment became more supportive, enabling students to practice speaking with reduced fear of making mistakes. The flexibility offered by digital media also allowed students to learn at their own pace, thereby creating a greater sense of psychological safety.

One participant explained:

"After learning speaking through interactive digital media, I felt greatly helped, became more confident, and was no longer nervous when speaking." (Participant P4, Interview, January 26, 2026).

Another participant stated:

"I felt more relieved after learning speaking through interactive digital media, and I became more confident." (Participant P5, Interview, January 29, 2026).

Similarly, another participant emphasized:

"Learning through digital media made me feel safer and more comfortable because I could express myself more freely." (Participant P6, Interview, January 31, 2026).

These findings indicate that interactive digital media contributed to reducing students' speaking anxiety by providing a more flexible and less threatening learning environment. Classroom observations further showed that students became more willing to volunteer during speaking activities and demonstrated fewer signs of hesitation compared with the early stages of the learning process.

Increased Motivation and Self-Confidence

Besides reducing anxiety, interactive digital media also strengthened students' learning motivation and self-confidence. Participants perceived digital learning activities as more engaging because they combined visual, audio, and interactive features that facilitated understanding and encouraged active participation.

One participant remarked:

"The use of digital media increased my motivation." (Participant P7, Interview, February 1, 2026).

Another participant stated:

"The explanations were clearer and the learning atmosphere was more comfortable, so I preferred learning through interactive digital media." (Participant P8, Interview, February 2, 2026).

Another participant explained:

"I used to be shy, but after learning through digital media, I gradually gained the courage to speak English and became more fluent." (Participant P9, Interview, February 3, 2026).

Likewise, another participant added:

"With digital media, I became much braver and no longer felt reluctant to speak." (Participant P10, Interview, February 4, 2026).

Overall, these responses demonstrate that students' increased motivation was accompanied by growing confidence in speaking English. Rather than avoiding communication, participants became more willing to express their ideas during classroom discussions and speaking practices.

Cognitive Development in Interactive Digital Media-Based Speaking Learning

Improved Understanding of Speaking Materials

Participants reported that interactive digital media facilitated their understanding of English speaking materials. Multimedia features such as audio recordings, videos, animations, and authentic pronunciation models enabled students to understand vocabulary, pronunciation, and expressions more effectively than conventional classroom instruction.

One participant noted:

"It was very helpful because the material became easier to understand." (Participant P2, Interview, January 18, 2026).

Another participant stated:

"I was able to pronounce words and expressions that I had not known before after learning through digital media." (Participant P5, Interview, January 29, 2026).

Similarly, another participant explained:

"Interactive digital media with authentic pronunciation from native speakers helped me understand pronunciation more quickly." (Participant P3, Interview, January 22, 2026).

These findings suggest that multimodal learning resources enhanced students' comprehension of speaking materials while reducing cognitive difficulties associated with vocabulary acquisition and pronunciation.

Development of Idea Organization and Speaking Fluency

Interactive digital media also supported students in generating and organizing ideas before speaking. Participants explained that digital learning resources stimulated their thinking and helped them structure their ideas more systematically during oral communication.

One participant stated:

"Digital media really helped me develop my ideas." (Participant P6, Interview, January 31, 2026).

Another participant confirmed:

"New ideas came to me while learning through digital media." (Participant P1, Interview, January 15, 2026).

Another student reflected:

"At first, I could not speak well, but gradually I became more accustomed to speaking." (Participant P8, Interview, February 2, 2026).

These findings indicate that interactive digital media not only supported language comprehension but also facilitated higher cognitive processes, including idea generation, organization of thoughts, and improvement in speaking fluency.

Development of Autonomous Learning Strategies

Another important cognitive outcome identified in this study was the development of autonomous learning strategies. Participants reported becoming less dependent on teachers because digital platforms enabled them to independently search for explanations, examples, and additional learning resources whenever they encountered difficulties.

One participant explained:

"Whenever I did not understand something, I could search for the answer using interactive digital media." (Participant P4, Interview, January 26, 2026).

The observation data also indicated that students increasingly utilized digital resources independently before asking for teachers' assistance. This behavior reflects greater learner autonomy and self-directed learning during English speaking practice.

Comparison Between Interactive Digital Media and Conventional Learning

Participants consistently perceived interactive digital media as more engaging than conventional teacher-centered instruction. Interactive applications, online quizzes, multimedia content, and immediate feedback created a more dynamic learning environment that encouraged active participation.

One participant observed:

"Digital media uses applications and online quizzes that make learning more interesting and varied, whereas conventional learning tends to be passive." (Participant P7, Interview, February 1, 2026).

Another participant added:

"In conventional classes, I felt awkward and nervous because I was afraid of making mistakes." (Participant P9, Interview, February 3, 2026).

Overall, participants believed that interactive digital media created more meaningful learning experiences by combining technological support with opportunities for repeated speaking practice, resulting in greater participation and confidence than conventional classroom instruction.

To provide a clearer overview of the findings, the interview data were synthesized into major affective and cognitive themes that emerged consistently across participants. Rather than presenting isolated quotations, the summary in Table 2 illustrates the overall pattern of students' transformation before and after the implementation of interactive digital media in EFL speaking learning. This thematic synthesis complements the interview excerpts by highlighting the key changes identified through the phenomenological analysis and provides a more comprehensive representation of participants' shared experiences.

Table 2. Summary of Students' Affective and Cognitive Transformation During Interactive Digital Media-Based Speaking Learning

Dimension	Before Interactive Digital Media	After Interactive Digital Media
Emotional Condition	Anxiety, fear of making mistakes, low self-confidence, reluctance to speak	Greater confidence, reduced anxiety, increased psychological comfort
Learning Motivation	Low participation and limited engagement	Higher motivation and active participation
Speaking Performance	Hesitant to communicate and limited fluency	Greater willingness to speak and improved fluency
Cognitive Understanding	Difficulty understanding vocabulary and pronunciation	Better comprehension supported by multimodal learning
Idea Development	Difficulty generating and organizing ideas	Easier idea generation and more structured expression
Learning Strategy	Teacher-dependent learning	Greater autonomy through independent use of digital resources

Table 2 summarizes the major patterns identified through the phenomenological analysis. Across the participants' narratives, the implementation of interactive digital media was associated with meaningful changes in both affective and cognitive dimensions of English speaking learning. These changes were not limited to improvements in speaking performance but also reflected students' evolving perceptions, emotions, and learning strategies throughout the learning process.

From an affective perspective, participants consistently described a reduction in speaking anxiety accompanied by increased confidence and psychological comfort. Students who initially perceived English speaking as a stressful classroom activity gradually became more willing to participate in discussions and oral presentations. The opportunity to practice through interactive digital media enabled them to communicate without excessive fear of making mistakes, thereby fostering a more positive emotional learning environment.

The findings also revealed substantial cognitive development. Participants reported improved understanding of vocabulary, pronunciation, and speaking materials through multimodal learning resources. Furthermore, digital media supported students in generating ideas, organizing their thoughts more systematically, and developing independent learning strategies by utilizing various online resources whenever they encountered learning difficulties.

Overall, the affective and cognitive changes occurred simultaneously and mutually reinforced one another. As students gained better cognitive understanding of speaking materials, they became increasingly confident in expressing their ideas. Likewise, greater confidence encouraged more active participation, which further strengthened their communicative competence. This reciprocal relationship illustrates that emotional and cognitive development cannot be separated within students' speaking learning experiences.

The Phenomenon: From Passive Learners to Emerging English Speakers

The integration of the affective and cognitive themes revealed the central phenomenon underlying participants' lived experiences: a gradual transformation from passive learners into emerging English speakers. Before the implementation of interactive digital

media, most participants described themselves as reluctant to communicate because they lacked confidence, feared making mistakes, and experienced difficulty understanding speaking materials. Consequently, classroom participation was generally limited, and students tended to avoid opportunities to communicate in English.

Following sustained exposure to interactive digital media, participants experienced meaningful changes in both emotional and cognitive aspects of learning. The availability of multimedia resources, interactive learning activities, and immediate access to information enabled students to better understand English speaking materials while simultaneously reducing the psychological pressure commonly associated with oral communication. These experiences gradually encouraged students to participate more actively in classroom interactions and speaking practices.

The phenomenological analysis suggests that this transformation did not occur instantly but developed progressively throughout one semester of learning. Emotional changes, including increased confidence, reduced anxiety, and greater motivation, created favorable conditions for learning. At the same time, cognitive improvements in vocabulary acquisition, pronunciation awareness, idea organization, and independent learning strategies strengthened students' ability to communicate effectively. These interconnected developments collectively shaped students' new perceptions of themselves as more capable English speakers.

Figure 1 conceptually illustrates the transformation experienced by participants throughout the learning process.

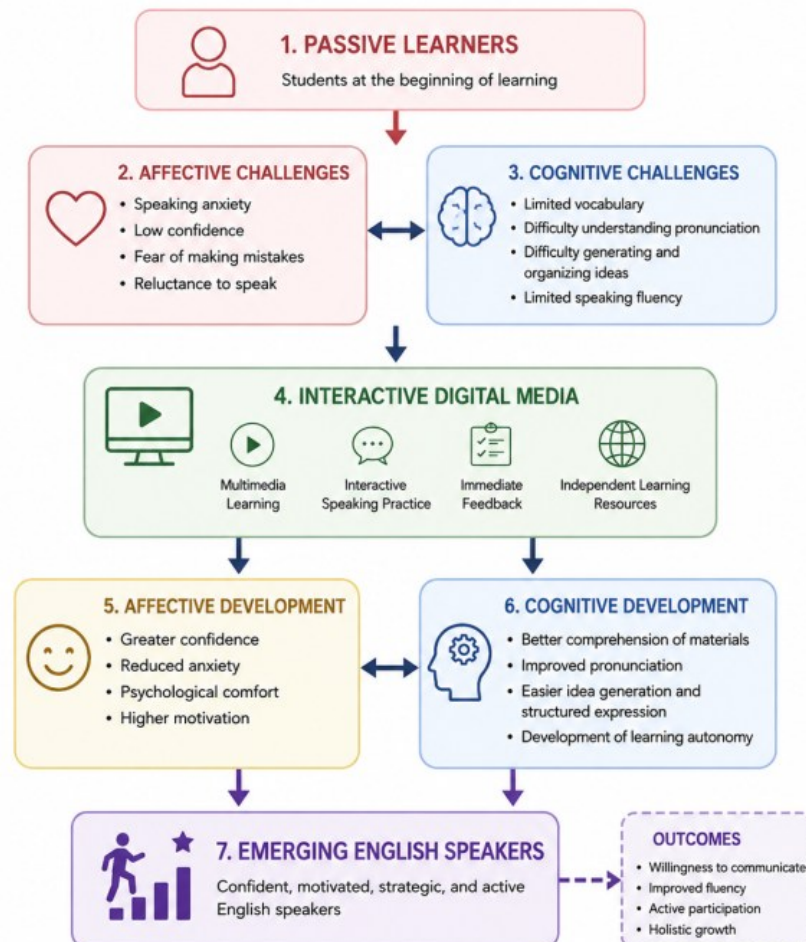


Figure 1. From Passive Learners to English Speakers

Discussion

Transformation and the Reduction of Speaking Anxiety

This study aimed to understand students' affective and cognitive experiences in learning EFL speaking through interactive digital media using a phenomenological approach. The findings reveal a meaningful transformation in students' emotional states, cognitive engagement, and participation patterns. Students initially experienced fear, low self-confidence, and speaking anxiety, which discouraged them from actively participating in English speaking activities. After engaging with interactive digital media, however, they reported feeling more comfortable, motivated, and confident in expressing their ideas. These findings indicate that interactive digital media can facilitate positive emotional changes that support speaking development.

The observed transformation can be interpreted from the perspective of affective factors in second language learning, where learners' emotional readiness substantially influences communicative performance. Students with high speaking anxiety generally avoid opportunities to communicate, whereas learners with greater confidence are more willing to participate actively in speaking tasks (Quvanch et al., 2024). The present findings demonstrate that interactive digital media created a more psychologically supportive learning environment by allowing students to practice repeatedly with reduced fear of making mistakes. The availability of multimedia resources, flexible learning opportunities, and interactive activities enabled students to develop confidence gradually while reducing communication apprehension.

Furthermore, participants consistently reported increased learning motivation throughout the implementation of interactive digital media. The combination of visual, audio, and interactive learning features made speaking activities more engaging than conventional classroom instruction. This finding supports previous studies showing that technology-enhanced learning environments improve learners' motivation, confidence, and willingness to communicate by providing flexible opportunities for authentic language practice (Sun, 2023; Qiao & Zhao, 2023). As students became more emotionally comfortable, they gradually reconstructed their self-perception from hesitant learners into individuals who were increasingly willing to communicate in English.

Cognitive Development Through Multimodal Learning

Besides affective transformation, this study identified considerable cognitive development among participants. Students reported improved understanding of speaking materials, pronunciation, vocabulary, idea organization, and speaking strategies after learning through interactive digital media. These improvements suggest that digital media functioned as cognitive support by presenting information through multiple learning modes.

The multimodal characteristics of interactive digital media enabled students to integrate visual, auditory, and contextual information simultaneously, thereby reducing cognitive difficulties during speaking activities. Students particularly emphasized that authentic audio models and multimedia explanations helped them understand pronunciation more effectively while enriching their vocabulary and expressions. These findings are consistent with previous research indicating that multimedia-supported learning environments enhance cognitive engagement and facilitate more meaningful language processing (Bashori et al., 2022; Kerimbayev et al., 2023).

Another important cognitive outcome concerned students' ability to generate and organize ideas before speaking. Participants explained that multimedia prompts, interactive tasks, and digital learning resources stimulated their thinking and helped

them structure ideas more systematically during oral communication. This finding reflects the role of interactive digital media in supporting higher-order cognitive processes rather than merely delivering instructional content.

In addition, participants developed greater autonomy in learning English speaking. Rather than depending exclusively on teachers, students increasingly searched for unfamiliar vocabulary, pronunciation models, and additional learning resources independently through digital platforms. Such experiences demonstrate that interactive digital media encouraged students to become more self-regulated learners capable of managing their own language development.

Transformation of Participation: From Passive to Active Engagement

One of the central findings emerging from this study is the transformation of students' classroom participation. Before the implementation of interactive digital media, participants generally described themselves as passive learners who rarely volunteered to speak because they lacked confidence and feared making mistakes. Their limited cognitive preparation further reinforced their reluctance to participate in speaking activities.

As students became more familiar with interactive digital media, their participation gradually increased. Better comprehension of speaking materials reduced uncertainty, while greater emotional comfort strengthened their willingness to communicate. These two processes occurred simultaneously, creating a gradual transition from passive participation toward active classroom engagement.

The findings indicate that speaking development involves more than linguistic competence alone. Students became increasingly willing to communicate because they experienced both emotional support and cognitive readiness throughout the learning process. Interactive digital media therefore functioned as a transitional learning environment in which students could observe authentic language use, rehearse speaking repeatedly, and gradually develop confidence before participating in classroom interactions. Such progressive learning experiences encouraged students to redefine themselves as more capable English speakers rather than learners who continually struggled with oral communication.

Digital Media as Affective and Cognitive Mediation

The findings further demonstrate that interactive digital media simultaneously functioned as affective and cognitive mediation in EFL speaking learning. From an affective perspective, digital media reduced speaking anxiety, strengthened confidence, increased motivation, and created psychologically supportive learning experiences. From a cognitive perspective, multimedia resources improved comprehension, facilitated idea generation, enhanced pronunciation awareness, and encouraged autonomous learning strategies.

The integration of multimedia elements enabled students to engage in more meaningful speaking activities by connecting language input with authentic communication contexts. Rather than memorizing isolated expressions, participants constructed ideas through contextualized learning experiences supported by videos, images, audio, and interactive speaking tasks. Such learning experiences encouraged students to integrate emotional involvement with cognitive processing throughout the speaking process.

Moreover, the flexibility of digital platforms allowed students to revisit learning materials, repeat pronunciation exercises, and practice independently according to their

own learning pace. These opportunities contributed not only to cognitive development but also to greater emotional comfort because students could practice without the immediate pressure commonly experienced in conventional classroom instruction. This finding is consistent with previous research suggesting that educational technology provides engaging, learner-centered environments capable of simultaneously supporting cognitive engagement and emotional well-being (Madhavi et al., 2023; Ding & Yusof, 2025).

Interrelation Between Affective and Cognitive Changes

An important contribution of this study is the recognition that affective and cognitive development occurred simultaneously and mutually reinforced one another. Students' emotional comfort increased their willingness to participate, while improved cognitive understanding strengthened their confidence to communicate. Likewise, repeated communication practice further enhanced both their speaking competence and positive emotional experiences.

These findings suggest that successful EFL speaking instruction should address learners' emotional and cognitive needs simultaneously. Developing linguistic competence alone may not be sufficient if students continue experiencing anxiety or low confidence. Conversely, creating emotionally supportive learning environments without meaningful cognitive engagement may not produce substantial improvements in speaking ability. The findings therefore support the view that affective readiness and cognitive processing constitute complementary dimensions of communicative competence (Portugal-Toro et al., 2025; Ma, 2022).

Implications for EFL Speaking Instruction

The findings suggest that integrating interactive digital media into EFL speaking instruction can support students' holistic development by simultaneously addressing emotional and cognitive dimensions of learning. Teachers are encouraged to utilize multimedia resources that provide authentic speaking models, interactive learning activities, repeated speaking opportunities, and flexible access to learning materials. Such learning environments may reduce speaking anxiety while promoting greater confidence, motivation, and active classroom participation.

Furthermore, interactive digital media can facilitate learner autonomy by encouraging students to independently access additional learning resources, pronunciation models, and vocabulary support outside formal classroom activities. This learner-centered approach aligns with current technology-enhanced language learning practices that emphasize active participation and self-directed learning (Dong et al., 2022).

Interpretation

This phenomenological study demonstrates that the most significant contribution of interactive digital media extends beyond improvements in speaking performance. The findings reveal a holistic transformation in students' lived experiences as English language learners. Participants gradually moved from anxiety to confidence, from uncertainty to understanding, and from passive classroom participation to active communication. These interconnected affective and cognitive changes illustrate that speaking development is fundamentally shaped by learners' emotional experiences and cognitive engagement throughout the learning process.

Overall, interactive digital media served as a meaningful pedagogical bridge connecting emotional readiness, cognitive development, and communicative participation. By creating supportive, engaging, and flexible learning environments, digital media enabled students to reconstruct their identities as more confident and capable English speakers, thereby realizing the central phenomenon identified in this study: the transformation from passive learners to emerging English speakers.

Research Limitations

This study has several limitations. First, the research was conducted only in one class (Class XI Science 2) at SMAN Paiton, limiting the transferability of the findings to other educational contexts. Second, the study employed a qualitative phenomenological approach involving a relatively small number of participants; therefore, the findings represent students' lived experiences rather than statistical generalizations. Third, the data were collected within one semester of implementing interactive digital media, meaning that the study did not examine the long-term sustainability of students' affective and cognitive development. Future studies are recommended to involve participants from different schools, educational levels, and learning contexts, as well as to adopt longitudinal or mixed-method approaches to provide a more comprehensive understanding of the impact of interactive digital media on EFL speaking learning.

Novelty/Contribution

The novelty of this study lies in its phenomenological exploration of students' affective and cognitive experiences in learning EFL speaking through interactive digital media. Unlike previous studies that primarily examined the effectiveness of digital media by measuring improvements in speaking performance, this study explains how students gradually transformed from passive and reluctant learners into more confident and active English speakers through interconnected emotional and cognitive processes.

This study contributes theoretically by enriching the literature on technology-enhanced EFL speaking instruction from a phenomenological perspective, emphasizing the reciprocal relationship between affective transformation and cognitive development. Practically, the findings provide insights for English teachers into designing interactive digital media-based speaking activities that not only improve communicative competence but also foster students' confidence, motivation, learner autonomy, and active participation in English speaking classrooms.

CONCLUSIONS AND SUGGESTIONS

Conclusion

This study explored students' affective and cognitive experiences in learning EFL speaking through interactive digital media using a phenomenological approach. The findings indicate that interactive digital media facilitated a meaningful transformation in students' speaking experiences by simultaneously supporting their emotional and cognitive development. From an affective perspective, students experienced reduced speaking anxiety, increased self-confidence, stronger motivation, and greater willingness to communicate in English because the digital learning environment provided a more supportive and psychologically safe space for speaking practice. From a cognitive perspective, students demonstrated improvements in vocabulary acquisition, pronunciation awareness, idea organization, speaking fluency, and autonomous learning through multimodal learning resources and repeated practice opportunities. The

phenomenological analysis further revealed that students gradually transformed from passive learners into more confident and active English speakers through the reciprocal relationship between affective and cognitive development, in which emotional comfort enhanced cognitive engagement while improved understanding strengthened confidence in oral communication. These findings demonstrate that interactive digital media functioned not only as an instructional tool but also as affective and cognitive mediation that promoted holistic speaking development. Therefore, this study contributes to the literature on technology-enhanced EFL speaking instruction by providing a deeper understanding of students' lived experiences and highlighting the importance of integrating learner-centered digital technologies to foster emotional well-being, cognitive engagement, and communicative competence in English speaking learning.

Suggestions

Based on the findings of this study, English teachers are encouraged to integrate interactive digital media into EFL speaking instruction to create supportive, learner-centered, and engaging learning environments that foster students' affective and cognitive development. Teachers should design speaking activities that not only improve communicative competence but also reduce speaking anxiety, strengthen self-confidence, encourage learner autonomy, and promote active participation. Schools are recommended to provide adequate technological infrastructure and professional support to facilitate the effective implementation of interactive digital media in English classrooms. Future researchers are encouraged to examine students' affective and cognitive experiences across different educational settings, educational levels, and types of interactive digital media. Further studies may also employ longitudinal or mixed-method approaches to investigate the long-term impact of interactive digital media on students' speaking development and to provide a more comprehensive understanding of technology-enhanced EFL speaking learning.

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AUTHOR CONTRIBUTION STATEMENT

Anggraini Sifaus Syauqiah: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing – Original Draft, Visualization. **Mohammad Sofyan Adi Pranata:** Supervision, Methodology, Validation, Writing – Review & Editing, Resources, Project Administration. All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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