
Developing the SWITCH-EL Model: Integrating AI-Generated Animated Videos to Enhance English Speaking Skills and Digital Self-Regulation among Vocational High School Students

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Abstract

The increasing use of online games among vocational high school students has raised concerns regarding students' digital habits and the need for more meaningful technology-supported learning experiences. This study aimed to develop the SWITCH-EL Model (Switching Digital Gaming Engagement into English Learning) by integrating AI-generated animated videos, interactive speaking activities, learner-generated digital content, and reflective digital practices to support English speaking development and digital self-regulation. The study employed a Design-Based Research (DBR) approach with a mixed-method evaluation. A preliminary needs analysis involving 300 vocational high school students in Pekanbaru, Indonesia, identified substantial online gaming engagement, with 45.67% of students reporting more than six hours of gaming per day. The SWITCH-EL Model was developed through six stages: Self-Monitoring Digital Habits, Watch AI-Animated English Content, Interactive English Challenge, Talk and Task Performance, Create AI-Based English Content, and Habit Reflection and Time Rebalancing. The results showed a marked descriptive improvement in English speaking performance, with the proportion of students achieving scores of 75 or above increasing from 9.33% in the pre-test to 81.67% in the post-test. Qualitative interviews further indicated increased awareness of digital habits, better management of gaming and learning time, greater engagement in English learning, and more purposeful use of digital technology. These findings suggest that SWITCH-EL has potential as an innovative instructional model for integrating AI-supported language learning with more responsible digital engagement among vocational high school students.

Keywords: Switch-El, Ai-Generated Animated Video, English Speaking Skills, Digital Self-Regulation, Vocational High School, Online Game

INTRODUCTION

Digital transformation has substantially changed the ways adolescents learn, communicate, interact, and spend their leisure time. Smartphones and other digital devices are no longer used merely for communication but have become gateways to social media, online videos, digital games, artificial intelligence (AI), and various forms of entertainment. For vocational high school students, these technological developments provide considerable opportunities to access learning resources and develop new skills. However, they also create educational challenges when digital devices are used predominantly for recreational activities rather than productive learning. Digital technology use among adolescents therefore requires not only technological competence but also the ability to manage time, attention, priorities, and online behavior responsibly. In this context, digital self-regulation has emerged as an increasingly important competence for young learners (Wang, 2026).

One of the most prominent forms of recreational digital engagement among adolescents is online gaming. Online games offer visually attractive environments, immediate feedback, challenges, rewards, achievement systems, competition, and opportunities for social interaction. These characteristics can encourage students to spend considerable amounts of time playing games. However, long gaming duration should not automatically be interpreted as gaming addiction or gaming disorder, since such conditions require appropriate diagnostic criteria and validated measurements. Nevertheless, excessive gaming duration may indicate problematic

patterns of digital engagement and the need to strengthen students' ability to manage their digital behavior.

Previous research has demonstrated an important relationship between self-regulation and problematic digital engagement. Howard et al. (2025), through a meta-analysis involving 183 studies and more than 234,000 children and adolescents, found that self-regulation was negatively associated with various forms of problematic digital engagement, including problematic gaming. Similarly, Hu et al. (2025) reported a negative relationship between problematic gaming and self-control among adolescents and emerging adults. These findings suggest that students with stronger self-regulatory abilities may be better equipped to control their engagement with recreational digital activities and maintain a healthier balance between entertainment, learning, and other responsibilities.

Preliminary data collected from 300 vocational high school students in Pekanbaru further highlight the relevance of this issue. The findings showed that 120 students (40.00%) reported playing online games for approximately 7–9 hours per day, while 17 students (5.67%) reported playing for more than 9 hours per day. Overall, 45.67% of the students spent more than six hours per day on online gaming. These findings suggest that digital gaming occupies a substantial proportion of students' daily activities and reinforce the need for an educational approach that does not merely restrict gaming, but redirects part of students' digital engagement toward meaningful and productive learning activities. In this context, English learning supported by AI-generated animated videos may provide an alternative digital experience that combines visual engagement, speaking practice, creativity, and digital self-regulation.

This perspective is consistent with the concept of digital self-regulation. Digital self-regulation refers to an individual's ability to consciously manage digital behavior, regulate attention, establish priorities, control impulses, monitor screen-related activities, and balance recreational and productive uses of technology. Wang (2026) argues that digital self-regulation during adolescence should be developed through autonomy, competence, purposeful goal setting, and self-monitoring rather than through external restrictions alone. Similarly, Büttner et al. (2026) found that brief interventions aimed at improving adolescents' digital self-regulation did not consistently lead to substantial reductions in screen time or problematic device use. Their findings indicate that digital self-regulation may need to be embedded within meaningful, sustained, and engaging activities rather than taught as an isolated behavioral intervention.

One promising context for redirecting students' digital engagement is English language learning. English competence is particularly important for vocational high school students because it is closely associated with employability, professional communication, access to technical information, and interaction within increasingly globalized workplaces. Vocational students may be required to participate in job interviews, communicate with customers, explain products and services, give instructions, make presentations, interact with colleagues, and understand workplace-related information in English. Among the four major language skills, speaking is particularly important because it enables learners to use English actively in real-life communication.

Despite its importance, developing English speaking skills remains challenging for many students. Learners may experience limited vocabulary, inadequate pronunciation, low confidence, speaking anxiety, insufficient exposure to authentic communication, and limited opportunities to practice English in meaningful situations. Conventional classroom instruction may also struggle to maintain students' attention when it competes with highly interactive digital entertainment. Consequently, English instruction needs to become more visual, interactive, contextualized, participatory, and relevant to students' digital experiences.

Recent developments in artificial intelligence offer new possibilities for addressing these challenges. AI-supported language learning environments can provide students with opportunities to practice speaking, receive feedback, access personalized learning materials, and engage with multimodal content. Fathi et al. (2024) found that AI-mediated interaction

contributed positively to EFL learners' speaking performance, including fluency and coherence, lexical resources, grammatical accuracy, and pronunciation. AI-mediated interaction was also associated with increased willingness to communicate. These findings suggest that artificial intelligence can support language learners by creating additional opportunities for meaningful oral practice.

The potential of AI in speaking instruction is particularly relevant to vocational education. Zhang et al. (2026) examined generative AI-mediated informal digital English speaking practice among vocational college students and found positive relationships with intrinsic motivation, self-efficacy, and speaking performance. Such findings demonstrate that generative AI can provide learners with flexible opportunities to practice language beyond conventional teacher-centered instruction. However, effective integration of AI requires learning designs that encourage students to actively use language rather than depend passively on automatically generated content.

Another rapidly developing application of generative AI is the creation of visual and audiovisual content. AI-generated animated videos can combine images, characters, movement, narration, dialogue, sound, and contextual storytelling within a single learning medium. For students accustomed to visually rich digital environments, animated videos may provide more engaging language input than text-based materials alone. Xu et al. (2025) reported that AI-generated instructional videos could support learning performance and retention while providing learning experiences comparable to conventional recorded instructional videos. These findings indicate the potential of AI-generated audiovisual resources as instructional media.

The pedagogical potential of AI-generated video becomes particularly relevant when students are involved not only as viewers but also as content creators. Hwang et al. (2026) investigated an AI-enhanced video drama-making approach in English language learning and found that AI-supported video production contributed to the development of students' English writing and speaking skills. Video production required learners to develop scripts, organize ideas, communicate meaning, revise language, and present their work. Such activities can transform AI from a tool for consuming information into a medium for creativity, collaboration, communication, and language production.

Storytelling also provides an important foundation for integrating AI-generated animation into English learning. Story-based learning enables language to be presented within meaningful contexts rather than as isolated vocabulary or grammatical structures. Namaziandost and Çakmak (2025) reported that AI-generated storytelling could support vocabulary retention and learner engagement in computer-assisted language learning environments. Contextualized narratives can help learners understand how expressions are used, follow sequences of events, connect language with visual information, and use English for meaningful communication.

For vocational high school students, AI-generated animated storytelling can be connected directly with workplace contexts. Students can create scenarios related to job interviews, customer service, workplace conversations, tourism, hospitality, technical procedures, product promotion, workplace safety, or professional presentations. They can first write English dialogues, generate visual characters, transform still images into animated sequences, add English narration or conversations, and finally present or perform the resulting content. In this way, speaking practice is connected with students' vocational interests as well as their familiarity with digital technology.

Another relevant approach is gamification. Many characteristics that attract students to digital games can also be incorporated into educational activities, including challenges, levels, points, rewards, immediate feedback, storytelling, and achievement. Chan and Lo (2024) found that gamification in EFL and ESL learning has the potential to facilitate language learning while positively influencing students' motivation, attitudes, engagement, and emotional experiences. Therefore, rather than positioning gaming and learning as completely opposing activities,

selected motivational elements of games can be adapted to create more engaging English learning experiences.

Although artificial intelligence has increasingly been integrated into English language learning, most previous studies have focused on chatbots, automated feedback, conversational AI, or AI-assisted speaking practice, while limited attention has been given to the use of AI-generated animated videos within a structured learning model for vocational high school students. At the same time, studies on problematic gaming and digital self-regulation have generally been conducted separately from subject-based learning interventions, particularly English language education. This creates a research gap concerning how AI-generated animated videos can be used not only to improve students' English speaking skills but also to redirect excessive digital engagement toward more productive learning activities. This gap is particularly relevant in the vocational high school context, where preliminary data indicate that a substantial proportion of students spend several hours each day playing online games. Therefore, the title "Developing the SWITCH-EL Model: Integrating AI-Generated Animated Videos to Enhance English Speaking Skills and Digital Self-Regulation among Vocational High School Students" was selected because it reflects the need for an innovative instructional model that integrates English speaking development, AI-supported visual learning, learner-generated digital content, and digital self-regulation within a single pedagogical framework.

RESEARCH METHODS

This study employed a Design-Based Research (DBR) approach with a mixed-method evaluation to develop and evaluate the SWITCH-EL Model (Switching Digital Gaming Engagement into English Learning). DBR was selected because it enables educational interventions to be designed, implemented, evaluated, and refined through iterative cycles in authentic learning environments (Yang & Lee, 2025; McKenney & Reeves, 2025). The study involved 300 vocational high school students in Pekanbaru, Indonesia, during the preliminary needs-analysis phase to identify students' online gaming duration, digital habits, English-speaking difficulties, and learning preferences. The development process consisted of four stages: needs analysis, model design and development, expert validation and revision, and classroom implementation and evaluation. The SWITCH-EL Model comprised six instructional stages: Self-Monitoring Digital Habits, Watch AI-Animated English Content, Interactive English Challenge, Talk and Task Performance, Create AI-Based English Content, and Habit Reflection and Time Rebalancing. The use of AI-generated animated videos was incorporated because AI-generated instructional videos have been shown to support multimodal learning experiences, engagement, and learning retention (Xu et al., 2025).

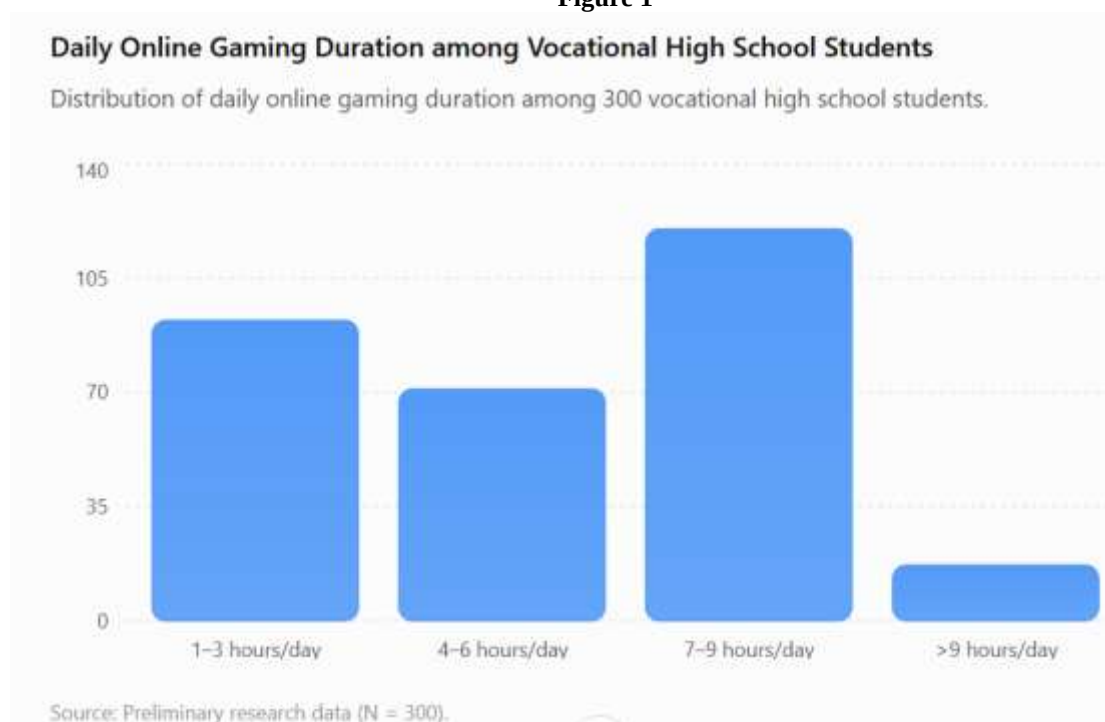
Data were collected using an English Speaking Performance Test, Digital Self-Regulation Questionnaire, daily digital activity log, classroom observation, and student reflection. The speaking test assessed fluency, vocabulary, grammatical accuracy, pronunciation, and communicative effectiveness, while the digital self-regulation questionnaire measured students' ability to manage gaming time, digital distractions, learning priorities, and purposeful technology use. The inclusion of digital self-regulation was based on recent evidence emphasizing the importance of adolescents' ability to consciously regulate and balance their use of digital technology (Büttner et al., 2026). Quantitative data were analyzed using descriptive statistics, paired-sample tests, and ANCOVA to examine changes in students' English-speaking skills and digital self-regulation before and after the implementation of SWITCH-EL. Qualitative data obtained from classroom observations and student reflections were analyzed thematically to explore students' learning experiences, engagement with AI-generated animated videos, and changes in their digital habits. The integration of quantitative and qualitative findings was used to provide a comprehensive evaluation of the feasibility and effectiveness of the SWITCH-EL Model.

RESULTS AND DISCUSSION

Students' Digital Gaming Habits and Learning Needs

The findings of this study highlight the close relationship between students' digital habits, their engagement in English learning, and the potential role of AI-supported instructional strategies in vocational education. The development of the SWITCH-EL Model was grounded in the observation that students' substantial engagement with online gaming could be redirected toward more meaningful and productive learning experiences rather than addressed solely through restriction. By integrating AI-generated animated videos, game-based learning activities, speaking practice, and reflective digital habits, the model was designed to create a learning environment that responds to students' existing digital interests while simultaneously supporting English language development and more purposeful technology use. The following discussion interprets these findings in relation to students' gaming patterns, changes in speaking performance, and reported shifts in digital self-regulation.

Figure 1



The issue of extensive online gaming is also evident among vocational high school students in the local context. Preliminary data collected from students at SMK Negeri Pekanbaru showed that a considerable proportion of students spent substantial amounts of time playing online games. Of the 300 students surveyed, the largest group consisted of 120 students (40.00%), who reported playing online games for approximately 7–9 hours per day. Meanwhile, 92 students (30.67%) reported playing for 1–3 hours per day, 71 students (23.67%) for 4–6 hours per day, and 17 students (5.67%) for more than 9 hours per day. These findings indicate that a substantial proportion of students engaged in online gaming for extended periods, with 45.67% reporting more than six hours of gaming per day. This pattern highlights the importance of educational strategies that help students manage their digital activities more effectively and redirect part of their digital engagement toward productive learning experiences, particularly English language learning.

The findings should not be interpreted as evidence of gaming addiction, as the duration of gaming alone is insufficient to determine problematic gaming behavior. Howard et al. (2025), based on a meta-analysis of 183 studies, found that the association between self-regulation and

the amount of time spent on digital recreation was relatively small, whereas self-regulation was more meaningfully associated with problematic forms of digital engagement. Thus, the findings of the present study emphasize the importance of developing students' capacity to regulate their digital activities rather than simply restricting their access to games.

Effect of the SWITCH-EL Model on English Speaking Skills

The implementation of the SWITCH-EL Model was intended to provide students with more engaging, contextualized, and technology-supported opportunities to practice English speaking. Through AI-generated animated videos, interactive challenges, role-play, guided speaking tasks, and learner-generated digital content, students were repeatedly exposed to meaningful spoken English and encouraged to actively produce language in vocationally relevant contexts. The comparison between pre-test and post-test score distributions was therefore used to examine the extent to which students' speaking performance changed after participating in SWITCH-EL-based instruction.

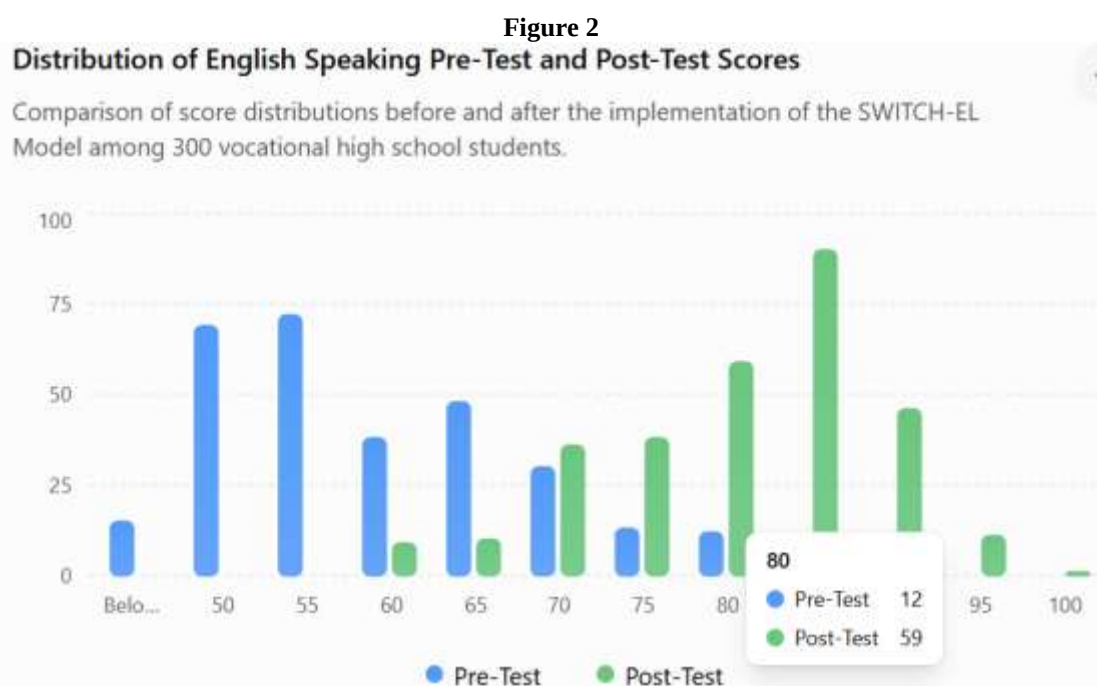


Figure 2 illustrates a clear shift in students' English speaking scores following the implementation of the SWITCH-EL Model. Pre-test scores were largely concentrated between 50 and 65, with the highest frequencies at scores of 55 and 50. In contrast, the post-test distribution shifted toward higher achievement levels, particularly scores of 80–90, with the largest number of students achieving a score of 85. This distribution demonstrates a substantial descriptive improvement in students' English speaking performance after participating in SWITCH-EL-based learning.

The improvement may be associated with the combination of multimodal language input, repeated speaking practice, contextualized dialogue, interactive challenges, and AI-supported content creation embedded in the SWITCH-EL learning sequence. Rather than asking students to practice English speaking through isolated exercises, the model provided opportunities to encounter language through animated situations and subsequently reproduce and develop the language through role-play, dialogue, presentation, and video-production activities. This finding is consistent with Fathi et al. (2024), who reported that AI-mediated interaction supported improvements in EFL learners' fluency and coherence, lexical resources, grammatical accuracy, pronunciation, and willingness to communicate.

The results are also in line with Zhang et al. (2026), who found that generative AI-mediated English speaking practice improved speaking performance among vocational learners. The relevance of this finding to the present study is particularly important because vocational students require communicative English that can be applied to authentic occupational situations. In SWITCH-EL, speaking activities were therefore connected to contexts such as job interviews, customer service, workplace conversations, giving instructions, product descriptions, and presentations. Such contextualization allowed students to practice English not simply as an academic subject but as a communication tool relevant to their future professional environments.

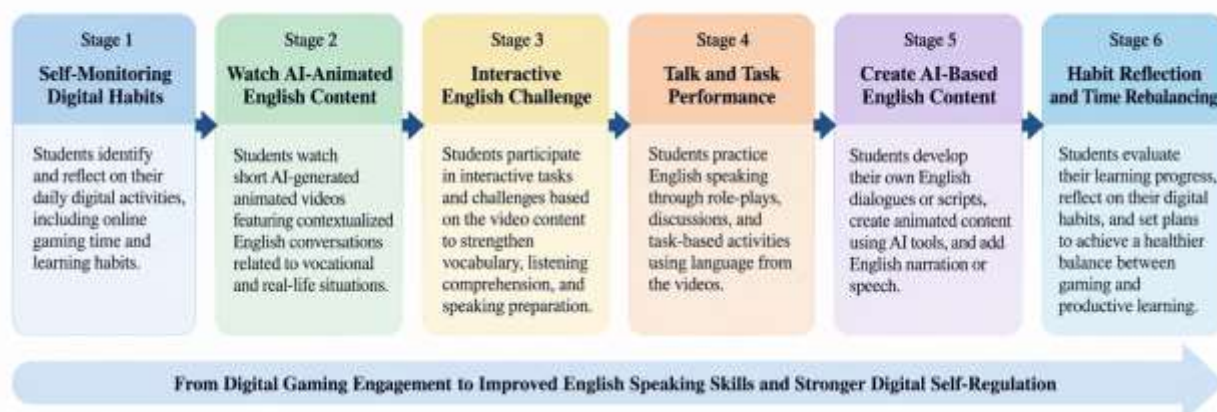
Furthermore, the improvement in speaking performance supports the use of learner-generated audiovisual activities within the model. Hwang et al. (2026) found that AI-enhanced video drama-making facilitated both English writing and speaking development by engaging learners in script preparation, vocabulary selection, pronunciation practice, and oral production. A comparable mechanism was incorporated into SWITCH-EL through the Create AI-Based English Content stage, in which students developed dialogues, created visual characters, transformed static images into animated content, and added English speech or narration. Consequently, the learning process required students to actively produce language rather than passively consume AI-generated materials.

The distribution of post-test scores also suggests that the integration of AI-generated animated videos should not be viewed merely as an attempt to make lessons visually attractive. Its pedagogical value lies in the sequence of activities surrounding the videos. Students first received contextualized language input, responded to interactive challenges, practiced oral communication, and subsequently created their own digital English content. Xu et al. (2025) similarly demonstrated that AI-generated instructional videos can support learning and retention when appropriately incorporated into instructional design. Thus, the present findings suggest that the effectiveness of AI-generated animated videos depends not only on the technology itself but also on how the technology is integrated into structured and communicative learning activities.

Overall, the shift in score distribution from predominantly lower categories in the pre-test to predominantly higher categories in the post-test provides descriptive evidence that students' English speaking performance improved after the implementation of the SWITCH-EL Model. The results further indicate that integrating AI-generated animation, contextualized speaking tasks, interactive challenges, and learner-generated content may provide vocational high school students with a learning environment that is both digitally engaging and communicatively meaningful.

Figure 3

(Switching Digital Gaming Engagement into English Learning)



Digital self-regulation constitutes another important component of SWITCH-EL. The model does not seek to eliminate online gaming completely. Instead, it encourages students to

recognize their digital habits, monitor their use of technology, establish learning priorities, and gradually balance recreational and productive digital activities.

The Self-Monitoring Digital Habits stage requires students to identify how much time is devoted to online gaming and other digital activities, while the Habit Reflection and Time Rebalancing stage encourages them to evaluate whether their digital behavior supports their academic goals. This approach is consistent with Howard et al. (2025), who found that self-regulation is more closely associated with problematic patterns of digital engagement than with screen time alone. Hu et al. (2025) similarly reported a negative relationship between problematic gaming and self-control, suggesting that strengthening self-regulatory capacity may be more educationally meaningful than relying solely on external restrictions.

Within SWITCH-EL, digital self-regulation is therefore conceptualized as the ability to make more purposeful decisions about technology use. The intention is not merely to reduce screen time but to encourage students to transform part of their digital engagement from passive or recreational consumption into productive learning, speaking practice, and digital content creation. However, the effectiveness of SWITCH-EL in improving digital self-regulation should be interpreted using direct empirical measures of students' self-regulation before and after the intervention. Therefore, claims regarding improvements in digital self-regulation should be supported by questionnaire, activity-log, or interview data rather than inferred solely from reductions in gaming duration.

Taken together, the findings indicate that the SWITCH-EL Model provides a structured approach for integrating AI-generated animated video, speaking practice, interactive challenges, and learner-generated digital content into vocational English learning. The substantial shift in speaking-score distribution suggests that the model has potential to support students' oral English development, while its self-monitoring and reflection stages provide a framework for promoting more purposeful digital behavior. The findings also suggest that the educational value of AI does not depend solely on the technology itself. Rather, its effectiveness is shaped by how AI is embedded within a coherent pedagogical sequence that requires students to observe, practice, communicate, create, and reflect. In this sense, SWITCH-EL transforms students from passive digital consumers into active English users and digital content creators.

Development and Pedagogical Implementation of the SWITCH-EL Model

Based on the needs analysis, the SWITCH-EL Model (Switching Digital Gaming Engagement into English Learning) was developed to integrate English speaking practice, AI-generated animated videos, interactive learning challenges, digital content creation, and digital self-regulation within a single instructional framework. The resulting model consists of six sequential stages: Self-Monitoring Digital Habits, Watch AI-Animated English Content, Interactive English Challenge, Talk and Task Performance, Create AI-Based English Content, and Habit Reflection and Time Rebalancing. Each stage was designed to gradually move students from awareness of their digital habits toward active English communication and more purposeful use of digital technology.

The use of AI-generated animated videos represents a central component of the model. During the Watch AI-Animated English Content stage, students are exposed to short animated videos presenting contextualized English conversations, particularly situations related to vocational and workplace communication. The combination of visual characters, motion, dialogue, and narration provides multimodal language input that can support students' understanding of vocabulary, pronunciation, and communicative contexts. Xu et al. (2025) found that AI-generated instructional videos could support learning performance at a level comparable to conventional recorded videos and produced stronger retention outcomes in English vocabulary learning. These findings support the use of AI-generated audiovisual materials as meaningful learning resources when they are embedded within structured instructional activities.

The Create AI-Based English Content stage further extends the role of AI from content delivery to learner-generated production. Students are expected to develop English scripts and dialogues, create visual characters or scenes, transform static images into animated sequences, and add English narration or conversation. This activity enables students to practice speaking, pronunciation, vocabulary, and communication while simultaneously developing digital creativity. Hwang et al. (2026) similarly demonstrated that AI-enhanced video drama-making could support the development of EFL learners' writing and speaking skills. Their findings reinforce the importance of positioning students not merely as consumers of AI-generated materials but as active creators of English-language digital content.

Another important feature of SWITCH-EL is the integration of digital self-regulation throughout the learning process. Students begin by monitoring their gaming and digital habits and conclude each learning cycle by reflecting on the allocation of their digital time. The model therefore does not aim to eliminate online gaming completely; instead, it encourages students to develop greater awareness of how they use digital technology and to consciously redirect part of their recreational screen time toward productive English learning. This orientation is consistent with Howard et al. (2025), who emphasized that self-regulation is particularly relevant to problematic patterns of digital engagement rather than to screen time alone.

Taken together, the needs analysis and model development indicate that SWITCH-EL responds to two interconnected educational needs among vocational high school students: the need to strengthen English-speaking competence and the need to develop more purposeful digital habits. By combining AI-generated animated videos, interactive speaking challenges, learner-generated content, and reflective digital self-regulation, the model attempts to transform students' familiarity with digital environments into opportunities for meaningful English language learning.

The qualitative findings revealed meaningful changes in how students perceived and managed their digital activities after participating in the SWITCH-EL Model. Thematic analysis of the interview responses identified four interrelated themes: increased awareness of digital habits, improved management of gaming and learning time, greater engagement in English learning, and a shift from recreational toward purposeful digital use. These themes suggest that digital self-regulation should not be understood simply as reducing screen time, but as developing the ability to monitor, control, and purposefully manage digital behavior. This perspective is consistent with Wang (2026), who conceptualizes adolescent digital self-regulation as a developmental capacity involving awareness, intentional decision-making, regulatory strategies, and purposeful digital engagement.

The first theme concerned students' growing awareness of their online gaming habits and the amount of time devoted to recreational digital activities. Before participating in SWITCH-EL, some students perceived online gaming as more attractive than conventional learning activities. However, the self-monitoring and reflection components of the model encouraged them to reconsider how their digital time was being used.

S1: "I used to feel lazy and bored when studying. Playing online games was much more enjoyable for me. However, after participating in SWITCH-EL, I began to enjoy learning English. My teacher also helped me understand the negative effects of excessive online gaming, so I became more aware of how I use my time."

The response illustrates an emerging awareness of personal digital behavior, which represents an important foundation for self-regulation. Wang (2026) argues that effective digital regulation among adolescents should develop internal awareness and regulatory capacity rather than depend solely on external restrictions. Similarly, Howard et al. (2025), in a meta-analysis of 183 studies, found that self-regulation was meaningfully related to problematic forms of digital engagement, including gaming. Therefore, increasing students' awareness of their own gaming behavior may be an important first step toward more intentional digital use.

The second theme reflected changes in students' management of gaming and learning time. Students reported that they had begun to reduce online gaming activities and allocate more time to English learning, particularly when learning involved AI-generated animated videos.

S2: *"I used to play online games very often because they were exciting. Now, I have reduced my gaming activities considerably. I prefer learning English through AI-generated animated videos because the lessons are more interesting, visual, and easier for me to follow."*

This response indicates that the change was not simply characterized by avoiding technology. Instead, students began redirecting part of their digital activity toward educational purposes. Such a pattern is consistent with the concept of digital self-regulation proposed by Wang (2026), in which adolescents gradually develop the capacity to make intentional choices about when, why, and how digital technology is used. Moreover, Hu et al. (2025) found a moderate negative association between problematic gaming and self-control among adolescents and emerging adults, suggesting that the ability to regulate impulses and manage behavior plays an important role in healthier gaming patterns.

The third theme concerned increased engagement in English learning. Students described the learning process as more enjoyable when English-speaking activities were integrated with AI-generated animated videos and interactive tasks.

S3: *"I have reduced my online gaming activities considerably because my teacher teaches English in an enjoyable way using AI-generated animated videos. The lessons are more interesting, and I am now more motivated to practice speaking English."*

This response suggests that AI-supported audiovisual learning may provide students with an alternative form of digital engagement that remains visually attractive while being academically productive. Hwang et al. (2026) found that AI-enhanced video drama-making supported EFL learners' speaking and writing development and was perceived by students as useful, engaging, and relatively easy to use. Their findings showed that AI-supported video production could encourage meaningful language production through vocabulary, sentence construction, pronunciation, and speaking activities.

The present finding is also consistent with Zhang et al. (2026), who found that generative AI-mediated English speaking practice improved speaking performance among vocational learners. The relevance of this finding to SWITCH-EL is particularly important because the model combines digital technology with authentic speaking practice rather than using AI solely for passive content consumption.

The fourth theme reflected a broader shift in students' perceptions of digital technology. Before the intervention, smartphones and other devices were largely associated with entertainment and online gaming. Through SWITCH-EL, the same technologies were increasingly used to watch English learning content, practice pronunciation, develop dialogues, generate visual characters, and create AI-supported animated videos.

This change represents a transition from predominantly recreational digital consumption toward more purposeful digital engagement. Wang (2026) emphasizes that effective digital self-regulation involves developing competence and strategies that enable adolescents to engage with technology intentionally rather than simply reducing access to digital devices. From this perspective, SWITCH-EL provides students with an alternative digital activity in which technology is connected to communication, creativity, and learning.

The learner-creator component of SWITCH-EL is also supported by Hwang et al. (2026), who demonstrated that students can benefit when AI is integrated into video production and authentic language tasks. In addition, Zhang et al. (2026) showed that generative AI can support English speaking performance in vocational learning contexts. These findings reinforce the importance of positioning students not merely as consumers of AI-generated materials but as active users of technology for meaningful English-language production.

Overall, the interview findings indicate that students reported greater awareness of their gaming habits, improved management of gaming and learning time, stronger engagement in English learning, and more purposeful use of digital technology after participating in SWITCH-EL. These qualitative findings complement the observed improvement in English speaking performance. However, because digital self-regulation was explored through interviews rather than a standardized quantitative scale, the findings should be interpreted as students' reported changes in digital self-regulation, rather than as statistically verified improvement.

Overall, the findings demonstrate that the SWITCH-EL Model provides an integrated learning environment in which AI-generated animated videos, contextualized speaking activities, interactive challenges, digital content creation, and reflective digital practices work together to support vocational high school students' English learning. The improvement in speaking-score distribution indicates meaningful gains in oral English performance, while the interview findings suggest that students became more aware of their gaming habits, managed their digital time more purposefully, and increasingly used digital devices for learning rather than entertainment alone. These findings highlight the potential of SWITCH-EL as a technology-enhanced instructional model that connects English speaking development with more responsible and purposeful digital engagement.

CONCLUSION

This study developed the SWITCH-EL Model as an instructional approach that integrates AI-generated animated videos, interactive English speaking activities, learner-generated digital content, and reflective digital practices for vocational high school students. The findings showed a substantial descriptive improvement in students' English speaking performance after the implementation of the model, with post-test scores shifting markedly toward higher achievement levels. The interview findings also indicated that students became more aware of their online gaming habits, reported better management of gaming and learning time, showed greater engagement in English learning, and increasingly used digital technology for more purposeful educational activities. These findings suggest that SWITCH-EL has the potential to support English speaking development while encouraging more responsible digital engagement. However, because digital self-regulation was explored qualitatively through student interviews, future studies should employ validated quantitative instruments and broader experimental designs to examine the effectiveness of the model across different vocational school contexts.

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