



8 - Enhancing Junior High School Students' Motivation and Achievement Through Multimedia-Assisted English Instruction

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Abstract

With the rapid development of technology, multimedia has been widely adopted in language learning. This study aims to explore students' motivation and achievement in English instruction within a multimedia-assisted learning context. The researchers implemented instruction designed to enhance students' desire to learn English, improve their ability to use modern technology, inspire innovation, and cultivate competence simultaneously. Four junior high school students were recruited from a public school in New Taipei City, Taiwan. Over ten weeks, self-designed multimedia-assisted English lessons were observed and analysed. A qualitative research method was employed, with data collected from classroom observations, student interviews, instructional materials, and assignments from various multimedia platforms. The findings indicated that students' motivation to learn English has indeed increased. Furthermore, students demonstrated improved achievement in the four English language skills, media literacy, critical thinking, and problem-solving abilities, etc. In conclusion, educators who embrace such innovative multimedia-assisted instructional approaches could not only significantly boost students' motivation and engagement, but also contribute to more effective and enjoyable English learning experiences.

Keywords: Multimedia-assisted instruction, English learning motivation, competency-oriented education, digital tools, junior high school students

1. Introduction

Nowadays, with the rapid development of science and technology, multimedia has been widely adopted in language learning (Alobaid, 2020). Through multimedia, teachers can explore the most effective ways to create a conducive environment for foreign language teaching and learning, enabling students to learn English without pressure (Gilakjani, 2012). Additionally, with multimedia as the medium, learning is no longer constrained by time, space, or geographical location, significantly influencing education (Tsai, 2021).

In Taiwan, multimedia-assisted language instruction is emphasized in the *Curriculum Guidelines for 12-Year Basic Education*, which is based on a competency-oriented vision (Ministry of Education, 2019). Despite its recognized importance, junior high schools in Taiwan face challenges in incorporating multimedia-assisted, competency-oriented English instruction into their schedules due to curriculum content constraints and the pressures of entrance exams. To address these challenges, the Ministry of Education (MOE) launched an innovative initiative called the *Bilingual Digit Companions for Learning Project*. However, as the program is still in its early stages, there is a lack of research investigating its effects or impact on multimedia-assisted, competency-oriented English instruction.

This study aims to fill this gap by exploring junior high school students' motivation and achievement in competency-oriented English instruction within a multimedia-assisted learning

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context. As part of the project, the researchers, who are teacher-researchers participating in the *Bilingual Digit Companions for Learning Project*, designed 10-week multimedia-assisted, competency-oriented English lessons for secondary school students.

This study seeks to answer the following research questions:

RQ1. How does the 10-week multimedia-assisted competency-oriented English course influence students' motivation to learn English?

RQ2. How does the 10-week multimedia-assisted competency-oriented English course influence students' achievement, especially English four skills and competency?

2. Literature review

2.1 Multimedia-assisted English instruction

2.1.1 The definition of multimedia-assisted English instruction

Multimedia-assisted English instruction refers to the integration of digital media—such as text, images, graphics, videos, audio, animations, and interactive applications—into English language teaching. This pedagogical approach offers multimodal resources that cater to diverse learning styles, promote active engagement, and foster language acquisition in dynamic and interactive environments (Nami et al., 2018; Meskill, 1996). By incorporating multimedia tools, educators can design engaging and less stressful learning experiences, making language learning more attainable and enjoyable for students (Hwang et al., 2021).

This approach also facilitates a shift from teacher-centered to student-centered learning, empowering students to take active roles in their language development through adaptive, self-paced digital resources (Kim, 2020). Multimedia supports differentiated instruction by addressing varied proficiency levels and learning needs, aligning with trends in language education that emphasize learner autonomy and personalized learning (Hockly, 2018).

Furthermore, multimedia addresses challenges related to geographical and temporal constraints in language education. Online platforms and digital content enable remote learning and flexible access to instructional materials, benefiting students with limited opportunities for direct language immersion or classroom interaction (Godwin-Jones, 2019). The integration of authentic materials, such as podcasts, exposes learners to genuine language usage and cultural contexts, enhancing communicative competence and bridging the gap between classroom learning and real-world application (Zhang & Zou, 2020).

Additionally, multimedia fosters collaborative learning through online discussions, virtual exchanges, and peer-to-peer language practice with students from diverse locations (Hampel & Stickler, 2015). Such collaborative activities provide meaningful, real-world contexts for practicing language skills, further enriching the learning experience.

In conclusion, multimedia-assisted English instruction leverages digital media to enhance students' language abilities. By enriching traditional teaching methods, it creates a multimodal, interactive, and adaptable learning environment that addresses individual learners' needs while preparing them for authentic language use in real-world situations.

In this study, the multimedia tools integrated into English instruction were categorized into three key aspects:

- Interactive platforms: Padlet, Slido, Jamborad, Peardeck, Google Chat, etc
- Collaborative tools: Canva, Jamboard, etc
- Gamified learning platforms: Cool English, Quizizz, Quizlet, Baamboozle, Wordwall, etc

2.1.2 Studies on the learning motivation of multimedia-assisted English instruction

Research indicates that multimedia-assisted instruction significantly increases students' motivation to learn English, both intrinsically and extrinsically.

On the one hand, **intrinsic motivation** refers to an internal desire to learn, driven by interest and enjoyment rather than external incentives. According to Self-Determination Theory, intrinsic



motivation is more likely to develop when learning activities satisfy students' needs for autonomy, competence, and relatedness (Ryan & Deci, 2017). Multimedia-assisted instruction supports these needs by offering adaptive and self-paced learning experiences, providing instant feedback, and allowing students to engage with content in diverse ways. For instance, Nami et al. (2018) found that incorporating multimedia elements such as interactive exercises, videos, and animations in English language instruction significantly increased EFL learners' intrinsic motivation, especially when the content was designed to be engaging and aligned with their interests. Similarly, Hwang et al. (2021) demonstrated that gamified multimedia learning activities enhanced students' intrinsic motivation to learn English grammar by making the learning process more enjoyable.

On the other hand, **extrinsic motivation**, driven by external factors such as grades, rewards, or recognition, also plays an important role in language learning. Multimedia-assisted instruction can enhance extrinsic motivation by providing digital tools that help students achieve tangible learning outcomes, such as improved test scores. Multimedia improves learning efficiency by offering a variety of resources tailored to different learning speeds and styles, helping students recognize the value and benefits of their efforts (Sun et al., 2018). For example, Chiu and Liu (2023) examined the impact of achievement goal orientation on students' extrinsic motivation in a multimedia-assisted English learning context. Their study revealed that students with performance-oriented goals were more motivated by external rewards such as grades and teacher recognition when engaging with multimedia resources. Additionally, Huang et al. (2022) found that multimedia tools incorporating gamification elements, such as points, levels, and leaderboards, notably enhanced students' external drive to participate in English language learning.

To sum up, considerable research suggests that multimedia-assisted English instruction positively impacts learning motivation, addressing both intrinsic and extrinsic aspects.

2.1.3 *Studies on the achievement of multimedia-assisted English instruction*

Research consistently demonstrates that incorporating multimedia in English teaching can lead to significant improvements in students' language skills, including reading, writing, listening, and speaking, as well as their overall academic achievement (Zhang & Zou, 2020; Hwang et al., 2021).

The positive impact of multimedia on English skills is well-supported by recent studies. For example, Hsu (2019) reported that EFL students taught English with multimedia assistance outperformed those in traditional classrooms on vocabulary and grammar tests. Additionally, Hsu (2019) found that multimedia-assisted teaching significantly improved vocabulary acquisition and retention among EFL students. By utilizing multimedia resources such as videos, audio clips, and online quizzes, students engaged more actively with vocabulary learning tasks, resulting in higher retention rates compared to traditional instruction methods. Furthermore, Chen and Hsieh (2021) demonstrated that incorporating multimedia resources into English writing instruction significantly enhanced students' writing quality. Digital tools provided scaffolding for writing tasks and immediate feedback, supporting students' development as writers.

Research also suggests that multimedia-assisted instruction is particularly beneficial for students with lower proficiency levels or specific learning needs. Lai (2021) found that multimedia tools, offering both visual and auditory support, helped struggling students improve their comprehension and processing of language input.

Moreover, multimedia-assisted English instruction has been shown to positively impact students' overall academic achievement in language learning. Sun and Yang (2015) reported that students in multimedia-assisted classrooms scored higher on English proficiency tests than their peers in traditional settings, particularly in reading comprehension and listening skills. Recent studies have also highlighted the role of multimedia tools in standardized test preparation. For instance, Liu et al. (2022) found that using multimedia tools such as video tutorials and interactive language learning applications significantly improved EFL students' performance on standardized English tests, including TOEFL and IELTS.

Overall, there are considerable studies highlight that multimedia-assisted English instruction positively affects students' English skills and overall academic achievement.

2.2 Competency-oriented English instruction

2.2.1 The definition of competency-oriented English instruction

In Taiwan's education system, competency-oriented instruction has been integrated into the English curriculum. The objective is not only for students to master the knowledge of the English language but also to cultivate their interdisciplinary application abilities and core competencies. This teaching approach emphasizes the flexible application of learned knowledge in real-world contexts, fostering skills such as problem-solving, critical thinking, self-directed learning, and collaborative communication to equip students with the ability to tackle real-life challenges (Ministry of Education, 2019).

According to the *Curriculum Guidelines of 12-Year Basic Education*, competency-oriented English instruction requires teachers to design contextualized learning activities that engage students in exploration and practice within challenging situations. It prioritizes the depth and breadth of learning over memorization and rote learning. This teaching model aims to develop students' "knowledge, skills, and attitudes" simultaneously during the learning process, enabling them to flexibly apply their learning in dynamic environments and achieve the ultimate goal of cultivating true competency (Ministry of Education, 2019).

The *Curriculum Guidelines of 12-Year Basic Education* identify 19 key issues in competency-oriented instruction, including the following: Family Education Course, Character Education Course, Life Education Course, Environmental Education Course, Multicultural Education Course, Gender Equality Education Course, Human Rights Education Course, Energy Education Course, Marine Education Course, Legal Education Course, Technology Education Course, Resource Education Course, Safety Education Course, Disaster Prevention Education Course, Career Planning Education Course, Reading Literacy Education Course, Outdoor Education Course, International Education Course, and Aboriginal Education Course (Ministry of Education, 2019). These are the issues of competency-oriented instruction that are worth teaching, learning, and studying.

In this study, the program incorporated the four competency-oriented issues into the English curriculum design.

- Family awareness and responsibilities (Family Education Course)
- Character development (Character Education Course)
- Life lessons (Life Education Course)
- Environment protection (Environmental Education Course)

3. Methodology

3.1 Research design

This research uses a case study method to explore junior high school students' motivation and achievement of competency-oriented English instruction within a multimedia-assisted learning context. It is hoped that this study may investigate and reflect on whether multimedia-assisted competency-oriented instruction in the MOE program could indeed be effective in cultivating the ability of English and multimedia tools use, and competency, as well as could improve the learning motivation and achievement of junior high school students simultaneously.

The researchers designed 10-week teaching materials and would observe 40 sessions in class, which are related to multimedia-assisted competency-oriented English instruction for four secondary school students from the Bilingual Digit Companions for Learning Project. A qualitative research method was employed, with data collected from classroom observations, student interviews, instructional materials, and assignments from various multimedia platforms.

3.2 Research context

Guided by the core value of "life accompanies life, life teaches life," the *Bilingual Digital Companions for Learning Project* focuses on two main objectives: fostering "co-learning and companionship



between university students and secondary school students” and cultivating “the spirit of self-management, social responsibility, moral growth, and digital literacy among university students” (Ministry of Education, 2022). The program aims not only to enhance students’ ability to use English but also to develop their proficiency in applying multimedia tools, fostering competencies simultaneously.

By integrating multimedia tools into English teaching, the project creates a more diverse digital learning environment for students in remote areas, enhancing their motivation to learn and improving their academic achievement. Additionally, these tools support the establishment of a cooperative mentoring system between secondary and university students (Ministry of Education, 2022).

The program incorporated four key issues into its curriculum design: **family awareness and responsibilities, character development, life lessons, and environmental protection**. The teaching objectives for each issue are as follows:

1. Family awareness and responsibilities:

Students are expected to develop the ability to explore family development and the interaction between family and society. They will also cultivate a sense of responsibility and awareness in family relationships.

2. Character development:

Students will enhance their moral development and gain competencies to perform acts of kindness, thereby promoting overall character growth.

3. Life lessons:

Students will strengthen their ability to reflect on fundamental life issues and enhance value-based critical thinking and emotional understanding.

4. Environmental protection:

Students will understand the environmental crises and challenges facing humanity, recognize the importance of sustainable development, and take practical action.

As teacher-researchers, we carried out the program schedule as shown in the table below.

Table 1 - Program Schedule

Month	Program schedule
August	<ol style="list-style-type: none"> 1. Participated in the training. 2. Designed 10-week lessons. 3. Implemented the teaching demonstration. 4. Revised and adjusted the lesson plan through the professors’ feedback.
September to November	<ol style="list-style-type: none"> 1. Participated in systematic educational training. 2. Gave lessons. 3. Wrote diary for instruction. 4. Collected feedback from professors and students. 5. Participated in monthly meetings. 6. Implemented regular assessment.
December	<ol style="list-style-type: none"> 1. Gave lessons. 2. Wrote diary for instruction. 3. Participated in monthly meetings. 4. Implemented final assessment. 5. Improved from the professors’ feedback and suggestions.

3.3 Lesson schedule

The table below shows the lesson schedule adopted in the research. Each issue would be covered for two weeks. Interviews would be conducted in the first, sixth and the final week.

Table 2 - Lesson Schedule

Week	Lesson	Week	Lesson
Week 1	Overview & Class management (+Interview)	Weeks 6-7	Life lessons (+ Interview)
	Introduction to the use of multimedia tools	Weeks 8-9	Environmental protection
Weeks 2-3	Family awareness and responsibilities	Week 10	Reflections for the course (+Interview)
Weeks 4-5	Character development		

3.4 Participants

The participants in this study were four junior high school students from New Taipei City, enrolled in a program under the Ministry of Education (MOE). The group consisted of two first-year students and two second-year students.

The students demonstrated varying levels of motivation. While some exhibited high levels of enthusiasm and engagement, others required additional support to strengthen their motivation. Most students were actively engaged in class; however, one student occasionally displayed signs of distraction. Some participants showcased strong English proficiency, excellent multimedia tool usage, and a solid understanding and application of competency. Nonetheless, there was room for improvement among certain individuals.

To address the research questions, data was collected through student interviews, classroom observations, instructional materials, and assignments submitted via various multimedia platforms.

3.5 Data Collection Techniques

3.5.1 Interviews with Students

The type of interview (outlined in the Appendix), developed by the researchers, consisted of online, informal, semi-structured interviews with the four participants. These interviews were conducted during the first week, the sixth week, and the final week of the program

The interview procedure included the following steps:

1. Creating an interview guide.
2. Conducting interviews with students during class at the beginning, middle, and end of the semester.
3. Recording the interviews and noting key points from students' responses.
4. Reviewing the recorded videos and transcribing the interviews after each session.

Table 3 presents the categories of interview questions used at the beginning, middle, and end of the program.

Table 3
Categorization of the Interview

Schedule	Category
Start of the program (Week 1)	<ol style="list-style-type: none"> 1. Motivation for participating in the program 2. English learning experiences 3. Motivation for learning English 4. Experiences with using multimedia tools to learn English
The middle of the program (Week 6)	<ol style="list-style-type: none"> 1. Learning interest - affective domain 2. Learning interest - cognitive domain 3. Learning interest - behavioural domain
The end of the program (Week 10)	<ol style="list-style-type: none"> 1. Changes in ideas about the course 2. Changes in feelings about the course 3. Reflections on the integration of multimedia tools in the competency-oriented English curriculum 4. Reflections on perceived progress in English, competency, and multimedia tools use

3.4.2 Researcher's Diary for Instruction

After each class, the researchers documented an instructional diary (Figure 1), which included the class date, a summary of the course content, teaching focus, instructional objectives, learning outcomes, and the performance of each student that addressed aspects such as learning engagement, language usage ratio, improvement, and the learning situations, etc.

Figure 1 - Instructional Diary of the Researchers

上課日期	講義日期	科目	大學 伴	小學伴	每週課程內容摘要	教學 點	本週教學目標	活動 完成率	活動 正確率	學習成效 評量方式	評量結果	管理
111-10-05 (三) 18:30-20:00	111 / 10 / 06 (四) 00:30	英語	國立 臺中 教育 大學 博理 系	新北市三區區光榮 國民中學 教師 群組id: 25 [出席] [出席] [出席]	1.學生能聽懂及看懂課本之內容和課後所傳 達訊息與付代之意涵。 2.學生能自行省思和覺察家人或他人的付 出。 3.學生能理解並練習應用不同的方法實踐家 恩。 4.學生能應用課本 (The Thank you boo k) 之內容，練習感恩句型。	聽、 說、 讀、 寫	1.學生能理解聽懂內容並運用課堂所學家 恩之相關內容與英語句型。 2.感恩日記於新批改後，學生能與理解並 改正自身文法錯誤，運用更多的感謝他人 的句型。 3.學生能於課堂主動分享和實踐家恩之內 涵。	90%	90%	Speaking & Reading & Listenin g & Writin g	整體表現都不錯，不 過撰寫可以再加強。	紀錄
111-11-03 (四) 17:00-18:30	111 / 11 / 03 (四) 21:36	英語	國立 臺中 教育 大學 博理 系	新北市三區區光榮 國民中學 教師 群組id: 19 [出席] [出席] [出席]	生命教育：珍惜關係 反思生老病死與人生無常的現象，探索人生的目的、 價值與意義，知道要如何表達自身感恩。 學生懂得珍惜。 議題：I miss you 課本 課上的動作，會關於感恩的表達。	聽、 說、 讀、 寫	1.Students are able to cher ish what they have in their life. 2.Students are able to kno w how to express and deal with their feelings about fa	90%	90%	Listening & Speaki ng & Wri ting & Re ading	學生的說讀寫有進步，寫 也有進步，不過還可以更 好。 學生今天的答題選擇，很 多都答對，甚至也有全對 的！	紀錄
111-12-19 (一) 18:30-20:00	111 / 12 / 19 (一) 22:09	英語	國立臺 中教育 大學 博理系	新北市三區區光榮 國民中學 教師 群組id: 25 [出席] [出席] [出席]	兩份問卷調查 研究動機 後測 成果發表指示 學生分享相關的想 法 檢討一些後測問題	聽、 說、 讀、 寫	學生能與再於分享自身的想法 學生能與完成兩份問卷及後測	90%	90%	Listening & Reading Post test	有的學生表現得不錯，有的 學生有進步。	紀錄
111-10-05 (三) 18:30-20:00	111 / 10 / 06 (四) 00:30	英語	國立 臺中 教育 大學 博理 系	新北市三區區光榮 國民中學 教師 群組id: 25 [出席] [出席] [出席]	1.學生能聽懂及看懂課本之內容和課後所傳 達訊息與付代之意涵。 2.學生能自行省思和覺察家人或他人的付 出。 3.學生能理解並練習應用不同的方法實踐家 恩。 4.學生能應用課本 (The Thank you boo k) 之內容，練習感恩句型。	聽、 說、 讀、 寫	1.學生能理解聽懂內容並運用課堂所學家 恩之相關內容與英語句型。 2.感恩日記於新批改後，學生能與理解並 改正自身文法錯誤，運用更多的感謝他人 的句型。 3.學生能於課堂主動分享和實踐家恩之內 涵。	90%	90%	Speaking & Reading & Listenin g & Writin g	整體表現都不錯，不 過撰寫可以再加強。	紀錄
111-11-03 (四) 17:00-18:30	111 / 11 / 03 (四) 21:36	英語	國立 臺中 教育 大學 博理 系	新北市三區區光榮 國民中學 教師 群組id: 19 [出席] [出席] [出席]	生命教育：珍惜關係 反思生老病死與人生無常的現象，探索人生的目的、 價值與意義，知道要如何表達自身感恩。 學生懂得珍惜。 議題：I miss you 課本 課上的動作，會關於感恩的表達。	聽、 說、 讀、 寫	1.Students are able to cher ish what they have in their life. 2.Students are able to kno w how to express and deal with their feelings about fa	90%	90%	Listening & Speaki ng & Wri ting & Re ading	學生的說讀寫有進步，寫 也有進步，不過還可以更 好。 學生今天的答題選擇，很 多都答對，甚至也有全對 的！	紀錄
111-12-19 (一) 18:30-20:00	111 / 12 / 19 (一) 22:09	英語	國立臺 中教育 大學 博理系	新北市三區區光榮 國民中學 教師 群組id: 25 [出席] [出席] [出席]	兩份問卷調查 研究動機 後測 成果發表指示 學生分享相關的想 法 檢討一些後測問題	聽、 說、 讀、 寫	學生能與再於分享自身的想法 學生能與完成兩份問卷及後測	90%	90%	Listening & Reading Post test	有的學生表現得不錯，有的 學生有進步。	紀錄

3.4.3 Samples of students work

Samples of student work were collected from weekly class activities and included a diverse range of multimedia-assisted products, such as Padlet class interaction responses and sharing, Jamboard brainstorming ideas and reflection, and Canva presentations and posters.

3.5 Data collection procedure

The beginning of the semester			
Course guideline	Interview	Class observation	
The middle of the semester			
Interview	Learning outcomes from multimedia platforms		Class observation
The end of the semester			
Interview	Final achievement performance	Reflection	Class observation

Figure 2 - Data collection procedure at the beginning, middle, and end of the semester.

3.6 Data analysis methods

Step 1: Organizing and preparing the data for analysis. The initial phase of data analysis involved transcribing interviews and systematically organizing the data. The researchers began by creating individual folders for each focal student, then further divided these four students’ data into the beginning, middle, and end of the semester to organize.

Step 2: Reading through all the data and conducting initial open coding. The researchers used three-column tables to facilitate the initial open coding process. As shown in Figure 3, meaning units were entered in the right-hand column, preliminary codes in the middle column, and topic categories in the left-hand column. The **topic categories** represent initial, broad classifications used to identify and organize larger chunks of data. Sorting data into these categories provided an overview of the various topics within the dataset. These broad categories were subsequently refined, deleted, or combined to develop more specific coding categories.

Table 4 - Sample Open Coding Table

Topic categories	Codes	Data
Motivation	Motivation to join the program	<ol style="list-style-type: none"> 1. I kind of like learning English and enjoy having the company of friends when learning new things. 2. I just wanted to find something to learn and enrich myself. 3. I don't have tutoring right now, so I want to enrich myself.
Changes	Changes for achievement	<ol style="list-style-type: none"> 1. My English indeed has improved. For instance, I don't turn on Chinese subtitles anymore. I watch only English subtitles now. Also, I have learned how to apply various competency-oriented issues. 2. I found I have improved in English, technology, and competency. For instance, I spelled words faster and knew more important issues in the world. 3. I have learned how to read and use more words and sentences.
	Changes for learning motivation	<ol style="list-style-type: none"> 1. I just wanted to find something to do at first and I didn't really like English, but I like English a little bit right now. 2. I didn't like English very much before, it was forced by my parents at first, but I try to like English now. 3. I was a little anxious about the class at the beginning and didn't think I had a good level of English; however, I didn't feel that way anymore and was convinced that I had more interest and motivation.

Step 3: Creating narratives about the student learning journey. The researchers created a narrative for each student’s learning journey. Each narrative told a story about a student’s initial motivation to join the program, his or her experience and motivation for learning English and using multimedia tools,



their learning interest for cognitive, affective as well as behavior, and their perceived progress in all aspects as English learning motivation, achievement, competency, and multimedia tools use.

Step 4: Identifying emergent themes. Themes are patterns or trends across data that are associated with a specific research question (Bazeley, 2013). In this study, the researchers used the student learning journey narratives and coding of sample student work to generate emergent themes that describe the impact of the multimedia-assisted competency-oriented English course on student motivation and achievement. For instance, in analyzing students' learning motivation, the researchers noticed a recurrence of codes across all four student data sets. A thematic statement with regard to the change in student motivation was therefore generated: While the four focus students entered the program with varying motivations for learning English, the 10-week multimedia-assisted competency-oriented English course appeared to have cultivated their interest in studying English, both in and out of classroom contexts.

Step 5: Making an interpretation of the findings. According to Patton (2002), "interpretation means attaching significance to what was found, making sense of findings, offering explanations, drawing conclusions, extrapolating lessons, making inferences, considering meanings, and otherwise imposing order" (p. 480).

The researchers interpreted the findings by examining changes in students' motivation, changes in students' achievement, and implications for future multimedia-assisted English instruction, etc.

4. Results and discussion

4.1 Narratives of four students' learning journeys

4.1.1 Angel's learning journey

Angel perceived notable progress in her learning motivation, interest, and achievement in English and competency throughout the program, as detailed below.

Angel entered the program with high motivation to learn English alongside friends. When asked about her reason for joining the program, she shared, "I kind of like learning English and enjoy having the company of friends when learning new things" (Informal Interview, September 2023). Before joining the program, Angel had already formed a habit of regularly exposing herself to English through watching "YouTube videos and Netflix movies" (Informal Interview, September 2023). She found that multimedia made English learning more enjoyable and expressed a desire to share these tools with her friends while learning new multimedia tools in the program (Informal Interview, September 2023).

After a few weeks of classes, Angel reflected that multimedia-assisted English learning "was very helpful in all aspects," benefiting her reading, writing, listening, and speaking skills. For example, she noticed an increased willingness to express her ideas in English during class. She remarked, "If I encounter something I don't know, I can just think it is a practice" (Informal Interview, November 2023). Angel's positive learning attitude was also noted in the researchers' instructional diary. In addition to improving her English proficiency, Angel observed that she had become more attentive to "the important issues that global citizens must care about" (Informal Interview, November 2023).

As Angel continued participating in the program, her learning interest and motivation grew stronger. In her final interview, when asked about changes she noticed since the beginning of the program, Angel remarked, "I used to like English a little bit, but now I really love to learn it." She also reflected on her progress, emphasizing improvements in her English skills and competency: "My English indeed has improved. For instance, I no longer use Chinese subtitles; instead, I now listen to English directly with English subtitles as support. Also, I have learned how to apply various competency-oriented issues such as problem-solving ability, self-expression ability, and critical thinking ability" (Informal Interview, December 2023).

4.1.2 Chino's learning journey

Chino initially demonstrated some learning motivation but faced challenges in her learning environment. Over time, however, her motivation and achievements in English, competency, and technology use showed notable improvement, as detailed below.

Chino entered the program with some motivation and interest in learning. When asked about her reason for joining the program, she explained, “I just wanted to find something to learn and enrich myself” (Informal Interview, September 2023). Before joining the program, Chino recognized the importance of English as an international language for communicating with foreigners and broadening her horizons. However, she felt her English skills were insufficient and admitted she lacked familiarity with certain multimedia tools. Her primary goals were to improve her English, fully understand the content taught by the teacher, and gain confidence in using multimedia tools.

After a few weeks of classes, Chino noticed improvement in her English skills. She expressed a desire to use English to convey her ideas during class as a way to demonstrate her progress and achievements. Additionally, she became proficient in using multimedia tools that had previously been unfamiliar to her. Beyond enhancing her English and technology skills, Chino also developed competencies such as expressing her feelings, respecting others, and practicing gratitude in a digital English learning environment. Observations recorded in the researchers’ class diary highlighted her gradual growth in English proficiency, multimedia tool usage, and overall competency.

As Chino continued participating in the program, her learning interest and motivation strengthened. In her final interview, when asked about changes she noticed since the beginning of the program, Chino reflected, “I just found something to do at first, and I didn’t really like English, but I have a little bit liked English right now” (Informal Interview, December 2023). She also shared, “I found I have improved in English, multimedia tools use, and competency. For instance, I spell words faster, know how to use more multimedia tools, and understand more important competency-oriented issues in the world, such as self-expression ability and communication skills” (Informal Interview, December 2023). By the end of the program, Chino recognized her progress in all aspects of learning.

4.1.3 Kiki’s learning journey

Kiki initially exhibited low levels of learning motivation and achievement; however, her learning motivation, interest, and achievements in English, competency, and technology use ultimately improved, as detailed below.

Kiki entered the program with low learning motivation. When asked about her reason for joining, she responded, “My parents forced me to join this program” (Informal Interview, September 2023). She also felt anxious due to previous negative experiences with digital learning. While she acknowledged the importance of learning English and expressed a desire to improve her skills, she admitted,

“I was not very interested in learning English, especially with multimedia tools. I felt that technology was constantly changing, and I was too lazy to learn” (Informal Interview, September 2023).

After a few weeks of classes, Kiki noted that her anxiety had decreased. She became more willing to learn English and engage with competency-oriented issues using multimedia tools, describing the experience as “a little bit interesting” and “useful” (Informal Interview, September 2023). She also observed gradual improvement in her English skills, including reading, writing, listening, and speaking. Furthermore, Kiki began actively using English to express her ideas in the stress-free class environment, which was observed by the researchers and documented in the instructional diary.

As Kiki continued participating in the program, her learning interest and motivation grew stronger. In her final interview, she reflected on the changes she experienced: “I didn’t like to learn English very much before because it was forced by my parents, but now I try to like English.” She added,

“At the beginning, I was afraid that the teacher would be fierce or that I wouldn’t be able to learn English well. But I don’t feel that way anymore. I don’t feel terrified. Instead, I have learned a lot, like how to use more vocabulary and sentences” (Informal Interview, December 2023).



Finally, Kiki recognized the benefits of using multimedia tools to learn English. She mentioned that her school English scores had significantly improved due to these multimedia courses. Additionally, she learned how to apply competency-oriented issues, such as media literacy and environmental awareness, in real-life contexts.

4.1.4 *Jerry' learning journey*

Jerry perceived notable progress in his learning motivation, achievement in English, technology use, and competency, as detailed below.

Jerry entered the program with a high level of motivation. When asked about his reason for joining, he explained,

"I don't have tutoring right now, so I want to enrich my English" (Informal Interview, September 2023).

In the initial interview, Jerry expressed that he thought learning English was essential and believed using multimedia tools could strengthen his English skills while making the learning process more interesting. His main expectation was to improve his English. Observations from the researchers highlighted Jerry as a motivated and proactive student.

After a few weeks of classes, Jerry's motivation to learn English continued to grow, fueled by the use of multimedia tools. He became more willing to express himself in English, even though he initially lacked confidence. Over time, his anxiety about the English course diminished, thanks to his progress and increasing motivation. In a digital English environment, Jerry not only improved his ability to write complete sentences but also learned how to use multimedia tools effectively to organize his assignments and notes. Overall, his learning motivation and achievement showed steady improvement.

As Jerry continued participating in the program, he remained highly motivated to learn. In his final interview, he reflected on his progress:

"I was a little anxious about the class at the beginning and didn't think I had a good level of English; however, I don't feel that way anymore and am convinced that my English has indeed improved, and I have more interest now" (Informal Interview, November 2023).

Jerry also acknowledged that the multimedia tools he learned during the program were truly "useful." He credited the multimedia courses with improving his English skills and helping him develop competency-oriented abilities closely tied to real life, such as critical thinking, teamwork, and maintaining healthy friendships and family relationships.

4.2 *The impact of the 10-week multimedia-assisted competency-oriented English instruction on students' English motivation*

The four narratives about the students' learning journeys revealed varying levels of initial motivation for learning English. Angel and Jerry entered the program with high motivation, as evidenced by their interview responses and consistently reflected throughout their narratives. Chino, meanwhile, expressed mixed feelings about learning English. Although she acknowledged its importance and expressed a desire to enrich herself, she admitted that she didn't really enjoy learning English initially, indicating a moderate level of motivation. Lastly, Kiki demonstrated minimal motivation at the outset, stating that she joined the program because her parents forced her to. However, she still recognized the value of learning English.

After a few weeks of classes, Angel and Jerry experienced even higher motivation to learn English, largely due to the use of multimedia tools. They both found these tools beneficial, interesting, and engaging, which encouraged them to actively pursue English learning. Chino's motivation gradually increased over time, while Kiki's anxiety about learning English decreased, making her more willing to engage with the language. For both, multimedia tools played a significant role in fostering a positive attitude toward learning English.

By the end of the semester, all four students expressed in their final interviews that their motivation to learn English had indeed increased, as evidenced by the narratives of their learning journeys.

4.3 *The influence of the 10-week multimedia-assisted competency-oriented English instruction on students' achievement*

4.3.1 *English achievement*

The analysis of students' English achievement was based on students' assignments, informal interviews, and the researchers' weekly diary for instruction. In general, the four focal students perceived that their English proficiency had improved. They all mentioned this improvement in their final informal interviews. This improvement was also reflected in student assignments and the researchers' weekly diary for instruction. Focal students' listening, speaking, reading, and writing achievements are reported in the following sections.

(A) Listening. This study found that students made progress in their listening proficiency. For instance, Angel was able to watch English movies without Chinese subtitles. In her interview, she said,

"My English listening skills indeed have improved. For example, I no longer use Chinese subtitles; instead, I now listen to English directly with English subtitles as support" (Informal Interview, December, 2023).

Besides, Jerry perceived the progress of his English listening skills. He stated,

"I was initially a bit anxious about the class because I didn't think my English listening was good; however, I didn't feel that way now and was convinced that my English listening skills indeed improved" (Informal Interview, November, 2023).

Jerry's listening progress was also documented in the researchers' diary for instruction.

(B) Speaking. The four focal students entered the class with a reluctance to speak English. They interacted with each other and the instructor mainly in Mandarin. However, as the course progressed, the instructor observed a growing willingness and progress among the students to speak English.

In the final achievement performance, all students were required to orally present their final assignments and share their reflections, which found that students made progress in their speaking proficiency. For instance, Angel thought that her speaking skills improved a lot as she learned how to speak more fluently, accurately, and appropriately. Besides, Chino felt that her English speaking also improved as she learned how to speak more English sentences and vocabulary.

In addition, students' improvement in their speaking proficiency was also revealed in the researchers' diary for instruction. At the beginning of the semester, the researchers mentioned in the diary, "Students were afraid and resistant to speak English, while they interacted with the instructor only in Mandarin." In the middle of the semester, the researchers found that students had become more willing to speak English, with a general improvement in their speaking skills. By the end of the semester, it was demonstrated that some students performed very well, and some students made great progress in their English speaking.

(C) Reading. The study found evidence of progress in students' reading proficiency. For example, in Kiki's reflection, she mentioned that she could read more storybooks and apply what she learned in her reports or presentations. In the interview, Kiki also stated, "At the beginning, I was afraid that I wouldn't be able to learn English well. But I don't feel anxious anymore. Instead, I have learned how to read the English books and can understand more vocabulary and sentences" (Informal Interview, December, 2023).

Similarly, Angel, Chino, and Jerry also recognized improvements in their reading skills, as indicated in their final reflections and documented in the researchers' instructional diary.

(D) Writing. The four focal students entered the class with a resistance to writing English. Most of them finished assignments in Chinese at the beginning of the semester. Over the course of the program, however, the researchers observed they became more willing to write in English, accompanied by improvements in their writing performance. As shown in Figure 3, students initially

wrote exclusively in Chinese or just wanted to write a few English words. In contrast, Figure 4 illustrates that the four focal students later demonstrated an increased willingness to write English vocabulary and sentences, with gradual improvement in their writing skills.

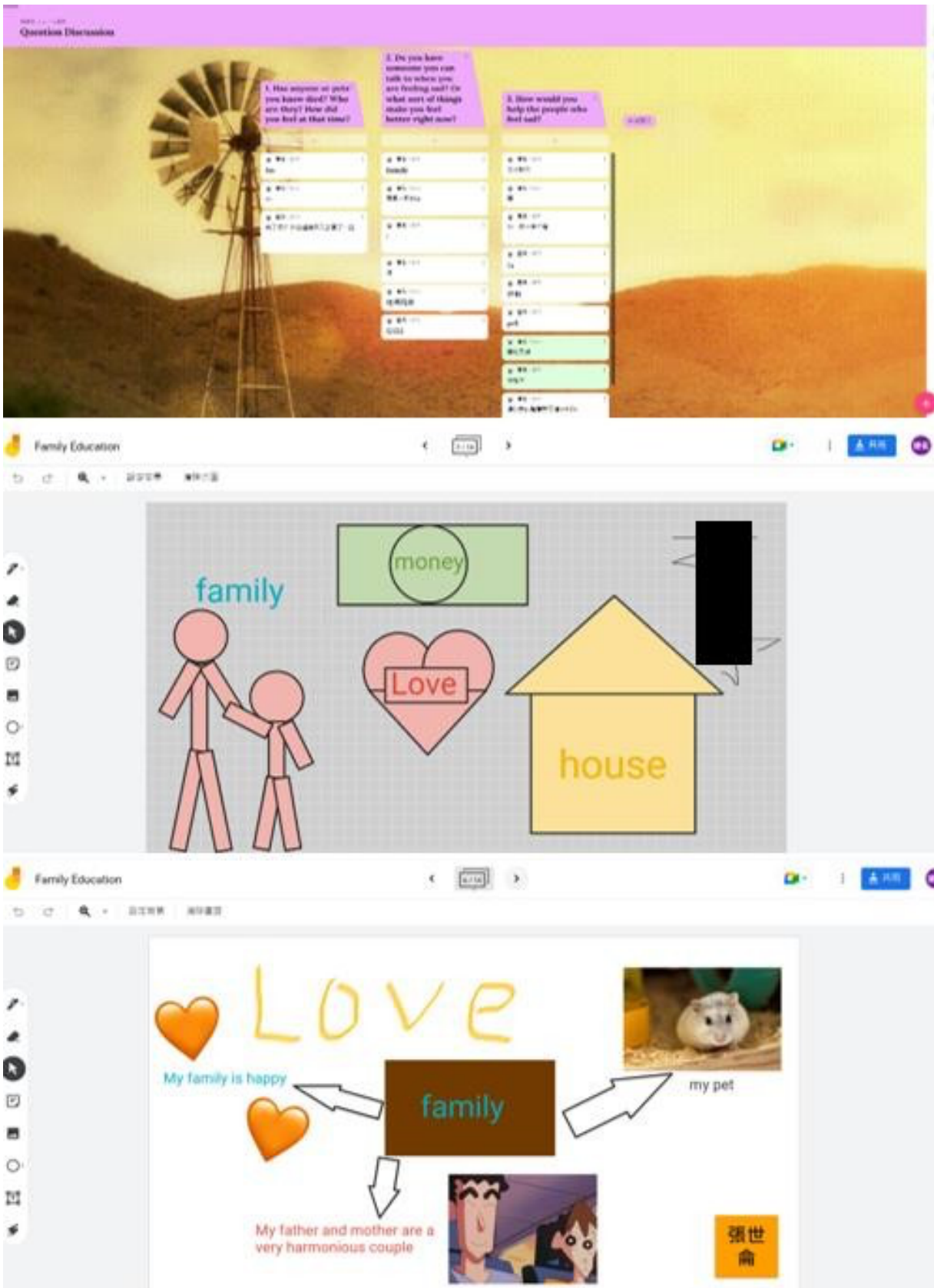


Figure 3 - Students' Assignments at the Beginning of the Semester

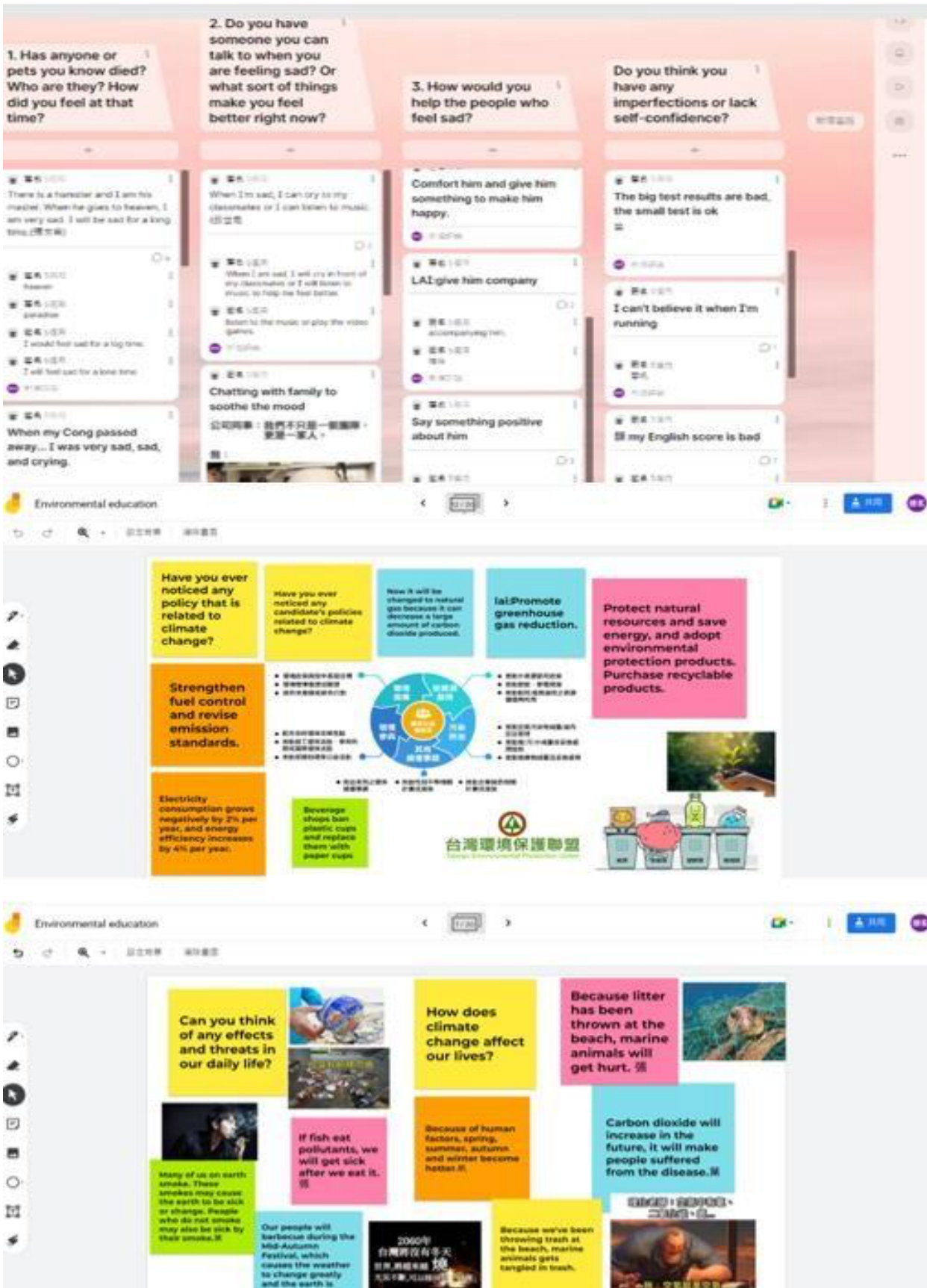


Figure 4 - Students' Assignments at the End of the Semester

Students' improvement in writing proficiency was also documented in the researchers' instructional diary. At the beginning of the semester, the diary observed, "Students were resistant to writing in English; most wrote in Chinese or only wanted to write a few English words." By the middle of the semester, students had become more willing to write in English, demonstrating general improvement in their writing skills. By the end of the semester, students' performance was remarkable, and their writing showed significant progress.

Figure 5 illustrates the four focal students' perceptions of their progress in writing skills. For instance, Angel reflected,

"I could write more words that rarely appear in my daily life." Similarly, Jerry remarked, "I learned the usage of different words and could write more diverse sentence patterns."

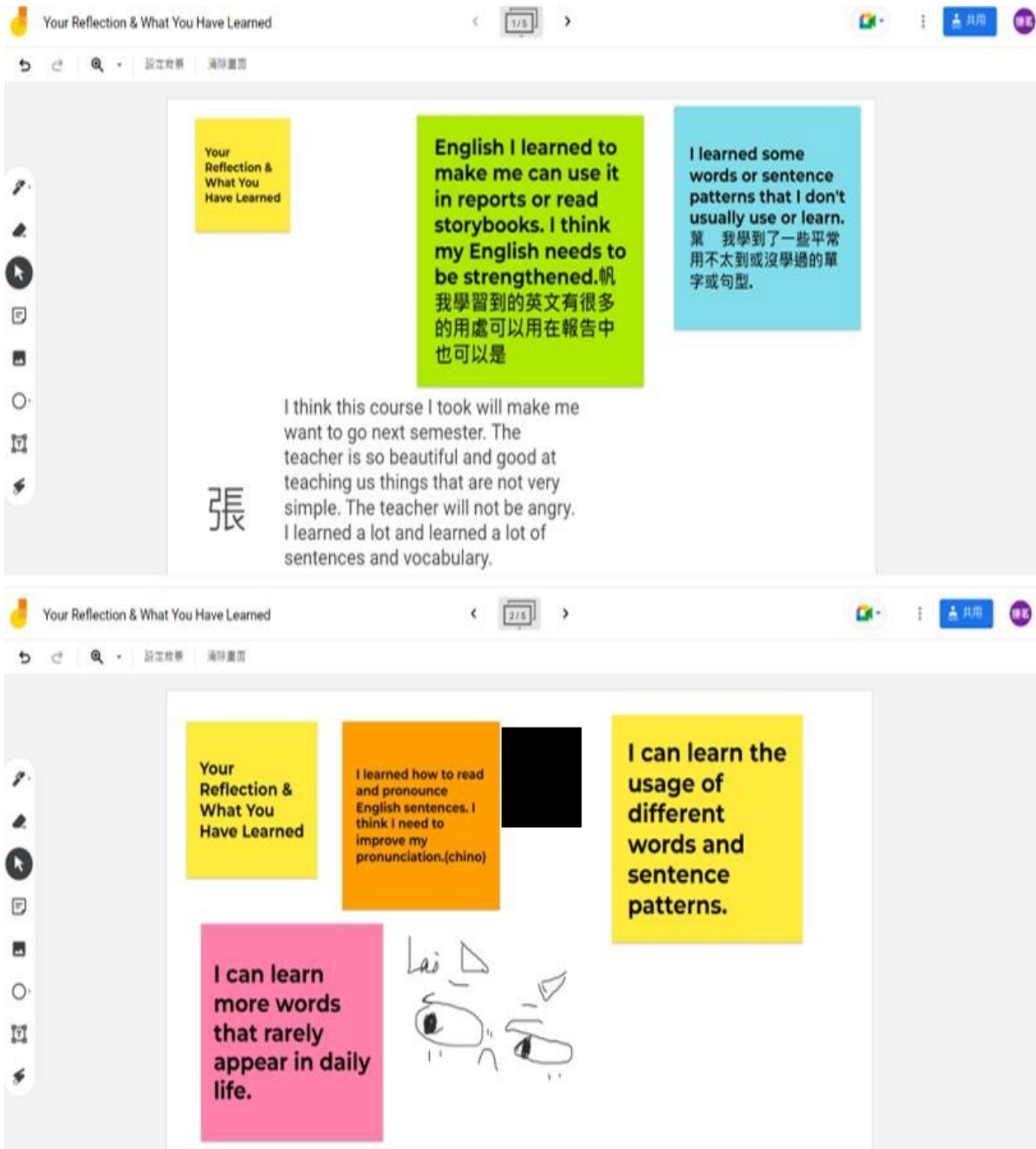


Figure 5 - Students' Reflections on Their Progress in English Writing

4.3.2 Achievement in competency-oriented issues

The analysis of the four focal students' task outputs and interview responses demonstrates significant improvement in their understanding and ability to explore competency-oriented issues. For example, Angel stated in her interview, "I have learned how to apply various competency-oriented issues such as problem-solving ability, self-expression ability, and critical thinking ability" (Informal Interview, December 2023). Similarly, Kiki remarked, "I gained a better understanding of how to apply these competency-oriented issues in real life, such as media literacy ability and environmental awareness" (Informal Interview, December 2023). Jerry also shared, "I learned more competency-oriented issues that are closely related to life, such as critical thinking ability, teamwork skills, and how to maintain good friendships and family relationships" (Informal Interview, December 2023).

The researchers' instructional diary further documented the students' progress in understanding competency-oriented issues. Midway through the semester, the diary noted, "there was still room for improvement in students' understanding of competency-oriented issues." However, by the end of the semester, the students not only demonstrated better performance but also showed a notably advanced understanding and application of these issues.

The following includes examples of students' classroom performance. Figure 6 illustrates work produced by students in the unit on **family awareness and responsibilities**. In this task, students were asked to create cards expressing their gratitude to their family and teachers. This activity was designed to help students recognize the importance of gratitude as a competency-oriented issue and to take actionable steps by using English to convey their appreciation.



Figure 6 - Students' Works for the Competency-oriented Issue of Family Awareness and Responsibilities

Similarly, in the unit on **life lessons**, students read a picture book by Pat Thomas. This unit focused on expressing ideas and feelings in English related to facing death, as well as the importance of cherishing what they have in life. Figure 7 illustrates students' personal expressions of their

thoughts and feelings for someone who has passed away, conveyed through messages on cards. This activity served as both a medium for communication and a form of spiritual expression, enabling students to symbolically communicate with the deceased.

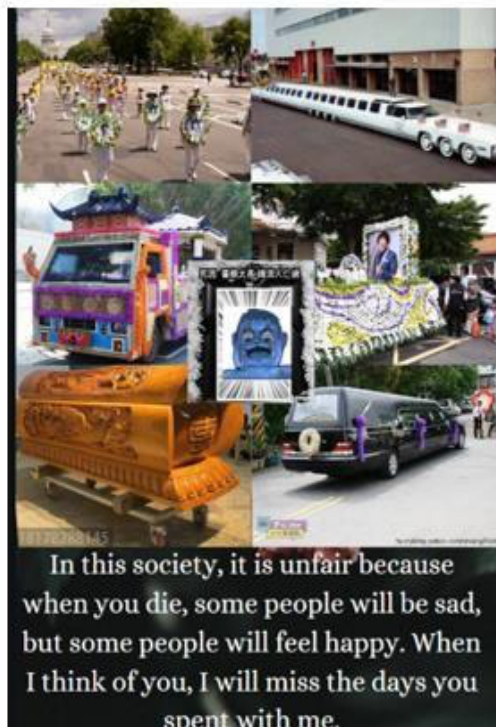
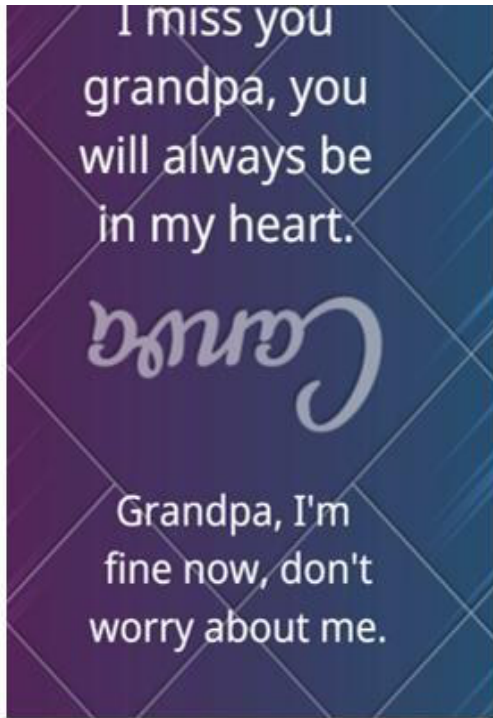


Figure 7 - Students' Works for the Competency-oriented Issue of Life Lessons

In the unit on **environmental protection**, students were tasked with proposing an environmental policy aimed at saving the planet. Additionally, they were required to identify and prioritize essential items needed for personal protection during natural disasters, as illustrated in Figure 8.



Figure 8 - Students' Works for the Competency-oriented Issue of Environmental Protection

The students' achievements demonstrate that this program effectively supports their learning of English and the development of key competencies. Furthermore, the findings revealed that, over the 10-week course, students not only increased their learning motivation but also made significant improvements in their listening, speaking, reading, and writing skills. Additionally, they developed critical competencies, including media literacy, critical thinking, problem-solving, self-expression, communication, and teamwork skills.

5. Conclusion

To summarize, the findings indicate that students' motivation to learn English significantly increased during the program. Additionally, students demonstrated improved achievements in listening, speaking, reading, and writing skills, as well as in competencies such as media literacy, critical thinking, and problem-solving abilities.

Based on the findings, the researchers offer several suggestions and strategies for instructors to enhance students' learning:

1. Boosting Students' Motivation: Firstly, to enhance students' motivation, the following strategies are recommended:

(a) **Incorporate game-based learning tools:** Platforms such as Kahoot, Quizizz, Quizlet, Wordwall, and Blooket can improve motivation by providing engaging and rewarding learning experiences. These tools offer a sense of achievement and foster greater focus, particularly for students with a competitive mindset.

(b) **Frequent encouragement:** Positive reinforcement—"encourage rather than blame, praise rather than criticize"—can build students' confidence, increase their willingness to learn, and empower them to overcome setbacks.



(c) **Create a stress-free learning environment:** A relaxed and enjoyable classroom atmosphere can make students more willing to learn, engage, and express their ideas, thereby improving their learning outcomes and achievement.

2. Supporting Content Comprehension: Secondly, to enhance students' understanding of lesson content, instructors might **utilize visual aids and multimodal instructional techniques:** Since students learn in different ways, combining visual aids with multimodal approaches can cater to diverse learning preferences, improve content comprehension, and foster greater interest in learning.

3. Integrating Multimedia Tools: Thirdly, integrating multimedia tools into lessons can create opportunities for language practice and support students' English achievement. Several free online tools can help instructors design interactive activities.

(a) **Interactive writing practice:** Tools like Jamboard, Padlet, Slido, and VoiceThread can assist students in developing their writing skills.

(b) **Vocabulary learning and review:** Platforms such as Quizizz, Wordwall, Kahoot, and Quizlet are particularly effective for vocabulary practice.

4. Benefits of Multimedia Integration: Fourthly, the study suggests that integrating multimedia into English instruction can:

(a) make lessons more dynamic and interactive.

(b) foster differentiated and adaptive teaching approaches.

(c) encourage autonomous learning.

(d) provide diverse assessment tools for evaluating students' progress.

In conclusion, educators who embrace innovative multimedia-assisted instructional strategies can significantly enhance students' motivation, engagement, and achievement. These approaches not only contribute to more effective English learning but also create a more enjoyable and rewarding educational experience.

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Appendix - Interview questions

I. At the Beginning of the Semester

1. Motivation for participating in the program
 - Why did you want to join the Bilingual Digital Companions for Learning program?
 - Do you have any expectations or concerns about participating in this program?
2. English learning experiences
 - How long have you been learning English?
3. Motivation for learning English
 - Is learning English important to you? Why or why not?
 - How much time do you spend learning English each week?
4. Experiences with using multimedia tools to learn English
 - In your daily life, do you have opportunities to use multimedia tools to learn English or use English?
 - If you answered "yes" to this question:
 - Please describe how you use multimedia tools to learn or use English.
 - What are your thoughts about using these tools?
 - If you answered "no" to this question:
 - Would you be looking forward to using multimedia tools to learn English?

II. In the Middle of the Semester

1. Learning interest - Affective domain
 - Do you feel worried or nervous when the teacher uses English to discuss competency-oriented issues in class?
2. Learning interest - Cognitive domain
 - Do you think that an English digital learning environment helps you learn English while also acquiring other knowledge/skills?
3. Learning interest - Behavioural domain
 - After participating in the Bilingual Digital Companions program, are you willing to actively use multimedia tools to learn English?
 - Are you willing to actively express your thoughts and opinions on competency-oriented issues in English during classes?

III. At the End of the Semester

1. Changes in ideas about the course
 - Regarding English learning, at the beginning of the semester, you said, "xxx." Has your opinion changed now?
2. Changes in feelings about the course
 - You initially had concerns about "xxx." Do you still have these feelings now?
3. Reflections on the integration of multimedia tools in the competency-oriented English curriculum
 - After a whole semester, what are your thoughts on multimedia-assisted competency-oriented English instruction?
4. Reflections on perceived progress in English, competency, and multimedia tools use
 - Do you think your abilities in English, competency, and multimedia tools use have improved?