Promoting an Inclusive Climate Through Multimodal Approaches in Higher Education English Classrooms

Girlie Ann Herrera[1]

Abstract:
Focusing on effective multiple methods of instruction is crucial for enhancing involvement, learning, and achievement. Given the diverse student population in a medium-sized private university in southern Japan, inclusive teaching plays a vital role in creating a supportive and welcoming learning environment that accommodates students' varied backgrounds and readiness levels for college-level English. This research explored the impact of multimodal approaches on fostering inclusion, student involvement, and motivation in English classrooms, eventually leading to academic achievement. The study used a combination of descriptive and phenomenological research methods. The participants were composed of 36 Intermediate English A (IEA) students from two classes. The findings revealed that the learners preferred hands-on and auditory teaching and learning styles. Using multimodal approaches tailored to students' preferences not only improved their academic performance but also boosted their confidence and motivation, built up classroom engagement, optimized teaching effectiveness, and most importantly promoted equal opportunity and inclusion in the learning environment. It has been concluded that aligning multimodal teaching methods to the learners' preferences for kinesthetic and auditory methods of instruction contributes to motivation, engagement, better comprehension, and academic performance. Ultimately, it significantly promotes inclusivity in higher education settings.

Key terms: Inclusive education, multimodal approaches, UDL, diverse learning preferences, academic performance

1. Introduction

Inclusive education aspires to offer students fair access to quality education, regardless of background or ability. As opposed to isolating learners based on differences, it emphasizes variety and ensures that everyone feels valued and can fully engage in the learning process (Florian, 2014). In recent years, it has gained momentum with growing research highlighting its positive impact on student learning and social growth (Kefallinou et al., 2020). In an inclusive classroom, teachers and students work together to create and sustain an environment where everyone feels welcomed, supported, and motivated. Teachers prioritize equal opportunities for all students, regardless of their abilities, backgrounds, or identities (Forlin et al., 2007). By fostering a sense of belonging and shared experiences, inclusive environments contribute to the holistic development of students and a more cohesive society.

To create equitable and accessible English language learning experiences for all students, inclusive education must be a cornerstone of English Language Teaching. As Garcia-Pastor and Gómez-Martínez (2020) argue, ELT teachers should design classrooms that welcome students from diverse backgrounds, including those with disabilities, marginalized communities, and multilingual learners. This inclusive approach maximizes individual potential, promotes fairness, and cultivates a strong sense of belonging among language learners.

The multimodal approach, according to Jewitt (2008), is the use of multiple modes of communication and representation to enhance learning. This emphasizes the integration of various modes such as visual, auditory, textual, and kinesthetics to create a rich learning environment. With the help of this approach, as stated by Anis & Khan (2023), educators can create an enhanced learning environment that meets the unique cognitive and emotional needs of each student. By employing various techniques, teachers can effectively improve their capacity to convey complex concepts

[1] English Lecturer, Center for Language Education, Ritsumeikan Asia Pacific University, Beppu, Japan Email: herreragirlieann@gmail.com

and accommodate students' learning needs. Additionally, according to Kress and van Leeuwen (2001), multimodal methods acknowledge that communication occurs through a variety of modes, including words, images, gestures, and spatial configurations. These approaches have emerged as effective tools for addressing the diverse learning needs of students. Jewitt (2013) also stated that to accommodate different learning styles, it is essential to incorporate different elements like visual, auditory, and kinesthetics as those can increase student engagement and learning experiences. These multimodal approaches provide a dynamic and inclusive classroom climate that enhances student potential.

This study investigated the potential of multimodal techniques to create more inclusive and effective English language learning environments. By examining the theoretical underpinnings, practical implementation, and impact of multimodal techniques, this study generally aimed to foster inclusivity through multimodal approaches and tailor teaching and learning practices for academic improvement in Intermediate English A (IEA) classes specifically in a medium-sized private university in the northeast of Kyushu, Japan. IEA is equivalent to the B1 level on the CEFR (Common European Framework of Reference for Languages). At this level, students can understand the main ideas of complex texts, interact fluently, and produce clear, detailed writing on familiar topics. Specifically, the study aimed to identify the students' learning mode preferences; examine the benefits and potential impact of multimodal approaches on students' academic performance; and provide recommendations for inclusive teaching and integrating functional multimodal methods into intermediate English courses.

This research has the potential to make a meaningful contribution to the areas of inclusive education and multimodal learning. By exploring the incorporation of multimodal techniques in language instruction, the study aims to advance inclusive practices, increase student engagement, and improve motivation and learning outcomes in English classrooms. Also, identifying effective multimodal strategies for fostering inclusivity can lead to the creation of educational materials and support the development of a more inclusive learning environment for students with diverse learning preferences.

Moreover, the research will offer educators practical strategies to meet the needs of diverse learners, helping them improve their teaching methods. By adjusting instruction to fit various learning styles and abilities, this study will aid in creating inclusive curricula for intermediate English language learners.

Most importantly, this research will be key in establishing a more equitable learning environment for all students. By recognizing students' learning preferences and customizing multimodal approaches to meet their needs, the study can enhance student motivation and engagement, leading to better learning outcomes.

1.1 Research Questions:

To achieve the objectives, the study addressed the research question: "How can multimodal approaches enhance inclusivity, student engagement, and motivation in an English classroom, and ultimately improve academic performance?" Specifically, the research focused on answering the following questions:

1. What are the IEA students' learning style preferences?
2. What are the benefits and potential impacts of multimodal approaches on students' academic performance?
3. What recommendations can be made for inclusive teaching and integrating functional multimodal methods into IEA courses?

2. Literature Review

2.1 Theoretical Foundations: Multiliteracies, Differentiated Instruction, and Universal Design for Learning

Given the diverse backgrounds and varying levels of preparedness among students in an international university in the southwestern region of Japan for college-level English work, employing inclusive teaching methods is crucial. Thus, this project delved into how utilizing multimodal approaches within the frameworks of Multiliteracies, Differentiated

Instruction, and Universal Design for Learning (UDL) could be beneficial in promoting inclusivity, motivation, engagement, and enhanced academic performance.

One aspect of language use nowadays is partly influenced by new information and communication technologies. Meaning is increasingly formed in multimodal forms, in which written language is combined with spoken, visual, aural, gestural, physical, and spatial ways of communication (Anstey & Bull, 2018). According to Cope and Kalantzis (2009), the multiliteracies framework expands the traditional concept of literacy to encompass a wider range of communication forms. This includes digital, visual, and auditory elements. The term *multiliteracies*, introduced by the New London Group (1996), refers to this broader view of literacy, which recognizes the importance of understanding and creating meaning through diverse modes of communication. It emphasizes the importance of teaching practices that integrate these diverse modes of expression. This multiliteracies framework encourages educators to consider a broad range of communicative practices, ensuring that all students can access and engage with the content in ways that align with their strengths. In this study, a variety of visual aids, such as diagrams, charts, and videos were used to support students who are visual learners. Hands-on activities and manipulatives were also incorporated to help students who are kinesthetic learners. Additionally, students were provided opportunities to collaborate with their classmates and engage in discussions, which can be beneficial for students who are auditory learners. Using this variety of teaching methods, a more inclusive and engaging learning environment for all students was created.

Likewise, Tomlinson (2001) emphasizes the importance of tailoring instruction to individual students, aligning with the inclusive goals of multimodal learning. By implementing differentiated strategies, teachers can ensure equitable access to learning opportunities that cater to each student's unique strengths (Heacox, 2017). Moreover, differentiated instruction enhances learning by offering multiple avenues for students to engage with subject matter. According to Heacox (2017), teachers can modify instructional processes (e.g., group or individual work), content (e.g., text difficulty), products (e.g., project formats), and learning environments to accommodate diverse learner needs. By combining these approaches, classrooms become more inclusive and supportive, fostering an environment where all students can contribute and succeed academically. Thus, differentiated instruction is an efficient approach to customizing teaching and learning to be able to accommodate individual student learning styles preferences, interests, and abilities (Tomlinson, 2001). By providing appropriate support and challenges, this strategy empowers all students to reach their full potential. This study on using multimodal approaches to encourage inclusivity is backed by Tomlinson (2001), who suggests adapting curriculum content, teaching methods, assessments, and learning environments to address the different needs of students. By acknowledging the diverse learning styles of students, differentiated instruction creates a more flexible and inclusive classroom (Hall, Strangman, & Meyer, 2003).

Hall, Strangman, and Meyer (2003) also highlight that differentiated instruction aligns with the principles of UDL, which seeks to remove barriers to learning by providing multiple means of representation, expression, and engagement. UDL is an educational framework that promotes the setting up of adaptable learning environments that are adept at meeting the varied learning needs of all students. It is based on the premise that learners have diverse talents, preferences, and backgrounds to cater to different learning preferences. Furthermore, UDL offers students a variety of ways to demonstrate their learning, offering options like essays, presentations, or creative projects.

UDL ensures that all students, regardless of individual characteristics, can access and engage with the educational material successfully. It strongly correlates with the purpose of encouraging inclusion in education. Through the use of diverse modes of representation, UDL enables teachers to deliver content in a way that appeals to a more diverse group of learners (Ralabate, 2011). To explain a concept to students who learn best visually, auditorily, or kinesthetically, an instructor can, for example, employ films, diagrams, and practical experiments. Based on CAST (2018), assessments are made accessible and fair for all students by ensuring that UDL places a strong focus on giving

students a variety of methods to convey their knowledge, including written work, oral presentations, and digital storytelling.

Furthermore, UDL helps keep students engaged by giving them different ways to approach learning tasks. This increases motivation and makes learning easier. For example, Ralabate (2011) explained that students can study a topic in different ways, such as by looking at primary sources, watching documentaries, or joining debates. This allows them to connect with the material in a way that matches their interests and abilities.

In conclusion, theoretical frameworks like multiliteracies, differentiated instruction, and universal design for learning offer a concrete framework for understanding and integrating multimodal approaches into practice to promote not only a better language learning environment but most importantly an inclusive climate. These frameworks also consider the different requirements and preferences of learners while providing a more informed perspective on the effectiveness of multimodal approaches in improving students' academic performance results.

2.2 Motivation, Engagement, and Student's Academic Performance

Motivation and engagement are key factors that help students succeed in learning (Martin et al., 2017). However, many teachers, especially those teaching English as a Foreign or Second Language, still do not fully understand how to improve student's academic performance through these factors. In fact, there is no evidence yet to show that this can be achieved (Henry and Thorsen, 2018).

On the other hand, Irvin et al. (2007) highlighted that academic motivation and engagement are closely connected and play a crucial role in boosting students' achievement and success. Martin (2013) further supports this by noting that highly motivated students enjoy learning more, which drives them to engage in different stages of the learning process eagerly. This enthusiasm leads to positive learning outcomes. With this, Howard et al. (2021) noted the positive impact of motivation on students' perseverance. They believe that strong academic motivation can help students overcome challenges they may face during the learning process. Additionally, when students are more engaged in their studies, their chances of academic success greatly improve (Philip & Duchesne, 2016).

While the connection between motivation, engagement, and academic success is clear, there is still a lack of concrete strategies for teachers to effectively enhance these factors, especially in language learning. Further research is needed to identify practical approaches that educators can use to foster motivation and engagement in the classroom.

3. Methodology

The study was carried out during the spring semester of 2023. The initial development phase was completed in the first quarter, which involved conducting standard English classes, observing key aspects of students' academic performance, administering the VARK assessment, and identifying students' preferred learning modalities. The VARK assessment is a tool designed to identify an individual's preferred learning style. It stands for Visual, Auditory, Reading/Writing, and Kinesthetic—the four primary ways people absorb and process information (The VARK Assessment, n.d.). This was used to help understand how diverse learning styles interact with multimodal teaching strategies using multiple approaches like videos, hands-on activities, or discussions to engage students. By identifying learning preferences with VARK, Fleming & Baume (2006) claimed that researchers can analyze how well multimodal teaching meets the needs of students with different styles and whether it enhances learning outcomes. With these insights, lesson plans, activities, and teaching materials were designed and tailored to match students' learning preferences. Throughout Quarter 2, these customized resources were seamlessly incorporated into the targeted topics and lessons.

A mixed-methods approach was used in the study, combining both qualitative and quantitative methods. For the qualitative aspect, a phenomenological lens was applied to explore and understand the lived experiences of students and teachers within the classroom setting. Phenomenology means focusing on how individuals personally experience

and feel about the use of multimodal teaching strategies (Neubauer, Witkop, & Varpio, 2019). This helped the study look closely at how these strategies promote inclusivity and affect students' academic performance. By prioritizing the participants' personal perspectives, the study offered a richer understanding of the impact of these inclusive teaching methods on student outcomes.

These approaches led to a wider and deeper exploration of the benefits of multimodal approaches in promoting inclusivity, motivation, and engagement among the participants – two groups of IEA classes, which will be referred to hereafter as Alpha (α) class and Beta (β) class. These IEA classes were composed of a diverse mix of students, including freshmen, continuing students, and those repeating the course, with year levels ranging from the 1st to 4th. All participants were enrolled in the researcher's IEA classes. Purposive sampling was used to deliberately select individuals who had successfully completed all the course requirements.

To achieve the first specific objective, the students' learning style preferences were identified through the 'VARK Questionnaire - How do you learn best?' developed by Fleming. It was administered to the two IEA classes towards the end of Quarter 1 in the spring semester of 2024. This 16-item multiple-choice online test was designed to identify an individual's preferred learning modality. A survey was also conducted using a Likert scale to assess students' views on multimodal learning. This approach allowed the researcher to collect feedback and insights.

During the data collection phase, the VARK questionnaire was administered to both classes to determine their preferred learning styles. The insights gained were then utilized to develop additional strategies, classroom activities, and materials aimed at improving students' academic performance. The top two to three learning preferences of each student were prioritized and integrated into all lesson plans. By predominantly focusing on the top preferences, each lesson was designed to ensure that at least one of the students' preferred learning styles was incorporated. Rather than relying on assumptions about how students learn best, these plans and instructional materials were tailored to fit closely with the students' perceptions of what suited them. This approach aligns with one of the core principles of inclusive teaching: eliminating assumptions about student needs. This strategy was also implemented with the hope that students would begin to adopt study habits or engage in self-guided learning by consistently being exposed to their preferred learning modes.

To measure the impact of these strategies, the students' final average scores in every skill were identified. Their academic performance averages from quarters 1 and 2 were then compared to evaluate the effectiveness of the multimodal approaches used in the classroom.

4. Results and Discussion

4.1 The VARK assessment results

The teaching methods implemented during the spring semester's second quarter, spanning from the second week of June to the last week of July, were guided by the results of the VARK assessment conducted at the end of the first quarter. The assessment identified students' learning preferences, which were used to design lessons and teaching materials.

The summary of results for both α and β classes are shown in Tables 1 and 2 below:

Table 1

VARK assessment results of α class

α - class							
Multimodal approach elements	**1st preference**	**%**	**2nd preference**	**%**	**Total %**	**Final ave. percentage**	**Ranking**
Visual	4	23.53	3	17.65	41.18	20.59	3rd
Aural	2	11.76	6	35.29	47.05	23.53	2nd
Reading/Writing	3	17.65	3	17.65	35.3	17.65	
Kinesthetic	8	47.06	5	29.41	76.47	38.23	1st
Total # of students	17	100	17	100		100	

Table 1 indicates that of the 17 students who took the VARK assessment, eight preferred a kinesthetic learning style, four preferred visual, two preferred aural, and three preferred reading/writing as their primary learning mode. For their secondary preference, six students favored aural learning, five chose kinesthetic, and three for both visual and reading/writing modes.

In summary, kinesthetic learning ranked first, with 38.23% of students preferring it as their primary or secondary learning modality, followed by aural learning at 23.53%. Visual learning ranked third, with 20.59% of students favoring it, while reading/writing was the least preferred modality, chosen by only 17.65% of students.

Table 2

VARK assessment results of β class

β - class							
Multimodal approach elements	**1st preference**	**%**	**2nd preference**	**%**	**Total %**	**Final ave. percentage**	**Ranking**
Visual	5	26	4	21	47	23.5	3rd
Aural	3	16	8	42	58	29	2nd
Reading/Writing	1	5	2	11	16	8	
Kinesthetic	10	53	5	26	79	39.5	1st
Total # of students	19	100	19	100		100	

Table 2 shows that out of the 19 students who took the VARK assessment, 10 preferred a kinesthetic learning style, five preferred visual, three favored aural, and only one student chose reading/writing as their primary learning mode. For their secondary preference, eight students leaned toward aural learning, five selected kinesthetic, four preferred visual, and two opted for reading/writing.

Briefly put, kinesthetic learning emerged as the top choice, with 39.5% of students selecting it as their primary or secondary learning modality. Aural learning came next at 29%, followed by visual learning at 23.5%. Reading/writing was the least preferred modality, chosen by only 8% of the students.

The VARK assessment results across two groups of students indicated that kinesthetic learning was the most preferred learning style overall, both as a primary and secondary modality. Aural learning ranked second, followed by visual learning, while reading/writing was the least favored. This suggested that students tend to favor more interactive and sensory-based approaches to learning over text-focused methods.

4.2 Impact of Multimodal Approaches on Student Achievement

Once the students' preferred learning styles were identified, the classroom activities, teaching methods, and learning materials were tailored to align with these preferences. A range of speaking, listening, and kinesthetic activities, including interactive and online games, were incorporated into the lessons, all of which played a crucial role in meeting the objectives of the study.

Tables 3 and 4 below show the percentages of academic performance before and after using the multimodal approaches in both alpha and beta classes. The Quarter 1 scores were gathered prior to any intervention.

Table 3

Academic performance average of 17 students in α - class

α - class		
Skills	Quarter 1 average	Quarter 2 average
Listening and Vocabulary	75.8%	77.5%
Speaking	79.3%	88.1%
Writing	79.6%	82.5%

Table 3 revealed that the α - class average listening and vocabulary score in Quarter 1 was 75.8%, which climbed to 77.5% in Quarter 2, for a total gain of 1.7%. The average score for the speaking skills assessment increased to 88.1% in Quarter 2 from 79.3% in Quarter 1, representing the biggest improvement among all skills at 8.8%. Writing grew by 2.9%, from 79.6% in Q1 to 82.5% in Q2.

Table 4

Academic performance average of 19 students in β - class

β - class		
Skills	Quarter 1 average	Quarter 2 average
Listening and Vocabulary	79%	81.6%
Speaking	81%	84%
Writing	84.2%	86.9%

Table 4 shows that the β -class average listening and vocabulary score improved from 79% in Quarter 1 to 81.6% in Quarter 2, reflecting a 2.6% increase. The average score for the speaking skills assessment saw the most significant improvement, rising from 81% in Quarter 1 to 84% in Quarter 2—a gain of 3%. Writing also increased by 2.7%, from 84.2 % in 1st quarter to 86.9% in 2nd quarter.

The results demonstrate that both α -class and β -class students experienced notable progress in their English skills between Quarter 1 and Quarter 2, particularly in speaking. The α -class exhibited the most significant improvement in speaking skills, with an 8.8% increase, while the β -class showed consistent growth across all skills, with speaking also leading at a 3% gain. These highlight the effectiveness of targeted multimodal approaches in enhancing students' speaking, listening, vocabulary, and writing skills. The improvements suggest that aligning teaching strategies with students' needs and preferences can foster significant academic progress. This progress is further reflected in the overall passing rates, with the α -class achieving 100% and the β -class reaching 93% when averaging all scores and final grades.

4.3 Students' Feedback

As shown in the results of the general increase in academic performance, students' ability to understand improved after the implementation of multimodal approaches. The survey about the impact of these approaches on their motivation and engagement in the classroom also shows positive results. The table below summarizes the survey results, which consist of ten questions about the positive effects of the multimodal approaches on student motivation and engagement in the classroom.

Table 5

Student feedback summary

Likert scale options	**α - class**	**β - class**
Strongly agree	65%	69%
Agree	26%	25%
Not sure / Sometimes	6%	4%
Disagree	2%	2%
Strongly disagree	0%	0%

Table 5 indicates that more than half of the 36 students from classes who took the survey strongly agree that multimodal approaches positively influenced their motivation and engagement. Including those who simply agreed, the total amounts to a very significant portion of the students – an average of 93% – who view these approaches favorably. Only 5% of students were unsure about the benefits, and an even smaller 2% disagreed. Notably, no one expressed strong disagreement, further reinforcing the overall positive perception of multimodal approaches. This data reflects how students view the approaches as having a positive effect on their motivation and engagement in the classroom.

5. Discussion

5.1 Best Practices for Inclusive Teaching

One key recommendation for inclusive teaching is understanding the diverse needs of your students. In the study, the VARK Assessment - "How do you learn best?" was used to achieve that goal by identifying each student's unique learning styles, strengths, and preferences. By knowing your students well and avoiding assumptions about their learning, you can offer a variety of learning materials and methods that better support their understanding of the lesson. Another important approach is using the theories that support this study: Multiliteracies and UDL. These encourage providing different ways to represent information, like using text, audio, and visuals, to cater to various learning preferences. Additionally, teachers may use UDL's multiple means of actions and expressions which means giving students a chance to choose how they would present their understanding of the concepts learned in class, or in completing and submitting any task. Finally, as demonstrated in this study, it is important for teachers to regularly ask for feedback to be aware that the strategies used are effective and, at the same time, to be open to adjusting their teaching methods as needed.

5.2 Integrating Functional Multimodal Methods for Inclusive Teaching

The results of the study indicate a general improvement in academic performance, highlighting that students' cognitive abilities were enhanced following the implementation of multimodal approaches. Therefore, it is strongly recommended that English teachers incorporate multimodal methods to promote a more inclusive learning environment.

One functional method is to allow students to submit assignments in multiple formats. This gives them the flexibility to choose how they complete their homework, projects, or specific activities. For example, in speaking tasks, they can create an audio recording, podcast, or video, depending on their strengths and interests. Additionally, they can choose to work individually, in pairs, or in groups, which promotes collaboration and engagement.

This study is also backed by the importance of technology integration as a key aspect of multimodal approaches. By mixing in various media like audio, video, PowerPoint, and interactive games, lessons become more inclusive and offer a break from traditional teacher-led lectures. In IEA classes, interactive online tools that use game-like elements such as Quizizz, Kahoot, and Quizlet helped with vocabulary practice and checking comprehension. Discussion boards and collaboration through OneNote made learning more engaging and dynamic. With OneNote, students could share notebooks and work together in real-time, adding notes, ideas, and even drawings. Everyone could

tag important points, comment on each other's work, and see changes as they happened. It helped keep everything organized and made it easy for everyone to contribute. These tools help students grasp complex ideas more easily and accommodate different learning styles, including visual and hands-on learners.

Another recommendation that was greatly used during the study was promoting active learning. These are activities that get students involved in hands-on activities and collaboration. For IEA tasks such as understanding lecture videos, students did role-play and presentation; for essay writing, they participated in peer reviews and peer-teaching; and for speaking tasks, they worked on group projects, interviews, and group discussions. Many of these methodologies also included the use of technology tools.

As teachers use all these multimodal approaches, it is vital to ensure that the materials are easy for all students to access. This means using easy-to-read formats, fonts, and clear simple language and instructions. It is also important to create opportunities for students to practice giving and receiving feedback on their use of these multimodal approaches.

5.3 Bridging the Gap: Teacher Training and Multimodal Strategies

In today's changing education system, using multimodal strategies has become a key part of teaching, especially in English language classrooms. While these methods hold great promise, their success largely depends on how well teachers can plan and deliver lessons using them. This highlights the importance of focused teacher training to ensure educators have the skills and tools to connect theory with practice (Kalantzis & Cope, 2012). This need is especially important in English language teaching, where teachers often work with students from different backgrounds and learning styles.

For instance, teachers need to know how to use multimodal tools like interactive whiteboards, digital storytelling platforms, or video editing software to make language lessons more engaging. These tools let students use text, pictures, and audio together, helping them express their ideas creatively and connect with the material on a deeper level (Serafini, 2014). However, without proper training, teachers might find it hard to use these tools effectively, which could lead to a surface-level approach that does not fully benefit students' learning.

Moreover, teacher training should focus on how to lead effective feedback sessions in a multimodal classroom. For example, after students create a digital presentation or video project, teachers should know how to manage peer review sessions where students assess each other's work based on aspects like clarity, creativity, and language use (Jewitt, Bezemer, & O'Halloran, 2016). This approach not only helps students improve their multimodal communication skills but also promotes critical thinking and teamwork.

In addition, professional development programs can support teachers in learning how to adjust multimodal methods to teach different language skills. For example, when teaching writing, teachers could use graphic organizers or video prompts to help students plan and organize their ideas before they start writing essays. Similarly, for listening and speaking activities, teachers might use podcasts or video discussions, which provide real language examples and encourage students to actively engage with multimodal content (Walsh, 2011).

Finally, training teachers to use multimodal methods supports the move toward 21st-century skills in education (Kalantzis & Cope, 2012). As classrooms become more digital, teachers who are skilled in multimodal teaching can better prepare students for real-world communication, where being able to understand and use different types of media is crucial.

6. Conclusion

With the results of the study, it can be concluded that implementing multimodal approaches significantly enhances classroom inclusivity and improves students' academic performance. This was accomplished through key strategies

such as addressing diverse learning styles, tailoring materials to individual needs, utilizing various teaching and learning methods, and offering multiple ways for students to demonstrate their understanding. Additionally, the effective integration of technology and providing students with opportunities to make choices contributed to fostering a positive and supportive learning environment.

Specifically, it is also concluded that the two classes of intermediate-level English learners primarily preferred hands-on learning styles, followed by aural and then visual learning. Reading and writing modalities were the least preferred. The summary of the students' average percentage scores showed that tailoring learning approaches to students' preferences can enhance engagement, comprehension, and mastery of content, leading to improved academic performance. The multimodal approaches which include technology integration greatly impact their performance and final grade as it showed a percentage increase that ranged from almost 2% to 10% across all skills. Lastly, using a variety of teaching methods significantly increased students' interest and involvement in the classroom. This was confirmed by a survey showing that 92.5% of students found that the approaches and strategies tailored to their learning style preferences helped them feel more motivated and engaged.

7. Limitations and Future Research

While this study provides valuable insights into the benefits of multimodal approaches in fostering inclusivity and improving student performance in English classrooms, several limitations should be acknowledged.

First, the study's sample size was relatively small, with only 36 IEA students from a single university in southern Japan. This limited scope may affect the generalizability of the findings to other educational settings or larger student populations. Future research should expand the sample size and include participants from diverse institutions and regions to validate the results and ensure broader applicability.

Second, this study did not account for other possible variables that could have influenced the results. For example:

- Students may feel more comfortable working with each other during the second quarter due to increased familiarity and rapport.
- Students may become more aware of and accustomed to the teaching style and assessment methods as the course progresses, which could impact their performance and engagement.

Future studies should examine these potential factors to better isolate the effects of multimodal approaches.

Finally, the study was limited to a short timeframe, examining the effects of multimodal approaches over a single academic term. Longitudinal studies are needed to assess the sustained impact of these approaches on students' academic performance, motivation, and engagement over multiple semesters or academic years.

By addressing these limitations and pursuing these recommendations, future studies can improve how multimodal approaches are used to better support different types of learners and make inclusive education more effective on a larger scale.

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Appendices

Appendix 1 – Survey Questions

1. Do you feel more motivated to learn when lessons include videos or interactive content?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
2. Does using different types of media (e.g., videos, games, PowerPoint, and other presentation apps) in class make learning more interesting for you?
    - Strongly agree/ agree/ Not sure /disagree / strongly disagree
3. Would you like to see more lessons that use different types of media and interactive tools?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
4. Do you find it easier to understand complex topics when multiple teaching methods are used?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
5. Does working in groups or on interactive activities make you feel more engaged in class?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
6. Do you enjoy lessons more when technology tools are used (e.g., online games, collaboration platforms)?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
7. Do you believe using a variety of teaching tools helps you remember the material better?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
8. Does participating in discussions or peer reviews increase your interest in the subject?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
9. Do you feel motivated and more confident in your learning when lessons are presented in different ways?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree
10. Do you think that multimodal approaches help cater to your personal learning style?
    - Strongly agree/ agree/ Not sure/disagree / strongly disagree

Appendix 2 – Statistics of Survey Results

alpha class

Questions	strongly agree	agree	not sure/ sometimes	disagree	strongly disagree	total
1. Do you feel more motivated to learn when lessons include videos or interactive content?	5	10	2	0	0	17
2.Does using different types of media (videos, games, PPTs, and other presentation apps) in class make learning more interesting for you?	10	7	0	0	0	17
3. Would you like to see more lessons that use different types of media and interactive tools?	16	1	0	0	0	17
4. Do you find it easier to understand complex topics when multiple teaching methods are used?	17	0	0	0	0	17
5. Does working in groups or on interactive activities make you feel more engaged in class?	5	9	2	1	0	17
6. Do you enjoy lessons more when technology tools are used (e.g., online games, collaboration platforms)?	17	0	0	0	0	17
7. Do you believe using a variety of teaching tools helps you remember the material better?	5	6	4	2	0	17
8. Does participating in discussions or peer reviews increase your interest in the subject?	6	8	2	1	0	17
9. Do you feel motivated more confident in your learning when lessons are presented in different ways?	15	2	0	0	0	17
10. Do you think that multimodal approaches help cater to your personal learning style?	15	2	0	0	0	17
Total Responses	111	45	10	4	0	170
Percentage	65%	26%	6%	2%	0%	100%

beta class

Questions	strongly agree	agree	not sure/ sometimes	disagree	strongly disagree	total
1. Do you feel more motivated to learn when lessons include videos or interactive content?	8	11	0	0	0	19
2.Does using different types of media (videos, games, PPTs, and other presentation apps) in class make learning more interesting for you?	13	6	0	0	0	19
3. Would you like to see more lessons that use different types of media and interactive tools?	17	2	0	0	0	19
4. Do you find it easier to understand complex topics when multiple teaching methods are used?	17	2	0	0	0	19
5. Does working in groups or on interactive activities make you feel more engaged in class?	10	7	2	0	0	19
6. Do you enjoy lessons more when technology tools are used (e.g., online games, collaboration platforms)?	19	0	0	0	0	19

7. Do you believe using a variety of teaching tools helps you remember the material better?	8	6	3	2	0	19
8. Does participating in discussions or peer reviews increase your interest in the subject?	8	7	2	2	0	19
9. Do you feel motivated and more confident in your learning when lessons are presented in different ways?	17	2	0	0	0	19
10. Do you think that multimodal approaches help cater to your personal learning style?	15	4	0	0	0	19
Total Responses	132	47	7	4	0	190
Percentage	69%	25%	4%	2%	0%	100%