International Journal of Research in Social Science and Humanities (IJRSS)

DOI: 10.47505/IJRSS.2025.7.7

E-ISSN : 2582-6220

Vol. 6 (7) July - 2025

Multimodal Instructional Materials in Game-Based English Language Teaching: A Comprehensive Study

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ABSTRACT

This study examined the effectiveness of using multimodal instructional materials in game-based language teaching strategies in improving the Most Essential Learning Competency (MELC) on the performance on visual-verbal relationships of Grade 8 students in terms of interpreting data presented in tables, graphs, and information gaps, presenting information using diagrams and recognizing the importance of graphical presentation of data. The data gathered through a comprehensive test and an interview was analyzed using the Braun and Clarke Thematic Analytical Framework. Findings revealed that the performances of the respondents differ before and after the use of multimodal instructional materials in a game-based language teaching strategy. Engaging, beneficial, and enhancement were the three themes that have emerged regarding the experiences of the respondents when exposed to multimodal instructional materials in game-based language teaching strategy. Based on the findings and conclusion, using multimodal instructional materials in game-based English language teaching strategy to improve the students' learning performance is highly recommended.

Keywords: Braun and Clarke Thematic Analytical Framework, Learning Competency, Game-based language teaching Strategy, learning performance, Multimodal instructional materials.

1. INTRODUCTION

Multimodal instructional materials are educational tools that use many modes of representation to enhance the learning experience, such as text, images, audio, video, and interactive components. These tools attempt to provide different and engaging ways for students to interact with linguistic subjects in the context of English language training. Multimodal educational resources cater to different learning preferences and assist in meeting students' diverse linguistic ability by incorporating several modalities. Multimodal materials for English language learning include interactive language games, audio-visual presentations, digital storytelling, and other resources that go beyond traditional textbooks. The use of multimodal resources in English language training attempts to provide a dynamic and immersive learning environment that promotes improved language understanding, retention, and application. It recognizes the changing communication landscape and agrees with the notion that competency in English entails not only linguistic competence but also the capacity to navigate and understand language in a variety of forms and circumstances.

Over the past 20 years, e-learning has become more and more popular in the field of contemporary educational practices. It uses computer technologies to improve the quality of instruction and the learning experiences of students. The multimedia learning mode principle, which asserts that children gain more from spoken text in multimedia messaging than from printed text, emphasizes this change. Hence, there has been a significant increase in the creation of computer-assisted language learning programs and multimedia materials targeted at enhancing word attack, phonics, spelling, and pronunciation in English. This pattern is consistent with current educational goals that highlight multimodal literacy and instructional strategies. To effectively engage students in understanding instructional materials, teachers are now integrating diverse pedagogical methods, combining various sensory modalities like visual, aural, tactile, olfactory, gustatory, and kinesthetic modes. This reflects a broader understanding that communication and representation are inherently multimodal rather than solely reliant on language (Tandiana et al. (2020).

Calinagan (2020) discovered that multimodal text was helpful because it helped students relate to themselves and provided opportunities to improve their abilities, skills, and aptitude through personalized practical tasks designed to assist students in improving their skills at their own pace. Meanwhile, Tangkeko and Diva (2023) used multimodal education; linguistic, visual, aural, gestural, and spatial, and discovered a substantial difference between multimodal teaching and oral language fluency. It was discovered that when the pupils were exposed to multimodal teaching, their performance improved. This meant that multimodal instruction might help pupils improve their text structure, language skills, listening, and speaking abilities. Furthermore, Varaporn and Sitthitikul (2019) evaluated the impact of multimodal activities on students' analytical reading abilities and perspectives. According to the data, pupils had a generally positive view of the multimodal activities. The multimodal exercises not only helped them propose critical reading ideas and develop analytical thinking skills, but they also increased intrinsic motivation and learning autonomy.

While previous studies have investigated the favorable impacts of multimodal instructional materials on various features of learning, such as those by Calinagan (2020), Tangkeko and Diva (2023), and Varaporn and Sitthitikul (2019), there is a clear research gap in the specific context of game-based learning for Grade 8 students in English language education. The research generally addresses the advantages of multimodal techniques in general, ranging from self-relatable and tailored practical activities to increases in oral language fluency, critical reading abilities, and analytical thinking capabilities. These studies, however, do not dive into the targeted use of game-based learning within a multimodal framework for improving visual-verbal links in Grade 8 students. This study intends to close this gap by concentrating on the unique combination of multimodal instructional materials and game-based learning, with the goal of discovering their collective influence on the performance of Grade 8 students in English language competencies such as interpreting data, presenting information, and recognizing the significance of graphical representation.

This study focused on examining the effects of using multimodal instructional materials on the English language performance of Grade 8 students in visual-verbal relationships, as measured by their ability to interpret data presented in tables, graphs, and information gaps, present information using diagrams, and recognize the importance of graphical representation of data. Moreover, the post-test performance of Grade 8 students in visual-verbal relationships compares to their pre-test performance after exposure to multimodal instructional materials, particularly game-based learning activities. Also, significant differences between the pre-test and post-test scores, indicating the effectiveness of multimodal instructional materials in enhancing English language proficiency were assessed. This study explored the qualitative experiences and feedback of the students regarding the use of multimodal instructional materials, including game-based learning activities.

This research has significant implications for pedagogy and educational technology, notably in the field of English language learning for Grade 8 students. The study intends to provide significant insights into effective teaching approaches by investigating the effects of multimodal instructional materials, including game-based learning activities, on students' visual-verbal interactions. Understanding baseline performance and then measuring the impact of these creative instructional resources can provide English teachers with information about strategies that engage with students and contribute to improved language proficiency. The study's emphasis on quantitative and qualitative data, as well as pre- and post-test evaluations and student comments, offers a thorough evaluation of the educational strategy.

The findings of this study have the potential to shape recommendations for the development of enriched game-based learning activities tailored to the specific needs of Grade 8 students, thereby contributing to the advancement of English language education in the specific school setting and potentially serving as a model for broader educational contexts. Finally, the study's influence goes beyond its immediate area, providing useful insights into good educational strategies that use multimodal instructional resources to promote language development.

Research Questions

This study examined the effects of using multimodal instructional materials in game-based language teaching strategy on the performance on visual-verbal relationships of Grade 8 students in Lawaan III National High School

DOI: 10.47505/IJRSS.2025.7.7

during the school year 2023-2024 as basis for a proposed enhanced multimodal instructional material for game-based English language teaching.

It specifically answered the following sub-problems:

1. What is the baseline performance of the respondents on the visual-verbal relationships competencies as to:

   1.1 interpreting data presented in tables, graphs, and information gaps,

   1.2 presenting information using diagrams, and

   1.3 recognizing the importance of graphical representation of data?

2. What is the performance of the respondents on the visual-verbal relationships competencies after exposure to multimodal instructional materials in game-based language teaching strategy?

3. Is there a significant difference between the performances of the respondents before and after the use of multimodal instructional materials in game-based language teaching strategy?

4. What are the experiences of the respondents when exposed to multimodal instructional materials in game-based language teaching strategy?

2. LITERATURE REVIEW

Multimodal instructional materials give students a variety of input. Students read visuals, maps, movement, and videos instead of just words. In addition to writing, they listen to audio, music, and noises that clarify an idea. It is critical to evaluate how pupils receive knowledge as well as how they communicate it. To make the most of the intertwined model of literacy, teachers need to offer a variety of communication-focused activities for students to utilize their literacy skills and engage with assignments in a variety of ways. Multimodal literacy isn't made of separate media, but rather seen as a complete entity, with various aspects of literacy being interconnected. In the present day, literacy entails more than simply being able to read and write (Maiullo, 2022).

Maiullo added that learners possess sight, aural, and additional sensory signals in face-to-face classes that permit them to reduce their emotional barriers and assimilate recent details. These signals are reduced in online classes, resulting in less realistic and understandable information. Similarly, communicative activities promote presentational communication over interpersonal interaction. A fruitful resolution is to develop real resources derived from an intertwine literacy framework that merges the four skills four skills using varied materials; these resources, consequently, are more appropriate use in interpersonal communicative activities in which students engage in meaningful conversation. Language teachers producing online classes can build activities like those in face-to-face classes that engage students in intelligible and genuine conversation by considering multimodal resources and modalities of communication.

Meanwhile, Coelho et al. (2021) discussed that the use of multimodal instructional materials has become essential in modern education because of how teaching and learning settings are changing. As e-learning and digital tools become more prevalent, traditional classroom contact time is frequently insufficient for students to completely understand subjects. As a result, students depend on resources that independently support and enhance their learning outside of the classroom. In this setting, multimodal educational materials are essential because they offer a variety of formats—visual, aural, tactile, and interactive features, for example—that may be tailored to accommodate varying learning preferences and styles. These resources support students in meeting certain learning objectives on their own, even in the absence of direct teacher assistance, in addition to aiding them in efficiently remembering material. The diversity and accessibility of study materials and support platforms increase with the advancement of technology, making it more crucial than ever for educators to comprehend how students interact with these resources and what drives their use.

Correspondingly, the digital era has forced educators to maintain better instruction standards, which has affected EFL teaching and learning in Indonesia. The topic of multimodality in connection to digital media in EFL

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instruction is currently being updated. Trisanti et al., (2022) investigated how Indonesian EFL teachers perceive multimodality in the teaching materials. It makes clear how multimodal literacy methods are used by EFL teachers in secondary schools to foster learners' critical thinking and creativity. The results showed that using written, auditory, and visual elements can help learners understand the teaching and learning materials and guarantee that they fully grasp the materials using multimodal expressions, content, and preference. The result indicates that Indonesian EFL in-service teachers have demonstrated flexibility in incorporating multimodal literacy into their lesson plans and are aware of the shift from traditional to digital mode. Therefore, further study is needed to learn more about the multimodal literacy strategies employed by EFL instructors in Indonesia.

Similarly, Olivier (2019) explained that there is a need to support self-directed learning while facilitating social and communal constructivism. Videos can be utilized in this way to encourage students to engage with content critically and work together to employ new technology. Short instructional films were used for this study since it's crucial to take video length into account. This study examines how university-level Afrikaans language classroom student teachers viewed the production and application of brief instructional videos as multimodal open educational resources. As a type of microlearning, short instructional videos have various benefits that align with student perceptions and literature. A qualitative research methodology was used in this paper, using participant comments supplied via a questionnaire with both closed- and open-ended questions. The following topics emerged from this analysis: the difficulties students face, the benefits of using brief instructional videos, the components of making the movies that were enjoyable, and the affordances of making short instructional videos. It was evident from the investigation that students feel positively about the creation and application of videos. Furthermore, it became clear that the nature of short videos in this context is influenced by a variety of factors, including social interaction, awareness of multimodalities, technical proficiency, device restrictions, and video content. As such, classroom support is essential.

Many would argue that the increased integration of information and communication technologies into people’s daily lives has altered how we study and gain knowledge. Nouri (2019) discussed how online learners in higher education interact with technology during their independent studies and how they make use of various semiotic affordances of ICTs to acquire course material. Thus, emphasis is placed on how college students use multimodal literacy to their advantage and create knowledge through a variety of media and modes while designing their own learning experiences. Many would argue that the increased integration of information and communication technologies into our daily lives has altered how we study and gain knowledge. Considering this, the paper will discuss how online learners in higher education interact with technology during their independent studies and, in particular, how they make use of various semiotic affordances of ICTs to acquire course material. Hence, emphasis is placed on how college students use multimodal literacy to their advantage and create knowledge through a variety of media and modes while designing their own learning experiences.

Contrarily, Djamdjuri et al., (2021) seeks to understand how students' views on learning English apply 21st century learning techniques in the context of teaching English to EFL students using a multimodal approach. Islamic subjects were used as the subject matter for an online lecture that lasted for one semester, or four months. Following a presentation and discussion of the course contents, students were requested to write or speak about the subjects. 47 students enrolled in the English language course at a private Islamic college in Bogor, Indonesia, who are part of the Islamic Broadcasting Program within the Faculty of Islamic Studies, were interviewed and questionnaires were distributed as part of this study's descriptive qualitative data collection method. The findings showed that: 1)the majority of participants are keen on utilizing Islamic resources to study English; 2) most participants assert that utilizing Islamic resources aided them in gaining greater fluency in the language; and 3) most participants are keen on utilizing multimodal Islamic online resources. Additionally, the participants expressed that the multimodal learning strategy is highly engaging, efficacious, and beneficial for their English language acquisition. Furthermore, the students expressed their desire for the uninterrupted smooth operation of direct student-teacher interaction. Thus, the usage of Islamic materials with a multimodal foundation may offer potential for participatory learning between instructors and students.

DOI: 10.47505/IJRSS.2025.7.7

In everyday conversations and teaching scenarios, arrows and spontaneous gestures usually convey similar information to participants. Drawing on comparable conceptualization and spatial representations, individuals could envision spatial data either 2D or 3D space. According to Acartürk et al., (2021), the arrow symbol is frequently used in visual communication. Depending on the situation, an arrow can serve a range of functions due to its geometrical and Gestalt qualities, including causal and temporal connections, concepts of motion and force in physics, direction and labeling. While deictic arrows are only sometimes used in writing, they are crucial for communication. Gestures could convey a diverse range of information, like arrows. Due to having similar conceptualization elements, there may be overlaps in the information conveyed by the gestures and arrows. Therefore, using the same visual elements and arrows can convey the same information. The correlation between impromptu hand movements and arrows can be viewed as evidence that impromptu have movements and diagrams have common conceptual area for representation in multimodal communication.

In terms of multimodal written texts, Hesham and Suliman (2015) discussed that investigation into multimodal communication and representation based on Systemic Functional Linguistics (SFL) has been limited to school and business settings. While multimodal communication research has been undertaken in postsecondary settings in the subjects of mathematics, science and computing, and nursing, business courses have not been investigated. Thus, he investigated 10 international Master of Commerce Accounting students enrolled at an Australian university's essential multimodal academic literacy and numeracy skills. It seeks to offer a description of the important textual and logical frameworks in central theme of the Principles of Finance course, specifically capital budgeting methodologies and oversight reports, through the examination of cohesive devices. He revealed that the interplay of the graph and the accompanying verbal text creates meaning in the multimodal semiotic resources not only intrasemiotically but also inter-semiotically.

In connection with this, Hatefi (2021) investigated concrete poems in terms of the link between verbal text and visual or in terms of de-familiarization. The growth of the phenomenological and discursive semiospheres in Afshin Shahroudi's concrete poem "The Train Moved Again" was examined in this article. The text's link between spoken text and visual was "spectral" rather than fixed. This relationship displayed a continuum in the form of discontinuity-balance-fusion at the level of expression due to the process of content level. Sign levels can also change from an index to an icon to a symbol. The findings revealed that, at the phenomenological level, the Enunciator attempted to stimulate the discourse by utilizing the prelinguistic powers of the verbal phonemes. Through his sensory system, the Enunciator attempted to influence the Enunciate. The enunciate created a discourse climate by responding to the enunciator's invitation. It was a mutual movement that resulted in the process. In another procedure, the phenomenal space of the text necessitated the re-segmentation of the verbal and visual levels. During the re-segmentation, a "evolutionary metaphor" was discovered, according to which the relationship between verbal text and image was "spectral" rather than fixed, and a discontinuity-balance-fusion relationship was developed.

Visual-verbal illustrations is a dynamic technique of presenting information that combines simplicity and visual appeal to capture readers. These illustrative techniques, which employ a varied range of visual elements such as graphs, maps, tables, infographics, charts, and more, serve as strong instruments for elucidating complicated topics. The core of visual-verbal illustrations is their capacity to transcend the boundaries of traditional written communication, engaging readers by presenting concepts in a visually appealing and readily digestible format. These images not only improve the overall readability of material but also encourage a deeper grasp of concepts by leveraging the communicative potency of numerous visual aids. This strategy is very useful in instructional materials, presentations, and informational content when the goal is to transmit ideas clearly, ensuring that readers not only understand but also retain the information offered to them (Department of Education, 2020).

Meanwhile, in school mathematics, word problems are widely used to allow students to investigate mathematical relationships and structure. Previous research, however, has found that term issues are overused or mistreated in manners that ignore the original aim of investigating mathematical framework and connection. Lee and Hwang (2022) offered a sequence of explorations by a little cluster of third graders while arguing the mathematical connections in addressing a word problem with visualizations across a few days. Even though the investigation lasted more time than expected, it was valuable. It provided a forum for students to voice their bewilderment, demonstrate

DOI: 10.47505/IJRSS.2025.7.7

their expertise, test hypotheses, and explore alternate scenarios. Finally, these investigations assisted students in seeing multiple links in the framework of situations while drawing their focus on practical applications. The review study of class occurrences provides understanding of educational prospects to assist students in investigating mathematical concepts and connections while conversing and arguing the context of the calculation challenge.

In terms of the ability to interpret data presented in tables, graphs, and information gaps, Calzon (2023) indicated that analyzing information with different analytical tools to draw significant conclusions is known as data interpretation. Interpreting data helps individuals organize, control, and condense information to address important questions. The importance of correctly interpretating data is clear and must not be overlooked. Data is highly probable to originate from different sources and to be introduced to the analysis process in a random sequence. Analyzing data is known for its subjectivity. In other words, the purpose and approach to interpretation varied among companies and probably depended on the type of data being analyzed.

Tables and graphs are essential visual tools in data representation because they provide an organized way to arrange complex information and reveal patterns and relationships within datasets. By converting numerical data into visual formats, these graphical representations make it easier for people to understand intricate details, patterns, and correlations. Tables, with their orderly rows and columns, make it easier to present data points in a systematic manner, but graphs, such as bar charts or line graphs, excel in illustrating trends and fluctuations across specific factors. The importance of tables and graphs resides in their capacity to transcend numerical complexities, allowing users to quickly grasp the underlying meaning of data. This visual clarity not only aids in data understanding but also improves information's communicative power, making tables and graphs essential tools in domains ranging from scientific research to business analytics (Centre for University Pathways and Partnership, 2022).

In terms of presenting information using diagrams, de Freitas (2012) asserted that a diagram in literature is a visual depiction that can be used for a variety of reasons. It can be viewed as a systematization and problem-solving tool, assisting in the arrangement and visualization of complex ideas. A diagram, on the other hand, can be considered as a way of unfolding and explaining relationships, highlighting the alignment of words, forms, things, and people. A diagram, in this sense, becomes a map of movement, capturing the possibility for exploration and discovery. A diagram's concept oscillates between order and openness, providing both stability and destabilization. It is a method of marking out and delineating, but also of crossing out and challenging existing limits. In general, diagrams are a useful tool for conveying complex concepts, visualizing links, and stimulating new ways of thinking.

Finally, in terms of recognizing the importance of graphical representation of data, Raajeswari (2023) explained that the visual display of data using plots and charts is known as graphical representation. It is widely utilized in numerous academic and professional domains, but most notably in mathematics, medicine, and science. Graphical representation aids in quantifying, sorting, and presenting data in a way that is understandable to a wide range of audiences. A graph is a graphical depiction of data that uses symbols like as lines, bars, pie segments, points, and so on. A graph is a visual representation of numerical data in the form of a qualitative structure that conveys crucial data.

Adipat et al. (2021) explained that according to engagement theory, students are more likely to retain knowledge if they are more involved in the method. Engagement is when a student participates and cooperate, and their drive and interest in it. Students are prompted to choose assignments drawn from their abilities, and subsequently act if permitted; consequently, they transform into fully engaged in the execution of prescribed activity. Student involvement can be determined based on the educational gaming components involved by assessing the dynamic, behavioral, and/or cognitive engagement features they demonstrate. Hence, game-based learning can improve students' involvement during the process of acquiring knowledge. Engagement theory suggests three elements for promoting successful learner involvement in the learning process: First, the process of learning must emphasize working together among students. Second, the process of learning must be planned around project-based activities and tasks. Third, authentic, relevant, and meaningful out-of-classroom work should be offered to encourage effective student participation.

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3. METHODOLOGY

3.1 Design

This study employed Creswell's (2007) mixed method approach, specifically the explanatory sequential mixed methods design. Qualitative analysis is employed in explanatory designs to provide a comprehensive understanding of the quantitative analysis (Almaki, 2016). The explanatory sequential mixed methods design involves an initial phase of gathering and examining numerical data, succeeded by a qualitative phase of gathering and analyzing data, and finally integrating the data from both strands. Qualitative data was utilized in this study to reinforce the results obtained from initial quantitative data to gain a better understanding of the issue under investigation.

In quantitative case, the baseline performance of the respondents on the visual-verbal relationships competencies as to interpreting data presented in tables, graphs, and information gaps, presenting information using diagrams, and recognizing the importance of graphical representation of data were described. Likewise, the performance of the respondents on the visual-verbal relationships competencies after exposure to multimodal instructional materials in game-based language teaching strategy was assessed. Further, significant differences between the performances of the respondents before and after the use of multimodal instructional materials in game-based language teaching strategy was evaluated.

To gain a deeper understanding of the quantitative outcomes, the qualitative portion of this study thoroughly examined the respondents' experiences with multimodal instructional materials in a game-based language teaching approach. To find out how students felt about the multimodal materials and what obstacles they faced, researchers used observational studies, focus groups, and interviews. The qualitative data provided a nuanced perspective on how different instructional strategies affected students' motivation, learning processes, and general interaction with the subject by assembling in-depth narratives and personal perspectives. By illuminating the underlying causes of the variations in students' performance on visual-verbal relationship abilities, this qualitative investigation served to contextualize the quantitative results. Thus, a thorough grasp of the efficacy and significance of multimodal instructional materials in boosting game-based English language acquisition was ensured by the integration of qualitative findings.

3.2 Environment

The research was conducted at Lawaan III National High School in Lawaan III, Talisay City, Cebu. There are 5 sections of English classes in grade 8. The researcher handles two of these sections with a total of 50 students who participated in the study. Lawaan III National High School is a medium-sized school with around 648 students across all grades from grade 7 to grade 10.

The school's facilities include classrooms equipped with basic educational technology, a library and a computer laboratory. These resources were vital for analyzing the effects of restricted access on student performance and involvement.

Lawaan III National High School functions according to regulations established by the Department of Education (DepEd) and all research methods adhered to DepEd policies regarding educational research in public educational institutions. The research received authorization from the school administration along with the agreement from teachers and students. The collaborative effort from educators and school personnel was a crucial element of the research setting. Educators shared important observations about the students' educational development and learning difficulties. The support from school personnel aided in conducting observations and surveys, enhancing the overall comprehension of the learning environment.

3.3 Participants

The participants of this study were the 25 students from Grade 8 level of Lawaan III National High School. In determining the sample size to identify the study's participants, a universal sampling was employed. Grade 8 students took the pre-test, which was designed to examine their baseline performance of the respondents on the visual-verbal

DOI: 10.47505/IJRSS.2025.7.7

relationships competencies in three areas: analyzing data provided in tables, graphs, and information gaps; presenting information using diagrams; and understanding the value of graphical data representation. This pre-test was given prior to any exposure to multimodal instructional resources, notably game-based learning. A thirty (30) items multiple choice test with table of specifications was used to measure their performance. Further, after exposure to multimodal instructional materials in game-based language teaching strategy, the performance of the respondents on the visual-verbal relationships competencies was likewise assessed.

For Focus Group Discussion (FGD), 6 students were interviewed to know their experiences when exposed to multimodal instructional materials in game-based language teaching strategy. Purposive sampling was used in selecting the participants. The six students were chosen with the intention of capturing a wide variety of viewpoints from Lawaan III National High School's Grade 8 students. A variety of factors, including academic achievement, degree of engagement with multimodal instructional materials, and responses to the pre-test on visual-verbal relationships competencies, were taken into consideration when selecting these participants. The selection process considered students with varying levels of competency, including both average and high achievers, to guarantee a representative sample. To account for any variances in students' experiences with game-based language teaching strategies, other students were added who had different learning styles and preferences. The objective is to assemble a diverse group capable of offering in-depth understandings of how the multimodal instructional materials affect students' comprehension and utilization of visual-verbal relationships in language learning. To guarantee a comprehensive representation of the Grade 8 student population in the study, the criteria additionally considered variables including verbal expressiveness, diversity in extracurricular interests, and willingness to participate.

Figure 1. Distribution of Respondents

Section	Number of Students
Quantitative Data Collection	25
Qualitative Data Collection	6
TOTAL	**31**

3.4 Instrument

The researcher formulated a 30-item Multiple Choice test designed to assess Grade 8 students' performances before and after the use of multimodal instructional materials in game-based language teaching strategy. Researcher adapted the test from Department of Education module format. The test is designed to give a comprehensive assessment of students' performance in these competencies both before and after exposure to multimodal instructional materials in game-based language teaching strategy.

The test instrument for this study was rigorously prepared, with a specific focus on addressing the learning competency specified in the Most Essential Learning Competencies (MELCs) for Grade 8 students. The items were specifically correlated with MELC EN8SS-IIe-1.2, which require Grade 8 students to effectively describe the visual-verbal connections. The assessment intends to give a targeted and in-depth evaluation of students' abilities in analyzing data presented in diverse formats by adapting the test items to this crucial competency. The focus on MELCs guarantees that the evaluation is firmly aligned with the curriculum, providing significant insights into the efficacy of multimodal teaching materials in accomplishing specific educational objectives.

Interview

This was used to know the experiences of the respondents when exposed to multimodal instructional materials in game-based language teaching strategy. The validity of the items in the interview guide were evaluated to ascertain its excellent quality. It is crucial to assess the consistency and correctness of the research tool. The researcher created a prototype interview guide that measures the experiences of the students in using multimodal instructional materials to ensure validity. The experiences of the students in using multimodal instructional materials must be accurately reflected in the interview guide, so experts must look all over the items for readability, clarity, and comprehensiveness

DOI: 10.47505/IJRSS.2025.7.7

before agreeing on which ones should be included in the final interview guide. The researcher asked the opinion of three experts for content validation. Those with appropriate experience and skills in the field of educational research are chosen as experts for content validation. To follow the experts' recommendations, the interview guide was appropriately amended. To enhance and support the instrument's content, the researcher incorporated and altered it in response to the comments and suggestions.

3.5 Data Gathering Process

The data collection approach for this study includes administering a comprehensive test and conducting interviews to assess the effects of using multimodal instructional resources, specifically game-based learning, on Grade 8 students' English language skills.

The test was performed in two stages: pre-test and post-test. The pre-test assessed the baseline performance of Grade 8 students in Visual-Verbal relationships, focusing on competencies such as interpreting data in tables, graphs, and information gaps, presenting information using diagrams, and recognizing the importance of graphical representation of data. The test consists of 10 items for each competence, for a total of 30 items. The questions are rigorously developed to comply with MELC EN8SS-IIe-1.2, ensuring that the assessment is focused and curriculum-aligned.

The post-test performed following the adoption of multimodal instructional materials, notably game-based learning, to assess any changes in students' performance in the prescribed skills. The post-test, like the pre-test, consists of 10 items for each competency, for a total of 30 items. The paired design of the pre-test and post-test enables a comparative analysis to assess if there are notable differences in the students' performance before and after exposure to the educational materials.

The instruments were sought for recovery. The organization of data, tabulation, analysis, and interpretation automatically conducted using the most suitable techniques employed in research. The interview session with selected students immediately followed to know their experiences with multimodal instructional materials. Permission to audio-and video record the proceedings of the interview was sought. Researcher stated in a short paragraph the major objectives of the interview. Simultaneously, researcher established credibility to the interviewee by having an eye-to-eye contact. After the interview, researcher transcribed all the responses and interpret the essence of each participant’s responses. Each interview was expected to last not more than an hour. Researcher transcribed the recorded interview responses for further analysis. Analysis and interpretation were done to discuss the results and discussion to come up with conclusions and recommendations.

3.6 Data Analysis

The collected data was analyze statistically utilizing the most suitable statistical techniques. Descriptive statistics like occurrence rates and percentage and t-test were utilized in examining and understanding the collected data.

Descriptive Statistic (Mean). This was used to describe the baseline performance of the respondents on the visual-verbal relationships competencies as to interpreting data presented in tables, graphs, and information gaps, presenting information using diagrams, and recognizing the importance of graphical representation of data as well as the performance of the respondents on the visual-verbal relationships competencies after exposure to multimodal instructional materials in game-based language teaching strategy.

Inferential Statistics (t-test). This was used in determining the significant difference between the performances of the respondents before and after the use of multimodal instructional materials in game-based language teaching strategy.

Scoring and Interpretation. The table 2 presents the range, description, and its interpretation for the assessment of the performances of the respondents before and after the use of multimodal instructional materials in game-based language teaching strategy.

DOI: 10.47505/IJRSS.2025.7.7

Table 2 Summary statistics

Range	Description	Interpretation
90 -100	Advanced	Outstanding
85-89	Proficient	Very satisfactory
80-84	Approaching Skills	Satisfactory
75-79	Developing	Fairly satisfactory
70 -74	Beginning	Did not meet expectations

Thematic Analysis. Braun and Clarke Thematic Analytical Framework was used in assessing the experiences of the respondents when exposed to multimodal instructional materials in game-based language teaching strategy. Braun and Clarke's Thematic Analytical Framework is used to examine and evaluate data from a variety of sources, including documents, focus groups, and interviews. The procedure of using the framework consists of six steps: familiarization, coding, theme search, theme exploration, theme assessment, and report creation. Rather than merely summarizing or classifying the data, the goal is to find patterns and meanings within it. Because the framework enables a thorough and nuanced examination of the facts, it is especially helpful for themes that are delicate or complex.

Braun and Clarke's Thematic Analytical Framework was used to evaluate the respondents' experiences with multimodal instructional materials in a game-based language teaching approach. This framework is intended to analyze and assess qualitative data from a range of sources, such as interviews, focus groups, and documents. There are six steps in the process:

Initially, to become familiar with the data, researchers had to read transcripts of focus groups and interviews several times over. To document the respondents' initial thoughts and important details on their experiences with multimodal instructional materials, preliminary notes were taken.

Second, text passages that seemed pertinent to the research questions were methodically found using coding. Key concepts, trends, and recurrent themes found in the respondents' input were represented by these codes.

Third, the codes were examined to find possible topics during the theme search stage. Themes are more comprehensive patterns of meaning that capture important facets of the respondents' viewpoints and experiences with the game-based learning approach.

Fourth, the themes that had been found were examined and improved upon during the theme review phase. To make sure the themes appropriately represented the experiences of the respondents, this involved comparing them to the coded data and the complete dataset. Depending on their applicability and intelligibility, certain topics were merged or eliminated.

The fifth step in theme formulation was giving each theme a precise definition and name. A thorough examination was carried out to delineate the extent and substance of every theme, guaranteeing that they furnished significant perspectives into the study inquiries.

A thorough report outlining the conclusions of the theme analysis was produced by the report production process. Each issue was covered in-depth in the paper, along with quotes and data examples to highlight important aspects. The purpose of this last phase was to communicate a comprehensive and nuanced understanding of the respondents' experiences using the multimodal teaching materials.

Ethical considerations

While creating multimodal teaching resources for game-based English language instruction, it is vital to consider ethical aspects (Amdur & Bankert, 2013). Researcher needs to secure informed consent, safeguard personal information and lessen harm to participants. Emphasizing advantages, cultural awareness, and openness and responsibility is crucial for enhancing the welfare of all involved.

DOI: 10.47505/IJRSS.2025.7.7

4. RESULTS AND DISCUSSION

The following presents the pre-test and post-test performance of the respondents on visual-verbal relationships as well as the experiences of the respondents when exposed to multimodal instructional materials in game-based language teaching strategy. The data gathered herein are presented, analyzed, and carefully interpreted to answer the study's specific problem.

Table 3 Pre-test Performance of Students

Competency	Mean (SD)	Equiv. %	Description
C1- Interpreting data presented in tables, graphs, and information gaps	6.60 (1.71)	66.00	Did not meet exp.
C2- Presenting information using diagrams	6.48 (1.64)	64.80	Did not meet exp.
C3- Recognizing the importance of graphical representation of data	6.32 (1.63)	63.20	Did not meet exp.
Total	**6.47 (1.66)**	**64.67**	**Did not meet exp.**

*Based on DepEd's grading system: Below 75 (Did not meet expectations), 75-79 (Fairly satisfactory), 80-84 (Satisfactory), 85-89 (Very satisfactory), 90 and above (Outstanding)

The research shows that students struggled with visual-verbal relationship skills, especially in analyzing data from graphs and tables, conveying information through diagrams, and understanding the significance of graphic representation. Elements leading to their poor performance encompass unfamiliarity with different visual formats, struggles with critical thinking, and obstacles in mathematical computations. Moreover, pupils find it challenging to comprehend abstract explanations and differentiate among various graphical representations, which impedes their capacity to analyze and interpret visual data efficiently. These findings show that their initial performance fell short of the expected criteria established by the DepEd grading system, indicating a requirement for further assistance and improvement.

To tackle these issues, incorporating multimodal teaching resources like interactive visuals, audio supports, and game-based learning can enhance engagement and understanding. Digital resources such as simulation activities and teamwork platforms can aid students in utilizing their knowledge in real-world situations, promoting enhanced learning. Studies indicate that utilizing different learning modalities—visual, auditory, and interactive—can improve student comprehension and memory. By enhancing access to these educational materials and providing organized training in data analysis, teachers can more effectively prepare students with the essential skills to interpret and convey information.

Table 4 Post-test Performance of Students

Competency	Mean (SD)	Equiv. %	Description
C1- Interpreting data presented in tables, graphs, and information gaps	8.64 (1.35)	86.40	Very Satisfactory
C2- Presenting information using diagrams	8.56 (1.50)	85.60	Very Satisfactory
C3- Recognizing the importance of graphical representation of data	8.52 (1.16)	85.20	Very Satisfactory
Total	**8.57 (1.34)**	**85.73**	**Very Satisfactory**

The research indicates that students exhibited notable enhancement in their visual-verbal relationship skills after interacting with multimodal teaching resources within a game-oriented language instruction approach. Their ability to interpret data from tables and graphs, present information through diagrams, and appreciate the significance of graphical representation all achieved a "very satisfactory" level, suggesting that the dynamic and engaging aspects of game-based learning improved their comprehension and enthusiasm. Through the incorporation of games and various resources, students successfully practiced and utilized their skills in significant ways, resulting in enhanced

DOI: 10.47505/IJRSS.2025.7.7

retention, critical thinking, and problem-solving skills. The research highlights that visual instruments like charts, tables, and diagrams are essential in structuring and displaying intricate information, which helps students to efficiently analyze and interpret data.

The results coincide with studies that highlight the significance of multimodal teaching methods in contemporary education. Through the inclusion of written, auditory, and visual components, students interact with material in various manners, enhancing their understanding and flexibility in adapting to different learning formats. The research emphasizes the increasing necessity for teachers to adopt digital and interactive instructional techniques, especially in EFL (English as a Foreign Language) environments, to meet the changing educational benchmarks. Additional studies are suggested to investigate efficient multimodal literacy approaches for improving student involvement and achievement.

Table 5 Significant Difference Between the Performance of the Students

	Pre-test	**Post-test**		
Competency	**Mean (SD)**	**Mean (SD)**	**t (p-value)**	**Interpretation**
C1- Interpreting data presented in tables, graphs, and information gaps	6.60 (1.71)	8.64 (1.35)	5.70 (0.0000)	Significant
C2- Presenting information using diagrams	6.48 (1.64)	8.56 (1.50)	5.56 (0.0000)	Significant
C3- Recognizing the importance of graphical representation of data	6.32 (1.63)	8.52 (1.16)	6.44 (0.0000)	Significant

*Significant when p-value <.05

The research shows a notable variance in student achievement prior to and following the implementation of multimodal instructional resources in a game-oriented language teaching approach, as evidenced by a p-value of 0.0000, which is lower than the 0.05 significance threshold. This validates the success of the method in improving Grade 8 pupils' skills in analyzing data from charts and graphs, conveying information through diagrams, and understanding the significance of visual representation. The findings emphasize that interactive and captivating educational resources, like games and visual aids, enhance student learning by simplifying and making complex ideas more engaging. The Department of Education (2020) highlights the effectiveness of visual-verbal illustrations in learning, as they improve understanding and memory by delivering information in attractive and easily graspable ways.

The results also correspond with studies on the growing importance of information and communication technologies (ICT) in education. According to Nouri (2019), learners today utilize multimodal literacy with different digital tools to improve their educational experiences. Incorporating ICT in education enables students to obtain, analyze, and utilize information through various methods, resulting in enhanced comprehension and better retention of educational content. This implies that integrating multimodal and game-oriented learning techniques into classroom teaching can be an effective method for contemporary education, enhancing student involvement and boosting their skills in analyzing and communicating information efficiently.

Table 6 Students Experiences of Multimodal Instructional Materials in Game-Based Language Teaching

Themes	Categories
Engaging	• Motivate learning • Fun experiences
Beneficial	• Advantages of Game-Based • Improves critical thinking
Enhancement	• Desire for variety of games • Suggestions for future game preferences

DOI: 10.47505/IJRSS.2025.7.7

Engaging. The theme that surfaced from the responses was the captivating engaging nature of learning experiences that are based on games. Digital and non-digital games are used in game-based learning to help students acquire new knowledge and abilities. It was noted that this strategy was very successful in raising student involvement and academic results.

Beneficial. Game-based learning provides various advantages, mainly by boosting students' intrinsic motivation through fun and interactive experiences. Games incorporate 'joyful' aspects that promote ongoing involvement and active learning, enhancing both emotional and cognitive engagement. Studies indicate that game-based learning enhances motivation, emotional engagement, and enjoyment, all of which are essential for effective learning. Moreover, games act as a social tool, fostering interactive and engaging learning experiences that assist students in developing skills while enjoying themselves.

Enhancement. The enhancement of learning experiences using multimodal instructional materials in game-based language teaching methodologies was one prominent theme that came out of the qualitative study.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Results have indicated that by using multimodal instructional materials in game-based English language teaching, the learners' performance has improved and there is a significant difference in pre-test and posttest per competency from did not meet expectation to very satisfactory. Based on the student's gathered experiences, it increases learners' engagement and motivation leading to improved learning outcomes. Therefore, game-based teaching strategy is a valuable tool for educators and creates a more immersive and interactive experience for students encouraging them to take an active role in their own learning.

5.2 Recommendation

Considering the results and conclusions, a number of suggestions are put forward. Instructors ought to include practical tasks and interactive activities in training sessions to promote active learning and enhance skill development. The ongoing implementation of game-based language teaching methods is recommended to sustain and improve students' skills in visual-verbal associations. Furthermore, school administrators ought to offer teachers continuous professional development chances to remain informed about the newest research and successful methods for game-based learning. Educators might also investigate different game types to vary teaching methods and enhance student involvement. Finally, the suggested improved multimodal teaching resources for game-based English instruction need to be presented to the principal of Lawaan III National High School for evaluation, validation, and possible implementation by Grade 8 educators.

REFERENCES

Acartürk, C., Coskun, M., & Emil, S. (2021). Multimodal communication in instructional settings: An investigation of the functional roles of gestures and arrows. *Revista Signos, 54*(107), 867-892. doi:https://doi.org/10.4067/S0718-09342021000300867

Calinagan, R. A. N. (2022). Passport to Africa and Asia: a multimodal texts in Afro-Asian literature. *EPRA International Journal of Research and Development (IJRD), 7*(11), 127-133.

Coelho, L., Reis, S., & Coelho, F. (2021, April). Preferences for teaching materials: A survey on a multimodal world. In *2021 IEEE Global Engineering Education Conference (EDUCON)* (pp. 21-24). IEEE.

Djamdjuri, D. S., Suseno, M., Tajuddin, S., Lustyantie, N., & Chaeruman, U. A. (2021). Multimodal Approach in Online EFL Class Using Islamic Learning Materials: Students' Perspective. *International Journal of Language Education*, *5*(4), 337-355.

Hatefi, M. (2021). Evolutionary Visual-Verbal Relationship in the Concrete Poem of. *Journal of Researches in Linguistics*, *13*(2), 1-20.

Hesham, S. A., & Suliman, M. A. (2015). A study of cohesion in international postgraduate business students' multimodal written texts: An SF-MDA of a key topic in finance. *The Buckingham Journal of Language and Linguistics, 8*, 56-78. doi:https://doi.org/10.5750/bjll.v1i0.1047

DOI: 10.47505/IJRSS.2025.7.7

Lee, J., & Hwang, S. (2022). Elementary students' exploration of the structure of a word problem using representations. *International Electronic Journal of Elementary Education, Suppl.Special Issue: Typical and Atypical Mathematics Learning: What do we Learn from Recent Studies?, 14*(3), 269-281. doi:https://doi.org/10.26822/iejee.2022.243

Maciejewski, M. L. (2020). Quasi-experimental design. *Biostatistics & Epidemiology*, *4*(1), 38-47.

Nouri, J. (2019). Students multimodal literacy and design of learning during self-studies in higher education. *Technology, Knowledge and Learning*, *24*(4), 683-698.

Olivier, J. (2019). Short instructional videos as multimodal open educational resources in a language classroom. *Journal of Educational Multimedia and Hypermedia*, *28*(4), 381-409.

Tandiana, S. T., Abdullah, F., & Saputra, Y. (2020). Learning multimodality through genre-based multimodal texts analysis: Listening to students' voices. *Vision: Journal for Language and Foreign Language Learning*, *9*(2), 101-113.

Tangkeko, J. M. M., & Diva, C. B. Multimodal Teaching in Enhancing the Students' Language Fluency.

Trisanti, N., Suherdi, D., & Sukyadi, D. (2022). Multimodality Reflected in EFL Teaching Materials: Indonesian EFL In-Service Teacher's Multimodality Literacy Perception. *Language Circle: Journal of Language and Literature*, *17*(1), 129-139.

Varaporn, S., & Sitthitikul, P. (2019). Effects of multimodal tasks on students' critical reading ability and perceptions.

Calzon, B. (2023). A Guide to The Methods, Benefits & Problems of The Interpretation of Data. https://www.datapine.com/blog/data-interpretation-methods-benefits-problems/

Centre for University Pathways and Partnership (2022). Module 10: Interpreting Tables and Graphs. https://www.utas.edu.au/mathematics-pathways/pathways-to-health-science/module-13-interpreting-tables-and-graphs

de Freitas, E. (2012). The diagram as story: Unfolding the event-structure of the mathematical diagram. *For the Learning of Mathematics*, *32*(2), 27-33.

Department of Education (2020). Quarter 2 – Module 1: Explaining Visual-Verbal Relationships. CO_Q2_English8_Module1

Maiullo, J. (2022). Considering Multimodal Materials and Modes of Communication for Authentic Communication in Online Classes. https://americanenglish.state.gov/files/ae/resource_files/60_1_pg02-14_maiullo.pdf

Raajeswari, P. A. (2023, December). Presentation of data II – Graphical representation.https://ebooks.inflibnet.ac.in/hsp16/chapter/presentation-of-data-ii-graphical-representation/

DOI: 10.47505/IJRSS.2025.7.7