

The Impact of Incorporating Multimodal Learning Tools on Self-Regulation among Students in Literature Classes The Case of Fourth-Year Students of English at ENS Laghouat

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Abstract:

In response to challenges in fostering students' self-regulation in literature classes, this study examines the impact of integrating multimodal learning tools (MLTs) on autonomy and self-learning. Conducted with 30 fourth-year English students at ENS Laghouat, employing a quantitative approach, data were collected via a self-regulation test and Likert scale survey, analyzed using SPSS. Results suggest that incorporating MLTs positively affects students' self-regulation, garnering positive feedback. The study advocates for educators and institutions to embrace and implement these tools to enhance student learning experiences in literature classes.

Keywords: Multimodal Learning Tools (MLTs); self-regulation skills; students; teaching literature.

Introduction

This study examines the impact of integrating multimodal learning tools on self-regulation among fourth-year English students at ENS Laghouat. These tools, incorporating visual, auditory, and audiovisual elements, have the potential to enhance engagement and comprehension in literature instruction. The research aims to demonstrate how these tools can foster essential self-regulatory skills, enabling students to better manage their learning processes and achieve academic success. The primary objective is to investigate how multimodal learning tools affect students' self-regulation in literature classes, evaluating their effectiveness in improving autonomy, self-monitoring, goal-setting, self-reinforcement, and academic performance and engagement.

The key research questions guiding this study are:

- 1- What is the impact of incorporating multimodal learning tools on students' self-regulation within the literature class?
- 2- How do students perceive and respond to the integration of multimodal learning tools in literature instruction?

Based on these questions, the hypotheses formulated for this study are:

1- The utilization of multimodal learning tools in literature instruction enhances students' self-regulation abilities.

2- A majority of students will demonstrate improved self-regulatory skills as a result of the integration of multimodal learning tools in literature instruction.

By addressing these questions and hypotheses, this research aims to provide valuable insights into the benefits of multimodal learning tools, offering practical implications for enhancing literature instruction and fostering better learning outcomes for EFL students.

1. Review of Literature

1.1. Teaching Literature for EFL Learners

The integration of English literature into English language learning is recognized as an effective method to address language proficiency concerns (Widdowson, 1975 as cited in Baharudin et al., 2019). Widdowson emphasized that literature study provides learners with a holistic understanding of language use in everyday contexts (Baharudin et al., 2019). However, literature learning poses several challenges for EFL learners, including linguistic obstacles such as complex vocabulary and intricate syntactic structures, cultural obstacles involving unfamiliar references, and pedagogical obstacles related to matching teaching methods to learners' proficiency levels. Additionally, student interests are often overlooked, leading to reduced engagement, and the rigidity of an imposed syllabus can limit the use of engaging materials and methods. Addressing these challenges requires careful material selection, content adaptation, and the employment of modern tools (Khatib et al., 2011, pp. 203-205).

1.2. Multimodal Learning Tools

Multimodal learning, integrating various sensory modes, enhances information reception and understanding (Bezemer and Kress, 2016; Moreno and Mayer, 2007 as cited in Bouchey et al., 2021). It employs visual, aural, and written elements to construct meaning within a classroom context (Vaish and Towndrow, 2010, cited in Laadem & Mallahi, 2019). Multimodal learning tools, including visual, auditory, and audiovisual components, are gaining popularity in education (Reiser, 1996, p. 68 as cited in Baidawi, 2016). Visual tools encompass printed media, realia, and overhead transparency, contributing to enhanced learning by combining pictures and abstract symbols. Auditory tools involve presenting recorded content for listening, fostering listening comprehension and oral capacities. Audiovisual tools, combining visual and verbal elements, create immersive learning experiences, facilitating comprehension and knowledge retention (Baidawi, 2016).

1.3. Self-Regulation

Self-regulation, crucial for successful learning, encompasses skills like self-monitoring, self-instruction, goal-setting, and self-reinforcement. Self-monitoring, a metacognitive process, involves observing, evaluating, and regulating one's own thoughts and behaviors, fostering self-awareness and adaptive decision-making. Self-instruction, or self-directed learning, allows learners to guide themselves through a learning experience independently. Goal setting establishes specific objectives, offering direction, motivation, and a framework for evaluating progress. Self-reinforcement, celebrating

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success, plays a significant role in self-regulation, influencing behavior and motivation (Nebraska University's College of Education and Human Sciences, n.d.). Integrating multimodal learning tools in literature classes addresses language learning challenges while enhancing self-regulation skills, resulting in a more effective and engaging learning experience for EFL learners.

1.4. Previous Studies

In various EFL contexts, previous studies have shown the benefits of multimedia-enhanced teaching. In Inesa Sahakyan's study on first-year Master's students, the impact of multimodal learning environments on creativity development was investigated through a three-day workshop titled "Creativity and Innovation." The study revealed that these environments positively influenced learner motivation, thereby significantly contributing to the development of creativity in learning environments (cited in Papadopolou & D. Avgerinou, 2019).

A study by Mizab Meriem at Biskra University explored the effects of audio-visual aids on first-year students' speaking skills in the Foreign Languages department. The study aimed to highlight the importance of using videos with EFL students, hypothesizing that audio-visual aids can improve speaking skills. Using a descriptive method, questionnaires were administered to 40 first-year students and five oral expression teachers. The analysis showed that both teachers and students viewed audio-visual aids as important tools for enhancing speaking abilities.

However, while these studies highlight the positive effects of multimodal learning environments and audio-visual aids on motivation, creativity, and speaking skills, they do not specifically address the impact on self-regulation. This gap in the literature emphasizes the need for further research to investigate how these tools influence self-regulatory skills in language learning contexts.

2. Methodology

This section delves into how Multimodal Learning Tools (MLTs) affect students' self-regulation in literature classes, aiming to fill gaps in existing research. It outlines the methodology, including setting, methods, design, sample details, and data collection tools. The analysis of collected data, interpretation of results, and conclusions are presented, along with implications for future research.

2.1 Research Design

For this research, a quasi-experimental design is chosen to test the effect of integrating Multimodal Learning Tools in teaching literature on students' self-regulation. Leon Festinger's description of an experiment as observing the effect on a dependent variable through the manipulation of an independent variable justifies the choice of a quasi-experimental design (Festinger, cited in Pandey & Pandey, 2015, p.90).

2.1.1 Quantitative Method

This study uses quantitative methods for efficient data collection. A quasi-experimental design tests the effectiveness of Multimodal Learning Tools (MLTs) like Google Classroom and YouTube on learners' autonomy

and self-regulation. An online Likert scale survey is used as a post-treatment test for accuracy.

2.1.2 Research Setting

The study takes place at Laghouat's Higher College of Teachers (ENSL) during the 2023-2024 school year. Established in 2011, ENSL is Algeria's first college offering degrees in literary and scientific disciplines, training qualified teachers for primary, middle, and secondary schools. This research specifically centers on the English language department at ENSL.

2.1.3 Population and Sampling

The research targets fourth-year English students from the class of 2023-2024 at ENSL. A sample of 30 participants from the PEM group was randomly selected, consisting of 3 males and 27 females aged 20 to 24. These students were chosen for their experience in studying literature and interpreting complex themes, making them suitable for testing the effectiveness of multimedia tools.

2.1.4 Data Collection Tools

Data collection tools include questionnaires, interviews, surveys, checklists, tests, and experiments. This study uses a quasi-experiment to examine the impact of MLTs on self-regulation and a survey to gather data on learners' attitudes and perceptions toward using MLT in teaching literature.

2.3 Data Analysis

This study employs a self-regulation test designed by the researcher to assess students' self-regulation before and after using Multimodal Learning Tools (MLTs) for studying a literary text. Using a pre-post-test experimental design, it seeks to determine if there's a significant change in self-regulation scores after MLT exposure.

Thirty fourth-year students participated in five sessions led by their literature teacher. The initial session included a pre-test to assess self-regulation and problem-solving abilities related to Thomas Pynchon's "Gravity's Rainbow." The lesson started with a discussion of prior knowledge about the book, followed by audiovisual materials presented through Google Classroom. In the next session, students engaged in collaborative learning activities. The final session involved a post-test to evaluate changes in self-regulation, performance, and debate skills.

2.3.1 The Statistical Packages for the Social Sciences (SPSS)

For the analysis of the quantitative data in this study, the researcher chose to utilize The Statistical Package for the Social Sciences (SPSS). It offers a comprehensive set of statistical procedures that facilitate the investigation of complex research questions and hypothesis testing. Therefore, SPSS was selected to ensure accurate data analysis for this research.

2.3.2 Results and Discussion

2.3.2.1 The Quasi-experiment

In this analysis, descriptive statistics and a paired-sample t-test will be employed by the researcher to compare the mean scores of the pre- and post-tests. Additionally, the correlation coefficient and standard error of the mean between the two tests will be calculated to further elucidate the outcomes.

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Table 1. Descriptive Statistics on the Pre and Posttest Scores on Students' Self-Regulation

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Pretest	30	29.00	53.00	44.666	.99347
Posttest	30	80.00	88.00	83.900	.41620
Valid N	30				

Table 1 shows that the pre-test mean score was 44.66, and the post-test mean score was 83.90, indicating a mean difference of 39.23. This suggests that multimodal learning tools significantly impacted EFL students' self-regulation. The pre-test had a standard deviation of 5.44 and a standard error of 0.99, while the post-test had a standard deviation of 2.27 and a standard error of 0.41.

Table 2. Paired-Samples T-Test for Pre-test/Post-test scores

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pretest Posttest scores Pair	39.233	5.6731	1.0357	41.351	37.114	37.878	29	.000

Sig<0.05

Table 2 shows the results of a paired test to determine the statistical significance of the difference between students' self-regulation scores before and after using multimodal learning tools. The mean post-test score was 83.90, significantly higher than the pre-test mean score of 44.66. The paired samples T-test indicated a significant improvement in post-test performance ($t = 37.878$, $df = 29$, $Sig = 0.000$, $p < .05$). This confirms a statistically significant difference between pre- and post-treatment scores, supporting the alternative hypothesis (H1) that multimodal tools enhance self-regulation in studying literary texts, and rejecting the null hypothesis (H0). Thus, multimodal learning tools significantly increased self-regulation among EFL students.

2.3.2.2 Post-Experiment Survey

Section 01: The Use of Multimodal Tools in Teaching Literature

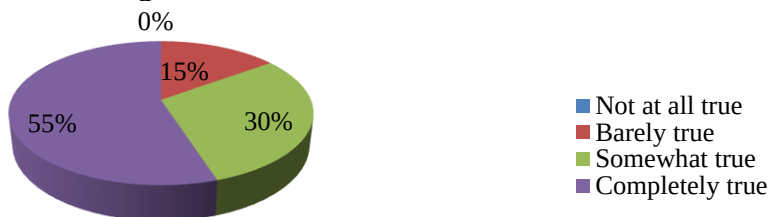
Item 1: The use of multimodal tools (such as videos, interactive websites, or visual aids) enhanced my understanding of literary concepts in this class.



Pie chart 2.1: MLTs' Usefulness in Enhancing Students' Understanding of Literary Concepts

The survey explored how multimodal learning tools affect understanding field-specific terminology in literature. Half of the students fully acknowledge the tools' usefulness, while 35% find it somewhat true. None indicate it's barely true, but 15% believe it's not true at all. These findings suggest that incorporating multimodal tools enhances comprehension of literary concepts for most students.

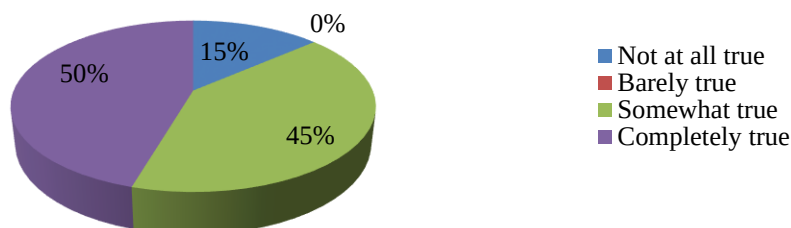
Item 2: The incorporation of multimodal tools made the literature class more engaging and interesting for me.



Pie chart 2.2: MLTs' Effectiveness in Raising Students' Engagement and Interest in Literature Classes

Motivation and engagement are crucial in literature classes for students' learning success. A majority (55%) strongly believe that integrating multimodal tools boosts engagement and interest levels, while 30% partially agree, and 15% find it barely true. Importantly, none of the students disagree with the effectiveness of these tools in creating a more engaging and interesting learning environment.

Item 3: The use of multimodal tools helped me to analyze and interpret literary texts more effectively.

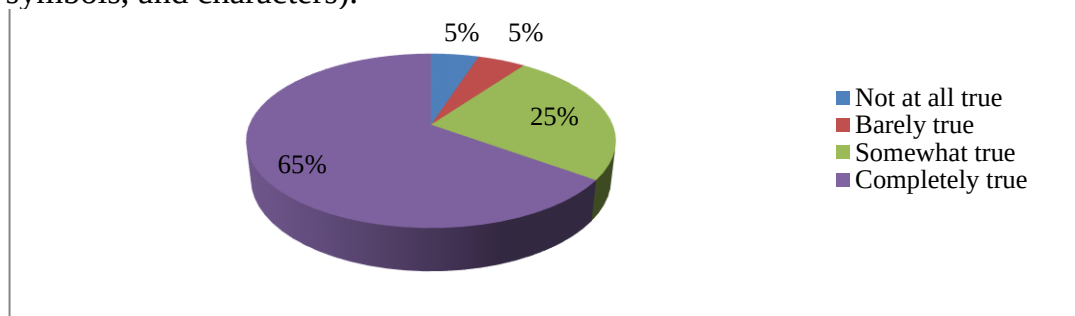


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Pie chart 2.3: MLTs' Effectiveness in Developing Students' Analysis and Interpretation Skills

Analyzing literary texts is crucial for academic success in literature, and the researcher assessed the impact of multimedia on these skills. According to pie chart 2.3, 50% of students found multimodal learning tools extremely beneficial, 45% considered them considerably helpful, and 15% found them not helpful at all. These results highlight the significant role of multimedia in enhancing essential analytical skills for success in literature.

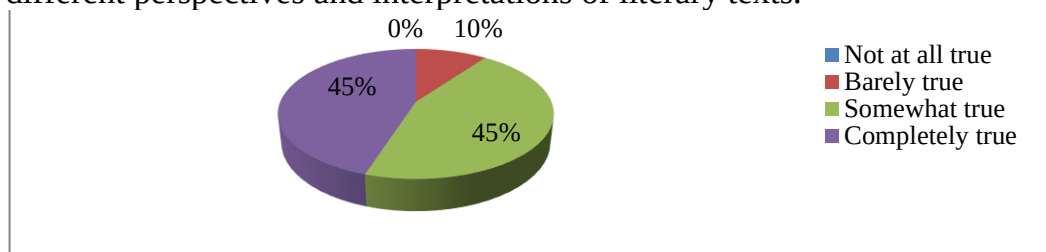
Item 4: The inclusion of multimodal tools improved my ability to make connections between different elements of a literary work (such as themes, symbols, and characters).



Pie chart 2.4: MLTs' Effectiveness in Improving Students' Ability to Draw Connections

Students must understand themes, symbols, and motifs in texts to grasp authors' intentions and societal context. Multimodal learning tools were introduced to aid in these skills. 65% of students reported significant improvement in connecting essential elements for text comprehension and analysis. Additionally, 25% found the tools somewhat helpful, while 5% felt they provided minimal assistance, and another 5% found them unhelpful.

Item 5: The integration of multimodal tools encouraged me to explore different perspectives and interpretations of literary texts.

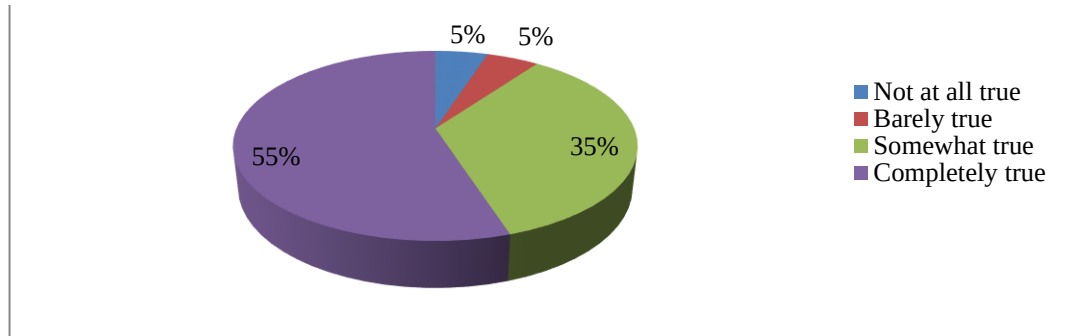


Pie chart 2.5: MLTs' Effectiveness in Providing a Multi-Perspective Image of Literary Texts

In English Language Teaching programs, literature is used to help students explore various interpretations and express their opinions. Multimodal learning tools (MLTs) were introduced to support these skills. When asked if MLTs motivated them to explore different perspectives, 45%

of students fully agreed, 45% partially agreed, and 10% gave limited acknowledgment. No student found MLTs ineffective.

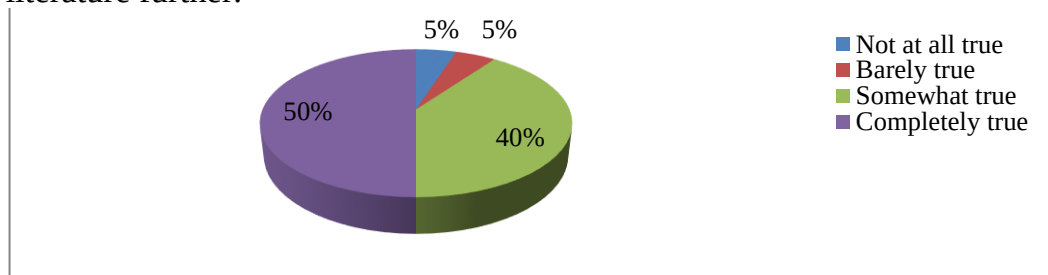
Item 6: The inclusion of multimodal tools provided a more comprehensive learning experience by combining textual analysis with visual and auditory elements.



Pie chart 2.6: MLTs' Effectiveness in Providing More Comprehensive Learning Experiences

The researcher explored students' views on the impact of multimodal learning tools, which combine written texts with visual and auditory elements, on their learning experiences. The findings revealed that 55% of students found these tools highly effective, 35% found them moderately effective, 5% found them barely effective, and 5% did not find them effective at all.

Item 7: The use of multimodal tools in this literature class contributed to my overall enjoyment of the course and increased my interest in studying literature further.

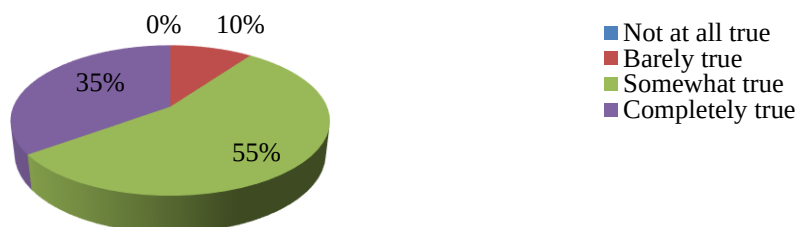


Pie chart 2.7: MLTs' Effectiveness in Raising Students' Enjoyment in the Class and Interest in Studying Literature Outside of the Class

The researcher investigated how multimodal learning tools (MLTs) affect students' enjoyment of the course and interest in studying literature outside class. Half of the students (50%) affirmed that these tools significantly enhance their enjoyment and interest, while 40% considered it somewhat true, and 5% barely true. Another 5% did not observe any impact.

Item 8: The use of multimodal tools in the literature class improved my self-discipline and motivation to actively engage with the course materials.

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Pie chart 2.8: MLTs' Effectiveness in Promoting Students' Self-discipline and Active Engagement with the Course Material

The researcher explored how multimodal learning tools (MLTs) influence self-discipline and active engagement in independent learning. Survey results showed that 35% of students found the statement "The use of multimodal tools in the literature class improved my self-discipline and motivation to actively engage with the course materials" completely true, 55% considered it somewhat true, and 10% found it barely true, with none disagreeing entirely.

Section 02: EFL Students' Self-Regulation

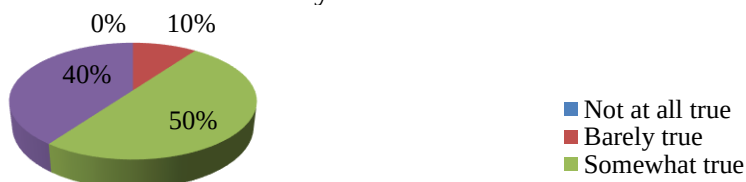
Item 1: If I am distracted from an activity, I don't have any problem coming back to the topic quickly.



Pie chart 2.9: Students' Refocusing Abilities

The pie chart 2.9 points out that 20% of the students don't have any problem coming back to the topic quickly after being distracted from an activity. 45% think that they somewhat have this ability of quick refocusing. 20% can barely refocus after getting distracted and 15% cannot get their focus back on track at all.

Item 2: If an activity arouses my feelings too much, I can calm myself down so that I can continue with the activity soon.

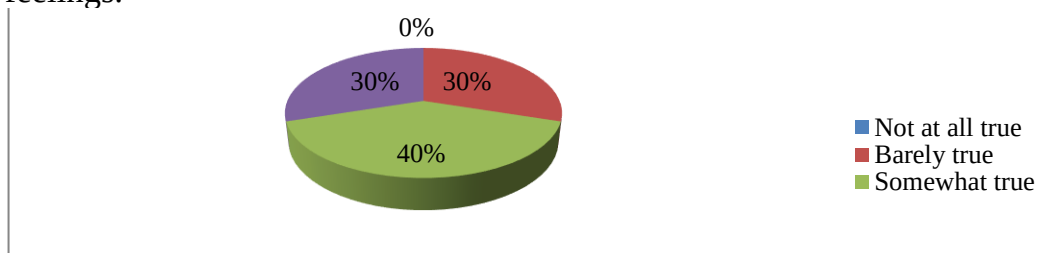


Pie chart 2.10: Students' Attitudes toward Difficult Activities

Pie chart 2.10 indicates that 40% of students confidently manage their emotions after highly stimulating activities, promptly refocusing on tasks.

Another 50% remain reasonably composed and can resume work without significant difficulty. However, 10% find it challenging to maintain self-control after experiencing heightened emotions, resulting in minimal continuation of the task.

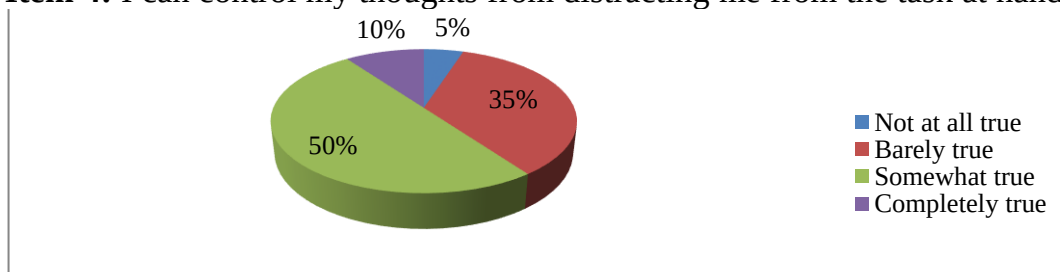
Item 3: If an activity requires a problem-oriented attitude, I can control my feelings.



Pie chart 2.11: Students' Problem-Solving Skills

Pie chart 2.11 shows that 30% of students exhibit full control over their feelings during problem-oriented tasks, while 40% can somewhat regulate their emotions. However, 30% struggle to regulate their emotions during such activities.

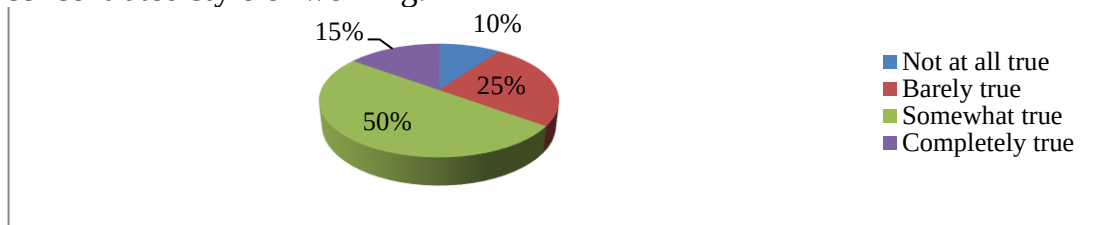
Item 4: I can control my thoughts from distracting me from the task at hand.



Pie chart 2.12: Students' Ability to Regulate Distracting Thoughts

Pie chart 2.12 illustrates participants' ability to self-regulate their thoughts. 10% can maintain focus on their tasks, 50% have some mastery over distracting thoughts, 35% struggle to control them, and 5% are easily distracted.

Item 5: After an interruption, I don't have any problem resuming my concentrated style of working.



Pie chart 2.13: Students' Ability to Resume their Level of Concentration

Pie chart 2.13 illustrates students' ability to maintain concentration after interruptions. 15% have no issue resuming their concentrated work, 50% believe they can regain almost the same level of concentration, 25%

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struggle to bounce back, and 10% cannot resume their concentrated work style.

Discussion of the Results

After analyzing the collected data, the researcher concluded that integrating multimodal learning tools (MLTs) in literature teaching positively impacts students' self-regulation skills. The experiment's results, evaluated with a paired-sample t-test, showed a significant increase in participants' post-treatment test performance compared to pre-treatment, indicating a notable difference in mean scores. This confirmed the hypothesis that MLTs enhance self-regulation skills. The post-treatment survey revealed that 65% of students acknowledged MLTs' contribution to analytical and critical thinking skills necessary for academic success, while 55% recognized their effectiveness in creating an engaging learning environment. Most respondents agreed that MLTs improved self-regulation skills like self-discipline, monitoring, and assessment. Additionally, students displayed self-awareness regarding their strengths and weaknesses, supporting positive attitudes toward MLTs in literature teaching. Thus, both research questions were answered, and their corresponding hypotheses were validated.

3. Conclusion

The researcher investigated how multimodal learning tools affect students' self-regulation in literature classes. Results from an experiment and survey showed significant improvement in self-regulation skills when these tools were used. The survey revealed positive student attitudes toward the tools, emphasizing their effectiveness in boosting engagement, interest, and analytical skills in literature classes. The study underscores the importance of literature in language teaching programs for vocabulary expansion, comprehension, and critical thinking. Overall, findings support the hypothesis that integrating multimodal learning tools enhances students' self-regulation in literature classes, providing insights into their positive impact on EFL learners' engagement and performance.

In summary, the study concludes that integrating multimodal learning tools into literature instruction for EFL learners has a positive impact. It highlights significant improvements in students' self-regulatory skills and positive attitudes toward these tools. Recommendations include diversifying teaching approaches, promoting active engagement, fostering critical thinking, providing adequate support, and encouraging reflective practice. These strategies aim to create a dynamic learning environment that enhances students' self-regulation and comprehension of literary texts in the EFL classroom.

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