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EXPLORING MULTIMODAL TEACHING STRATEGIES AND CULTURAL INTEGRATION LEADING THE WAY TO ENHANCE ACADEMIC ACHIEVEMENT IN ENGLISH LANGUAGE ARTS

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ABSTRACT

Multimodal teaching strategies use a variety of approaches and instruments to give education while accommodating diverse learning styles and preferences. This method combines visual, aural, kinesthetic, and textual elements to improve comprehension and retention. Examples include video, interactive exercises, hands-on experiments, and written resources. This research used the mixed method research design to explore holistically the effect of using multimodal teaching strategies and integration of culture in teaching English Language Arts. The results show a considerable improvement in pupils' academic performance from pretest to posttest. The mean score rose from 18.47 (SD = 1.98) in the pretest to 24.83 (SD = 2.93) in the posttest. The t-value of 16.79 and mean difference of 6.36 indicate a statistically significant difference ($p < 0.0001$). This significant rise indicates that the interventions used between the pretest and posttest had a beneficial effect. These results highlight the efficacy of multimodal teaching methodologies and cultural integration in improving comprehension, engagement, and overall academic achievement. As a result, using a variety of teaching approaches and culturally relevant materials is critical for fulfilling students' unique needs and achieving higher educational outcomes (Philippe et al., 2020; Magwenya et al., 2022; Harris & Nguyen, 2022; Escalaw, 2022).

KEYWORDS: *Multimodal Teaching Strategies, Culture Integration, Mixed-Method, Pegagogical Innovation*

I. INTRODUCTION

Multimodal teaching strategies involve using multiple methods and tools to deliver instruction, catering to different learning styles and preferences. This approach incorporates visual, auditory, kinesthetic, and textual elements to enhance understanding and retention. Examples include using videos, interactive activities, hands-on experiments, and written materials. By engaging multiple senses and modes of learning, multimodal teaching aims to create a more inclusive and effective educational experience (Anis and Khan, 2022; Forlin et al., 2018), accommodating diverse student needs and improving overall comprehension and engagement.

Integration of culture in education involves incorporating students' diverse cultural backgrounds into the learning environment. This includes recognizing, respecting, and valuing cultural differences in curricula, teaching methods, and school policies. It can involve using culturally relevant materials, celebrating various cultural traditions, and fostering an inclusive atmosphere that reflects the diverse identities of students (Garca-Pastor & Gómez-Martnez, 2020). This approach aims to enhance students' sense of belonging, promote cultural awareness, and improve educational outcomes by making learning more relevant and meaningful to all students.

Students' academic achievements refer to the measurable success and accomplishments attained by students in their educational pursuits. This includes grades, test scores, awards, and the completion of educational milestones such as grade promotion and graduation. Academic achievements reflect a student's understanding and mastery of subjects, as well as their ability to apply knowledge and skills effectively. These achievements are often used as indicators of a student's progress, potential for future success, and the overall effectiveness of the educational system.

The Yup'ik people, who make up the majority of the town, have rich traditions that are intricately woven with the culture of Hooper Bay School. The school serves as a center for cultural education, combining traditional knowledge with a cutting-edge academic program. Through a variety of cultural programs, such as Yup'ik language classes, subsistence activities, and involvement in local festivals, Hooper Bay School students are encouraged to embrace their ancestry. Elders interact with pupils on a regular basis, imparting wisdom and life lessons that have been passed down through the years. Students who experience this cultural immersion are better able to navigate both their traditional and modern environments and develop a sense of identity and pride in themselves.

Hooper Bay School, which has about 90 middle school students enrolled, strives to provide a small, nurturing learning community. Strong ties and individualized attention between students and educators are made possible by the small student body. With a focus on cooperation and respect for one another, the school environment is caring and community-focused. Every student should feel respected and empowered in a safe, welcoming environment, which is what the staff and faculty are

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dedicated to establishing. Notwithstanding the obstacles presented by its isolated location, the school is committed to delivering high-quality instruction and opportunities for individual development. Hooper Bay School is an exceptional and dynamic environment for learning and growth because of its unique combination of cultural diversity and a focused educational framework.

Multimodal teaching strategies involve using various methods and tools to engage different learning styles, enhancing understanding and retention (Si et al., 2022; Qushem et al., 2021; Bouchey et al., 2021). Integrating culture in education means incorporating students' diverse cultural backgrounds into the learning environment, fostering inclusivity and relevance. Both approaches aim to improve students' academic achievements by making learning more engaging and meaningful. This is a pilot study that shows that combining multimodal teaching strategies with cultural integration can significantly enhance students' academic achievements. By addressing diverse learning preferences and cultural backgrounds, educators can create a more inclusive and effective learning environment. This holistic approach supports better comprehension, engagement, and academic success.

The present study explores the impact of multimodal teaching strategies and cultural integration on students' academic achievements. By examining these elements together, the study aims to provide a comprehensive understanding of how diverse instructional methods and cultural inclusivity contribute to enhanced educational outcomes. This integration is crucial for developing effective teaching practices that cater to all students, ultimately fostering higher academic performance and overall success.

Consistent with the related literature and studies and their relation to the present study, this research was conducted in the school year 2022-2023 to determine the effectiveness of multimodal teaching and the integration of culture in teaching English Language Arts.

II. METHODOLOGY

This study used the mixed method research design to get the holistic aspect of utilizing the multimodal teaching strategies and integration of culture in teaching English Language Arts and its impact to academic achievement of the learners.

Research Design

To determine the effectiveness of multimodal teaching and the integration of culture in teaching English Language Arts, the performance of the learners before and after the implementation will be measured based on their pretest and posttest performances. Then the remaining research questions were answered using a qualitative research design. A qualitative research design that employs a phenomenological approach.

Phenomenology is derived from the word "phenomena," which means a person's real-life experience. It refers to the study of how people find their experiences meaningful, and its primary goal is to make readers recognize how different human beings experience and enjoy that sure phenomenon (Baraceros, 2016). A phenomenological study delineates the meaning of lived experiences for several individuals (Creswell & Creswell, 2018). A phenomenological research design is a research method designed to gather information on the lived experiences of the participants with a certain phenomenon and, at the same time, describe what all members share practically speaking as they experience it.

Participants of the Study

The participants of the study were grade 8 learners. There were 30 learners in the Hooper Bay school. All learners are part of the study, as this research used a complete enumeration in the quantitative data collection. For the qualitative stage of this study, to understand the perceptions of the learners on the implementation of multimodal teaching strategies and the integration of culture in teaching, nine learners were interviewed. Likewise, to know the challenges encountered by teachers in the implementation of multimodal teaching strategies and the integration of culture in teaching, reflection notes were analyzed and triangulated with related literature and pedagogical experts.

Research Instrument

The following are the research instruments of the study: the pretest and posttest, the lesson plan, PowerPoint presentation, audio materials, activity sheets, and all other materials that are taken from the community itself as part of culture integration in teaching. Moreover, an interview protocol has been prepared that matches the research question of the study. The interview questions were semi-structured to allow other questions to emerge during the interview process and additional concepts or ideas to be explored. The use of the interview guide allowed for more structure, which helped the researcher's task of organizing and analyzing interview data. The general atmosphere of the interview was casual, with the interviewees giving full attention. Moreover, the quality of the interviewers as to their ability to concentrate, their communication skills, and their ability for self-reflection contributed greatly. A tape recorder and mobile phone were used with permission from those interviewed. Interview guide questions run through the validation of experts in the field of education and research.

Data Gathering

A letter was sent to the school administrator regarding the conduct of the study. After it was approved, the researcher sent a letter to the parents of the learners for consent permitting their child to be part of the study. Once the informed consent of the participants was sought, they were asked to specify their preferred venues for the interview. Permission to audiotape the interviewee was obtained, and all interviews were recorded both by note-taking and audio-visual recording. During the interview, the researcher explained the nature of the study, its purpose, and its worth. Those who were inclined to participate in this research had signed a form. The participants were also informed that in the event that any of the participants would not permit the face-to-face interview, the researchers would use an online platform using an online application available on the internet.

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Data Analysis

To determine the effectiveness of multimodal teaching strategies and the integration of culture in teaching, a t-test was used. Then the remaining research questions utilized thematic analysis. To analyze data for qualitative studies, use thematic analysis. Thematic analysis is a method of analyzing qualitative data. For thematic analysis, researchers need to become familiar with the data, generate initial codes, search for themes, review themes, define themes, and write them up.

Research Ethics

All research activities must adhere to the highest ethical standards, ensuring the protection of participants' rights and well-being. Informed consent, confidentiality, and privacy must be maintained throughout the study. Any potential conflicts of interest should be disclosed, and data must be collected, stored, and analyzed responsibly. Researchers are obligated to report findings truthfully and avoid any form of misconduct, such as fabrication, falsification, or plagiarism. Ethical approval from relevant review boards is required before commencing the study.

III RESULTS AND DISCUSSIONS

Multimodal teaching strategies use various methods to cater to different learning styles, enhancing understanding and retention. This approach includes visual, auditory, kinesthetic, and textual elements, such as videos, interactive activities, and written materials. Incorporating cultural diversity in education promotes cultural awareness and enhances learning. Academic achievements, such as grades, test scores, and milestones, reflect a student's understanding and mastery of subjects, indicating progress and the effectiveness of the educational system. These are the concepts that were explored in this study and will be discussed in the preceding section.

Table 1 shows the result on the performance of the students before and after the implementation of multimodal teaching strategies and integration of culture in teaching.

Table 1. Result of the significant difference between the pretest and posttest.

Test	Mean	SD	t	Mean-Diff
Pretest	18.47	1.98	16.79	6.36
Posttest	24.83	2.93		

*** - Test is Significant @ p-value<0.0001*

The results indicate a significant improvement in students' academic performance from the pretest to the posttest. The mean score increased from 18.47 (SD = 1.98) in the pretest to 24.83 (SD = 2.93) in the posttest. The t-value of 16.79 and a mean difference of 6.36 demonstrate a statistically significant difference at $p < 0.0001$. This substantial increase suggests that the interventions applied between the pretest and posttest had a positive impact.

The findings support the effectiveness of multimodal teaching strategies and cultural integration in enhancing students' academic achievements. The significant improvement in posttest scores indicates that these approaches contribute to better comprehension, engagement, and overall academic performance. This underscores the value of employing diverse instructional methods and culturally relevant materials to meet the varied needs of students, thereby promoting higher educational outcomes.

The result of the study was supported by Liu (2022). According to the study of Liu (2022), multimodal teaching strategies, which involve the use of various modes of instruction such as visual, auditory, and kinesthetic, significantly enhance student engagement and learning outcomes (Si et al., 2022; Qushem et al., 2021; Bouchey et al., 2021). The result (Liu 2022; Si et al., 2022; Qushem et al., 2021; Bouchey et al., 2021) emphasizes the importance of considering both verbal and non-verbal elements in teaching, suggesting that multimodal approaches cater to students' cognitive and emotional nuances, thereby enriching the learning environment and improving academic performance. Additionally, integrating cultural elements into teaching has been found to make learning more relevant and engaging for students from diverse backgrounds. This inclusivity can lead to improved academic achievements as students feel more connected to the material. The study by Dewaele et al. (2019) highlights how understanding and incorporating students' cultural backgrounds can positively affect their learning experiences and outcomes (Eden et al., 2024).

Although, there was no recent study conducted these two concepts, consequently, Burić et al. (2016) stated that the combination of multimodal teaching and cultural integration creates a holistic educational approach that addresses the diverse needs of students. The research by Burić et al. (2016) supports the idea that addressing both the cognitive and emotional aspects of learning through multimodal methods can lead to significant improvements in academic performance.

These studies collectively reinforce the conclusion that employing multimodal teaching strategies and integrating cultural elements can lead to substantial improvements in students' academic achievements. By making learning more inclusive and engaging, educators can better support their students' academic growth and success.

On the perception of the learners on the implementation of multimodal teaching strategies and integration of culture in teaching

Learners perceive multimodal teaching strategies and cultural integration in teaching positively, with three main themes emerging:

First is the enhanced engagement. Students report increased interest and participation when diverse instructional methods, such as visual, auditory, and kinesthetic, are employed. The variety keeps lessons dynamic and caters to different learning styles, thus maintaining student attention and motivation (Smith, 2020; Si et., 2022; Qushem et al., 2021; Bouchey, et al., 2021; Escalaw, 2021; Escalaw, 2022).

Secondly, there is an improved understanding. Integrating cultural elements into lessons makes the content more relatable and easier for learners to comprehend. By connecting new

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information to students' cultural backgrounds, educators can enhance cognitive processing and retention of material (Johnson & Wang, 2021; Si et., 2022; Qushem et al., 2021; Bouchey, et al., 2021; Escalaw, 2022).

Lastly, there is the significance of an inclusive environment. This approach fosters a supportive and inclusive classroom, promoting cultural awareness and sensitivity. It helps create an educational space where all students feel valued and understood, which is crucial for effective learning and positive social interactions (Brown et al., 2019; Si et., 2022; Qushem et al., 2021; Bouchey, et al., 2021; Escalaw, 2022).

Overall, these strategies are seen as significantly enhancing the educational experience by making learning more engaging, comprehensible, and inclusive (Si et., 2022; Qushem et al., 2021; Bouchey, et al., 2021; Escalaw, 2022).

On the challenges encountered by teacher-researcher in the implementation of multimodal teaching strategies and integration of culture in teaching

Teachers encounter several challenges in implementing multimodal teaching strategies and integrating culture into teaching, with three main themes emerging:

First are the resource limitations. Teachers often face a lack of adequate resources, such as technology and culturally relevant materials, which hampers effective implementation.

Secondly, there are professional development needs. There is a significant need for ongoing professional development to equip teachers with the skills and knowledge required to effectively employ multimodal and culturally integrated teaching methods (Magwenya et al., 2021).

Lastly, one of the most important competencies that a teacher should have is classroom management. Balancing diverse teaching strategies and cultural elements can complicate classroom management, making it challenging to maintain an organized and focused learning environment (Harris & Nguyen, 2022).

These challenges highlight the need for systemic support and resources to optimize the benefits of these teaching approaches (Philippe et al., 2020; Magwenya et al., 2022; Harris & Nguyen, 2022; Escalaw, 2021; Escalaw, 2022).

The results indicate a significant improvement in students' academic performance from the pretest to the posttest. The mean score increased from 18.47 (SD = 1.98) in the pretest to 24.83 (SD = 2.93) in the posttest. The t-value of 16.79 and a mean difference of 6.36 demonstrate a statistically significant difference at $p < 0.0001$. This substantial increase suggests that the interventions applied between the pretest and posttest had a positive impact. These findings accentuate the effectiveness of multimodal teaching strategies and cultural integration in enhancing comprehension, engagement, and overall academic performance. Therefore, employing diverse instructional methods and culturally relevant materials is crucial to meeting the varied needs of students and promoting higher educational outcomes (Philippe et al., 2020; Magwenya et al., 2022; Harris & Nguyen, 2022; Escalaw, 2022).

Recommendations

Based on the significant improvement observed in students' academic performance following the implementation of multimodal teaching strategies and cultural integration, the following recommendations are proposed:

There may be an increase in resources in the schools. Schools may invest in the necessary technology and culturally relevant materials to support diverse teaching methods. Adequate resources are crucial for the effective implementation of multimodal strategies (Philippe et al., 2020; Escalaw, 2022).

In addition, teachers may have a continuous professional development program. Continuous professional development opportunities should be provided for teachers to enhance their skills in multimodal instruction and cultural integration. Training programs should focus on equipping teachers with practical strategies and tools (Magwenya et al., 2022).

Educational policy-makers may have supportive policies. Educational policymakers should develop and enforce policies that promote the integration of multimodal teaching and cultural elements into the curriculum. These policies should also address the need for systemic support to ensure successful implementation (Harris & Nguyen, 2022; Escalaw, 2021).

It is recommended that schools foster a collaborative learning environment where teachers can share best practices and experiences related to multimodal and culturally integrated teaching. Peer support can enhance the effectiveness of these strategies.

Most importantly, there should be regular assessment and feedback. Implement regular assessments and gather feedback from both students and teachers to continuously improve the effectiveness of multimodal teaching and cultural integration. This approach ensures that teaching methods remain responsive to students' evolving needs.

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