UNIVERSIDAD DE ANTIOQUIA

Integrating crafts in a CLIL approach for enhancing vocabulary acquisition and subject comprehension among fifth-grade students

Action Research

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Dedication

To my mom, the motor of my life and my greatest supporter. This work is for you, for your endless love, strength, and unwavering belief in me. Thank you for being my guiding light and the reason I strive to achieve my dreams.

Acknowledgments

I would like to express my deepest gratitude to my advisor for her invaluable guidance, patience, and encouragement throughout this journey. Your expertise and support have been instrumental in shaping this research, and I am truly grateful for your mentorship and dedication.

To my incredible cooperating teacher, thank you for your collaboration, wisdom, and the warm welcome you extended to me in your classroom. Your openness, as well as your trust in me, played a huge role in this project. The way you support and inspire your students is truly admirable, and I am grateful to have had the opportunity to learn from you. Your contributions and encouragement throughout this process have left a lasting impression on me, both personally and professionally.

To my best friend, Mariana, thank you for always being there with your much-needed (sometimes) tough love. Your straightforward advice, unyielding encouragement, and belief in my abilities kept me motivated and on track, even when the challenges felt overwhelming. Your support was a constant reminder of my strength and potential, and I could not have done this without you.

To my friends and family, thank you for always believing in me, celebrating my achievements, and encouraging me to overcome every challenge. Your love and faith in me gave me the strength and courage to finish this journey. This accomplishment reflects the incredible people who have surrounded me with their care and support. Thank you all for being an essential part of this experience.

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Abstract

This study inquires into how integrating crafts within a Content and Language Integrated Learning (CLIL) approach enhances both language acquisition and content comprehension among 46 fifth-grade students at Juan María Céspedes School in Medellín, Colombia. As a public institution located in a city marked by social and economic contrasts, the school plays a crucial role in providing not only education but also a safe space for personal growth and community building. Although the school promotes bilingualism and follows a curriculum aligned with international standards, challenges persist, including limited teacher proficiency in English and a lack of structured resources for effective CLIL implementation.

Through classroom observations, student assessments, and discussions with the cooperating teacher (CT), this research explores how craft-based activities within CLIL lessons can address these challenges by fostering both academic performance and student engagement. Early observations reveal that students respond positively to craft-integrated lessons, showing increased enthusiasm, participation, and motivation to engage with both language and content. Teacher feedback further highlights the practicality of this approach in large classroom settings, offering a creative and interactive alternative to traditional methods.

This study aims to provide practical insights for primary school teachers struggling with English instruction by demonstrating how crafts can enhance student outcomes in a bilingual context. The findings could possibly contribute to the development of effective CLIL practices at the school, aligning with their goal to integrate language learning across all subjects and meet international standards by 2025. Ultimately, this research offers a framework for promoting meaningful learning experiences through creative methods, benefiting both students and educators in public primary classrooms.

Keywords: CLIL (Content and Language Integrated Learning), Craft-based Learning

Resumen

Este estudio indaga sobre cómo la integración de las manualidades dentro de un enfoque de Aprendizaje Integrado de Contenidos y Lenguas Extranjeras (AICLE) mejora tanto la adquisición del lenguaje como la comprensión de contenidos de 46 estudiantes de quinto grado de la Institución Educativa Juan María Céspedes de Medellín, Colombia. Como institución pública situada en una ciudad marcada por los contrastes sociales y económicos, el colegio desempeña un papel crucial al proporcionar no sólo educación, sino también un espacio seguro para el crecimiento personal y la construcción de la comunidad. Aunque el colegio promueve el bilingüismo y sigue un plan de estudios alineado con las normas internacionales, persisten algunos retos, como el limitado dominio del inglés por parte de los profesores y la falta de recursos estructurados para una aplicación eficaz del AICLE.

A través de observaciones en el aula, evaluaciones de los alumnos y conversaciones con el profesor cooperador (TC), esta investigación explora cómo las actividades basadas en la artesanía dentro de las lecciones de AICLE pueden abordar estos desafíos mediante el fomento tanto del rendimiento académico como del compromiso de los estudiantes. Las primeras observaciones revelan que los estudiantes responden positivamente a las clases integradas de manualidades, mostrando un mayor entusiasmo, participación y motivación para comprometerse tanto con la lengua como con el contenido. Los comentarios de los profesores destacan además la viabilidad de este enfoque en aulas grandes, ya que ofrece una alternativa creativa e interactiva a los métodos tradicionales.

Este estudio pretende aportar ideas prácticas a los profesores de primaria que se enfrentan a la enseñanza del inglés, demostrando cómo las manualidades pueden mejorar los resultados de los alumnos en un contexto bilingüe. Los resultados podrían posiblemente contribuir al desarrollo de prácticas eficaces de AICLE en la institución, alineados con su objetivo de integrar el aprendizaje de idiomas en todas las asignaturas y cumplir las normas internacionales para 2025. En última instancia, esta investigación ofrece un marco para promover experiencias de aprendizaje significativas a través de métodos creativos, beneficiando tanto a los estudiantes como a los educadores en las aulas públicas de primaria.

Palabras clave: AICLE (Aprendizaje Integrado de Contenidos y Lenguas Extranjeras), Aprendizaje basado en las manualidades

Introduction

In a globalized world, bilingual education has become essential in preparing students to engage in diverse and multicultural environments. In Colombia, the National Bilingualism Plan (PNB) seeks to enhance the teaching of English across all educational levels, including public schools. However, these institutions often face obstacles such as limited teacher training, insufficient resources, and a lack of structured curricula, particularly in primary education. Implementing innovative methodologies like Content and Language Integrated Learning (CLIL)—which integrates language and content instruction—has proven difficult due to these constraints, especially when teachers lack English proficiency.

Juan María Céspedes School in Medellín provides a valuable context to explore these challenges. Located in a city known for both its social inequalities and cultural renewal, the school serves as an essential space for academic learning and community development. The institution's vision aligns with the PNB by promoting bilingual education and incorporating the CLIL approach. However, primary-level teachers continue to encounter difficulties implementing this methodology effectively. To address these gaps, the school has initiated collaborative efforts exploring strategies for integrating English across subjects.

This study aims to explore the potential of craft-based activities within a CLIL framework to enhance both language acquisition and content comprehension. Crafts provide an interactive learning experience, making it easier for students to grasp complex concepts while practicing a new language in meaningful ways. This approach offers the possibility of improving academic performance and student engagement, particularly in a classroom of 46 fifth-grade students with diverse socio-economic backgrounds, where classroom management and learning gaps also pose challenges.

By focusing on student participation, motivation, and academic outcomes, this project seeks to provide practical solutions for primary educators struggling with CLIL implementation. It also aims to contribute to the development of more effective bilingual education practices aligned with both the institution's goals and national education policies. The study offers insights into how creative, interdisciplinary approaches like craft-based CLIL can promote meaningful learning experiences in primary classrooms.

Description of the context

Juan Maria Cespedes School is a public educational institution located in Medellin, Antioquia, Colombia, the second-largest city and a hub for commerce, innovation, and culture. Over the past decades, Medellín has undergone significant transformation, evolving from a city affected by violence and inequality to a model of urban renewal being the home to diverse socioeconomic groups, though many neighborhoods continue to face economic challenges, social inequality, and issues related to migration and displacement. Schools in these areas often play a vital role in offering students not just education, but a safe space for personal growth and community building, which I.E. Juan Maria Cespedes does. The institution has been providing excellent education since 1921 and operates in two locations: one in Belén Miravalle and another in Belén Las Playas. where I am working, which is the biggest. This location is surrounded by a lot of nature and a peaceful neighborhood. The principal site in Belén Miravalle is not as big, and it does not have much nature since it is located in a more commercial and business-oriented place. The Belén Las Playas site is the newest one since it opened just about four years ago. Initially, there were not enough resources, so the parents got together to purchase essential items such as lamps and microwaves. and other necessary things for school. Today they do have more resources such as whiteboards, microwave ovens, and televisions for each classroom. Also, during the pandemic, both teachers and students received computers from the government to be able to study online, which they still have today. Inside the school, there is also a Wi-Fi-free zone that students can use without any problem.

The institution's mission is to deliver high-quality education that addresses both the social and academic needs of the community. To accomplish this, it follows a quality management system structured around four core processes. Its vision is to become a prominent educational

center known for excellence. The school aims to meet international standards by offering a curriculum that includes certification in a second language by 2025. Rooted in the principles of the Political Constitution and the expectations of a globalized society, its philosophy emphasizes accessible, meaningful education for vulnerable populations in the city and fosters skills for responsible citizenship. They provide a range of programs tailored to diverse learning needs. These include Technical High School programs specializing in automotive mechanics and network installation, as well as Virtual High School and Night High School options. Additionally, the International High School program offers students an internationally recognized education that equips them with essential competencies for global success and is acknowledged by universities worldwide (Institución Educativa Juan María Céspedes, n.d.).

They have a bilingualism project that proposes to all educational agents, parents, teachers, administrators, and students, the possibility of analyzing, understanding, and living the experience of languages and their cultural aspects, and living the knowledge of languages and their inherent aspects of culture. They use the CLIL approach, a Content integration approach to teaching through a second language (Institución Educativa Juan María Céspedes, 2024). They want to integrate all of the subjects with English learning. Primary school teachers still do not have the language skills to do so, which is why they want to make partnerships with other institutions, for example, Universidad de Antioquia, in this case, to support them. As a preservice teacher, I support my CT with the Biology and Technology classes. The elementary teachers produced their own initiative to improve their English skills. They created a group study together with the English teacher of the institution. They meet two hours a week in their own time to practice with each other and also to share different strategies to improve their teaching practice and their handling of this second language in class.

Lina Gómez was my Cooperating Teacher (CT) and has been with the institution since the inauguration of the new building. As part of the public education system, her official schedule aligns with the students' day, from seven a.m. to two p.m. However, her responsibilities extend beyond these hours, as she is required to update grades and objectives during weekends without additional compensation. This is due to the institutional platform remaining accessible for data entry from the end of the week until Monday. The class I am working with consists of 46 fourth-grade students from diverse cultural and socio-economic backgrounds. The group faces significant challenges in classroom management, which has impeded both their academic performance and behavioral development. Although my CT is not their designated group leader, she is the teacher who interacts with them most frequently, establishing herself as a key authority figure. In her assessment, the students exhibit some deficiencies in foundational knowledge, but when provided with clear direction and structured guidance, they demonstrate a positive attitude toward learning.

Statement of the Problem

The National Bilingualism Plan (PNB) states its goal is to "strengthen the teaching and learning of foreign languages in preschool, primary and secondary school students" (Ministerio de Educación Nacional, 2006, Description section). However, the education of young children in Colombian public schools regarding learning English continues to be questioned due to the deficiency of curricular, pedagogical, didactic, infrastructural, and material resources used in class. Following this line, many methodologies or approaches are implemented in schools when teaching English, as in this specific case Content and Language Integrated Learning (CLIL). The challenge with developing this methodology specifically in the first grades is that primary school teachers in public schools often lack knowledge of teaching in English, which can make it difficult to implement a CLIL methodology.

The Juan Maria Cespedes institution within its curricular planning (Proyecto Educativo Institucional, PEI) adopts a teaching approach of content integration through a second language (CLIL). According to the institutional educational program it aims to "prepare students to live in a progressively more international, pluricultural and plurilingual world." (Institución Educativa Juan María Céspedes, 2024, section 2.1.6.1). CLIL, which means Content and Language Integrated Learning', is an educational approach that combines content teaching with foreign language learning. Its goal is for students to acquire the language naturally while enjoying learning new topics while practicing and improving their skills in the foreign language.

Through my practicum experience, I gained valuable insight into these challenges by conversing with my Cooperating Teacher (CT) and documenting observations in my reflective journals. Notable issues include the absence of a structured curriculum to support this approach, inadequate teacher preparation and expertise, and a lack of appropriate didactic materials.

The objective of this study is to explore the integration of crafts within a CLIL approach to enhance both language acquisition and content comprehension among fifth-level students, in the line of the institution's PEI goals, by analyzing students' engagement and academic performance in both linguistic and subject-specific areas. By doing so, this study aims to provide a solution to primary school teachers who have difficulties with teaching English and contribute to the development of an effective CLIL methodology at I.E Juan Maria Cespedes.

Theoretical Framework

This theoretical framework examines how integrating crafts within a CLIL approach connects with creativity and art. Understanding how these elements work together is key for examining how those activities can enhance both language learning and content comprehension.

The problems of limited resources, poor teacher preparation, and the lack of modern teaching methods burden bilingual education in Colombia. CLIL is one of the options that integrates the approach to subject content with the learning of English to provide a meaningful experience in both. Bilingual education in Colombia faces challenges, including limited resources, inadequate teacher preparation, and outdated teaching methods. CLIL offers a potential solution by combining subject content learning with English acquisition, providing a more meaningful learning experience. Within the previously described context, successful implementation of CLIL at primary school often requires creative means to bridge language gaps from both teachers and students.

This framework draws on theories related to art's role in human history, creativity, and its application in English Language Teaching (ELT), along with a focused exploration of the concept of crafts. Additionally, it delves into the principles of CLIL to demonstrate how content-based instruction can be enriched through creative activities. Together, these elements provide the foundation for understanding how the use of crafts in a CLIL approach can promote both linguistic and subject-based learning in the classroom.

The role of art in language learning

Dissanayake (2013) argues that art plays a vital role in human evolution in general, viewing it as a fundamental part of survival and social cohesion. She introduces the concept of "making special," in which art elevates certain actions or objects to make them more meaningful, memorable, and pleasurable. This view aligns art with universal human behaviors, suggesting that creativity is biologically rooted rather than purely cultural. This perspective provides a deeper understanding of art's essential function in education and personal development.

In Colombia's traditional curricula, art and science are rarely integrated and are often viewed as opposing fields. However, Hutson (2023) brings these concepts together, asserting that both art and science arise from an intense curiosity and a shared drive to explore, comprehend, and depict the world. The merging of these fields has led to some of the most significant advancements in human history.

Traditional curriculums also often struggle to capture students' attention, but authors such as Lammey (as cited by Skumanich, 2020) and Farokhi, M. & Hashemi, M. (2012) suggest that incorporating arts can be a powerful motivator. Integrating arts into the curriculum can transform the learning experience for children, making it more engaging and meaningful than traditional approaches. Arts education stimulates a sense of curiosity and anticipation in students, encouraging them to explore their own interests while discovering the broader world. By creating a safe, pressure-free environment, art-making allows children to express themselves, think creatively, and approach questions in unique ways that regular curriculums often overlook.

Recognizing the motivational power of arts in education also opens the door to enhancing language development. Eisner (1994) defines that the term "language" can be conceptualized to refer to the use of any form of representation in which meaning is conveyed or construed. Additionally, this author states that literacy extends beyond what can be spoken and includes what the mind can comprehend. In this sense, by using kids' forms of representation we can integrate art into the content of the classes to give meaning and promote their own understanding.

Fostering Creativity in Language Learning

Creativity in language learning, and in education as a whole, is often misunderstood as inventing entirely new concepts. However, true creativity frequently involves building upon what already exists. The authors Xerri and Vassallo (2016) following Koestler ideas state:

"In The Act of Creation, Arthur Koestler (1964) maintains that rather than seeing creativity as the creation of something out of nothing it is more appropriate to conceive of it as the act of rearranging or regrouping already existing elements. He claims that creativity "uncovers, selects, re-shuffles, combines, synthesizes already existing facts, ideas, faculties, skills. The more familiar the parts, the more striking the new whole" (Koestler, 1964, p. 120). Hence, creative people are capable of "combining previously unrelated domains of knowledge in such a way that you get more out of the emergent whole than you put in."" (p. 2)

Creativity is an essential element in language acquisition and teaching. Language learning is inherently a creative process, as seen in the way children instinctively build their linguistic abilities. As Xerri and Vassallo (2016, p. 3) note, "As language speakers, we are all creative individuals. It takes a lot of creativity for a child to acquire a language and for a learner to use the language they are taught." This creative engagement not only aids learners in forming new expressions but also allows them to make personal connections with the language.

Becker and Roos (2016) argue that for learners to achieve fluency in a second language, they must be able to use language in spontaneous and creative ways. Similarly, Tomlinson (2015) (as cited by Shiobara, F. J., & Niboshi, R. 2022) found that elementary students involved in creative tasks, like writing plays, crafting stories, and selecting their own reading materials, gained a stronger capacity for authentic communication compared to those who primarily focused on rote memorization.

Crafts to enhance the learning process.

The National Society for Education in Art and Design (2018) defines craft as the designing and creation of individual artifacts and objects, encouraging the development of intellectual, creative, and practical skills, visual sensitivity, and a working knowledge of tools, materials, and systems.

Shiobara and Niboshi (2022) argue that craft projects are especially useful as they offer multiple visual supports that make it easier for students to follow lessons, while also allowing them to experience a sense of accomplishment by completing tasks with guidance. They further mention that many students find pleasure in doing craft activities. This combination of visual instruction and active participation not only enhances the learning process but also fosters creativity and critical thinking, essential skills in the holistic development of young learners.

"Crafts bring language learning and a fun activity together into a single focal point, and crafts in the young learner curriculum provide the children with a personalized, original representation of the English language input from our lessons." (Bastianoni, n. d., para. 3). By letting them create something with their own hands the kids are in charge of their learning process directly involving them in the construction of their understanding of the knowledge. "Linguistically, the children will be exposed to a wider range of vocabulary and will hear much repetition of key terms as well, such as colors, expressions of politeness, and suggestions and praise." (Bastianoni, n. d., para. 4)

To ensure a more balanced approach to language learning in craft-based lessons, it is essential to incorporate multiple forms of input. Shiobara (2022) highlights that classes with craft projects may involve mainly visual demonstration with very little language acquisition. To avoid this, all craft project classes incorporated a variety of input, such as extensive listening, extensive viewing, teacher talk, and written instructions.

Methodological principles of a CLIL context

Shiobara, F. J., & Niboshi, R. (2022) present CLIL's definitions as:

"Content and Language Integrated Learning (CLIL) has sometimes been used as an alternative to grammar-based learning in ESL classrooms. Coyle et al. (2009) described CLIL as "any learning

activity where language is used as a tool to develop new learning from a subject area or theme"

(para. 5)

CLIL's methodological principles resonate strongly with modern constructivist theories of learning, where students are active participants in the learning process. The principle of combining content and language learning makes the CLIL approach particularly appealing in multilingual settings, as it not only enhances language proficiency but also promotes cross-curricular integration. According to Dueñas (2004) CLIL is commonly perceived as a flexible operational framework for language instruction, with heterogeneity of prototypical models and application options available for different contexts and pedagogical needs.

At this stage, it is important to reference Coyle (2005). This researcher outlined four key principles that should be present in any CLIL context. The following sections will focus on each principle, providing an accompanying explanation.

• Content: it is the subject matter. It is based on content and skills. In this research, the CLIL approach was applied in biology class.

• Communication: the basis of any communicative interaction is language. A relevant aspect is that when using CLIL, students are not only using a foreign language to communicate but also discovering how to transmit information and interact using that second language.

• Cognition or thinking skills: this principle is based on letting students think and fostering learning and thinking processes. were each thinking skill and included a classification between lower and higher order.

• Culture: CLIL involves learning about culture and, hence, acquiring intercultural understanding. Therefore, by implementing CLIL in class, students discover places, people, and

traditions. At the same time, they become more respectful, and they become part of global citizenship.

The foundation of all communicative exchanges is language. An important point to note with CLIL is that students are not only using the foreign language for communication, but they are also learning how to convey information and engage with others through that second language.

Research Question

How does integrating crafts in a CLIL approach enhance English language acquisition and content comprehension among fifth-grade students in a public school?

Objectives

General Objective

To examine how the integration of crafts within a CLIL (Content and Language Integrated Learning) approach enhances both language acquisition and content comprehension among fifth-grade students.

Specific Objectives

To analyze the impact of crafts activities on students' language skills, in particular the acquisition of vocabulary.

To evaluate how craft-based tasks improve students' understanding of subject-specific biology content taught through the CLIL approach.

To assess students' engagement and motivation when participating in craft-integrated lessons compared to traditional learning methods.

To identify challenges and best practices in implementing crafts within a CLIL framework to support both language and content learning.

Action Plan

This action plan outlines a roadmap for the planned strategies in order to integrate crafts within a CLIL framework to enhance vocabulary acquisition and subject comprehension in fifth-grade science classes as follows: First, I will begin by familiarizing myself with the fifth-grade group and the science curriculum to build rapport with students and gain a comprehensive understanding of the subject matter. This preparation will enable me to align my interventions with both the students' needs and the curriculum. Next, I will inform the students about the purpose and objectives of my interventions to foster a transparent environment and encourage their active engagement in the activities.

Following this, I will conduct observations of class dynamics during activities led by the Cooperating Teacher (CT). These observations will allow me to analyze interaction patterns, engagement levels, and the general classroom atmosphere, providing insights into the students' behaviors and the best ways to implement CLIL with crafts. To establish a baseline for assessing the intervention's impact, I will design and administer an initial diagnostic test. This test will gauge students' attitudes toward English and their interest in crafts activities, helping to identify areas for targeted improvement.

Once these preliminary steps are complete, I will implement a series of lessons using crafts and hands-on activities to introduce English language elements within the context of science topics. This phase aims to support students' vocabulary acquisition and subject comprehension through experiential learning. Following the lessons, I will administer a second diagnostic exam

to measure the intervention's impact on students' motivation, creativity, engagement, and language skills, comparing these results with the initial diagnostic to evaluate progress.

Finally, I will conduct an interview with the Cooperating Teacher to gather her perspective on the project's integration, its alignment with the curriculum, and its effects on students' English skills. This feedback will provide additional insights into the intervention's effectiveness and inform future improvements.

Development of Actions

The actions for this research spanned nearly the entire school year, from February 21 until September 18, with a mid-year vacation break. In Week 1 (February 21), I took the initial steps to familiarize myself with the group and the subject matter. During this time, I also informed the students about my planned interventions in their classes. This preliminary stage helped set expectations and was documented in my journal. In Week 2 (February 28), I observed the class dynamics during activities led by the Cooperating Teacher (CT), allowing me to better understand the established classroom routines. These observations were carefully recorded in my journal as well.

By Week 3 (March 6), I designed an initial diagnostic test to assess students' feelings about English and their interest in crafts and hands-on activities. This tool was essential for collecting baseline data on student attitudes and engagement levels. The following one, in Week 4 (March 13), I administered this diagnostic test (see Appendix A), receiving a total of 40 responses. This initial data provided insight into students' perspectives and served as a foundation for evaluating the effectiveness of the craft-based lessons later in the project.

From Weeks 5 to 8 (March 20 - May 22 and August 14 - August 28), I Throughout this period, I planned and conducted a total of 10 lessons using a craft-based approach. Each lesson

was structured into three parts: a warm-up, where I showed a video on the topic and introduced relevant vocabulary; a main activity, in which students engaged in crafting; and a closure, where we shared our insights and reflections on the activity. This format aimed to create an engaging learning environment and facilitate meaningful English learning. These sessions were documented in journals, and photos of students' crafts were collected to capture the learning process and outcomes (see Appendix D).

In Week 8 (September 11), I administered a second diagnostic test (see Appendix B) to evaluate the impact of the craft-based activities on students' motivation, engagement, creativity, and language skills. This assessment received 37 responses and offered valuable data on the shifts in students' attitudes and skills following the intervention.

Finally, in Week 10 (September 18), I conducted an interview with the CT. While I originally intended it to be semi-structured, logistical constraints led to it being conducted in a structured format (see Appendix C). I sent the questions to the CT in advance, and she provided responses in text form, which served as an important source of qualitative data. This shift in approach allowed me to capture her insights despite the constraints.

Data Analysis

This study was conducted in a public institution in Medellin focusing on a fifth-grade group of forty-six students to collect data. Following Cohen & Manion's (2007) ideas, action research was the approach chosen since it is a versatile methodology, particularly effective in addressing challenges within educational settings, such as revising teaching methods, enhancing learning strategies, or improving assessment procedures. For example, it can replace traditional techniques with discovery-based approaches, encourage integrated learning strategies over single-subject styles, and refine continuous assessment methods, all contributing to achieving more desirable

outcomes. This aligns with the objective of this research which is motivated to improve a specific identified situation in this context.

According to Bell (2010), coding serves as an effective technique for organizing and categorizing information. This approach involves identifying key themes, patterns, and groups, which helps focus on the most critical data and facilitates drawing conclusions. Following this method, I began by thoroughly reviewing all my journal entries. I looked for recurring themes and classifications, using different colors to distinguish each group and highlight essential details. In line with Bell's (2010) data analysis process, I then compiled this information into a summary sheet, where I could systematically organize each category and its relevant data.

I also gathered data using two diagnostic tests administered to the students. Each test included seven questions: two multiple-choice questions and five open-ended questions. I recorded the response counts for each multiple-choice option and transcribed all responses to the open-ended questions. The results from the first three questions were organized into a summary sheet, while the open-ended responses were processed using the same coding method described earlier to analyze the qualitative data.

Lastly, I conducted a structured interview with the CT, consisting of five questions. I highlighted key information from her responses and coded it into the previously established categories.

Findings and Interpretations

The integration of crafts within a CLIL (Content and Language Integrated Learning) approach to teaching English and biology to fifth-grade students proved to be a highly effective strategy for enhancing both language acquisition and content comprehension. Through a combination of all of the data collection instruments and analysis, this study provides a rich
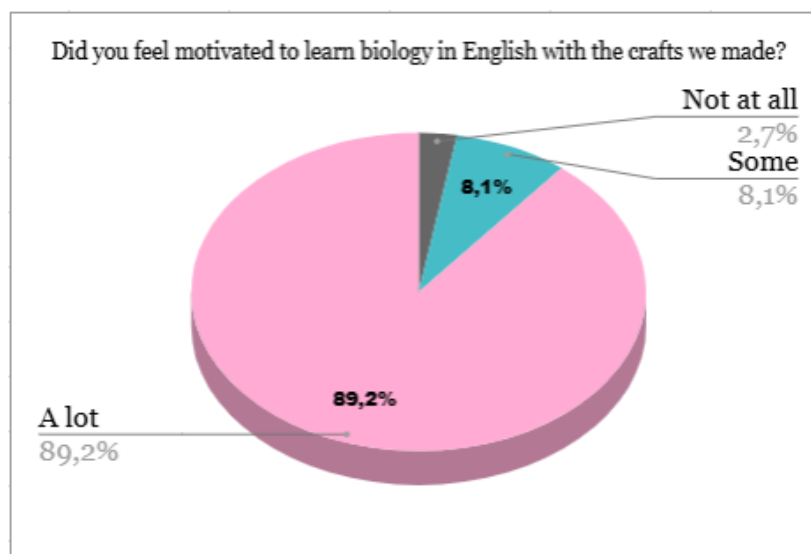
understanding of how crafts can contribute to learning in both subjects, fostering engagement, creativity, and increased confidence among students.

Engagement and Motivation

From the very beginning, students exhibited a sense of curiosity about the craft-based activities, but some were unsure how these activities would connect to their learning of both English and biology. Initially, students expressed concerns about whether crafts would be engaging enough or if they would be too difficult, particularly in a foreign language. However, by the end of the project, there was a clear shift in their perceptions. The hands-on nature of the crafts captured their attention and motivated them to participate more actively in the lessons. Students expressed increased enjoyment and motivation (See Figure 1), with many indicating that they would prefer to continue learning through similar activities in the future. For example "Lo que pienso es que son súper divertidas y no sólo eso también por medio de lo divertidas que son las actividades también podemos aprender súper fácil, práctico y divertido" and "me motiva que la profesora siga haciendo este tipo de manualidades porque me gusta aprender jugando o divirtiéndome". In both interviews and surveys, they noted that the creative aspect of the tasks—such as making lap books and other visual aids—made learning more fun and engaging, which in turn motivated them to invest more in both the English language and the biology concepts being taught.

Figure 1

Students' motivation to learn biology in English through crafts.

Did you feel motivated to learn biology in English with the crafts we made?

Not at all
2,7%
Some
8,1%

8,1%

89,2%

A lot
89,2%

Creativity and Practical Learning

One of the most significant outcomes of integrating crafts was the opportunity for students to learn in a creative and practical way. Rather than relying solely on written exercises or textbook explanations, the use of crafts allowed students to internalize biology concepts through visual representations and tactile experiences. This creative process helped students understand complex biological ideas by making abstract concepts more concrete. Students could directly link English vocabulary to these concepts through drawings, charts, and foldables, which helped reinforce their understanding of both the language and the content.

Students frequently expressed enjoyment of the crafts, for example, mentioning that the activities allowed them to learn "not just by writing, but by making things." Most students made comments about appreciating the creation of crafts, particularly the way it blended creativity with learning, and noted that it made the entire experience much more enjoyable than traditional methods of studying biology. Through crafting, students were able to express their understanding visually, which strengthened both their grasp of biology, and their use of English vocabulary related to the subject. An example of this can be the lesson about the food chain. This activity, a

clear favorite among students, combined the concepts with English vocabulary in an engaging and creative way. It began with a video about food chains and ecosystems, where students took notes and collaboratively built a vocabulary bank on the board. Using this knowledge, they created their own food chains, selecting a central animal and illustrating its connections in English (See Appendix D). The activity culminated with sharing their creations, fostering a sense of pride and community. The hands-on approach and integration of language skills made the lesson both memorable and impactful, as reflected in students' frequent mentions in later classes.

Language Acquisition

As students created lapbooks, posters, and other materials, they were required to use and apply new vocabulary in English, particularly related to biology. These activities provided students with opportunities to reinforce language skills through practical usage, rather than through passive learning or rote memorization. Students, who had a strong interest in English, reported feeling more confident in their ability to use new terms and concepts. The crafts allowed students to practice English in a context that was meaningful and directly related to the content, which is a key factor in promoting language acquisition.

For example, the use of visuals alongside English vocabulary provided a powerful learning tool. It helped students connect scientific terms to images, making the words more memorable and easier to understand. This multisensory approach to learning, which incorporated both visual and tactile elements, reinforced language learning in a way that traditional textbook methods could not.

Collaboration and Social Learning

In addition to enhancing individual understanding, the craft activities encouraged collaborative learning, where students worked together in groups to create and present their

projects. This collaborative approach not only deepened their understanding of both the language and the content but also fostered a sense of teamwork. By explaining concepts to each other in English and collaborating on tasks, students reinforced their learning and strengthened their language skills through peer-to-peer interactions. Many students reported that working with classmates helped them better understand the material, as they were able to explain concepts in simpler terms to one another.

The teacher also noted that the collaboration fostered a sense of community in the classroom, with students sharing their knowledge and supporting each other, especially in terms of language acquisition. This collaborative environment provided a valuable opportunity for students to practice speaking and listening skills, which are essential for language development.

Confidence and Self-Perception

At the beginning of the study, many students expressed low confidence in their ability to learn biology in English. They were uncertain about how they would be able to understand scientific concepts or communicate effectively in English. However, by the end of the project, there was a notable increase in students' confidence in both their language skills and their understanding of biology. Students felt more comfortable expressing themselves in English, particularly when working on the craft projects. They reported feeling proud of the materials they created and the English vocabulary they had learned.

Students noted that the activities not only improved their English skills but also helped them gain more confidence in using the language. They also expressed feeling motivated by the projects and how they helped them understand biology better. The integration of crafts allowed students to actively apply their learning and played a crucial role in boosting their self-confidence and making them feel more competent in both their language and content knowledge.

Conclusions

In conclusion, integrating crafts into a CLIL approach enhanced students' understanding of biology content and significantly supported their English language acquisition. Through engaging, creative, and practical learning experiences, students became more confident in using English and more capable of grasping complex concepts. The collaborative nature of the activities further strengthened their learning experience, providing opportunities for peer-to-peer teaching and social interaction. The data indicated that this approach significantly increased student engagement, language skills, and confidence, demonstrating the effectiveness of crafts as a tool for learning in a CLIL environment. For example, the CT expressed "La experiencia fue gratificante y enriquecedora, los niños estuvieron todo el tiempo motivados frente a las actividades, se mostraron comprometidos y respondieron a las actividades propuestas". Similarly, the students noted, "Las manualidades fueron muy divertidas porque hubo un nuevo método de aprender más cosas en inglés y así sabemos el significado de las palabras que trabajamos en las materias." These findings suggest that incorporating creative, hands-on activities into language teaching can be a powerful strategy for improving both content learning and language acquisition, opening avenues for future research on how similar approaches might be adapted for different subjects or age groups.

Recommendations

Based on the findings of this research, it is recommended that teachers continue integrating crafts into the CLIL approach to enhance both English language acquisition and content comprehension. Crafts effectively engage students, support vocabulary retention, and foster a deeper understanding of scientific concepts. To maximize these benefits, it is important to employ a variety of craft activities, incorporate visual and tactile materials, and encourage collaborative

learning. Additionally, providing ongoing professional development for teachers and considering

diverse student needs will ensure the approach is inclusive and effective.

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Appendixes

Appendix A

- ¿Te gusta aprender inglés? Pinta la carita que corresponda a tu emoción

- ¿Qué tan fácil o difícil te parece aprender inglés?
  - ☐ Muy fácil
  - ☐ Fácil
  - ☐ Neutral
  - ☐ Difícil
  - ☐ Muy difícil
- ¿Cómo te gusta aprender inglés?

- Te gusta recibir otras clases en inglés? ¿Por qué?

- ¿Qué actividades te gustan hacer en estas clases en inglés?

- ¿Qué no te gusta de estas clases en inglés?

- ¿Qué opinas de usar manualidades en estas clases en inglés? ¿Qué tipo de manualidades te gustaría hacer que te parezcan divertidas y creativas?

Appendix B

- ¿Qué piensas de las manualidades que hicimos para aprender biología?

- ¿Cómo te pareció entender biología en inglés?
  - ☐ Muy fácil
  - ☐ Fácil
  - ☐ Neutral
  - ☐ Difícil
- ¿Te sentiste motivado para aprender biología en inglés con las manualidades que hicimos?
  - ☐ Mucho
  - ☐ Algo
  - ☐ Poco
  - ☐ Nada
- ¿Te gustaría seguir aprendiendo biología en inglés usando manualidades de este tipo? ¿Por qué?

- ¿Qué fue lo que más te gustó de las manualidades?

- ¿Qué cambiarías de las manualidades?

- ¿Hay algo más que te gustaría compartir sobre tu experiencia?

Appendix C

1. ¿Cómo describirías tu experiencia al usar manualidades para integrar el aprendizaje de inglés y biología con los estudiantes de quinto grado?

2. ¿Qué aspectos de las manualidades te parecieron más útiles para aprender biología en inglés?

3. En una escala del 1 al 5, ¿cuán motivados crees que estaban los estudiantes al aprender biología en inglés a través de manualidades?

4. ¿Qué elementos de las manualidades crees que motivaron más a los estudiantes?

5. ¿Hubo algo que creas que podría mejorarse en la forma en que usamos las manualidades para aprender biología en inglés?

Appendix D

Panel labels:
- bacterias / bacteri
- oso polar
- pez
- algas

Shark
Seal
fish
Seaweed

√ Good job!

Polar Bear
seal
fish
Seaweed
Topic

Solid — ICE — States of Matter
Solid
Liquid
Gas

States of matter
solid
liquid
Gas

Solid — liquid — Gas

solid — liquid — gas
tv
water
vapor
cellphone
orange juice
helium
Nintendo switch
mercury
broth
air
cloud
tablet

Solid

Solid: Green
liquid: Blue
Gas: Red

Solid
ICE

Liquid
orange juice

Gas
Cloud

States
of
Matter

solid

liquid

gas

HETEROGENEOUS
MIXTURES

HOMOGENEOUS
MIXTURES

Information

example 1

example 2

information

example 1

information

example 2

Information