Faculty of Education

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The Effectiveness of Implementing Kinesthetic Strategies to Improve Phonological Awareness in Kindergarten Students During the Second Quarter of the Year 2024 at Saint Francis Collage, Alajuela

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November, 2024

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Sworm of declaration

Yo **Kristhel Chinchilla Quirós**, mayor de edad, portadora de la cedula número **207380401** egresada de la carrera de **Preescolar Bilingüe** de la Universidad Hispanoamericana, hago constar por medio de este acto y debidamente apercibido y entendido de las penas y consecuencias con las que castiga en el Código Penal el delito de perjurio, antes quienes se constituyen en el tribunal examinador de mi trabajo de tesis para optar por el título de **Licenciatura en Preescolar Bilingüe**, juro solemnemente que mi trabajo de investigación titulado: **The Effectiveness of Implementing Kinesthetic Strategies to Improve Phonological Awareness in Kindergarten Students During the Second Quarter of the Year 2024 at Saint Francis School, Alajuela** es una obra original que ha respetado todo lo preceptuado por las Leyes Penales así como la Ley de Derecho de Autor y Derecho Conexos número 6683 del 14 de octubre de 1982 y sus reformas, publicadas en la Gaceta número 226 del 25 de noviembre de 1982; incluyendo el numeral 70 de dicha ley que advierte; artículo 70. Es permitido citar a un autos, transcribiendo los pasajes pertinentes siempre que éstos no sean tantos y seguidos, que puedan considerarse como una producción simulada y sustancial, que redunde en perjuicio del autor de la obra original. Asimismo, quedo advertido que la Universidad se reserva el derecho de protocolizar este documento ante Notario Público.

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Cédula: **207380401**

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San José, 18 de Agosto, 2024

Universidad Hispanoamericana

Licenciatura en Educación Prescolar Bilingüe.

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Dedicatory

I dedicate this research, first and foremost, to God, whose guidance and blessings have been the foundation of all my accomplishments. Secondly, I dedicate this work to my mother, my pillar of strength, my constant support, and my daily source of motivation. This achievement is as much hers as it is mine, for without her, I would not be where I am today. Lastly, I extend this dedication to those who have accompanied me on this emotional journey. Thank you for always encouraging me to persevere and for instilling in me the belief that I can achieve anything I set my mind to.

Acknowledgement

I want to express my deepest gratitude to my mother, whose unwavering support, encouragement, and belief in me have been the foundation of my journey. Her love and strength have been my constant inspiration throughout this process. I also wish to extend special thanks to my thesis tutor, MSc. Yanory Arguedas Carballo, for her patient guidance, confidence, and the invaluable knowledge she shared with me, making this process more manageable. Her availability and willingness to assist were greatly appreciated. Additionally, I am truly grateful to my siblings and my boyfriend for their encouragement and support.

Resumen

El objetivo principal de esta investigación es determinar la efectividad de las estrategias kinestésicas en la mejora de la conciencia fonológica en estudiantes de kínder. Además, este estudio demuestra cómo estas estrategias están diseñadas para integrar los objetivos curriculares con las características naturales y activas de los estudiantes, enriqueciendo así su experiencia de aprendizaje. Al hacerlo, las estrategias buscan fomentar un mayor disfrute y compromiso en el proceso, lo que facilita un aprendizaje significativo y ayuda en la internalización de los fonemas, permitiendo a los estudiantes identificarlos y producirlos con mayor facilidad y confianza.

Abstract

The main objective of this research is to determine the effectiveness of kinesthetic strategies in enhancing phonological awareness among kindergarten students. Furthermore, this study demonstrates how these strategies are designed to integrate curricular objectives with the students' natural, active characteristics, thereby enriching their learning experience. By doing so, the strategies aim to enrich the learning experience, fostering greater enjoyment and engagement in the process. This approach ultimately facilitates significant learning and aids in the internalization of phonemes, enabling students to identify and produce them with greater ease and confidence.

Chapter I

Research Problem

1.1 PROBLEM STATEMENT

The following research aims to improve phonological awareness through the implementation of kinesthetic strategies accompanied by other stimuli such as visual and auditory to facilitate students' internalization of the phonemes. According to Kindervater (2002) integrating kinesthetic movement in daily lessons not only helps young learners to satisfy their constant necessity of being in motion, but it is linked with the development of a strong phonemic awareness, which is a fundamental key to early childhood literacy success, by engaging them in a whole-body learning experience. It is explained how combining phonics and motion activates both hemispheres in the brain helping children store and retrieve information into their long-term memory; and how its active naturality is designed to integrate fun into the process of creating long-life meaningful learning. Besides, it is mentioned how young children are not ready for abstraction and symbols; therefore, working on prewriting and prereading skills through other modalities that allow them to hear, feel, and see while they perceive the sound brings all the abstract concepts into a concrete experience facilitating the understanding.

Early childhood literacy instructions are critical to flourishing reading skills with joy. This glee is essential because developing the ability to read is not enough to ensure reading success. Students must have the desire and the curiosity to start their reading process so it can be guided by enthusiasm and lead them to success. Facilitating the process of awakening the curiosity related to literacy skills can be helped by the incorporation of certain types of motion during instructions by following their natural rhythm at the time of learning. Strong phonics instructions provide students with the necessary tools to become proficient in decoding and

encoding skills from the beginning of the process allowing them to develop the necessary confidence to achieve what is expected at kindergarten level without frustration.

A tactile-kinesthetic approach seeks to satisfy students' needs because it adapts to the early years' developmental characteristics such as their necessity of being in constant movement and their need of learn from concrete situations. Including these types of strategies where students learn actively with hands-on activities and manipulatives objects that can be handled and moved provide experiences where students see, feel, touch, and manipulate the physical environment enhancing motivation for reading. Also, using repetition and instructions that include multisensorial stimulation can improve letter names and sounds knowledge because those types of instructions directly attend to the ways of processing information during the first stage of life. Finally, working with multisensory approaches opens a path that allows to include a variety of learning styles such as visual, auditory, and tactile-kinesthetic at the same time which helps teachers to attend different necessities at one while teaching by distinguish the type of student learning.

1.1.1 Background of the problem

According to Guzmán (2017), the implementation of elements of the visual, auditory, and kinesthetic (VAK) model in preschool students during the acquisition process of new vocabulary in the target language led to considerable improvement. This was because the students' observation skills and ease of acquiring information made their contact with the foreign language more productive, showing an improvement in the construction of their vocabulary through the model. The integration of elements belonging to the VAK model as a didactic proposal in the English class allowed students to get closer to the vocabulary relevant to their

daily lives through the interaction of their main sensory receptors. This alternately developed a higher level of interest and attention in activities and processes, making them the main executors in constructing their new knowledge through their primary sensory receptors. Additionally, the application of sessions based on some elements of the VAK model as a strategy for acquiring vocabulary in English as a foreign language not only favored the acquisition process but also strengthened the students' confidence and participation when expressing themselves.

McGraw (2021), in her thesis about visual phonics, discusses multisensory instruction and its direct relationship with language, as both involve using the whole brain. She mentions how kinesthetic instruction enhances students' memory and their ability to discriminate between speech sounds, and how strategies or activities that take advantage of the body's physical response to visual, auditory, and tactile stimulation can impact the way early learners communicate what they know.

According to Langille and Green (2021), student learning is positively affected by implementing multisensory phonetics programs. These types of sensory strategies show improvement in student performance, regardless of learning needs, strengths, or challenges, providing constant phonemic awareness and offering significant support in second language acquisition. They also mention how strategies involving active participation become attractive learning experiences, favoring the learning process.

Ariati et al. (2017) discuss how having a strong foundation in English literacy is crucial for children to read successfully, and how Jolly Phonics can enhance early reading strategies by implementing enjoyable VAK techniques. This program aims to help children master English literacy by teaching skills such as learning the letter sounds, letter formation, blending for

reading, identifying sounds in words for writing, and tricky words in an engaging and creative way, tailored to children's developmental stage needs so they can actively participate while learning. The program follows an order that moves from the simplest to the most complex, introducing one to three sounds per week.

Guzmán (2017), McGraw (2021), Langille and Green (2021), and Ariati et al. (2017) agree that multisensory approaches are highly beneficial during the early development stage because they require active participation in the learning process, which increases students' interest and attention. These approaches also provide opportunities for children to explore letters independently through experimentation, engaging and encouraging them to learn through the senses by motivating them to follow their explorer and curious nature. Additionally, as language is a process that involves using the whole brain, learning it in a multisensory way is consistent with this, as it allows the use of several areas of the brain, making the connection and retention processes easier for students. Finally, these authors agree that there is room to continue exploring this topic, as more research is needed to further detect the multiple benefits and effects that visual, kinesthetic, tactile, and auditory approaches have on developing the necessary phonological awareness to begin the reading process.

1.1.2 Problematization

The following research work will be carried out with 15 students, specifically 10 boys and 5 girls between the ages of 4 and 5, who attend the kindergarten level at Saint Francis School, Alajuela. The annual program of this institution, in addition to considering three important areas in the development of children: the socio-emotional area, the psychomotor area and the cognitive-linguistic area, is taught entirely in English to take advantage of brain

plasticity during the first years, facilitating the acquisition of a second language. This group is characterized by being dynamic, active, participatory, and receptive to playful activities; therefore, sometimes they can feel bored with traditional academic duties directly affecting their attention span.

Considering the group characteristics, movement is seeing as an alternative to increase the attention span, interest, and significant acquisition of phonological learning by being a fundamental part of the development of children, and it is associated with important physical, emotional, social, and cognitive benefits across the life span. Being this stage a critical period to promote physical activity it is important to include these types of active activities into the preschool curriculum to promote natural and significant learning.

According to Zeng et al. (2017), advances in neuroscience have linked physical activity to brain structure and cognitive development. It is suggested that physical activity positively affects cognitive functions, facilitating learning and maintaining cognitive abilities by improving plasticity. Emerging studies have also proven that increased physical activity enhances academic achievement, executive functions, and on-task behaviors in children; therefore, physical activity has significant beneficial effects on motor skills and cognitive functioning.

Multisensory stimulation occurs when two or more senses are stimulated simultaneously, allowing the brain to combine information received through the senses, leading to more effective and meaningful learning. This process supports the acquisition of new skills, such as early literacy learning (Fattokhevna, 2023). These multisensory experiences lead students to enact what they learn, improving their critical thinking and problem-solving skills through active participation during the learning acquisition process. Similarly, combining visual and auditory

learning styles with kinesthetic ones allows for a deeper engagement with the material, encouraging students to experience the information through sensory exploration using their natural tendencies for movement and exploration. This approach can foster significant learning during the early years.

Fattokhevna (2023) also mentions that the brain can efficiently process and respond to incoming stimuli, and in real-world contexts, this stimulus occurs simultaneously. Therefore, activating multiple sensory receptors helps students recall information effortlessly because they have been actively involved in the learning process. The author also highlights how Fernan and Keller emphasized the necessity of kinesthetic and tactile experiences in learning literacy skills and how the tactile component enhances memory. As a result, implementing kinesthetic and tactile strategies can improve children's reading readiness. Additionally, combining these strategies with other sensory learning styles, such as visual and auditory, can enhance students' ability to internalize what they have learned while boosting their interest by creating experiences that allow them to enact the information acquired during the activities.

1.1.3 Problem Statement

The problem derives from the inconsistency that exists between the movement needs of the stage of development in which boys and girls are at the kindergarten level and the academic style implemented that requires students to absorb learning passively - quiet and still -. This inconsistency makes it difficult to meet curricular objectives, since inspiring interest in carrying out activities that develop phonological awareness, an ability closely related to reading success, has been affected.

1.2 PROBLEM JUSTIFICATION

The development of phonological awareness is closely related to reading readiness, making it crucial to implement strategies that naturally facilitate the acquisition of skills necessary for successful reading. According to Gilakjani (2011), students learn best when they are actively involved and understand the significance of the information presented, as their interest is essential for effective learning. Therefore, it is important to use diverse teaching methods that accommodate all learning styles and to provide stimulating environments that allow students to remain active throughout the process. This approach helps awaken their interest while considering their developmental and learning characteristics.

During the early years of life, from birth to age six, children's brain development is rapid and significant, characterized by cognitive, linguistic, social, emotional, and motor growth. At this stage, children learn quickly, as every sensory experience—seeing, touching, tasting, hearing, or smelling—creates new neural connections, shaping their brains and enabling them to interact with the world around them.

Csapo and Hayen (2006) emphasized the importance of understanding learning styles and the critical role they play in effective teaching. When both teachers and students understand their preferred ways of learning, the likelihood of achieving meaningful learning increases. Involving the senses in the teaching-learning process enhances interest by awakening students' natural curiosity and exploratory tendencies, aligning with the way they have been building their own learning since birth. Moreover, it allows for experimentation through play, enabling children to learn by doing and feeling while having fun. This leads to significant learning and promotes the

gradual acquisition of essential skills such as self-confidence, high self-esteem, and tolerance for failure.

As previously mentioned, following a child's pace and developmental characteristics is essential for achieving meaningful learning. Kinesthesia has been chosen as a central research tool because it addresses the need for constant movement that children exhibit during their early years. Movement helps children understand and perceive the world around them while becoming aware of their place in it. It also allows them to internalize their experiences, as young children think while they act, which supports the development of their ability to think, communicate, and solve problems. Additionally, kinesthetic approaches provide an alternative to improving reading readiness by using sensations and perceptions in the decoding of phonemes. Therefore, the implementation of kinesthetic and tactile strategies can meet kindergarten students' desire to explore, build, and actively participate in their learning process while achieving the research's curricular goals.

1.3 RESEARCH QUESTION

What is the effectiveness of implementing kinesthetic strategies to improve phonological awareness in kindergarten students during the second quarter of the year 2024 at Saint Francis School, Alajuela?

1.4 HYPOTHESIS

Through the implementation of kinesthetic strategies, kindergarten students at Saint Francis College will improve phonological awareness during the second quarter of the year 2024.

1.5 RESEARCH OBJECTIVES

1.5.1 General Objective

To determine the effectiveness of implementing kinesthetic strategies to improve phonological awareness in kindergarten students during the second quarter of the year 2024 at Saint Francis School, Alajuela.

1.5.2 Specific Objectives

a) To identify the amount of consonants and vowels phonemes that students from kindergarten at Saint Francis Collage know.
b) To determine how kinesthetic strategies improve phonological awareness in kindergarten students.
c) To analyze the improvement of phonological awareness in kindergarten students by comparing pre-test results, post-test results, and observations.

1.6 SCOPE AND LIMITATIONS

1.6.1 Scopes

The research has the possibility of continuing, since it is an educational center that seeks constant innovation to meet the needs of each of its students, responding to the various learning styles while achieving the curricular objectives. Likewise, being students who attend the kindergarten level, it is possible to continue with the application of kinesthetic strategies to recall the learning generated during the investigation; and at the same time, to continue with their process of developing phonological awareness the following year. Also, despite being an innovative topic, being closely related to learning through the senses, it has enough information to carry it out.

1.6.2 Limitations

The most obvious limitation is that the person conducting the research is not the kindergarten homeroom teacher, so despite having a close relationship with the students and the teacher, she does not spend the whole day with them. Due to this limitation, the characteristics of the group are known from the perspective of the classroom teacher. Likewise, during the application phase of the investigation, the work would be carried out for certain periods of the day. Another limitation is that all learning styles are different, and the possibility exists that some students resist this type of strategy.

Chapter II

Theoretical Framework

2.1 HISTORICAL CONTEXT

This chapter incorporates all pertinent details pertinent to the for the investigation, offering the potential to encompass a wide spectrum of subjects within the document. Nevertheless, the author places notable emphasis on steering the data towards a clear and straightforward elucidation of the subjects. As established in the initial chapter, the author's focus is on assessing the efficacy of incorporating kinesthetic strategies to enhance phonological awareness. Hence, the three vital settings corresponding to the specific objectives play a pivotal role in shaping this segment.

The author begins by discussing child development to precisely emphasize the significance of movement during early years. Subsequently, the focus intensifies on motor development within this phase, explaining its stages, significance, and direct link to cognitive development. Moreover, it explores how motor development can be enhanced during the initial years of life through play.

Furthermore, the author introduces the different types of teaching methods found within the preschool curriculum - traditional and modern - providing an explanation of both while also mentioning their pros and cons. Additionally, the author categorizes the sensory method within the modern teaching approach, with an explanation of diverse teaching styles - visual, auditory, and kinesthetic -. The focus is particularly on the kinesthetic learning style, as this forms the basis for the strategies intended for implementation during the research's application phase.

Likewise, the author explains the importance of speaking and listening skills at the kindergarten level and dedicates focus to explaining phonological and phonetic awareness,

emphasizing their distinctions. However, the primary focus remains on clarifying the importance of fostering phonological awareness, outlining the skills expected during the preschool age, and highlighting the advantages of nurturing it at an early age. Simultaneously, specific kinesthetic strategies to enhance phonological awareness are identified, complete with various examples that are designed to develop skills. Lastly, the author emphasizes how phonological awareness can be taught through motion.

2.1.1 Background of the organization and community

According to the institution website (2024) Saint Francis College “Our history”: Saint Francis College is an educational institution founded on profound Catholic values. It was founded on March 20, 1950, in Barrio Aranjuez under the leadership of Father David Schulze. From its inception, the college distinguished itself by offering a comprehensive education that encompasses spiritual, academic, and athletic dimensions. This commitment to educational excellence quickly earned the college national recognition and growth in enrollment. Recognizing the need for a larger campus to accommodate its expanding student body and to continue providing quality education, Mr. André Challe, a devout Catholic, generously donated land in the canton of Moravia. This donation facilitated the establishment of the modern facilities where Saint Francis College is currently located.

In 1973, the college made significant advancement with the opening of the Preschool and Primary sections, under the academic coordination of Professor Jeannette Cartín Rodríguez. This year also marked a pivotal change in the institution's educational policy as it transitioned to a co-educational system, expanding its offerings beyond exclusively male education.

In 2017, another milestone in the history of Saint Francis College was witnessed under the leadership of the General Director, Fray Walter Loáisiga González, the First Chapter of the Custody of Mary, Mother of Mercy was celebrated, sponsored by the Conventual Franciscan Friars in Central America. During this event, the proposal to establish a new branch of Saint Francis College in Alajuela was approved, aiming to offer an excellent Catholic educational option in that province.

In 2019, this vision was realized with the inauguration of Preschool Saint Francis located in Barrio San Jose, Alajuela, led by Ms. Damaris Marín Herrera. The preschool offers levels from Nursery to Preparatory. The following year, in 2020, the institution expanded its educational offerings in Alajuela by opening the Primary section, reaffirming its commitment to quality education in the region. Currently, the institution has 160 students distributed into five groups in preschool and six groups in elementary. The infrastructure includes administration and secretary's offices, a library, a computer lab, nine classrooms for elementary school and 6 for preschool, a multi-purpose court, a gymnasium, a playground, a butterfly garden, and a chapel.

Saint Francis Collage holds the vision of promoting good human beings who, inspired by Franciscan values, can transform society into a more just and caring one. Its mission is to foster a true Educational Franciscan Ministry to promote comprehensive, well-oriented transformations focused on common benefit.

2.2 THEORETICAL-CONCEPTUAL CONTEXT

Education is in a constant state of transformation, transitioning from traditional methods to innovative ones. Preschool teachers worldwide employ various approaches in their daily lessons, tailored to different educational philosophies, to meet learning goals while

acknowledging each child's unique developmental characteristics. Sundar (2018), drawing from Butler (1956), eloquently asserts that education transcends merely imparting knowledge; it is about kindling a spark within, emphasizing that education and the teaching process serve as catalysts for stimulating students' curiosity, critical thinking, and intellectual growth.

2.2.1 CHILD DEVELOPMENT

During the early years of life, children exhibit specific characteristics that define their behavior and learning processes. Following their natural rhythm positively impacts how they process information, making new neural connections more effortless. Being aware of these characteristics can help adapt lessons to various learning styles. According to Berk (2013), development is often divided into three broad domains: physical, cognitive, and socioemotional. These three domains are integrated, meaning each influences and is influenced by the others, which opens a path for learning through enriched experiences that promote a child's holistic development. Major theories sensibly divide time into age periods, each bringing expectations about the capacities and abilities that emerge during those times.

2.2.1.1 Characteristics of the periods of development

Berk (2013) outlines three critical developmental periods in early childhood, each marked by clear and meaningful changes that influence the trajectory of a child's growth. The prenatal period, spanning from conception to birth, is characterized by the most rapid changes, transforming a one-celled organism into a human baby (Berk, 2013, p. 5). Following this, the infancy and toddlerhood period, which covers from birth to 2 years, involves dramatic alterations in the body and brain. These changes support the emergence of motor, perceptual, and intellectual capacities, notably marking the onset of language development and the formation of

the first social connections (Berk, 2013, p. 5). The subsequent early childhood period, extending from 2 to 6 years, is a time when children's bodies become longer and leaner, motor skills are refined, and they gain greater self-control and self-sufficiency. During this phase, play becomes a crucial medium for socioemotional development, and both thought processes and language skills notably expand (Berk, 2013, p. 5). These periods help to understand human development from conception until six years of age, explaining the various changes, capacities, and abilities that emerge during specific periods of life. They also aid in understanding how the brain evolves as the years pass. This framework is essential for researchers to understand as it frames the developmental contexts that shape early learning experiences.

2.2.2 MOTOR DEVELOPMENT

Haywood and Getchell (2019) define motor development as the progression of movement abilities and introduce the concept of motor control as the nervous system's regulation of muscles that enables skilled and coordinated movements. They highlight the close relationship between these two terms, emphasizing the importance of understanding how movement abilities change with age to anticipate developmental milestones at various life stages. Similarly, Grell (2022) describes motor development as the process of learning to use and manipulate muscles to move the body in desired ways. He notes that the acquisition of motor skills progresses from simple to complex, and while development rates vary, children generally master specific skills during particular life periods. Expanding on this, Mauro (2022) categorizes motor development into two types: gross motor skills, which involve large muscles and are essential for balance, coordination, reaction, and physical strength, related to activities like walking, running, and

lifting; and fine motor skills, which require manual dexterity and hand-eye coordination, demanding a high degree of control and precision using the small muscles of the hand or wrist.

2.2.2.1 Stages of motor development

Grell (2022) identifies three stages of motor development that children experience in their early years before they can progress to a specialized movement phase. The reflexive stage involves the development of reflexes that help children orient their bodies and complete simple movements. This is followed by the rudimentary movement phase, during which children develop basic motor skills such as grasping, sitting, standing, and walking. The next stage, the fundamental movement phase, sees children acquiring basic movement and manipulation skills, including bending, twisting, running, jumping, and the ability to throw and catch a ball. Once children have mastered these stages, they are capable of attempting more precise movements and skills to achieve various movement-related goals. It is therefore crucial to stimulate children and provide experiences that challenge them to facilitate their progression through these stages of motor development.

2.2.2.2 Importance of motor development and movement during early childhood

Grell (2022) emphasizes the significant role of motor development in not only a child's physical growth but also in broader developmental areas. Proper motor development is crucial for overall growth as it facilitates physical and cognitive development, boosts self-confidence, and nurtures various skills allowing children to explore and engage with their environment. Additionally, motor development enriches the learning process by making it enjoyable and stimulating, thereby enhancing motor, social, cognitive, and language abilities.

Similarly, Idiculla (2021) points out the profound significance of motor development during early childhood, particularly how gross motor activity benefits the brain. The strong brain-body connection supports the brain in various ways, enhancing the learning process. Physical movement prepares the brain for learning by aiding in its reorganization and creating more interconnected neural pathways. Increased oxygen flow to brain cells and the release of brain-derived neurotrophic factor (BDNF) enhance cognition and boost neuron communication. Moreover, physical activity triggers the release of endorphins, dopamine, norepinephrine, and serotonin, which regulate mood. Incorporating movement into learning activities makes content internalization more effective. Research indicates that physically fit children tend to perform better academically and have fewer discipline issues. Movement also improves memory, language skills, attention, emotional regulation, and decision-making. Studies show that integrating language with movement can enhance learning effectiveness by 90%, and movement fosters improved self-awareness and awareness of others.

Idiculla (2021) findings underscore that movement is an essential component of the learning process, particularly during early childhood. Integrating movement into educational activities can enhance students' academic performance, motivate them, and foster a sense of security within the school environment. Furthermore, it strengthens the relationship between students and teachers, creating a more pleasant and enjoyable learning space.

The integration of physical activities into early childhood education curricula is seen as crucial, not only for enhancing physical healthiness but also for facilitating cognitive and emotional development among young learners. By acknowledging physical engagement within the educational environment, educators can significantly enhance children’s comprehensive

development capabilities. This approach enriches their thinking, language skills, and social interactions. Grell (2022) and Idiculla (2021) fundamentally support a holistic educational strategy that positions physical activity not as a supplementary aspect but as a pivotal component of early educational frameworks.

2.2.2.3 Developing motor skills during early childhood

Miles (2021) highlights the importance of play in developing both gross and fine motor skills during childhood, noting that it serves as a natural way for children to interact with the world. Through play, children can effortlessly develop and enhance the control and coordination of their movements. Similarly, Sutapa et al. (2021) discusses how motor skills can be improved through goal-oriented play activities, which are essential for children. These activities not only encourage children to exercise and stimulate muscle functions but also provide opportunities to enhance various skills such as motor, thinking, and problem-solving abilities. Early childhood is identified as the most critical period for stimulating motor abilities, and play encourages children to repeat the same activities, thereby making it easier for them to master specific skills by using play as a tool.

2.2.3 TEACHING METHODS: TRADITIONAL VS MODERN

In preschool, the curriculum can follow either a traditional or modern approach, which varies based on children's expectations and content delivery methods. Wang (2022) notes that the differences between modern teaching and traditional classroom methods extend beyond mere teaching techniques. Traditional education is characterized as teacher-centered and text-centered, where students are required to memorize theoretical knowledge primarily for testing purposes. In contrast, modern education focuses on inspiring creative thinking and emphasizes the

educational process rather than the end results. The goal of modern education is to inspire, guide, develop, and train students' creativity. Additionally, it is more dynamic, promoting better communication and motivation among students.

2.2.3.1 Teaching techniques in traditional and modern methods

The methods of imparting lessons in educational settings can vary significantly, ranging from passive to highly interactive approaches, each with distinct roles for teachers and students. Wang (2022) categorizes these methods into three main types. The passive method is teacher-centered, where the teacher's role is primarily authoritative, focused on content transmission while students act mainly as listeners. This approach involves minimal interaction between teachers and students, which may limit student engagement in the learning process.

In contrast, the active and interactive methods are integral to modern education, which is inherently student-centered. These approaches promote interactive learning, cooperative learning, and inquiry learning, fostering a more dynamic classroom environment. The active method involves students directly in the learning process, enhancing their engagement through hands-on activities. The interactive method, as further highlighted by Wang (2020), extends beyond the teacher-student dynamic to include interactions among students themselves. This method enhances cognitive and social skills by encouraging students to actively participate, explore, analyze, and solve problems together. Moreover, it fosters effective communication and cooperation, crucial skills in today's collaborative world.

These varied teaching approaches reflect a shift from traditional, memorization-focused methods to more innovative strategies that prioritize student creativity, problem-solving abilities, and overall engagement in the learning process. This evolution in teaching methods underscores

the importance of adapting educational practices to better meet the developmental needs of students and the demands of the modern educational landscape.

2.2.3.2 Learning focus in traditional and modern methods: advantages and disadvantages

Wang (2022) analyzes the impact of different educational focuses on learning outcomes, distinguishing between teacher-centered and learner-centered approaches. In the teacher-centered focus, the primary advantage is its alignment with exam requirements, which aids students in reviewing the syllabus effectively. This approach facilitates disciplined management that minimizes external distractions and promotes focused learning. However, it also presents significant downsides, such as fostering dependency on instructors, which can inhibit independent thinking and limit opportunities for student cooperation and communication.

On the other hand, the learner-centered focus is designed around the students' interests, allowing them to have a say in what they learn. This approach not only respects student opinions but also requires professors to adapt their teaching styles, content, and assignments to better meet student needs. Such flexibility in the educational process enhances motivation and engagement, making it easier for students to absorb and retain information, thereby improving academic performance. Furthermore, it increases participation and fosters collaboration among students, enhancing overall learning outcomes. This focus also supports personalized learning, which can be particularly beneficial in addressing the diverse and evolving needs of students.

These contrasting approaches underscore the necessity for educators to consider the balance between structured guidance and flexibility in curriculum design to optimize learning experiences and outcomes for all students.

2.2.4 MULTISENSORY APPROACH

According to Hoisington (2015), a multisensory approach is a teaching method that engages multiple senses simultaneously. By incorporating visual, auditory, and kinesthetic-tactile pathways, this approach significantly enhances memory and learning abilities. Engaging multiple senses allows students to explore and experience information through various channels, which stimulates their brains and increases their engagement in the learning process.

2.2.4.1 Learning Styles

Gilakjani (2011) emphasizes that the relevance of information is crucial for effective learning. To engage students, educators must adopt various teaching methods that cater to diverse learning styles, which he categorizes into three primary types: visual, auditory, and kinesthetic**.**

2.2.4.2 Visual

Visual learners excel when information is presented visually. They process information effectively when it is depicted in diagrams, charts, and through the body language of the instructor. This style of learning harnesses the power of seeing to enhance comprehension and retention (Gilakjani, 2011).

2.2.4.3 Auditory

Auditory learners prefer to absorb information through listening. They are sensitive to variations in pitch, emphasis, and speed during verbal presentations, which significantly aids their learning process. This style capitalizes on the auditory transmission of information (Gilakjani, 2011).

2.2.4.4 Kinesthetic

Kinesthetic learners benefit from a hands-on approach. They engage optimally when involved physically in learning activities, which helps them to focus despite potential challenges with maintaining attention. This style involves active participation and direct interaction with educational materials (Gilakjani, 2011).

Gilakjani (2011) argues that recognizing and integrating these learning styles within the educational process can lead to numerous advantages. Incorporating a variety of sensory experiences in teaching not only makes learning more accessible and quicker but also enhances problem-solving skills and promotes a deeper understanding of personal learning preferences (Gilakjani, 2011).

The integration of learning styles facilitates a multisensory approach to education, which is crucial for the assimilation of knowledge and for addressing the individual needs of students. By employing visual, auditory, and kinesthetic strategies, educators can create a learning environment that fosters greater student engagement, improved problem-solving abilities, and a better understanding of learning differences among students. This approach not only enhances academic performance but also builds student confidence and motivation, fostering a positive attitude toward learning (Gilakjani, 2011).

2.2.5 KINESTHETIC LEARNING

Kinesthetic learning emphasizes the importance of touch and the physical manipulation of materials. This educational approach acknowledges that certain students prefer and significantly benefit from engaging their sense of touch and actively participating in their learning process.

2.2.5.1 Kinesthetic learners

Kinesthetic learners exhibit a unique set of characteristics that significantly influence their learning preferences and effectiveness. According to Vincent and Ross (2001), these learners often face challenges with auditory instructions, as they tend to struggle with listening and maintaining focus. Instead, they succeed in environments that allow physical engagement, such as hands-on activities, which enable them to express emotions physically and engage actively in the learning process. These attributes are complemented by their outgoing personalities, necessitating educational approaches that integrate touch, movement, and active participation.

Further emphasizing the needs of kinesthetic learners, Masela and Subekti (2021) argue that such learners benefit greatly from physical activities that facilitate memorizing and understanding complex concepts. Vincent and Ross (2001) suggest practical strategies to enhance learning for these individuals, including engaging them in activities that require physical action and allowing frequent breaks to accommodate their need for movement.

Engage Education (2023) mentions that kinesthetic learners often find traditional classroom settings dull and restrictive. They learn more effectively through movement and are more engaged when they can test, experiment, and create, using their hands and bodies to explore new ideas. Hyperactivity in sedentary settings is common, and they are known for their expressive use of hand gestures and a preference for trying new, physically engaging tasks.

In conclusion, kinesthetic learners require a dynamic and interactive educational environment to fully harness their learning potential. Educators must recognize and accommodate these needs by providing diverse, physically engaging activities that align with

kinesthetic learners' natural inclinations toward movement and tactile exploration. Such an approach significantly enhances their learning outcomes, as they rely on active involvement to process and retain information effectively (Vincent & Ross, 2001; Masela & Subekti, 2021; Engage Education, 2023).

2.2.5.2 Kinesthetic Learning Benefits

Kinesthetic learning, characterized by physical engagement, offers multiple benefits that contribute to a learner's overall development. Engage Education (2023) highlights several advantages, including improved cognitive development. This improvement is attributed to increased physical activity which elevates oxygen levels in the blood, thereby enhancing brain function and cognitive abilities. Furthermore, kinesthetic learners often experience increased information retention as physical movement aids memory retention. This learning style also enhances social skills through activities that require interaction and collaboration with others, fostering effective communication and teamwork. Additionally, engaging in physical activities can develop creative thinking and problem-solving skills, as these activities encourage learners to think innovatively and find new solutions to challenges.

BAU (2022) outlines complementary benefits, emphasizing that kinesthetic learning supports both cognitive and social growth, contributing to a well-rounded development. Physical engagement not only increases comprehension of concepts but also strengthens thinking and problem-solving capabilities, making this approach integral to effective learning strategies. The integration of hands-on activities into educational frameworks is therefore not just beneficial but essential, as it supports a diverse range of cognitive, social, and creative skills in learners.

These insights underscore the significant impact of kinesthetic learning on various aspects of development, including cognitive, social, and creative capacities. By incorporating kinesthetic methods into educational practices, educators can support a holistic development approach that caters to diverse learning needs and enhances overall educational outcomes.

2.2.6 SPEAKING SKILL

Aprillina et al. (2021) highlight verbal communication as a crucial skill for children, essential for various school-related tasks. These tasks include critical functions such as thinking, learning, understanding, expressing ideas and emotions, reading, writing, asking and answering questions, organizing thoughts, reasoning, and problem-solving. Additionally, spoken language plays a key role in forming friendships, collaborating with peers, and influencing behavior. Thus, developing confident and fluent speaking skills is a fundamental aspect of a child's educational journey, carrying long-term significance throughout their life. Proficient speaking abilities encompass a range of skills necessary for effective interpersonal communication, enabling individuals to convey information clearly and ensure understanding by others.

Similarly, Pachina (2020) underscores the importance of verbal communication as a key skill for students, noting its significant impact on social interactions and academic success. Particularly in kindergarten, verbal communication is considered foundational for advancing language proficiency and speech development, serving as a crucial period for these skills.

2.2.7 LISTENING SKILLS

Mcilroy (2023) explores the significant connection between strong listening skills and the comprehensive development of physical, cognitive, social, and emotional domains. Effective

listening extends beyond mere hearing; it encompasses the brain's ability to comprehend and utilize the sounds it processes. The perceptual and discriminative abilities related to sound play a critical role in the development of speech and language skills in children. These abilities are foundational as children acquire competencies in speaking, reading, spelling, and writing.

2.2.8 PHONOLOGICAL AWARENESS

Kung (2020) identifies phonological awareness as a strong predictor of reading success. This awareness encompasses both basic recognition of speech sounds and advanced skills such as the manipulation of words.

2.2.8.2 Phonemic Awareness Definition

According to Kung (2020), phonemic awareness represents the most advanced level of phonological awareness. It involves the ability to recognize and manipulate phonemes—the smallest units of sound in words.

2.2.8.3 Difference between Phonological Awareness and Phonemic Awareness

Milankov et al. (2021) distinguish between phonological and phonemic awareness. Phonological awareness involves the auditory and oral manipulation of sounds, while phonemic awareness pertains to understanding the relationship between written symbols and their corresponding sounds. Thus, phonological awareness is a broader concept that includes phonemic awareness as its most advanced level. The International Literacy Association (2019) further elaborates on this distinction: phonological awareness is the sensitivity to the sound structure of spoken words, separate from their meanings. Phonemic awareness, however, represents the most complex aspect of phonological awareness, requiring the detection and manipulation of individual phonemes. Despite their interconnection, phonological awareness

encompasses a wider range of skills, with phonemic awareness focusing specifically on phoneme manipulation.

2.2.8.4 Importance of Phonological Awareness

Verissimo et al. (2021) emphasize the critical role of phonological awareness in reading success, linking it directly to academic achievement and school progression. They highlight that phonological awareness is essential for word recognition, reading fluency, accuracy, speed, and comprehension. Proper stimulation and development of phonological awareness can facilitate the learning process and help prevent learning disabilities, which in turn can lead to issues such as school dropout, low self-esteem, or behavioral problems.

Similarly, Kung (2020) underscores the significance of phonological awareness, explaining that it enables children to segment and blend words—fundamental processes for successful reading and spelling. A lack of well-developed phonological awareness can result in difficulties with text comprehension and decoding.

2.2.8.5 Expected Phonological Awareness Skills

According to the International Literacy Association (2019), phonological awareness typically progresses after age 4, shifting from an understanding of larger, more concrete linguistic units – such as words, syllables, and onset/rimes – to the recognition and manipulation of smaller, more abstract units like phonemes. Kung (2020) outlines the development of phonological awareness skills, which span from early to advanced levels. In the early stages, children begin by recognizing syllables within words and identifying rhymes and alliteration. As they develop basic phonemic awareness, they learn to segment onset-rime, blend sounds into words, and break words down into individual sounds.

Kung (2020) further elaborates on the three basic levels of phonemic awareness and their typical developmental stages. The early level, typically developed during preschool, involves isolating and identifying sounds, recognizing syllables, rhyming words, and alliteration. The basic level, which occurs from kindergarten to first grade, includes learning to blend and segment sounds, separating onsets from rimes, and mastering the ability to blend and segment phonemes to create or deconstruct words. The advanced level, generally achieved between third and fourth grade, involves more complex tasks such as deleting, substituting, reversing, and manipulating phonemes. These developmental stages are critical for children as they build the foundational skills necessary for reading and spelling.

2.2.8.6 Benefits of Developing Phonological Awareness

Milankov et al. (2021) emphasize the importance of stimulating and developing phonological awareness at appropriate stages in early reading, as it significantly accelerates learning and determines a child's readiness to read. The International Literacy Association (2019) further highlights the critical role of phonological awareness in early childhood as foundational for developing language and literacy skills. Phonological awareness, when combined with phonemic awareness and alphabet knowledge, helps children understand the correspondence between graphemes and phonemes, allowing them to blend sounds into words. This awareness also enhances reading comprehension by improving decoding skills and reading fluency, which are essential for successful literacy development. Additionally, a strong level of phonological awareness is crucial in preventing persistent reading difficulties throughout elementary school and is closely linked to vocabulary knowledge, further supporting overall language development.

2.2.9 KINESTHETIC STRAGETIES TO IMPROVE PHONOLOGICAL AWARENESS

Vincent and Ross (2001) state that teachers working with kinesthetic/tactile learners should provide activities that allow these students to be actively involved in the learning process, with lessons primarily based on hands-on and physical movement activities. Similarly, Kindervater (2002) explains that the "Phonics in Motion" program is designed to address the difficulties some children experience in hearing and perceiving sounds. This program engages the whole body to perceive phonemic elements, thereby activating both hemispheres of the brain, which helps children store and retrieve information in their long-term memory. The goal is to help children perceive sounds through their bodies, linking these sounds to symbols and movements.

2.2.9.1 Strategies for phonological awareness

Wise (2022) outlines various strategies to stimulate and develop phonological awareness in children. One approach is to show materials while discussing sounds and word structures, allowing children to trace each phoneme with their fingers. This multisensory strategy enhances phonemic awareness by helping children connect what they see and hear with what they say and feel. Another strategy involves letter games, such as creating letters in a sandbox or using magnetic and printed letters to help children identify phonemes and sounds. Additional multisensory techniques include creating letters with play-doh, using movement to jump or clap while repeating sounds, and employing body movements to form or represent letters, which encourages active participation in the learning process.

Rule et al. (n.d.) propose a variety of kinesthetic and hands-on activities to support the development of phonological awareness, acknowledging that each child has unique learning needs and that multiple approaches are necessary to address these differences in the classroom. Examples include bingo and concentration games combined with kinesthetic activities to represent phonemes, syllables, and sounds, as well as the "Steppingstone" game, where students identify sounds spoken by the teacher and step on the corresponding paper rock. Other activities, like manipulating small objects to identify or classify sounds, dividing words into syllables while jumping or clapping, and using a movable alphabet to form words, provide tactile experiences that engage learners physically. Hoisington (2015) also offers tactile-focused activities, such as creating letters with playdough, using word-building kits with magnetic letters or scrabble pieces, tracing sandpaper letters, and writing letters and sight words with different materials.

Hoisington (2015) suggests kinesthetic strategies, including "Sight Word Jump," where sight words are placed on high walls for students to jump and reach, and "Sight Word Towers," which involve reading words written on cups to build towers. Additional activities like letter-sound blending puzzles also reinforce learning through physical interaction. These activities can be adapted to target various phonemic awareness skills, such as recognizing beginning and ending sounds, counting syllables, and identifying rhymes. According to Kung (2021), early phonological awareness involves identifying individual sounds or syllables and gradually progresses to manipulating these elements. The primary goal is to cultivate skills such as rhyming, identifying initial and final sounds, and blending and segmenting phonemes, focusing on what students hear rather than what they read.

Kung (2021) provides examples of activities that enhance phonological skills at different developmental stages. These activities include "Odd One Out," where children identify words that do not share common sounds; "I Spy," a rhyming game that encourages students to find rhyming words; and "Matching Sounds," where children select words with similar initial or final sounds. Other activities, such as "Tell Me the Word" for blending sounds, "Clap Out the Sounds" for segmenting phonemes, and "Stretchy Sounds" for stretching onset-rime combinations, actively engage children in phonemic manipulation. These activities can be further adapted for kinesthetic learners by incorporating movements like jumping, running, or clapping, making learning playful and interactive.

The strategies for developing phonological awareness presented by Wise (2022), Rule et al. (n.d.), Hoisington (2015), and Kung (2021) underscore the importance of incorporating a variety of sensory and kinesthetic activities into early literacy instruction. These strategies recognize the diverse learning needs of children and advocate for a multisensory approach that engages students through visual, auditory, and tactile means. By integrating activities that combine movement, touch, and auditory cues, educators can create a more dynamic and interactive learning environment that caters to different learning styles. This approach not only helps children develop foundational phonological skills but also supports their overall cognitive, social, and emotional development. Moreover, by providing opportunities for active participation, these strategies enhance children's engagement and motivation, making learning more enjoyable and effective. The inclusion of kinesthetic and tactile activities also reinforces the idea that learning is not a passive process but one that requires active exploration and physical involvement, which is crucial for young learners.

2.2.10 PHONOLOGICAL AWARENESS AND KINESTHETIC STRATEGIES

Kindervater (2002) suggests that incorporating physical movement while teaching letter sounds is an extremely effective approach to developing phonemic awareness and phonics skills. This method leverages the benefits of multisensory literacy instruction, as children tend to grasp concepts more effectively when they are actively engaged in the learning process through movement and enjoyment. Integrating physical activities into learning creates a dynamic environment where children can connect sounds to actions, enhancing the retention and retrieval of information from long-term memory.

Combining physical movement with phonemic instruction highlights the importance of a multisensory approach to literacy development. Engaging multiple senses allows children to experience and internalize phonemic concepts actively, reinforcing their understanding and memory. By incorporating movement, children not only hear and see the sounds but also physically feel the actions associated with those sounds, which deepens their cognitive engagement with the material. This approach aligns with young children's natural tendencies to learn through play and physical activity, making learning a more enjoyable and meaningful experience. It also supports the idea that literacy instruction should be dynamic and adaptable, catering to the diverse needs of learners by promoting active participation and engagement. Prioritizing kinesthetic strategies helps educators foster a more inclusive and supportive learning environment, enhancing the development of critical literacy skills.

2.2.10.1 When and how to start the development of phonological awareness

According to Kindervater (2002), the optimal time to begin teaching letter sounds is when children show a strong interest in letters and words, a curiosity that typically emerges

during the preschool years as they start to recognize letters and understand their corresponding sounds. Prioritizing the instruction of letter sounds is crucial because it lays the groundwork for the fundamental process by which children learn to read. This process involves associating sounds with specific letters and combining these letters to form words. Children with a solid grasp of phonemic awareness are better prepared to navigate this process effectively, as their proficiency in recognizing and manipulating phonemes forms the foundation for successful decoding and spelling. Consequently, a strong base in phonemic awareness significantly enhances children's chances of excelling in early reading instruction.

2.2.10.2 Why to teach letter sounds and movement?

Kindervater (2002) offers several reasons for incorporating movement into phonics instruction:

- **Reason 1: Motions help kids feel and see sounds.**

Sensory engagement enhances learning engaging; therefore, children with physical movements makes sounds more tangible; as they link motions with specific letters, children quickly decode language and apply these skills to reading and writing. By establishing a strong base of phonemic awareness and phonics, children can consistently break words down into their smallest unit of sounds. (Kindervater, 2002)

- **Reason 2: Educators get immediate information for intervention.**

These strategies can give educators an immediate insight; thus, they can promptly intervene when a student requires assistance, as visual cues help them understand what students are or aren't comprehending. (Kindervater, 2002)

- **Reason 3: Harness kid energy for optimal literacy outcomes.**

Integrating movement into early literacy education maintains children's involvement, shifting the focus away from traditional methods like seatwork and memorization. Phonemic awareness is taught in a manner that resonates with kids, merging specific letter sounds into everyday activities. This approach fosters an enjoyable learning experience and cultivates a positive relationship with education. (Kindervater, 2002).

- **Reason 4: Provide a whole-body learning experience.**

People learn diversely, and incorporating motion into phonemic awareness instruction breaks down barriers for struggling students. (Kindervater, 2002).

- **Reason 5: Involve kids in the learning process.**

Children thrive when they actively participate in learning. Employing motion to teach letter sounds empowers them to make choices and decisions, engaging them in the learning process. (Kindervater, 2002).

Overall, Kindervater (2002) underscores the multiple benefits of integrating movement into phonics instruction, highlighting how it can transform the learning experience for children by making it more dynamic, interactive, and accessible. By engaging multiple senses and encouraging active participation, these strategies not only foster phonemic awareness but also promote a more inclusive and supportive learning environment that caters to diverse learning styles and needs. As such, incorporating movement into early literacy education can play a vital role in building foundational literacy skills, improving overall academic outcomes, and fostering a lifelong love for learning.

2.2.10.3 How does teach letter sounds through motion work?

According to Kindervater (2002), phonemic awareness is the foundational skill upon which all other literacy skills are built, and incorporating multisensory techniques, such as movement, not only fosters a strong enthusiasm for learning but also deepens comprehension. Integrating movement engages both the physical and mental aspects of a child's development, creating a phonemic reference point that supports the mastery of essential skills. In the "Phonics in Motion" program, one of the instructional approaches for teaching letters and their corresponding sounds is through Kinesthetic Motions for the Phonemes (KMP). This method is designed to align with the articulation of sounds, using purposeful movements to create tension in the body, providing a tactile experience of sound that is imprinted in muscle memory. The added tension enhances the multisensory learning experience by establishing a cognitive "anchor" in the child's mind, helping them recall phonemes they might struggle to remember. For example, if a child has difficulty recalling a specific letter sound, the associated movement can assist in making the sound connection. In essence, using multisensory techniques like KMP not only nurtures a passion for learning but also provides a strong foundation for understanding letter sounds and phonemic awareness, enhancing retention and recall through a kinesthetic approach (Kindervater, 2002).

The "Phonics in Motion" program sets specific expectations based on the student's level. At the kindergarten (Pre-K) level, students are expected to: clap syllables with teacher support, segment and blend syllables with assistance, identify and write focus sounds with support, and identify initial and final focus sounds in spoken words with guidance (Kindervater, 2002). Kindervater (2002) also explains that skill building is interconnected, starting from phonological

awareness and progressing toward comprehension. The program is designed to promote a transition from dependent to independent learning, allowing students to model concepts and skills with the support of adults before moving on to supervised and then independent practice. This type of instruction is tailored to follow the student's natural rhythm, progressively building their skills, competencies, and confidence.

Incorporating motion into the teaching of letter sounds effectively supports the development of phonemic awareness and broader literacy skills. By combining physical movement with phonics instruction, educators create a multisensory learning environment that actively engages students, enhancing their ability to learn and remember sounds. The "Phonics in Motion" program exemplifies this approach, providing structured, developmentally appropriate strategies that guide children from dependent to independent learning. This approach not only fosters enthusiasm and enjoyment in learning but also equips children with the foundational skills necessary for reading and writing success, laying the groundwork for lifelong literacy.

Chapter III

Methodological Framework

In this chapter, the author focuses on the methodological aspect of the study. This segment aims to enable the reader to comprehend the research's development process and its purpose within the study population. At the outset, the writer outlines the nature of the research which dictates whether the study is theoretical or applied. Similarly, within this subsection, the temporal aspect specifies the timing of the study's application as it delves into the phenomenon being investigated. This section also addresses the framework, elucidating how the research is structured in terms of its scale and scope, and the rationale behind these parameters. Furthermore, the nature of the research is established, determining how the collected data is analyzed and presented in the document. Finally, the research's character type is elucidated, outlining how the research and its goal is developed by the author into the studied population.

Succeeding, it becomes crucial to clarify the subjects and sources of information, categorized into primary, secondary, and tertiary sources. Moreover, the researcher delineates the process of selecting the study sample, offering comprehensive descriptions of both the overall population and the specific sample chosen. This portrayal offers the reader a deeper understanding of both the quantity and quality of the subjects being examined. The methods and instruments employed for data collection are concisely explained, providing a representation of how these instruments are formulated to reflect the reality of the observed population. Concerning the translation of variables into operational terms, the writer introduces both the general and detailed research objectives. Subsequently, each variable linked to these objectives is further elaborated upon.

3.1 TYPE OF INVESTIGATION

3.1.1 Purpose (applied)

Hassan (2023) explains that the purpose of research involves exploring and gathering information about a specific topic or issue, with the intention of addressing inquiries, solving problems, or advancing knowledge. This purpose aligns with the set goals of the research and may vary depending on the academic discipline and the specific research question being addressed. Hassan also notes that research plays a crucial role in education by fostering the creation of new teaching methods and strategies, conducting studies to determine the effectiveness of various educational approaches, and identifying factors that influence student learning.

Somasundaram (2022) clarifies that the primary distinction between theoretical and applied research lies in their objectives: theoretical research aims to advance knowledge in a specific domain, whereas applied research seeks to address a particular issue or challenge. The present study is fully applied because it is solution-driven; it aims to solve the inconsistency between the movement needs at the kindergarten level and the academic style used to develop phonological awareness. According to Ayayenmi (2023), applied research is characterized by its focus on providing practical solutions to specific problems and is often a follow-up to basic research, as it further investigates theoretical outcomes to validate findings and create innovative solutions in a practical manner. Ayayenmi also explains that applied research in education is used to improve teaching and learning methods by offering practical solutions to pedagogical problems.

3.1.2 Temporal Dimension (Transversal)

Transversal and longitudinal dimensions represent the two time-related frameworks within which research can unfold. In this instance, the research undertaking is constrained in terms of its applicability over time. In this scenario, the research project is constrained in its time of application, leading to its alignment with the transversal dimension. According to Indeed Editorial (2023) a cross-sectional study enables researchers to analyze distinct variables concurrently, all within the same time frame. These types of studies belong to the category of descriptive research and hinge on observational methods. This signifies that researchers merely gather and document existing information, rather than manipulating variables to assess causal connections.

On the other hand, Indeed Editorial (2023) explains how longitudinal studies fall within the category of correlational research, and how they involve researchers gathering and documenting data from numerous variables over an extended timeframe. The principal aim of these types of studies is to explore how variables that may not seem connected interact with or impact underlying background variables. Hence, longitudinal research proves suitable for examining behaviors within extended periods, allowing researchers to observe the historical evolution of specific phenomena within a population. However, this aspect does not align with the current research as its objective is to implement kinesthetic strategies for enhancing skills related to phonological awareness within a designated timeframe among a group of children, in accordance with the theoretical framework's principles.

3.1.3 Framework (Micro)

Research scope can be categorized into three dimensions: mega, macro, and micro levels. According to Kunselman (2004), macro research involves studying large or collective entities, while micro research focuses on analyzing individuals or small units, highlighting the different coverage ranges of studies. This research project employs a micro framework by focusing on a specific grade within an entire preschool. The three levels of investigation represented in this study are: mega, which includes all private institutions in Costa Rica; macro, which is focused on Saint Francis College Preschool; and micro, which concentrates on a sample of 15 kindergarten students.

3.1.4 Nature (Mixed, qualitative dominant)

Research can be categorized into various methods of gathering information or data, such as quantitative, qualitative, or a combination of both. According to Mcleod (2023), the core distinction between quantitative and qualitative research lies in the type of data they collect and analyze. Quantitative research compiles numerical data and uses statistical methods for analysis, aiming to generate objective, empirical data that can be quantified and expressed in numerical terms. In contrast, qualitative research gathers non-numerical data, focusing on exploring subjective experiences, perspectives, and attitudes, often through observations and interviews. The goal of qualitative research is to construct detailed and comprehensive descriptions of the studied phenomenon, uncovering new insights and meanings.

In this study, a mixed-method approach is adopted, with a qualitative emphasis. While the data collected includes both numerical and statistical information, the outcomes are primarily qualitative in nature, as they describe the attitudes and behaviors of the studied population. These

are assessed through the lens of the theoretical framework, rather than being quantified on a specific scale. The research thus involves analyzing both numerical and non-numerical data to provide a more holistic understanding of the phenomenon.

3.1.5 Character (Exploratory and descriptive)

Cambronero (2019), citing Ariñez (2018), explains that the character of research determines how information is gathered and delivered. In this study, the researcher applied both exploratory and descriptive approaches to define the research process. According to Surbhi (2017), exploratory research is a method designed to provide deeper understanding and insights into the challenges faced by the researcher. This method focuses on uncovering new ideas and concepts, where the required information is not precisely defined, and the research process remains flexible and unstructured. Exploratory research is particularly useful when there is a need to clearly define a problem, explore various potential courses of action, formulate hypotheses, gain additional insights, and establish a preliminary framework before determining priorities for further in-depth investigation. Given that the primary purpose of exploratory research is to provide new information that can be used for more focused studies, it is suitable for determining how kinesthetic strategies improve phonological awareness in kindergarten students. Surbhi (2017) also describes descriptive research as being aimed at obtaining detailed and accurate information for the study, which requires a careful and structured approach in the chosen methodology. In the current investigation, the researcher aims to assess the number of consonant and vowel phonemes that kindergarten students know, to analyze the improvement of their phonological awareness.

3.1.6 Subjects

Within this section, the researcher outlines the population under investigation. The population aspect of a research project can be categorized into two forms: the entire population (universe) and a representative subset (sample) of individuals. According to Shukla (2020), the concept of the "universe" includes all units that share a particular characteristic under study, regardless of their distribution across the entire universe or within the specific research domain. Additionally, "population" refers to the aggregation of all units to which the investigation's results will apply.

Shukla (2020) further defines the sample as a representative subset of a research population, meaning that the units chosen as a sample should reflect various characteristics found within the population. The use of a sample in research is crucial as it accelerates and economizes the research process, simplifies data collection, facilitates accurate statistical measurements, and enhances precision in data analysis and interpretation. Shukla (2020) emphasizes the importance of carefully selecting a sample to achieve accurate data collection aligned with the research objectives. This process, known as sampling, may involve either a probabilistic or non-probabilistic sampling method, depending on the aims of the research.

For this study, the universe comprises all the students at Saint Francis College. Although these students may not be directly involved in the assessment and research, the project's outcomes could potentially benefit the entire institution's population in the future. The specific group directly impacted by the research, however, consists of the kindergarten students at the institution. These students represent the sample within this project and provide data through the employed data collection instruments.

3.1.7 Sample Selection

3.1.7.1 The population

According to Shukla (2020), the population "refers to the set or group of all the units on which the findings of the research are to be applied" (para.8). In this case, the population for this research is the total number of students at Saint Francis College, Alajuela, which represents the universe of the study, even though the research is based on a specific sample.

Table 1

Title: Number of Preschool Students at Saint Francis College, Alajuela

Number of preschool students at Saint Fracis Collage, Alajuela	Boys	Girls
140	81	59

Source: Demographic report of the sections of Saint Francis College, Alajuela

3.1.7.2 Sample

Shukla (2020) defines the sample as "a part of the population that represents it completely," meaning it is a smaller subset of the population selected for study (para. 38). The sample for this research project consists of the kindergarten students from Saint Francis College, Alajuela. The researcher chose this grade based on the teacher's willingness to participate in the study and the alignment of the chosen topic with the grade's curriculum.

Table 2

Title: Number of Kindergarten Students at Saint Francis College, Alajuela

Number of kindergarten students at Saint Fracis Collage, Alajuela	Boys	Girls
15	10	5

Source: Demographic report of the sections of Saint Francis College, Alajuela

3.2 SAMPLING AND TYPE

3.2.1 Non-probabilistic

Shukla S. (2018) clarifies that the absence of a scientific basis in non-probabilistic sample selection increases the likelihood of choosing a sample that is biased. In this study, the author opts to exclude a substantial portion of the population to utilize evaluative tools. Consequently, the sample type employed here is non-probabilistic.

3.3 SOURCES OF INFORMATION

3.3.1 First-hand sources

Table 3

Title: Firsthand sources used in the research process

Author or authors	University or Organization	Country	Year
Nancy Csapo and Roger Hayen	Central Michigan University	United States	2006
Juan David Guzmán Ríos	Universidad de Cundinamarca	Colombia	2017
Lurdes Verissimo, Marisa Costa, Francisca Miranda, Catarina Pontes, and Isabel Castro	Universidad Católica Portuguesa	Portugal	2021
Fiona McGraw	Hamline University	United States	2021
Ni Putu Pebri Ariati, Ni Nyoman Padmadewi, and I Wayan Suarnajaya	Ganesha University of Education	Indonesia	2018

Yuemeng Wang	Syracuse University	United States	2022
Annette Vincent and Dianne Ross	University of Louisiana	United States	2001
Abbas Pourhossein Gilakjani	Islamic Azad University	Iran	2012

Source: Developed by Kristhe Chinchilla Quirós (2023)

3.3.2 Secondhand sources

Table 4

Title: Secondhand sources used in the research process

Author	Book Tittle	Year
Rule A., Dockstader J., and Steward R.	Early Childhood Education Journal	2006
Berk K.	Child Development	2013
Haywood K. and Getchell N.	Life Span Motor Development	2021
Hoisington B.	Multisensory Activities to Teach Reading Skills	2015
Kindervater T.	Motion and Movement: a teacher's resource book	2002
Kung K.	Phonological Awareness: A Guidebook for Parents	2020
Langille J. & Green Z.	Canadian Journal of Education	2021
Masela M. and Subektu A.	Englisia Journal of language, education, and humanities	2021

Source: Developed by Kristhel Chinchilla Quirós (2024)

3.3.3 Thirdhand sources

Table 5

Title: Thirdhand sources used in the research process.

Author	Book Tittle	Year
Rule A., Dockstader J., and Steward R.	Early Childhood Education Journal	2006
Berk K.	Child Development	2013
Haywood K. and Getchell N.	Life Span Motor Development	2021
Hoisington B.	Multisensory Activities to Teach Reading Skills	2015
Kindervater T.	Motion and Movement: a teacher's resource book	2002
Kung K.	Phonological Awareness: A Guidebook for Parents	2020
Langille J. & Green Z.	Canadian Journal of Education	2021
Masela M. and Subektu A.	Englisia Journal of language, education, and humanities	2021

Source: Developed by Kristhel Chinchilla Quirós (2023)

3.4 OPERATIONALIZATION OF VARIABLES

The following table presents details of the operationalization of variables. This table outlines the researcher's procedure for examining various research variables and the tools employed within the studied population to establish their validity. According to Bhandari P. (2022) Operationalization is the process of defining abstract concepts in measurable terms, which allows researchers to collect data and analyze relationships between variables. Therefore, within this variable operationalization process, the overarching aim of the investigation is identified, accompanied by its corresponding variable for each specific objective. Additionally, it encompasses both the conceptual and instrumental definitions, outlining the tools and techniques employed to gather data pertaining to the variables under scrutiny, as well as the anticipated outcomes. Finally, an operational definition is furnished, elucidating the way the collected information's value will be measured.

Table 6

Title: The Effectiveness of Implementing Kinesthetic Strategies to Improve Phonological Awareness in Kindergarten Students During the Third Quarter of the Year 2024 at Saint Francis School, Alajuela.

Variables Chart

General Objective: To determine the effectiveness of implementing kinesthetic strategies to improve phonological awareness in kindergarten students during the second quarter of the year 2024 at Saint Francis School, Alajuela.

Specific Objectives	Variable	Conceptual Definition	Instrumental Definition	Operational Definition
To identify the amount of consonants and vowels phonemes that students from kindergarten at Saint Francis Collage during the second quarter, 2024.	The amount of consonants and vowels phonemes that students from kindergarten know.	The number of distinct speech sounds, both consonant and vowel phonemes, that young learners in kindergarten have acquired the ability to recognize, distinguish, and accurately reproduce.	Instrument: Interview and Pretest Technique: Non-participant and participant observations The first instrument, the interview, is designed to identify the teacher's	The variable will be considered valid if the interview details the

	methods and the curriculum's expectations regarding phonological awareness at this level. The researcher will observe a class session, followed by conducting an interview with the homeroom teacher.	specific teaching strategies employed by the teacher and confirms that these strategies address at least 70% of the curriculum's stated objectives for phonological awareness.
	The second instrument, the pretest, is intended to assess the number of vowel and consonant phonemes that students are able to recognize at	The variable will be considered valid in the pretest if at least 70% of the students are able to accurately recognize all the

			the beginning of the investigation. Instruments: checklist (postest) and likert scale Technique: Participant observation	expected vowel and consonant phonemes.
To determine how kinesthetic strategies improve phonological awareness in kindergarten students at Saint Francis Collage during the second quarter, 2024.	How kinesthetic strategies improve phonological awareness in kindergarten students.	The comprehensive understanding of the manner in which physical and movement-based techniques positively impact the development of phonological awareness among children in kindergarten.	The third instrument, a checklist, will be used to identify the number of phonemes and vowels that students recognize at the end of the investigation. The fourth instrument, a Likert scale, will be used to determine how the	The variable will be considered valid in the checklist if at least 70% of the students can accurately recognize the beginning sounds of words.

			kinesthetic activities affect students' participation, behavior, and engagement, as well as how they improve phonological awareness.	The variable will be considered valid on the Likert scale if at least 70% of the students demonstrate improvement in participation, behavior, and engagement during the implementation of kinesthetic strategies.
To analyze the improvement of phonological awareness in kindergarten students at Saint Francis Collage during the second quarter, 2024 by comparing pre-test	The improvement of phonological awareness in kindergarten students	The overarching comprehension of the enhancements, advancements, or progress observed in the ability of young children at the kindergarten level to	Instruments: Journal Technique: observation and analysis The fifth instrument, a journal, is intended to obtain detailed	The variable will be considered valid if the journal records

results, post-test results, and observations.	recognize, differentiate, and manipulate the individual sounds, syllables, and phonemes present in spoken language.	information for each session.	comprehensive notes on the activities, student responses, and any observed changes in behavior or engagement during each session, providing qualitative data to support the study's findings.

Source: Developed by Kristhel Chinchilla Quirós (2024)

3.5 TECHNIQUES AND INSTRUMENTS

The investigator devised a set of tools aimed at gathering vital data essential for drawing conclusions in the study. Most of the instruments aim to determine the progress of students' phonological awareness development. The researcher provides an elaborate account of these instruments in the subsequent paragraphs.

Objective 1: Identifying Known Consonant and Vowel Phonemes

For the first specific objective, to identify the number of consonant and vowel phonemes that kindergarten students at Saint Francis College know, the researcher designed two instruments:

1. Interview with the Homeroom Teacher: This semi-structured interview aims to identify the teacher's methods and the curriculum's expectations regarding phonological awareness at this level. Interviews are valuable tools for gaining insights into participants' experiences and perspectives (Gill et al., 2008). See Annex 1
2. Pre-Test (Handout): A worksheet similar to those used in the homeroom teacher's lessons will be administered to assess the number of vowel and consonant phonemes that students recognize at the beginning of the investigation. Pre-tests are commonly used to establish a baseline for future comparisons (Dimitrov & Rumrill, 2003). See Annex 2.

Technique

Non-Participant Observation: The researcher will observe a class session without engaging with the students to understand classroom dynamics and teaching methods (Kawulich, 2005).

Participant Observation: During the administration of the pre-test, the researcher will engage with the students to establish a connection while gathering the necessary information (Kawulich, 2005). The use of traditional methods at the beginning will provide a baseline to observe changes in students' behavior, participation, and enthusiasm over time.

Objective 2: Determining the Impact of Kinesthetic Strategies

For the second specific objective, to determine how kinesthetic strategies improve phonological awareness in kindergarten students, the researcher created two instruments:

1. Checklist: This instrument will be used during the last session to assess students' recognition and production improvement after ten sessions of kinesthetic activities. Checklists are effective for recording the presence or absence of specific behaviors or skills (Miller, 2015). See Annex 3
2. Likert Scale: Applied in every session, the Likert scale will measure how kinesthetic activities affect students' participation, behavior, engagement, and improvement in phonological awareness. Likert scales are useful for gauging attitudes and perceptions (Joshi et al., 2015). See Annex 3

Technique

Participant Observation: The researcher will actively engage with the students during the kinesthetic activities to observe and record their responses (Kawulich, 2005).

Objective 3: Analyzing Improvement through Comparative Analysis

For the third specific objective, to analyze the improvement of phonological awareness by comparing pre-test results, checklist (post-test) results, and observations, the researcher employed one instrument:

1. Journal: A detailed journal will be maintained for each session to record observations, reflections, and notable events. Journals are valuable for qualitative data collection and tracking changes over time (Ortlipp, 2008). See Annex 5.

Techniques

Observation and Analysis: The researcher will systematically analyze the data collected from the pre-test, post-test, and journal entries to determine the effectiveness of the kinesthetic strategies (Patton, 2002).

Chapter IV

Analysis and Interpretation of data

4.1 DIAGNOSTIC OF THE CURRENT SITUATION

In this chapter, the researcher outlines the tools employed to gather pertinent information regarding the study and its participants. These tools are designed to aid in the thorough interpretation of the collected data, encompassing analysis, and explanation to uncover meaningful insights. Furthermore, this chapter seeks to elucidate and interpret the various perceptions and reactions exhibited by students concerning the topic of study. By achieving this, it offers an in-depth perspective on the students' experiences, facilitating more well-founded conclusions and suggestions related to the research subject.

4.1.1 Analysis of the Interview with the homeroom teacher

The interview (See Annex 1) explores different aspects of the teacher's approach to phonological awareness, providing valuable insights. It delves into instructional strategies, materials and resources used, specific activities and exercises implemented, and differentiation techniques to accommodate diverse learning needs. Additionally, it covers the assessment practices employed to monitor students' progress in phonological awareness and the benchmarks or standards expected to be achieved by the end of kindergarten. The responses provide a comprehensive understanding of how phonological awareness is taught and assessed, aligning with the broader goals of early childhood education.

Table 7

Tittle: Analysis of the Interview with the homeroom teacher

Question	Teacher's Answer	Analysis
1. Can you describe your general approach to teaching phonological awareness in your classroom?	I employ a student-centered approach to teach phonological awareness. I incorporate interactive and engaging activities that cater to various learning styles. My aim is to provide young learners with multisensory and hands-on learning experiences that make learning meaningful and enjoyable.	The teacher's use of a student-centered approach highlights the importance of catering to different learning styles, which can enhance engagement and retention of phonological skills.
2. What materials and resources do you use to support phonological awareness instruction (e.g., books, manipulatives, digital tools)?	I use a variety of materials and resources to support phonological awareness instruction, including books, manipulatives, and digital tools, to engage students and reinforce their learning.	The teacher's choice to use diverse materials indicates a comprehensive strategy to reinforce phonological awareness, utilizing multiple modes of instruction to cater to varied learning preferences.

3. How do you select these materials?	When selecting materials, I prioritize engagement and alignment with curriculum goals. I choose resources that are age-appropriate, visually appealing, and directly support the learning objectives. Additionally, I consider the diverse needs of my students by selecting materials that offer differentiated levels of difficulty.	By selecting age-appropriate and curriculum-aligned materials, the teacher ensures that instructional tools are both engaging and effective in meeting educational objectives.
4. Can you provide 2 examples of activities or exercises you use to help students recognize and produce consonant and vowel phonemes?	I use phonics songs and chants to reinforce letter sounds through repetition and rhythm. Additionally, I incorporate hands-on activities, such as letter formation with different materials, and worksheets.	The use of songs, chants, and hands-on activities reflects an understanding of the need for varied and interactive learning experiences to solidify phonemic awareness.
5. How do you differentiate instruction to meet the diverse needs of your students	I differentiate instruction by employing various methods and materials tailored to different learning styles and	The teacher demonstrates an awareness of the diverse needs within a classroom, employing various instructional methods to

in phonological awareness?	abilities. This includes small group instruction, one-on-one interventions, and peer tutoring to provide targeted support based on individual needs.	provide targeted support for all learners.
6. What strategies do you use for students who struggle with phonological awareness?	To support students struggling with phonological awareness, I use several strategies: • Repetition and Reinforcement. • Multisensory Activities • Peer Tutoring	The strategies mentioned suggest a well-rounded approach to intervention, combining multisensory activities with repetition and peer support to address different areas of difficulty in phonological awareness.
7. What are the specific goals of the kindergarten curriculum regarding phonological awareness?	The kindergarten curriculum aims for students to recognize letter names, identify letter sounds, learn related vocabulary, and identify beginning and ending sounds. These goals lay the foundation for reading and writing development by building essential literacy skills.	The specific goals outlined provide a clear understanding of the expectations for phonological awareness at the kindergarten level, emphasizing foundational literacy skills.

8. How do you assess students' phonological awareness throughout the year?	I use formative assessments, such as observations, checklists, and informal assessments during daily activities, to monitor students' phonological awareness throughout the year. This continuous monitoring allows me to track progress and adjust instruction as needed to support each student's development.	The use of formative assessments indicates a proactive approach to monitoring student progress, allowing for timely interventions to support continuous improvement.
9. What are the benchmarks or standards for phonological awareness that students are expected to achieve by the end of kindergarten?	By the end of the school year, students are expected to meet benchmarks aligned with the curriculum goals, including recognizing and naming all uppercase and lowercase letters, identifying primary sounds for each letter, segmenting and blending sounds in simple words, recognizing and producing rhyming words, and	The benchmarks outlined serve as measurable targets for phonological awareness development, ensuring that all students are equipped with the necessary skills for reading and writing success.

identifying beginning and
ending sounds in words.

Source: Interview applied to kindergarten homeroom teacher at Saint Francis Collage, Alajuela, 2024.

4.1.2 Analysis of the Pre – Test

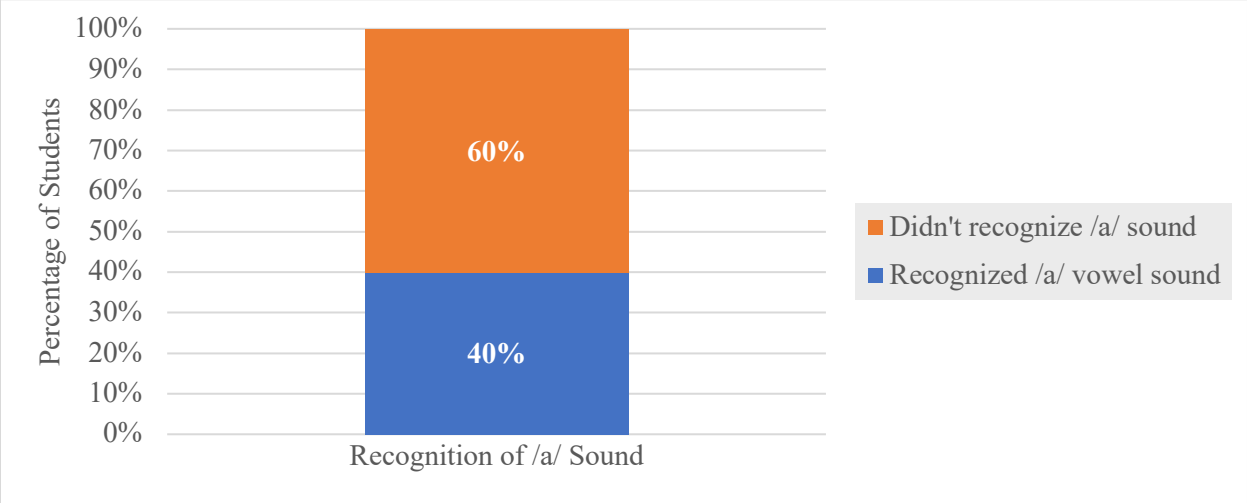
The pretest (See Annex 2) evaluates the initial phonemic awareness of the kindergarten students at Saint Francis Collage, Alajuela. Specifically, it aims to assess the number of vowel and consonant phonemes that students can recognize at the onset of the investigation. This assessment serves as a starting point, providing crucial data on the students' existing phonological skills. By establishing a clear baseline, the pretest ensures that progress can be accurately monitored and analyzed, contributing to the overall validity and effectiveness of the research.

The first part of the assessment focused on evaluating the students' ability to recognize various vowel sounds, which is critical for developing phonemic awareness. The following figures present the recognition rates for each vowel sound—/a/, /e/, /i/, /o/, and /u—among the students. These figures illustrate the students' current understanding of these vowel sounds, highlighting areas where additional support or targeted instruction may be necessary to enhance phonological development.

The **Figure 1** shows that 40% of the students were able to recognize the vowel sound /a/ as in "apple." This result indicates that less than half of the students have a basic understanding of this vowel sound, suggesting the need for additional instructional strategies to reinforce the recognition of the /a/ sound in different contexts.

Figure 1

Tittle: Students Recognition Rates for the Vowel "A"



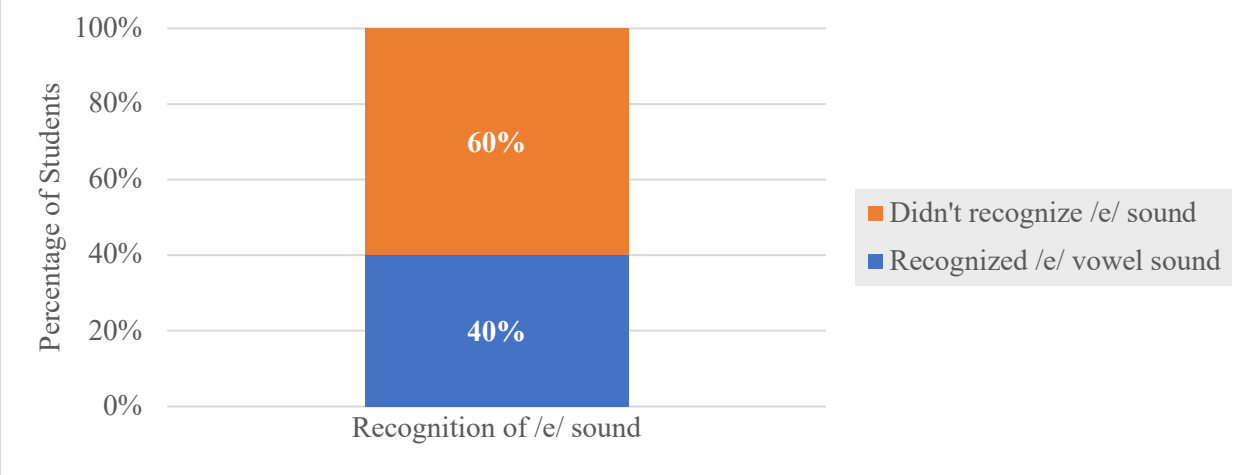
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The low recognition rate for the vowel sound /a/ suggests that incorporating kinesthetic strategies, which engage students physically while they learn phonemic elements, could significantly improve their recognition and retention of this sound. These strategies would make learning more interactive, leading to deeper comprehension.

The **Figure 2** illustrates the recognition rate for the vowel sound /e/ as in "elephant," with 40% of the students correctly identifying this sound. This result indicates a similar level of recognition difficulty among the students for the vowel sound /e/, implying that targeted educational interventions focusing on vowel sound differentiation and practice could be beneficial.

Figure 2

Tittle: Students Recognition of the Vowel Sound /e/



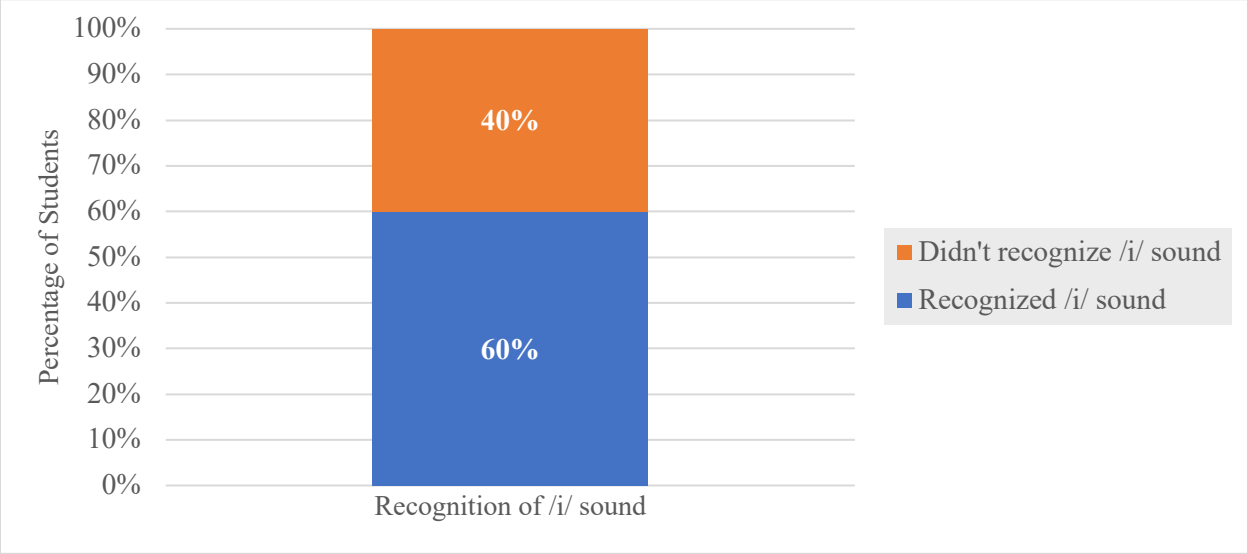
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Given that the recognition rate for /e/ mirrors that of /a/, there is a consistent difficulty among students in recognizing these early phonemes. Further instruction, possibly through kinesthetic strategies and multisensory activities, could improve their ability to distinguish between these sounds.

The **Figure 3** presents a more favorable outcome, with 60% of the students successfully recognizing the vowel sound /i/ as in "igloo." Although this recognition rate is higher than that for /a/ and /e/, a considerable portion of students would still benefit from continued exposure and activities aimed at enhancing their familiarity with the /i/ sound.

Figure 3

Tittle: Students Recognition of the Vowel Sound /i/



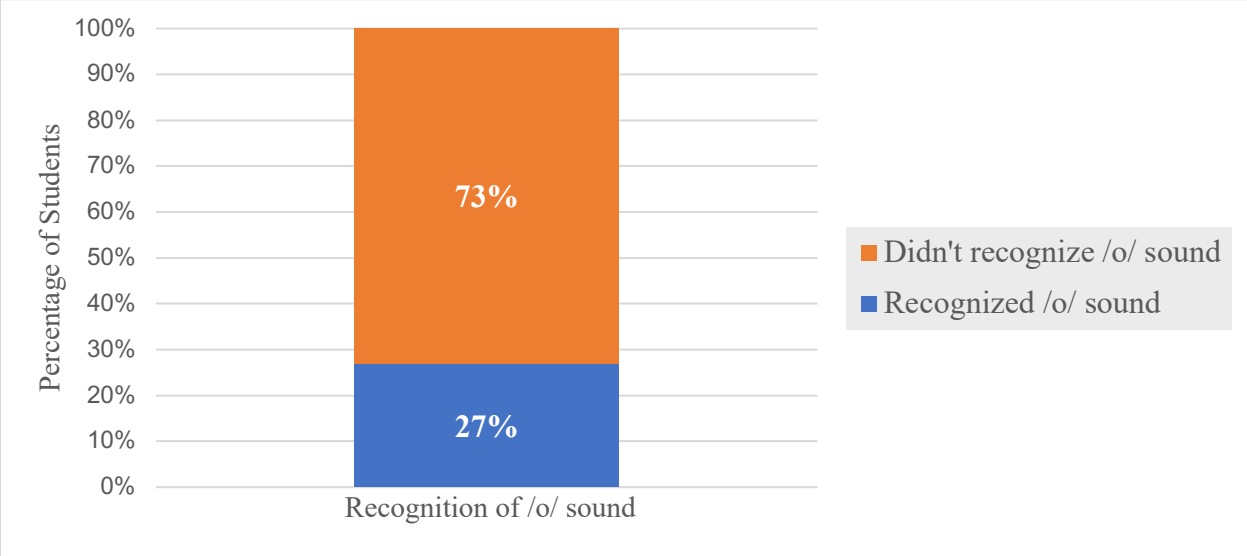
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Although the recognition rate for /i/ is higher, a portion of students still struggles. Kinesthetic learning activities could provide the necessary reinforcement, engaging students through multi-sensory learning that combines physical action with phonemic practice.

The **Figure 4** highlights the recognition rate for the vowel sound /o/ as in "octopus," which is the lowest among all the vowel sounds assessed, at 26.67%. This result suggests that most of the students struggle with recognizing the /o/ sound, pointing to a significant need for focused interventions and practice to strengthen their phonemic awareness in this area.

Figure 4

Tittle: Students Recognition of the Vowel Sound /o/



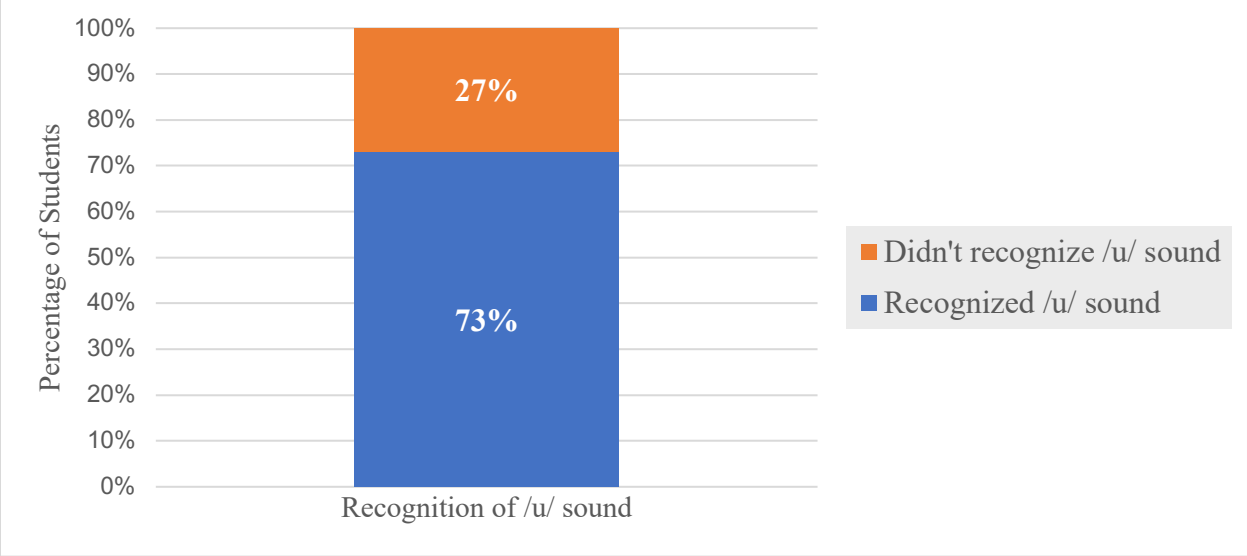
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The particularly low recognition rate for /o/ suggests a critical need for intervention. Kinesthetic strategies that integrate movement and tactile learning with sound recognition could help students build stronger connections with this vowel sound.

The **Figure 5** demonstrates that 73.33% of the students were able to recognize the vowel sound /u/ as in "umbrella." This is the highest recognition rate among the vowel sounds assessed, indicating that most students have a relatively strong grasp of this vowel sound compared to the others. However, some students may still require reinforcement to achieve consistent proficiency.

Figure 5

Tittle: Students Recognition of the Vowel Sound /u/



Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

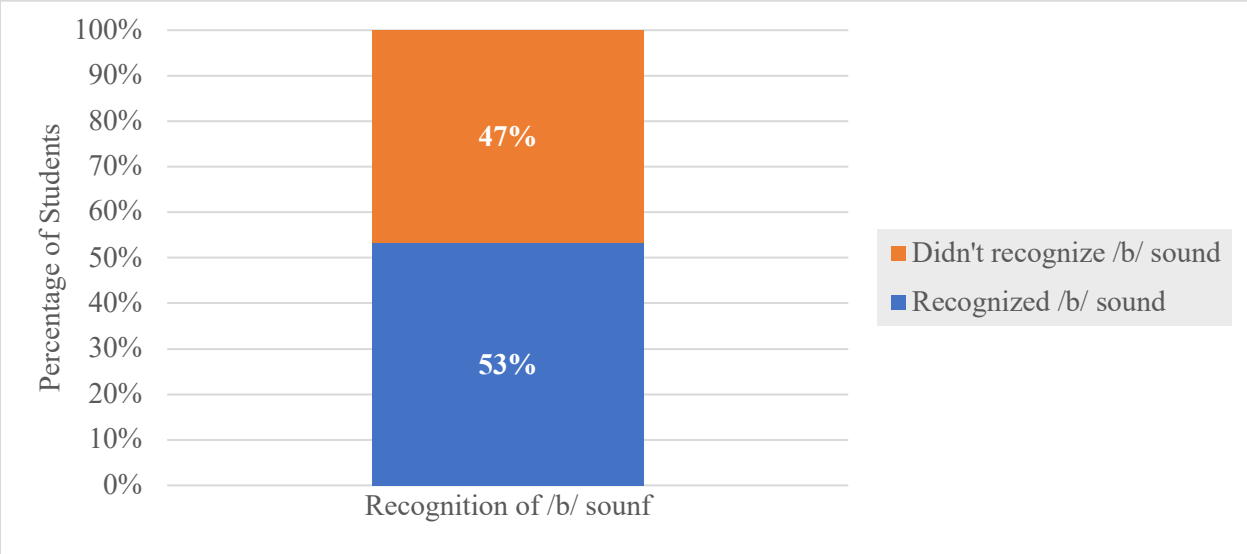
While most students recognize the vowel sound /u/, continued use of kinesthetic strategies can ensure that all students achieve consistent mastery. By engaging students in physical activities aligned with phonemic awareness, their understanding can be solidified.

The second part of the pretest assessed the students' ability to recognize various consonant sounds, which is a vital component of phonemic awareness and early literacy development. The results presented below show the percentage of students who recognized each consonant sound, providing insights into their current understanding and highlighting areas where further instruction and support may be necessary.

Figure 6

Tittle: Students Recognition of the Consonant Sound /b/

The **Figure 6** shows that 53.33% of the students were able to recognize the consonant sound /b/ as in "ball." This indicates that just over half of the students have a basic understanding of this consonant sound.



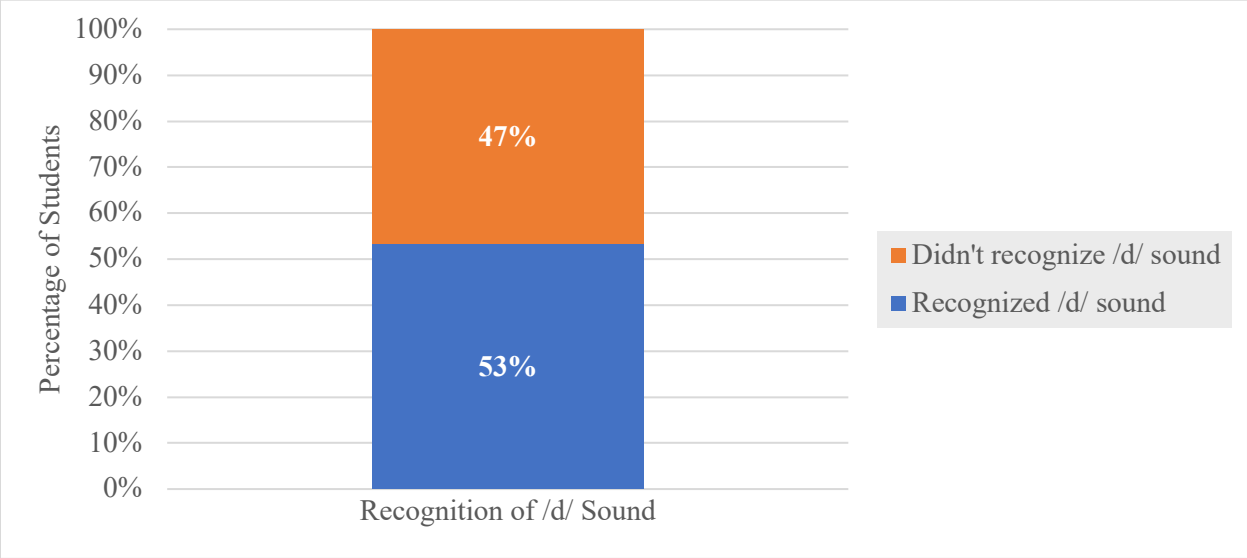
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The recognition rate for the consonant sound /b/ suggests that kinesthetic strategies could enhance students' engagement with this sound. Activities involving physical movement, such as using body movements while saying the sound, may help improve recognition.

Figure 7

Tittle: Students Recognition of the Consonant Sound /d/

The **Figure 7** illustrates that 53.33% of the students correctly identified the consonant sound /d/ as in "dog." This result mirrors the recognition rate for /b/, indicating a similar level of understanding.



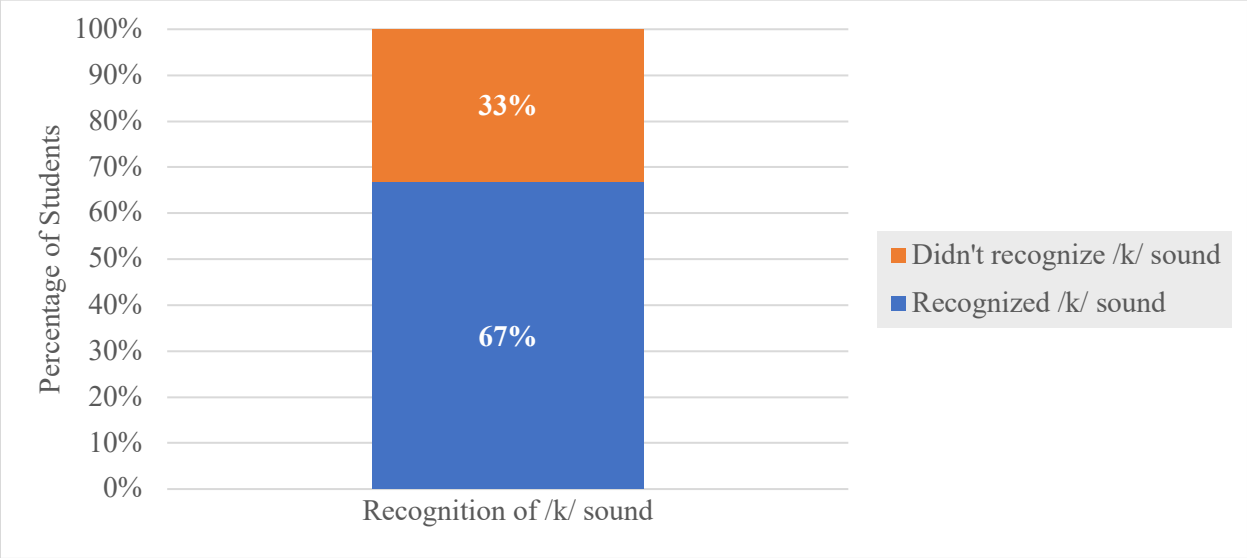
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The consistent recognition rate for /d/ suggests that incorporating kinesthetic learning strategies, like movement-based sound exercises, could help enhance students' ability to retain and differentiate this sound.

Figure 8

Recognition of the Consonant Sound /k/

The **Figure 8** presents that 66.67% of the students recognized the consonant sound /k/ as in "kite." This recognition rate is higher compared to other consonant sounds but still shows that about one-third of the students need additional practice.



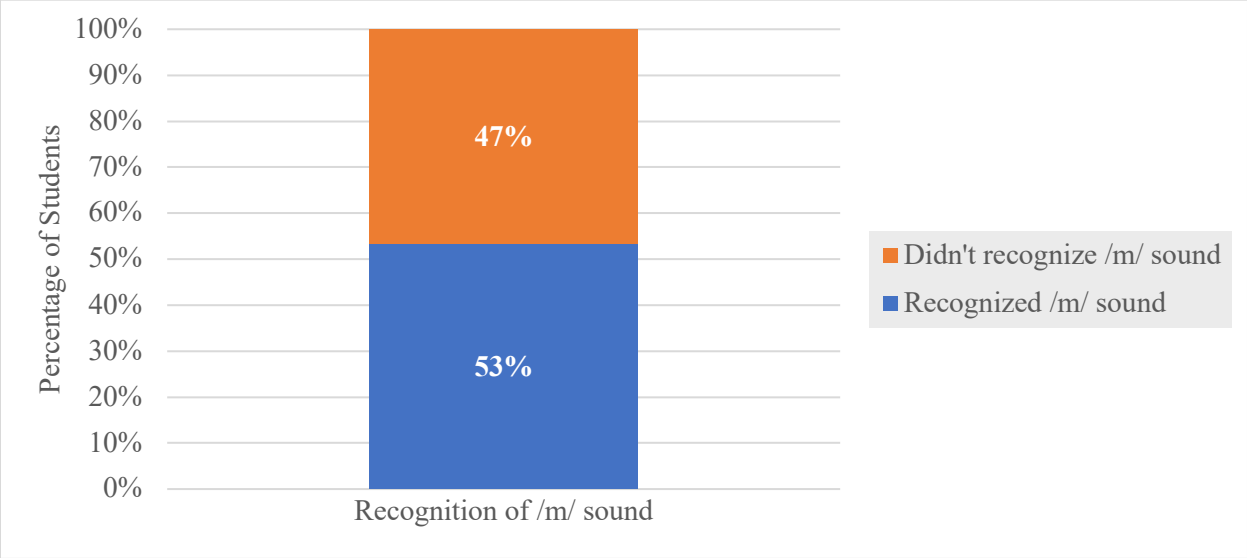
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The relatively higher recognition rate for /k/ suggests that kinesthetic strategies could still be beneficial for the remaining students who need reinforcement, providing a more interactive and engaging learning experience.

Figure 9

Tittle: Students Recognition of the Consonant Sound /m/

The **Figure 9** shows that 53.33% of the students were able to recognize the consonant sound /m/ as in "mat." This suggests a need for focused activities to reinforce recognition of the /m/ sound.



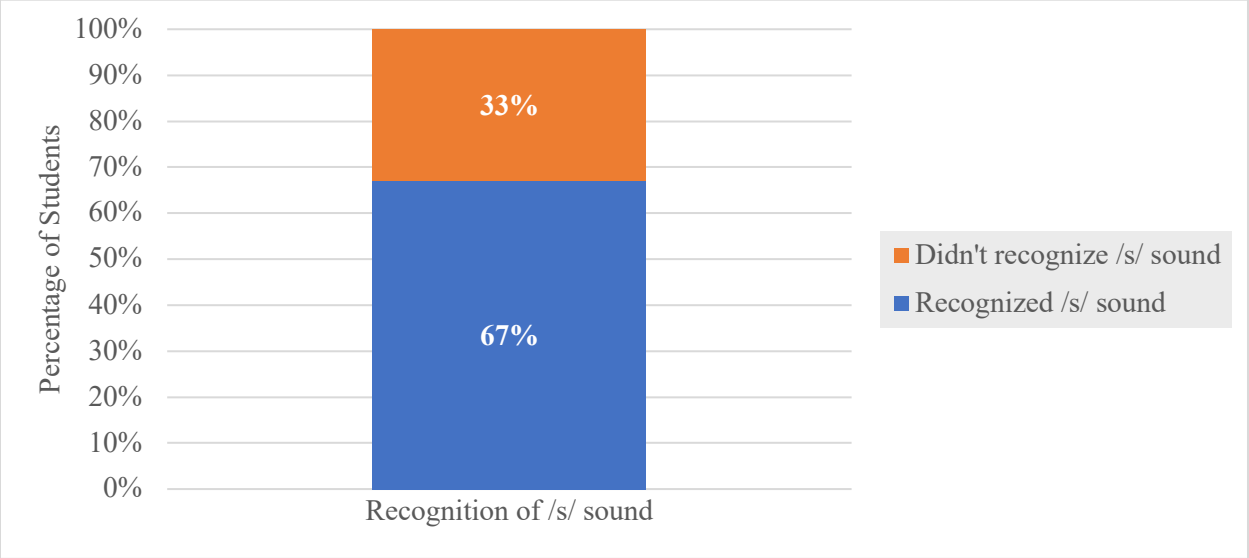
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The use of kinesthetic approaches, such as tracing the letter or performing actions associated with the sound, could improve students' retention and understanding of the /m/ sound.

Figure 10

Tittle: Students Recognition of the Consonant Sound /s/

The **Figure 10** demonstrates that 66.67% of the students were able to recognize the consonant sound /s/ as in "sun." This result is encouraging but indicates that one-third of the students may require additional support.



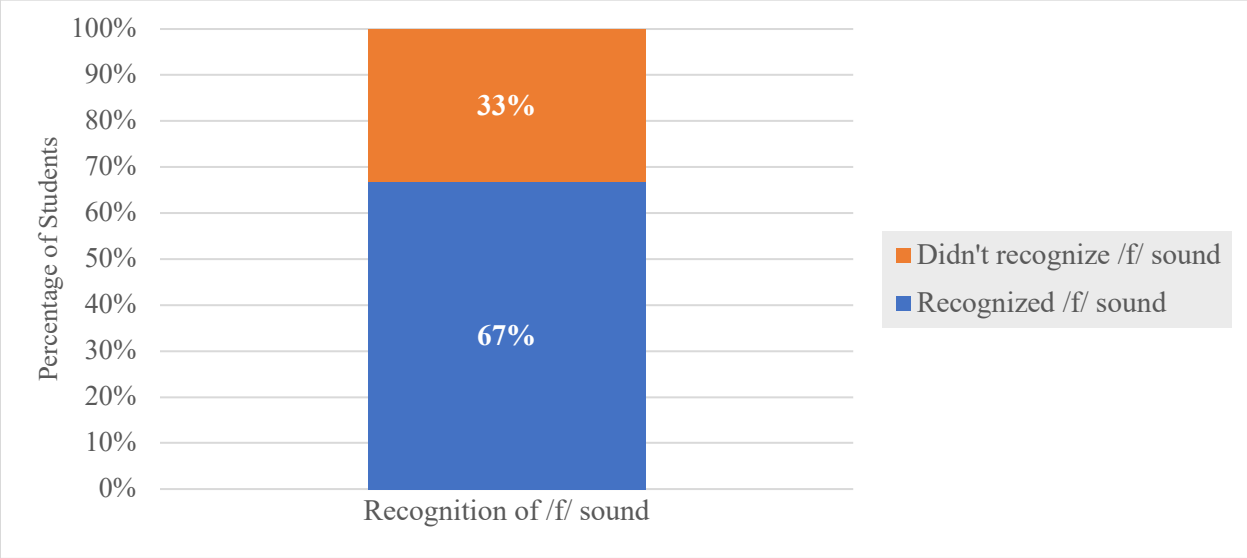
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies that incorporate movement or interactive sound exercises could further strengthen students' recognition of the /s/ sound, making the learning process more dynamic and effective.

Figure 11

Tittle: Students Recognition of the Consonant Sound /f/

The **Figure 11** shows that 66.67% of the students recognized the consonant sound /f/ as in "fan." While the majority are familiar with this sound, some students still need further reinforcement.



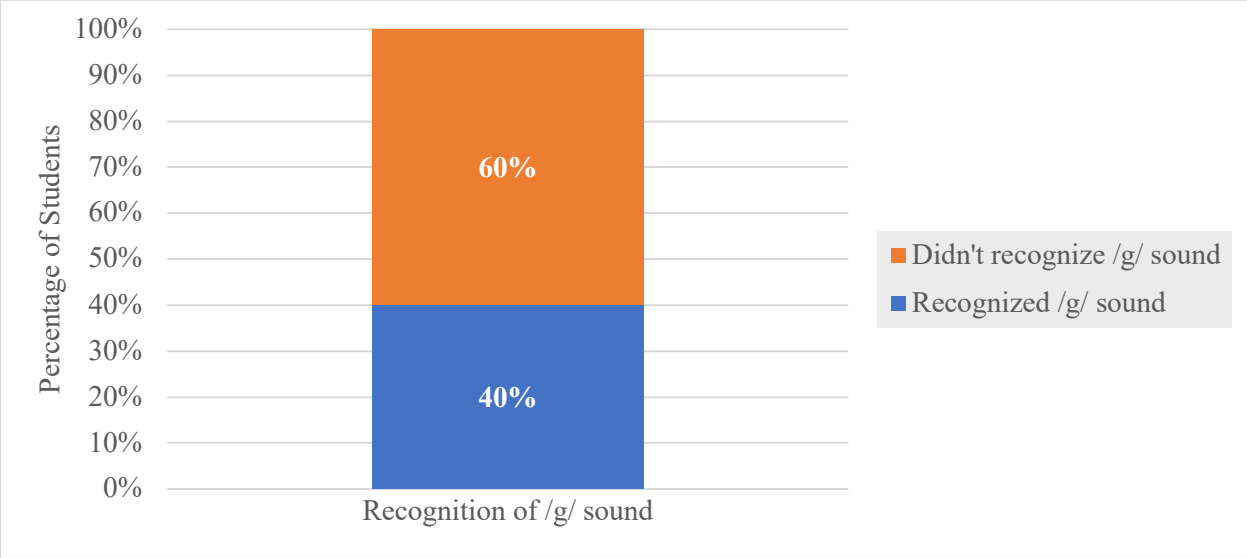
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The moderate recognition rate for /f/ suggests that continued use of kinesthetic learning strategies, such as movement-based activities that involve creating the sound physically, could help improve retention.

Figure 12

Tittle: Students Recognition of the Consonant Sound /g/

The **Figure 12** illustrates that 40% of the students were able to recognize the consonant sound /g/ as in "goat." This lower recognition rate suggests a significant gap in understanding.



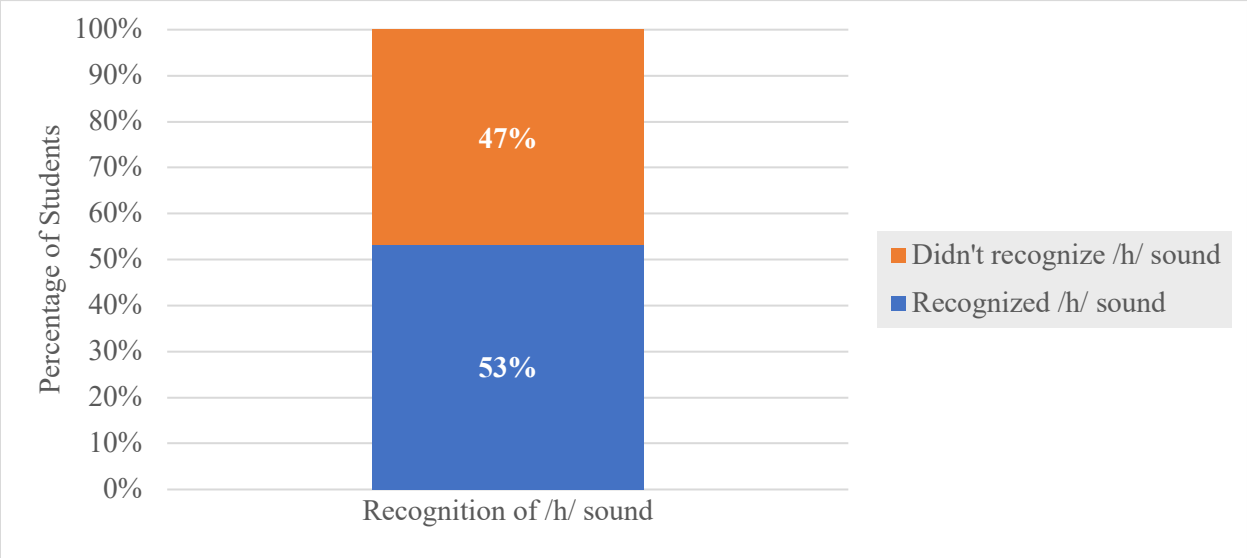
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The low recognition rate for /g/ highlights the need for kinesthetic strategies to actively engage students in learning this sound, making it easier for them to remember through physical engagement.

Figure 13

Tittle: Students Recognition of the Consonant Sound /h/

The **Figure 13** shows that 53.33% of the students recognized the consonant sound /h/ as in "hat." This level of recognition suggests a need for additional teaching strategies.



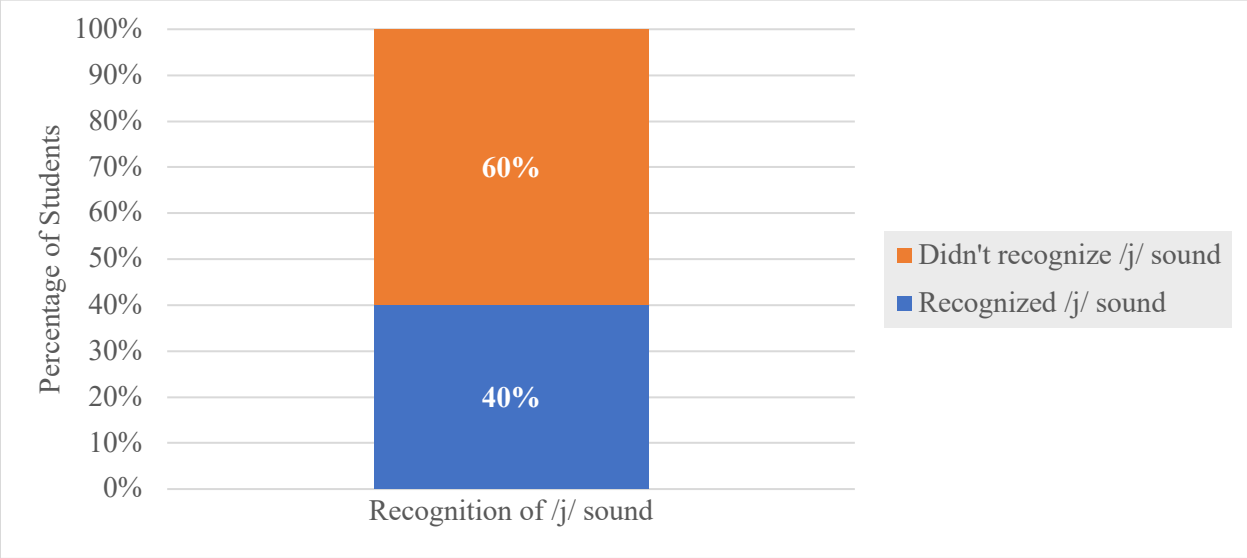
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The recognition rate for /h/ indicates that kinesthetic activities could be beneficial in reinforcing this sound, making learning more active and helping students connect the sound with physical movements.

Figure 14

Tittle: Students Recognition of the Consonant Sound /j/

The **Figure 14** presents that only 40% of the students were able to recognize the consonant sound /j/ as in "juice." This low recognition rate indicates a need for focused phonemic instruction.



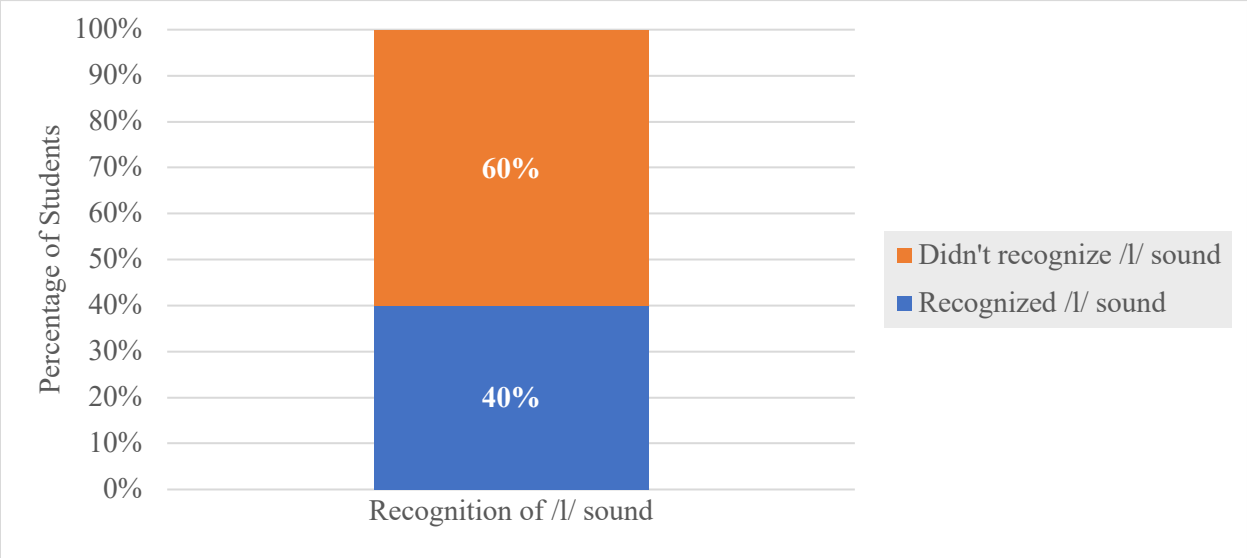
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The low recognition rate for /j/ suggests that kinesthetic learning methods could be useful, helping students improve recognition by engaging them physically in learning the sound.

Figure 15

Tittle: Students Recognition of the Consonant Sound /l/

The **Figure 15** reveals that 40% of the students identified the consonant sound /l/ as in "lamp." This suggests a low level of recognition.



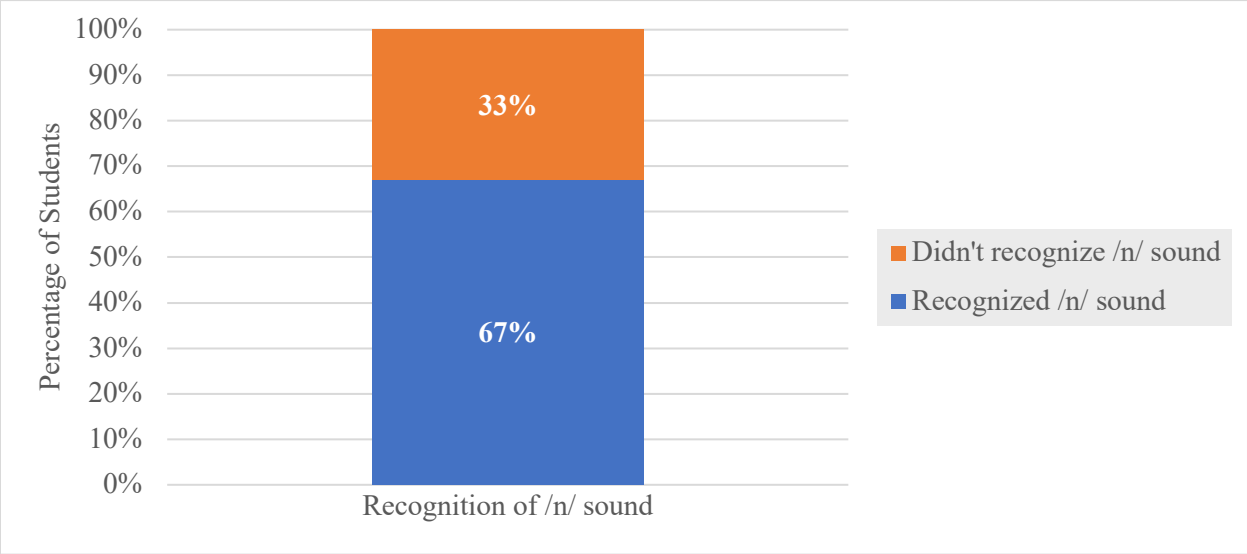
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

To improve recognition of the /l/ sound, incorporating kinesthetic strategies, such as physically forming the shape of the letter, could provide the necessary reinforcement for better understanding.

Figure 16

Tittle: Students Recognition of the Consonant Sound /n/

The **Figure 16** shows that 66.67% of the students recognized the consonant sound /n/ as in "net." While this is a relatively better outcome, continued practice is necessary.



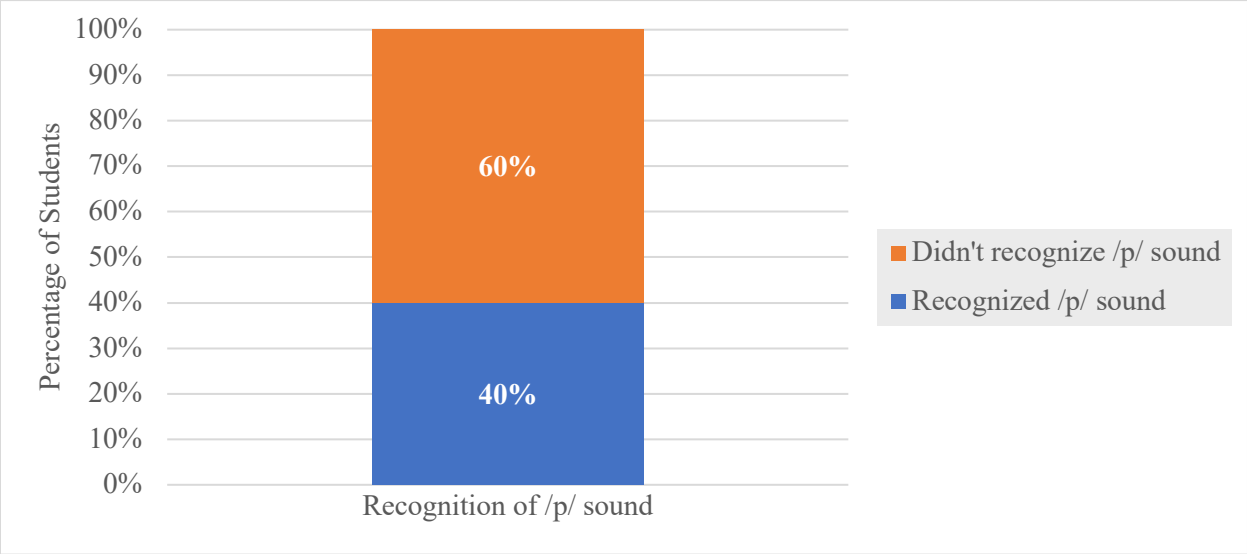
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies could help students who are still struggling to fully grasp this phoneme and improve retention and engagement.

Figure 17

Tittle: Students Recognition of the Consonant Sound /p/

The **Figure 17** indicates that 40% of the students recognized the consonant sound /p/ as in "pig." This reflects a need for additional support.



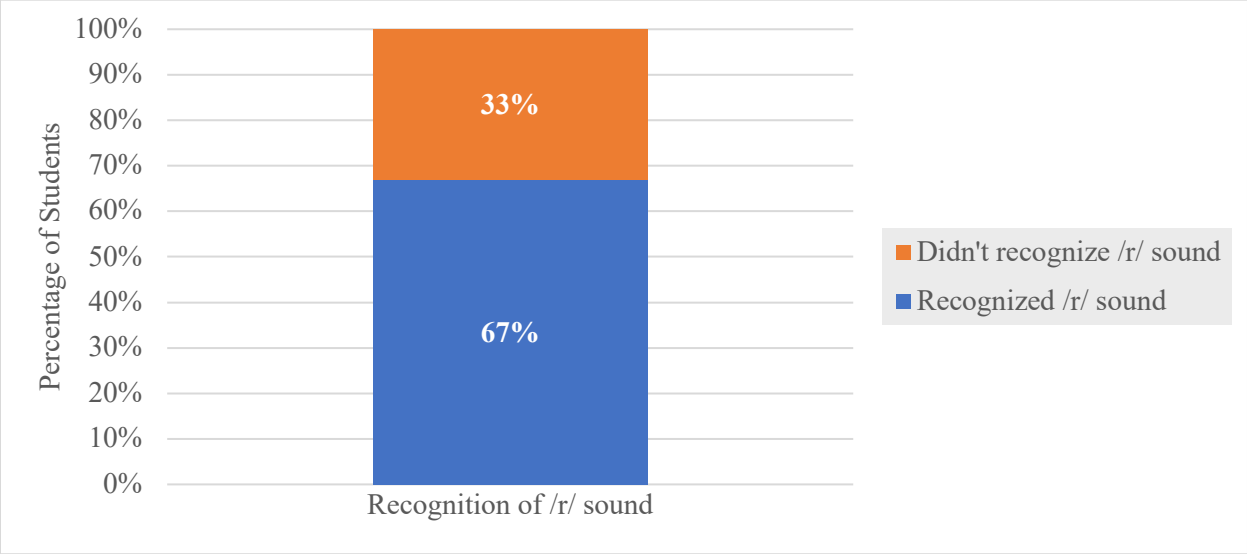
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The low recognition rate for /p/ suggests that kinesthetic strategies could engage students more effectively, helping them retain the sound through active participation in learning.

Figure 18

Tittle: Students Recognition of the Consonant Sound /r/

The **Figure 18** demonstrates that 66.67% of the students recognized the consonant sound /r/ as in "rat." This higher recognition rate shows progress, but further reinforcement is needed for some students.



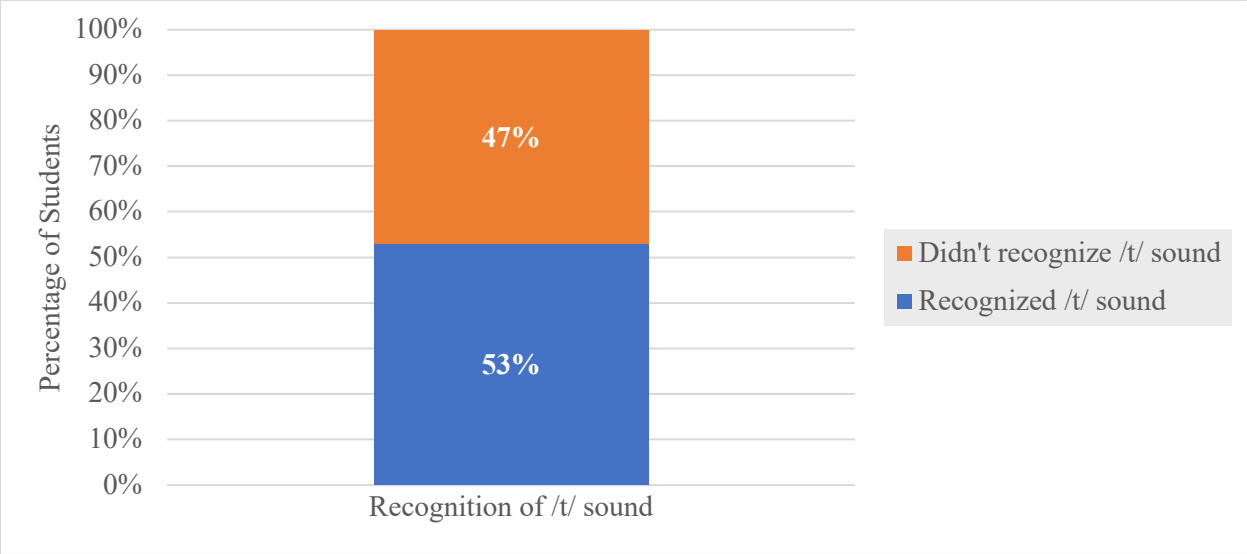
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The recognition rate for /r/ suggests that kinesthetic activities, like sound-focused movement exercises, could enhance understanding and retention for those students who still need reinforcement.

Figure 19

Tittle: Students Recognition of the Consonant Sound /t/

The **Figure 19** shows that 53.33% of the students recognized the consonant sound /t/ as in "tiger." This indicates a moderate level of understanding.



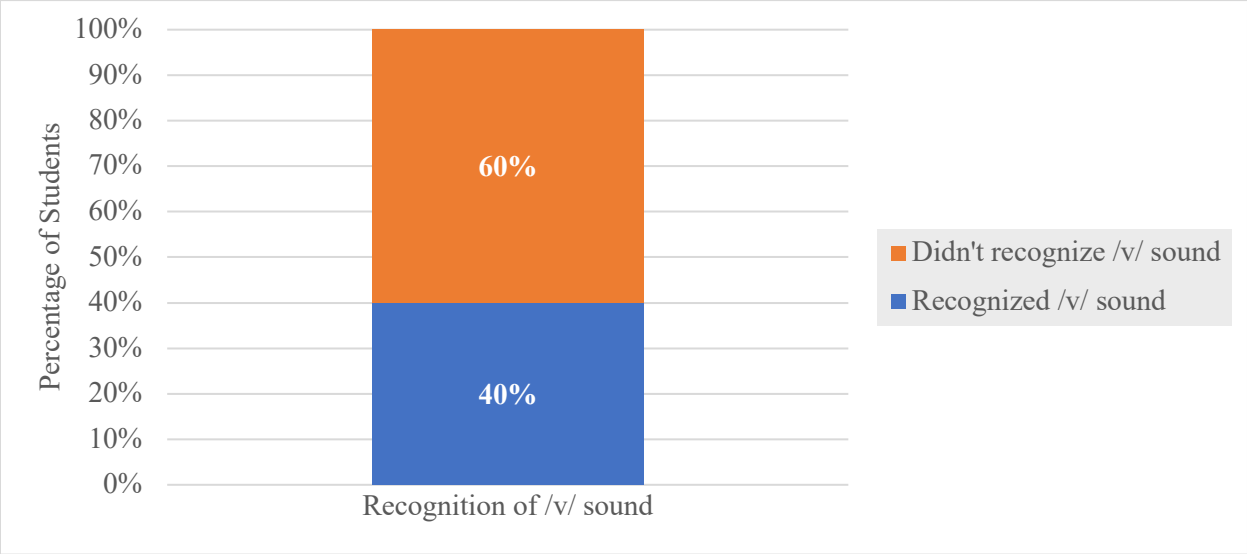
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies could be particularly effective in reinforcing the /t/ sound, making learning more interactive and helping students engage with the sound in a physical way.

Figure 20

Tittle: Students Recognition of the Consonant Sound /v/

The **Figure 20** presents that 40% of the students identified the consonant sound /v/ as in "van." This low recognition rate suggests a critical area for intervention.



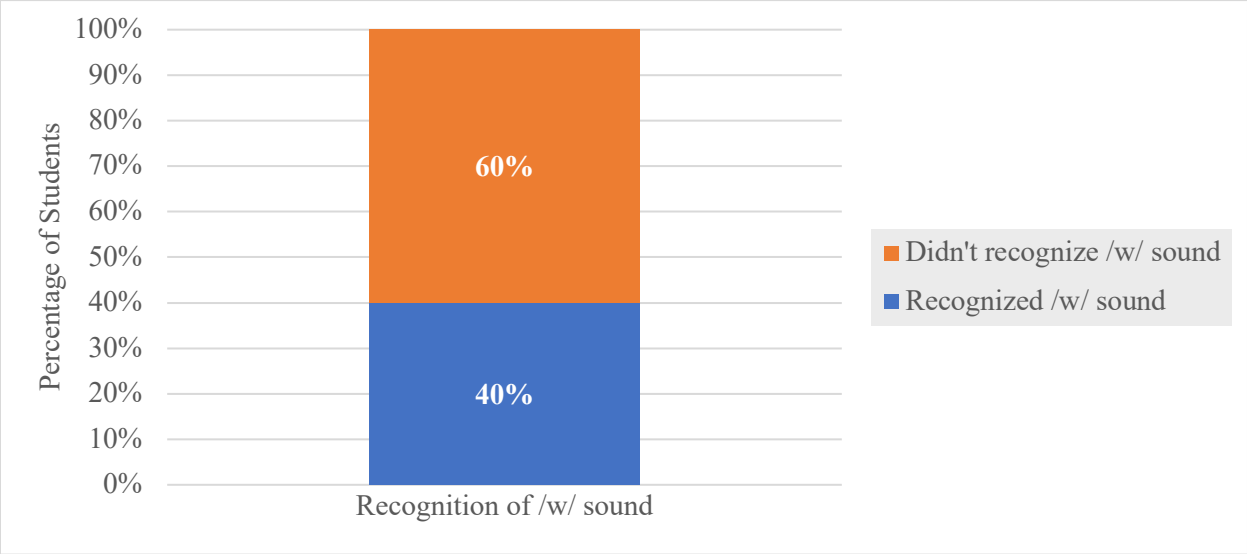
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The low recognition rate for /v/ highlights the need for kinesthetic activities that could help students improve retention of the sound, through engaging and hands-on learning methods.

Figure 21

Tittle: Students Recognition of the Consonant Sound /w/

The **Figure 21** illustrates that 40% of the students were able to recognize the consonant sound /w/ as in "wig." This sound may require targeted support to improve recognition rates.



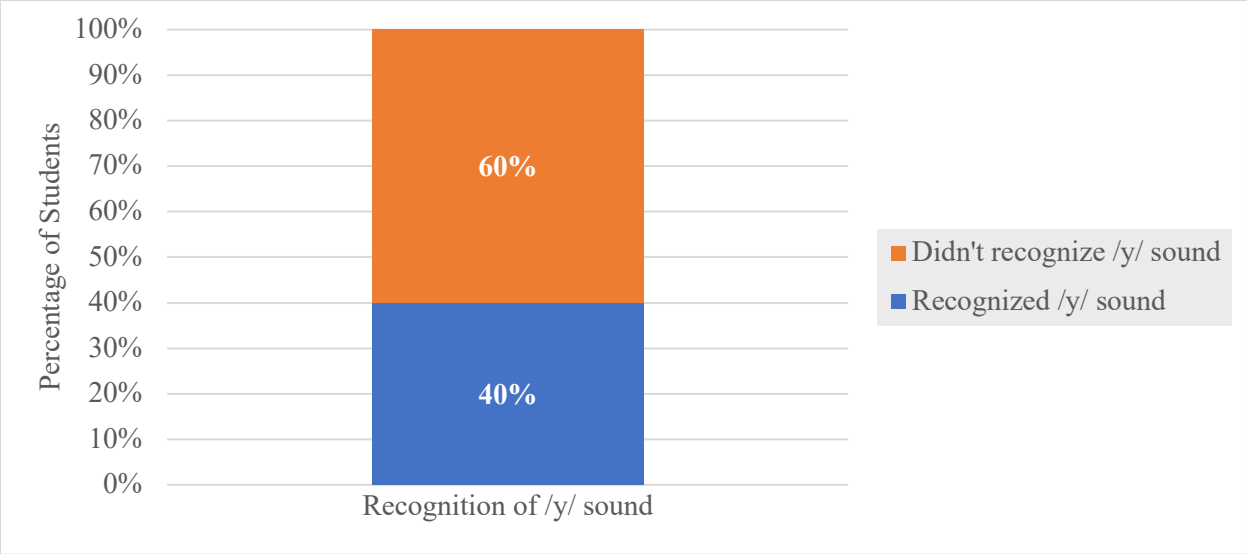
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Incorporating kinesthetic strategies, such as movement-based activities and sound exercises, could improve students' recognition of the /w/ sound, making learning more engaging.

Figure 22

Tittle: Students Recognition of the Consonant Sound /y/

The **Figure 22** reveals that 40% of the students recognized the consonant sound /y/ as in "yoyo." This low recognition rate indicates a significant need for more intensive practice.



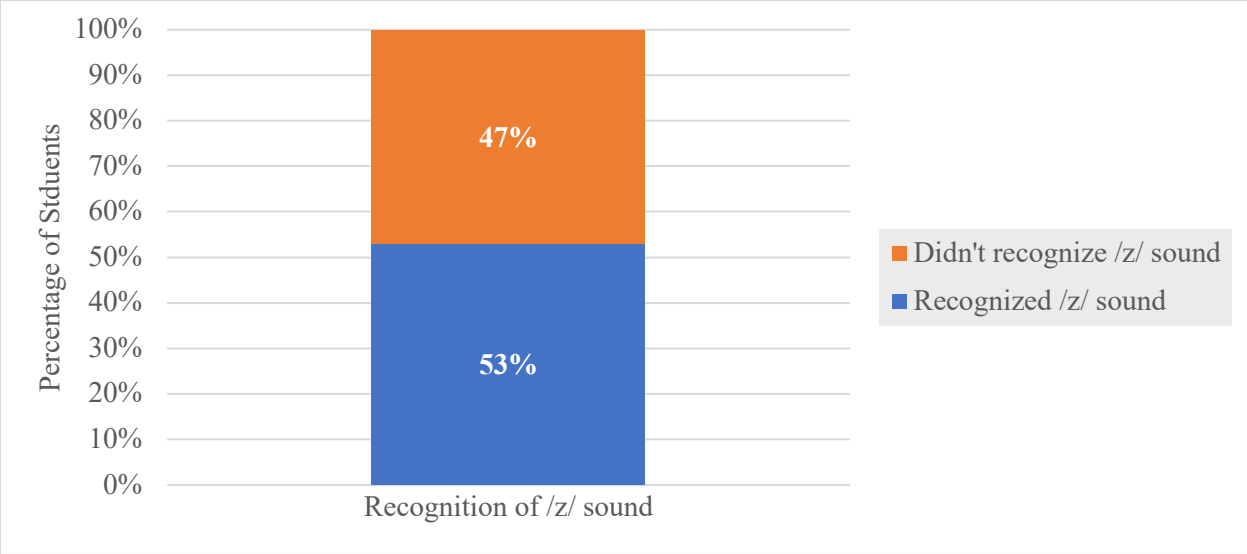
Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The recognition rate for /y/ suggests that kinesthetic strategies could improve phonemic awareness, offering students a more interactive and hands-on approach to learning this sound.

Figure 23

Tittle: Students Recognition of the Consonant Sound /z/

The **Figure 23** shows that 53.33% of the students identified the consonant sound /z/ as in "zebra." This suggests a need for more focused instruction and practice.



Source: Pre-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The moderate recognition rate for /z/ highlights the importance of kinesthetic strategies in reinforcing the sound through movement-based activities and interactive phonemic exercises.

4.1.3 Analysis of the checklist

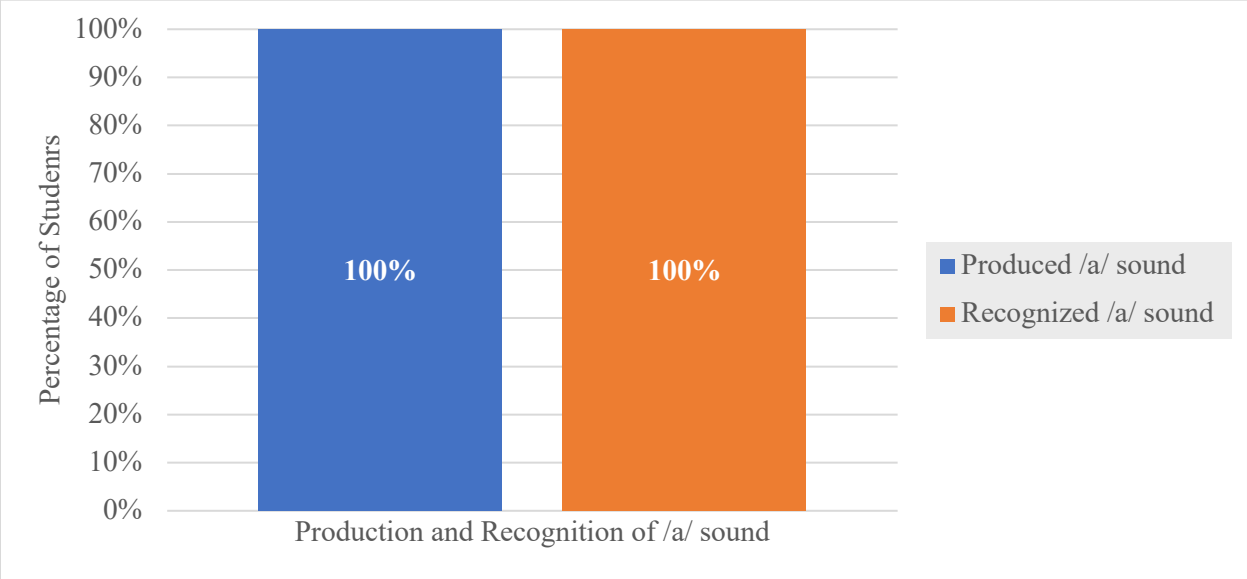
The checklist (See Annex 3) evaluates the number of vowel and consonant phonemes that kindergarten students at Saint Francis College, Alajuela, can recognize and produce by the end of the study. This assessment provides valuable data on the progress made in phonological skills throughout the investigation. The results from the checklist will be used to gauge the effectiveness of the kinesthetic strategies implemented during the study. By capturing the students' phonemic recognition at the end, the checklist provides a comprehensive evaluation of their growth and achievement, thereby enhancing the overall validity and impact of the research.

The first section of the checklist focuses on the recognition and production of vowel phonemes by kindergarten students at Saint Francis College at the end of the study. The results demonstrate significant improvement in phonemic awareness, with all students showing the ability to both recognize and produce all five target vowel sounds.

Figure 24

Tittle: Students Recognition and Production of the Vowel Sound /a/

The **Figure 24** displays the recognition and production of the vowel sound /a/ as in "apple." By the end of the study, 100% of the students were able to both recognize and produce this sound.



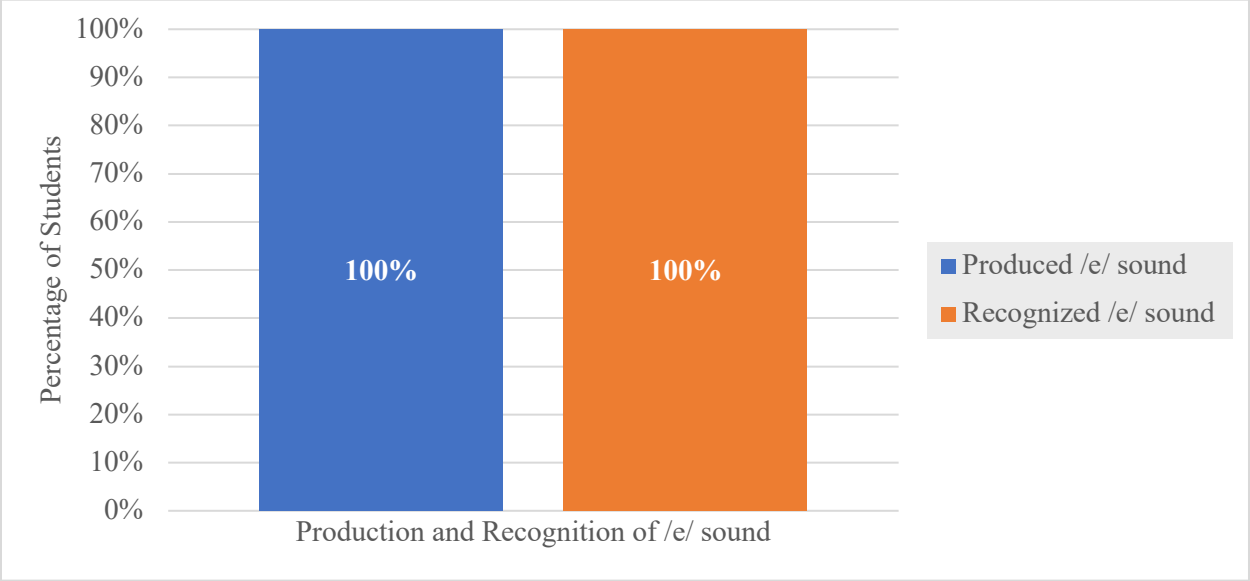
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high recognition and production rate of the vowel sound /a/ reflects the effectiveness of kinesthetic strategies employed throughout the sessions. The combination of active engagement with the sounds through physical movement reinforced students' understanding and helped them internalize this fundamental vowel.

Figure 25

Tittle: Students Recognition and Production of the Vowel Sound /e/

The **Figure 25** shows the recognition and production of the vowel sound /e/ as in "elephant." Like /a/, all students (100%) successfully recognized and produced the sound by the study's conclusion.



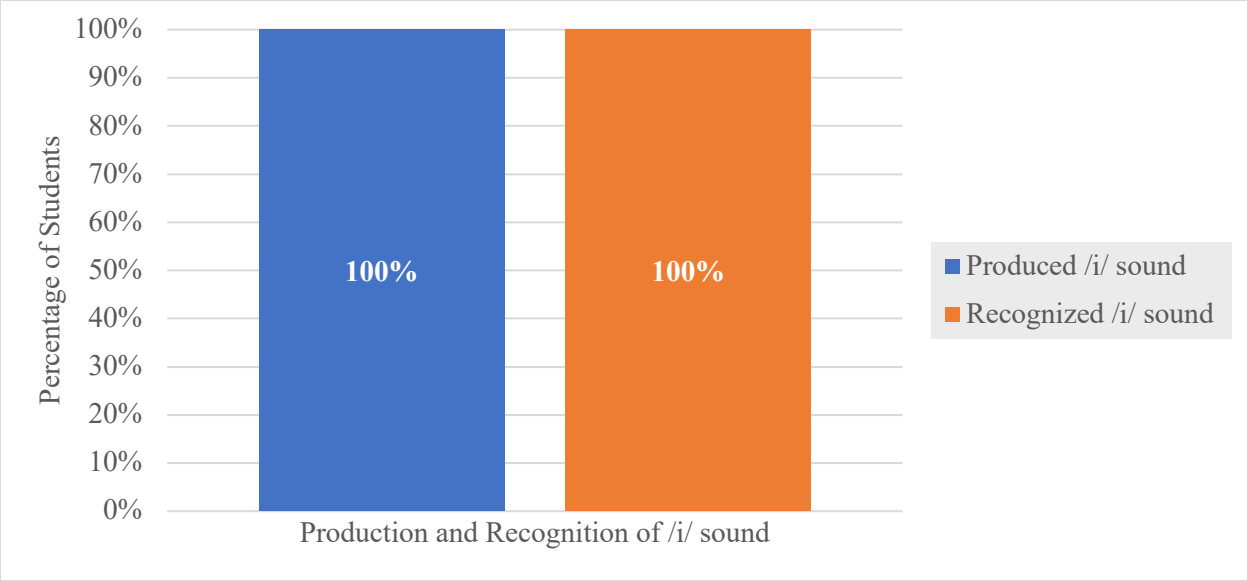
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The consistent success with the vowel sound /e/ further highlights the value of using kinesthetic strategies. These strategies provided students with multisensory experiences, which supported better recognition and production of the vowel in various contexts.

Figure 26

Tittle: Students Recognition and Production of the Vowel Sound /i/

The **Figure 26** demonstrates that 100% of the students successfully recognized and produced the vowel sound /i/ as in "igloo."



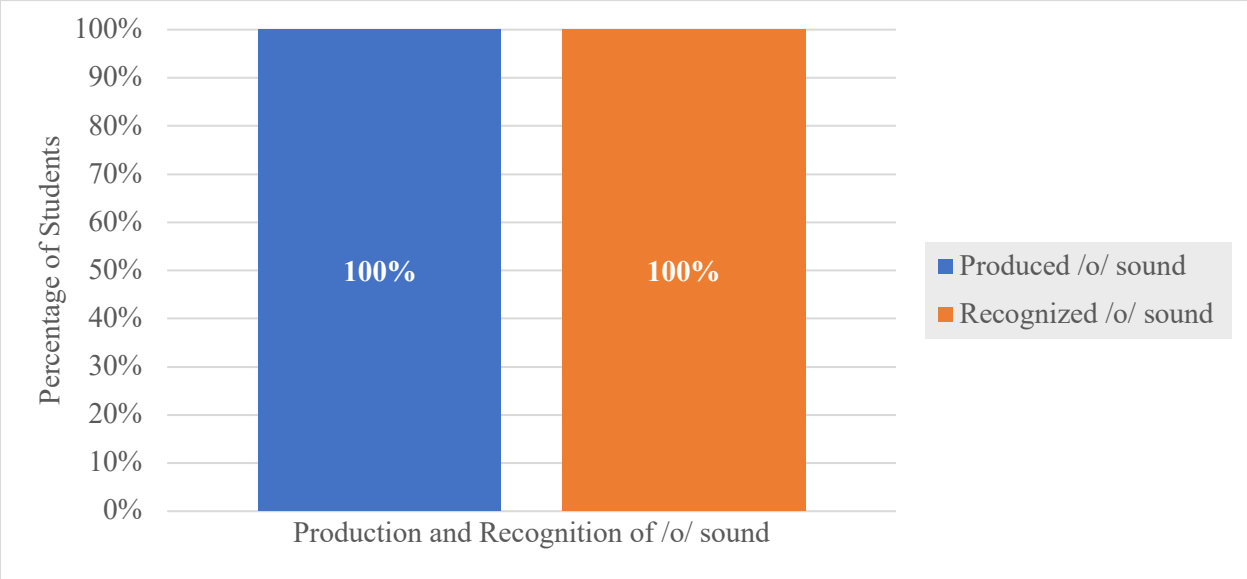
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high level of mastery with the /i/ sound suggests that kinesthetic activities were highly effective. By engaging students in interactive learning, they were able to deepen their understanding of this vowel sound and apply it confidently in practice.

Figure 27

Tittle: Students Recognition and Production of the Vowel Sound /o/

The **Figure 27** highlights the recognition and production of the vowel sound /o/ as in "octopus," with 100% of students accurately identifying and articulating the sound.



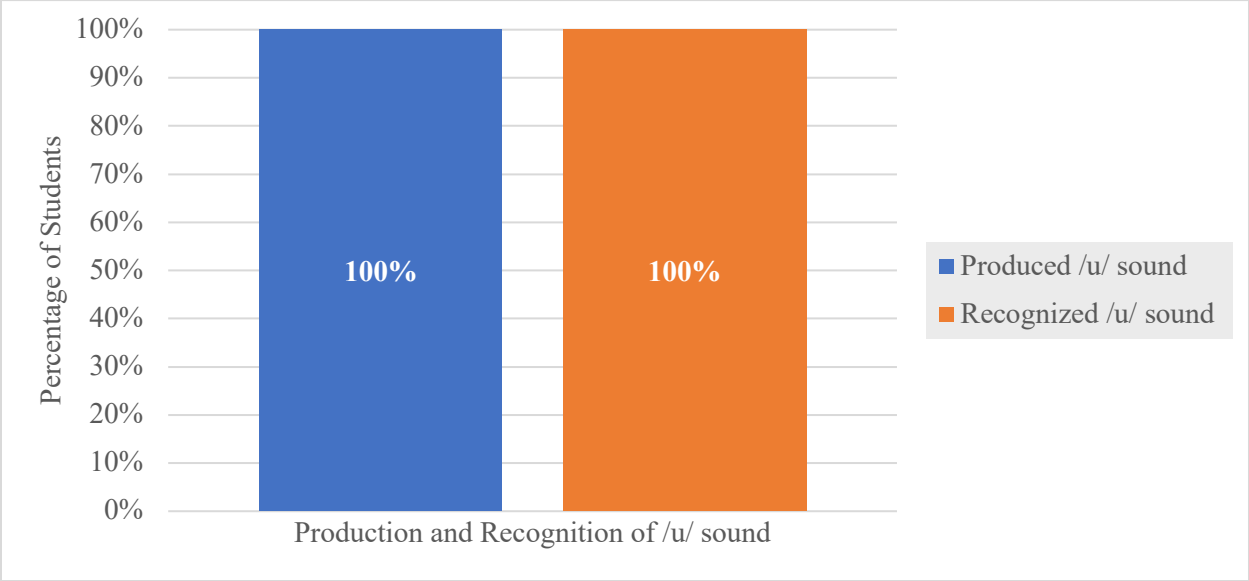
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The perfect score for /o/ recognition and production reflects the success of kinesthetic strategies that involved physical movement and sound reinforcement. This multisensory approach facilitated a robust understanding of the sound among all students.

Figure 28

Tittle: Students Recognition and Production of the Vowel Sound /u/

The **Figure 28** shows that 100% of the students were able to recognize and produce the vowel sound /u/ as in "umbrella."



Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

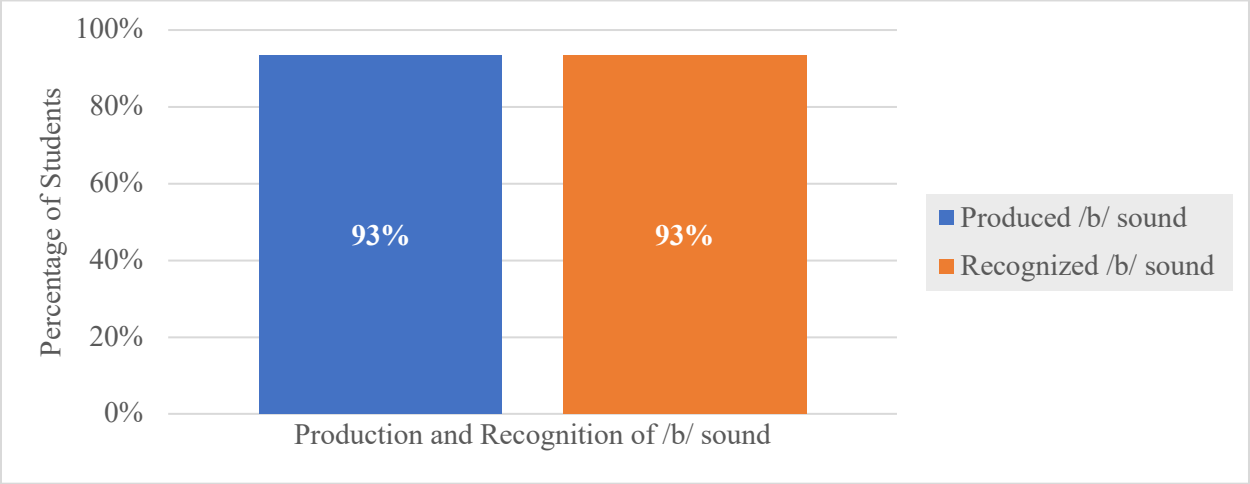
The success rate for /u/ demonstrates the effectiveness of using kinesthetic strategies in reinforcing vowel recognition and production. Through active participation and hands-on learning, students were able to solidify their understanding of this vowel sound.

The second section of the checklist evaluated students' ability to recognize and produce various consonant sounds. The results indicate that most consonant phonemes were successfully recognized and produced by most of the students. However, certain consonants—such as /g/, /j/, /v/, /w/, and /y/—had slightly lower success rates, indicating a need for additional reinforcement.

Figure 29

Tittle: Students Recognition and Production of the Consonant Sound /b/

The **Figure 29** shows that 93.33% of the students were able to recognize and produce the consonant sound /b/ as in "ball."



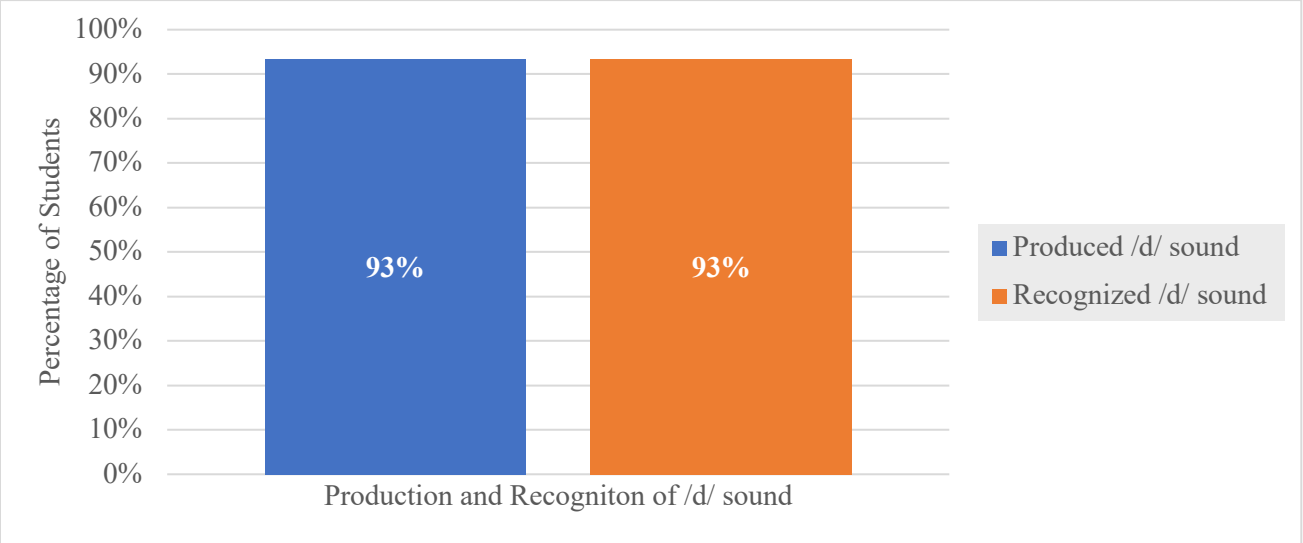
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high success rate for /b/ demonstrates that kinesthetic strategies, such as using physical movements to form letters, were effective. However, additional reinforcement could help the remaining students achieve full mastery.

Figure 30

Tittle: Recognition and Production of the Consonant Sound /d/

The **Figure 30** illustrates that 93.33% of the students successfully recognized and produced the consonant sound /d/ as in "dog."



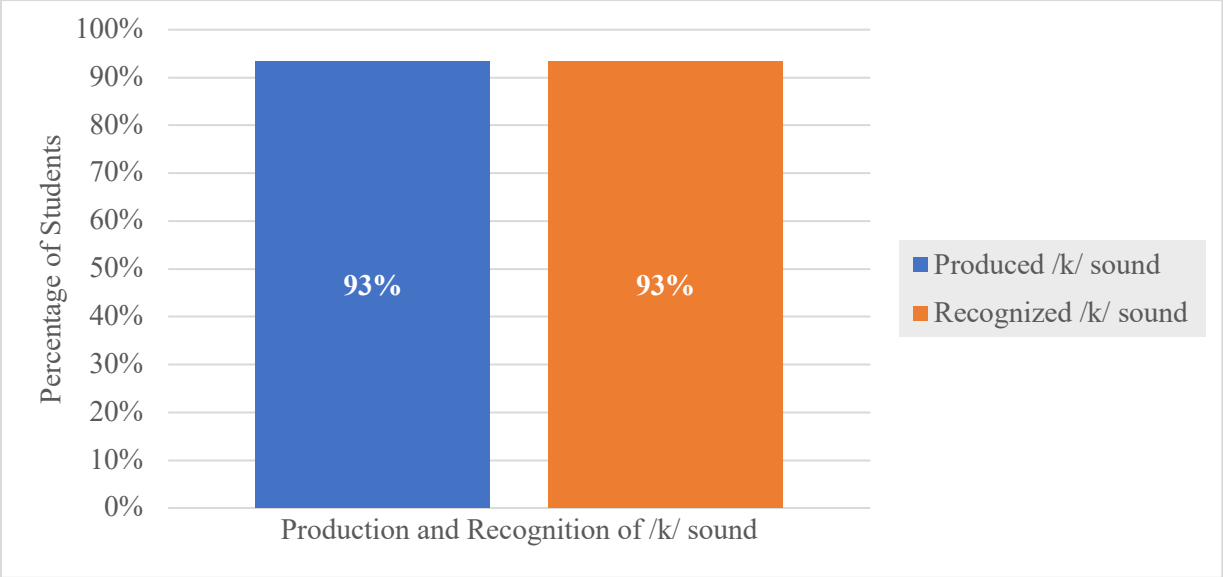
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The application of kinesthetic strategies helped students internalize the /d/ sound. Continued use of these methods may ensure that all students achieve full proficiency with this phoneme.

Figure 31

Tittle: Students Recognition and Production of the Consonant Sound /k/

The **Figure 31** presents that 93.33% of the students were able to recognize and produce the consonant sound /k/ as in "kite."



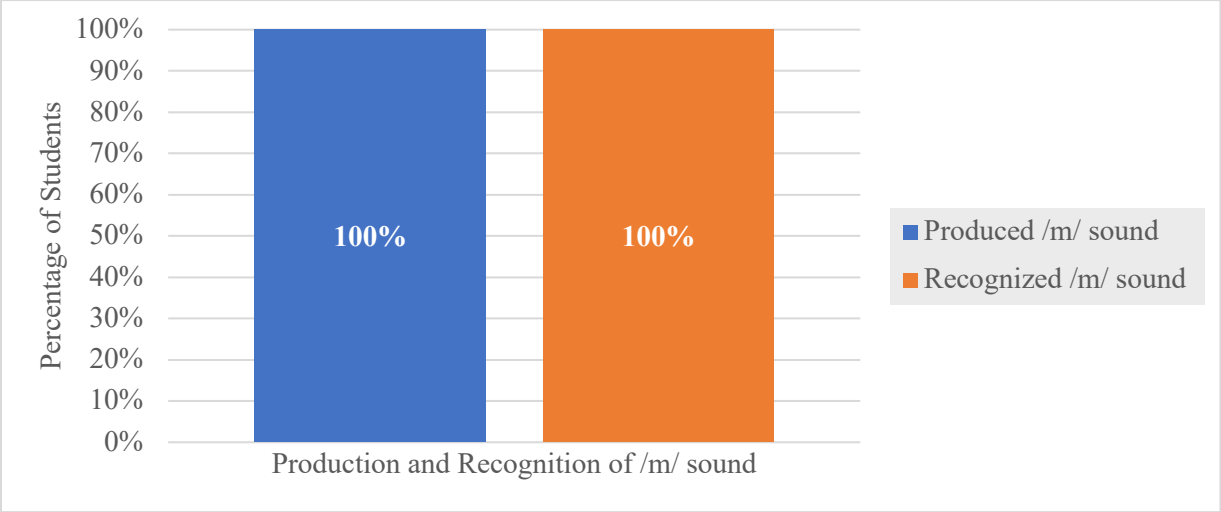
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies supported students in mastering the /k/ sound. Additional reinforcement could help the fully grasp of this phoneme.

Figure 32

Tittle: Students Recognition and Production of the Consonant Sound /m/

The **Figure 32** shows that 100% of the students successfully recognized and produced the consonant sound /m/ as in "mat."



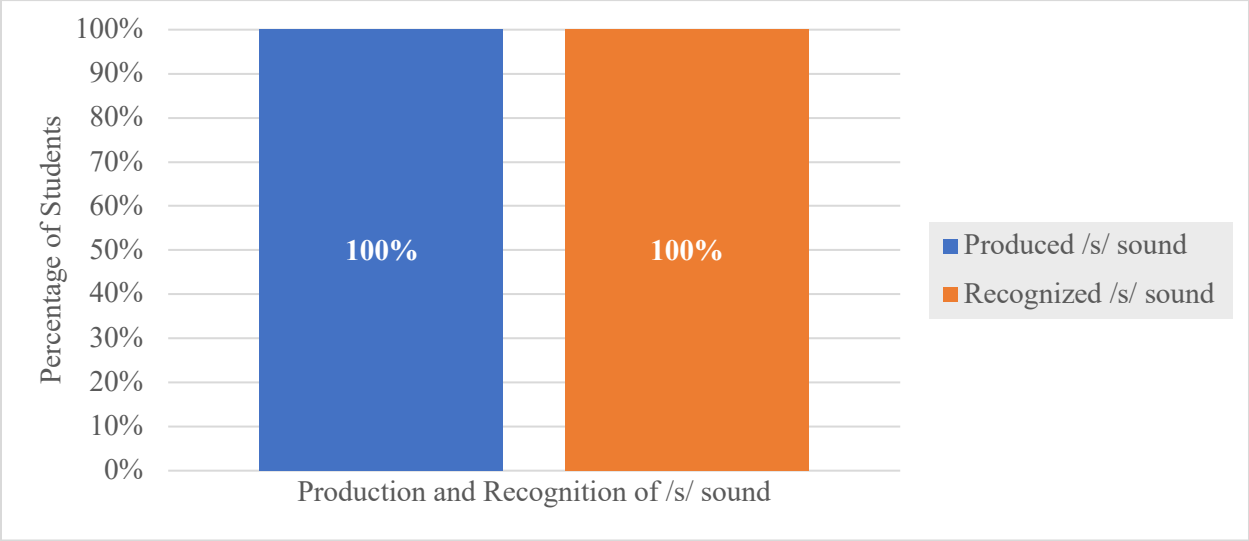
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The perfect recognition and production of the /m/ sound suggests that kinesthetic learning was highly effective for this phoneme. Students' active engagement with the sound helped reinforce their understanding and retention.

Figure 33

Tittle: Students Recognition and Production of the Consonant Sound /s/

The **Figure 33** demonstrates that 100% of the students were able to recognize and produce the consonant sound /s/ as in "sun."



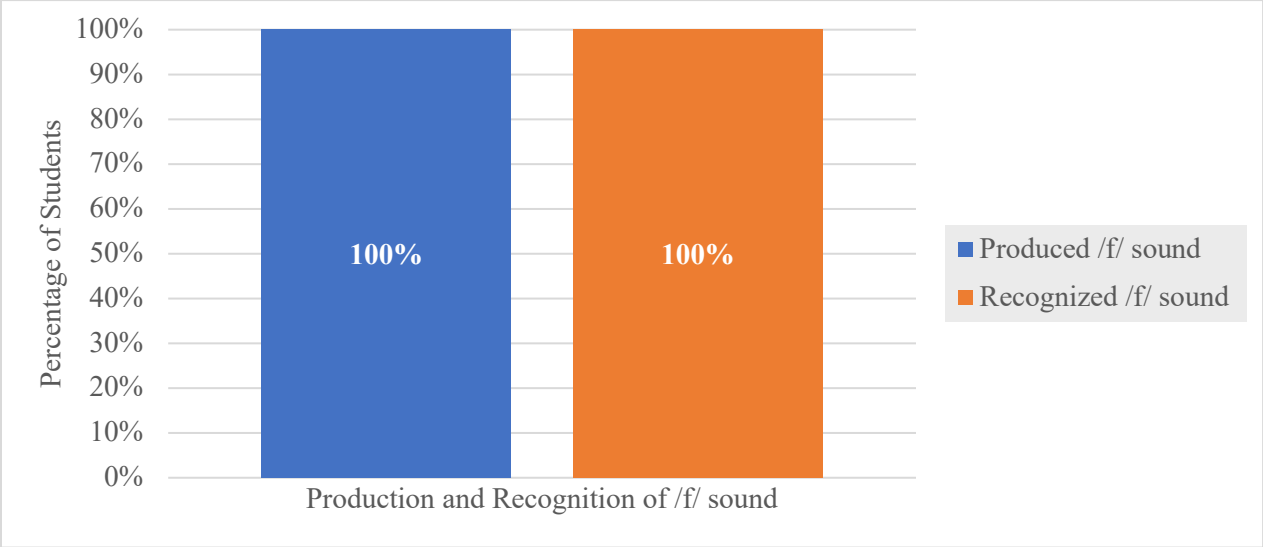
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies proved to be highly effective for the /s/ sound. The use of movement-based activities allowed students to fully internalize and accurately produce the phoneme.

Figure 34

Tittle: Students Recognition and Production of the Consonant Sound /f/

The **Figure 34** shows that 100% of the students recognized and produced the consonant sound /f/ as in "fan."



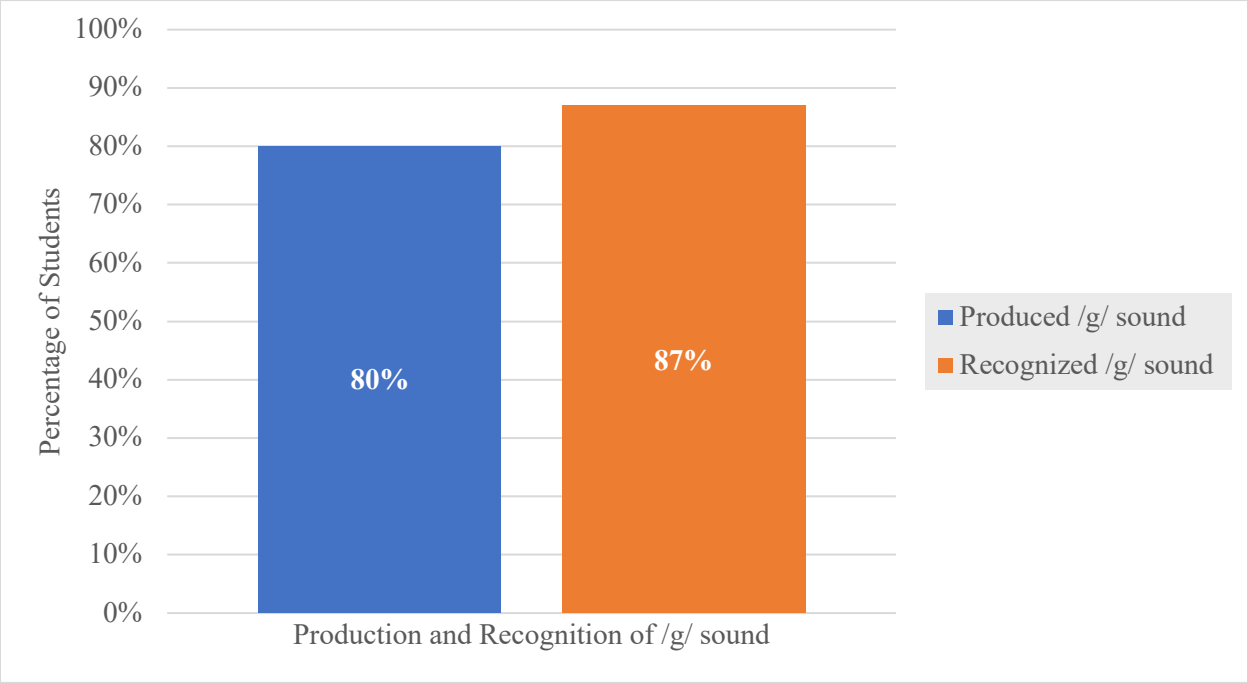
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The success of kinesthetic strategies in teaching the /f/ sound is evident in the 100% recognition and production rate. Engaging students physically in the learning process helped them retain this sound more effectively.

Figure 35

Tittle: Students Recognition and Production of the Consonant Sound /g/

The **Figure 35** reveals that 86.67% of the students recognized the consonant sound /g/ as in "goat," while 80% were able to produce it correctly.



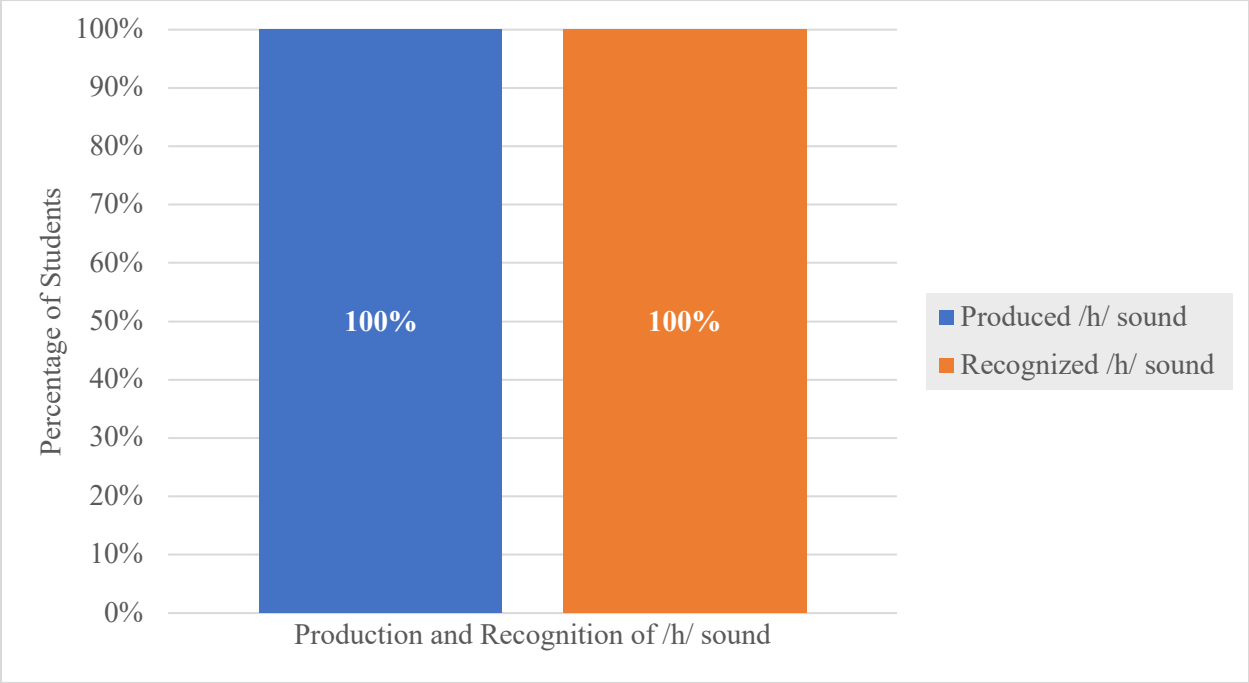
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The lower recognition and production rates for /g/ suggest that additional kinesthetic reinforcement is needed. Incorporating more interactive and physical activities related to the /g/ sound could improve retention and accuracy.

Figure 36

Tittle: Students Recognition and Production of the Consonant Sound /h/

The **Figure 36** shows that 100% of the students recognized and produced the consonant sound /h/ as in "hat."



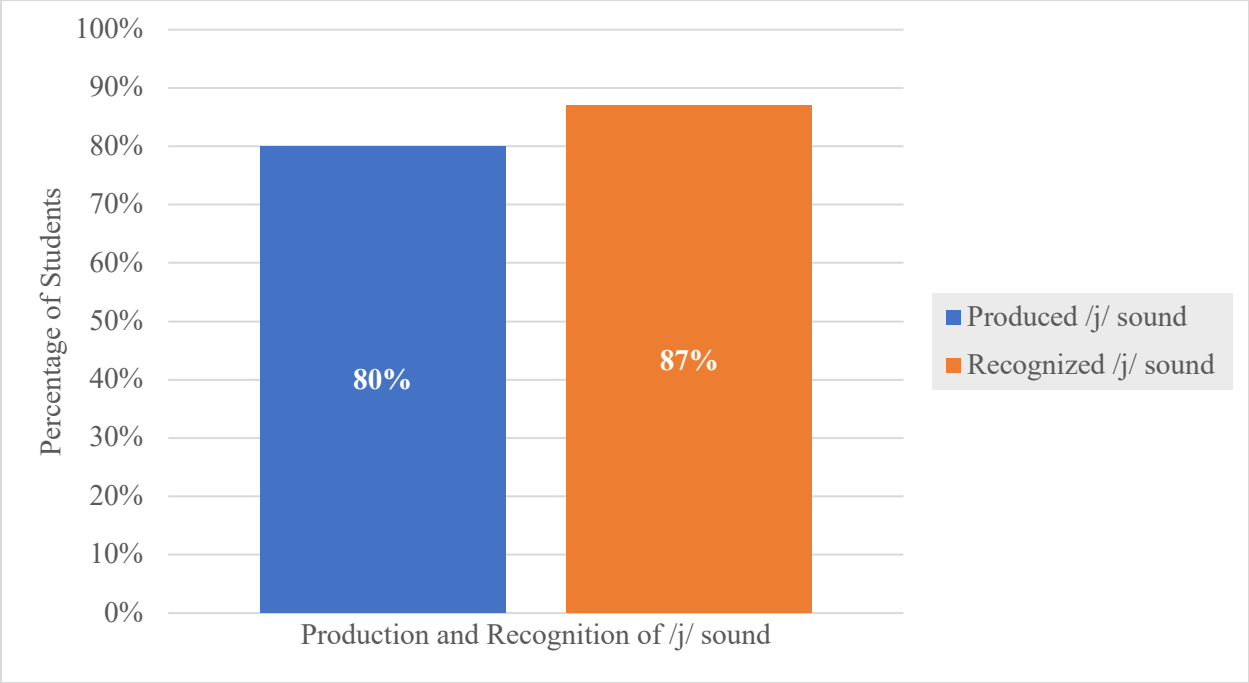
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high success rate for /h/ reflects the effectiveness of the kinesthetic methods used. Engaging students physically helped them secure full recognition and production of this sound.

Figure 37

Tittle: Students Recognition and Production of the Consonant Sound /j/

The **Figure 37** presents that 86.67% of the students recognized the consonant sound /j/ as in "juice," and 80% were able to produce it.



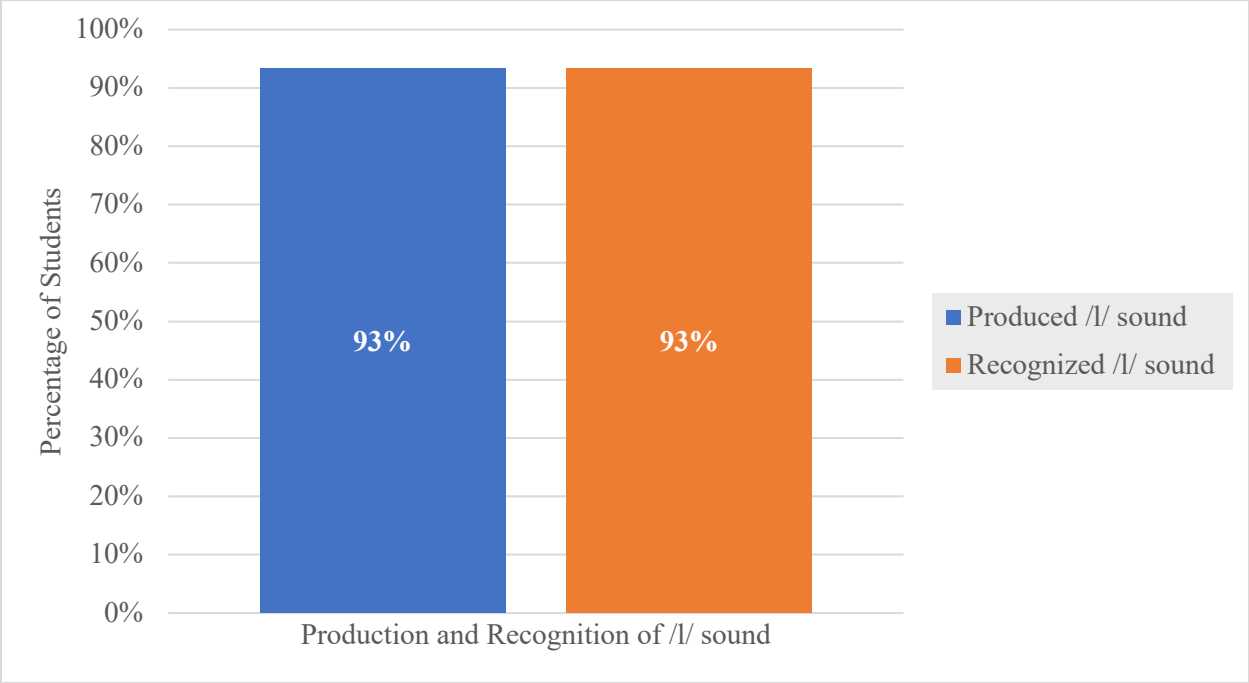
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

While kinesthetic strategies were effective for most students, additional practice may be needed to help the remaining students achieve full mastery of the /j/ sound.

Figure 38

Tittle: Students Recognition and Production of the Consonant Sound /l/

The **Figure 38** illustrates that 93.33% of the students successfully recognized and produced the consonant sound /l/ as in "lamp."



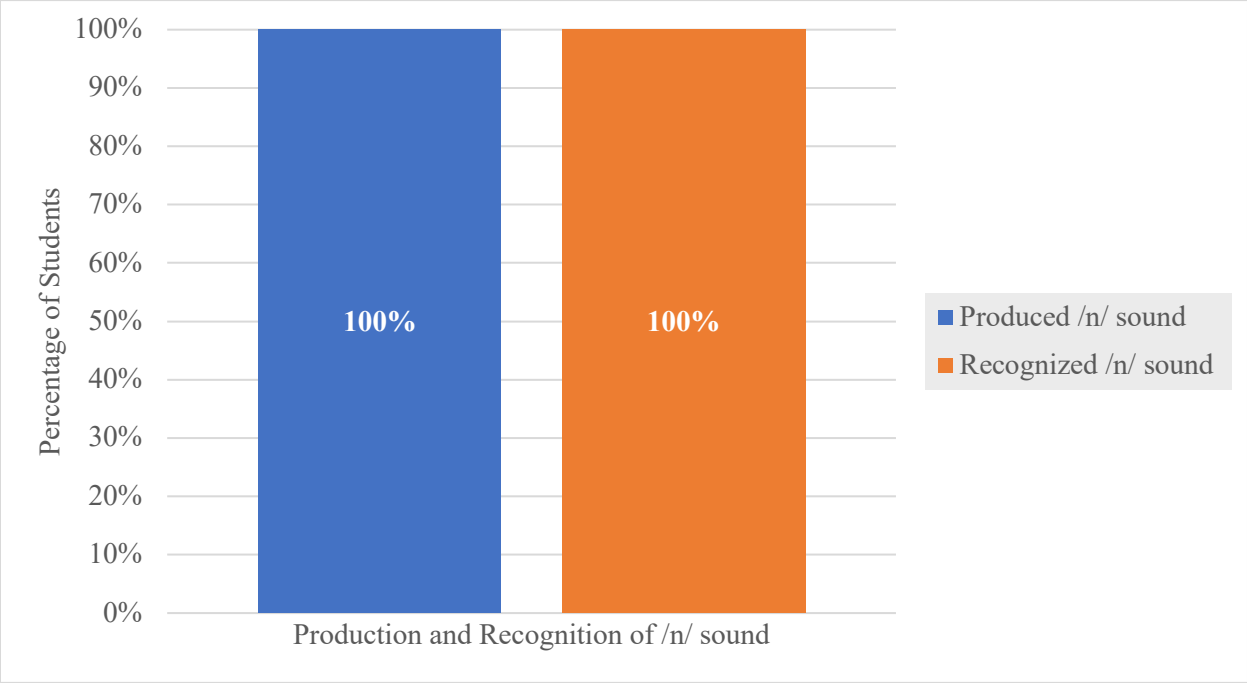
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The kinesthetic learning methods used were effective for most students, though additional reinforcement could help ensure complete recognition and production for all learners.

Figure 39

Tittle: Students Recognition and Production of the Consonant Sound /n/

The **Figure 39** shows that 100% of the students were able to recognize and produce the consonant sound /n/ as in "net."



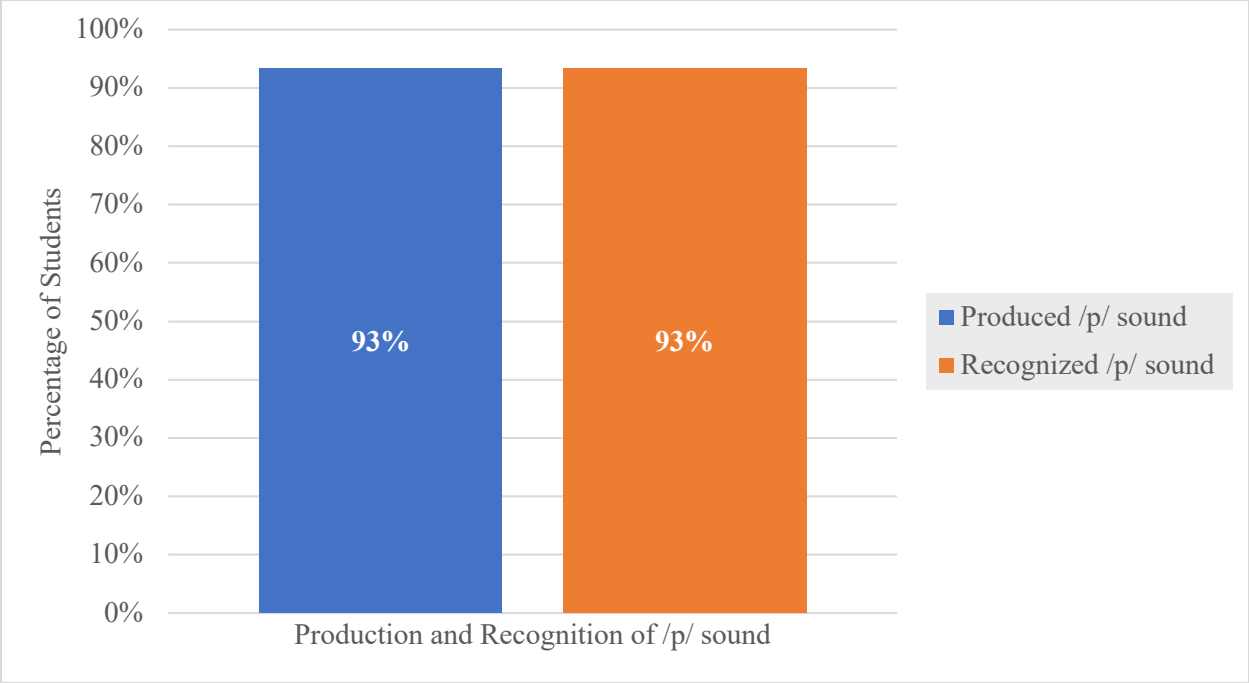
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The kinesthetic strategies applied were clearly effective in helping students master the /n/ sound, as evidenced by the perfect recognition and production rates.

Figure 40

Tittle: Students Recognition and Production of the Consonant Sound /p/

The **Figure 40** demonstrates that 93.33% of the students recognized and produced the consonant sound /p/ as in "pig."



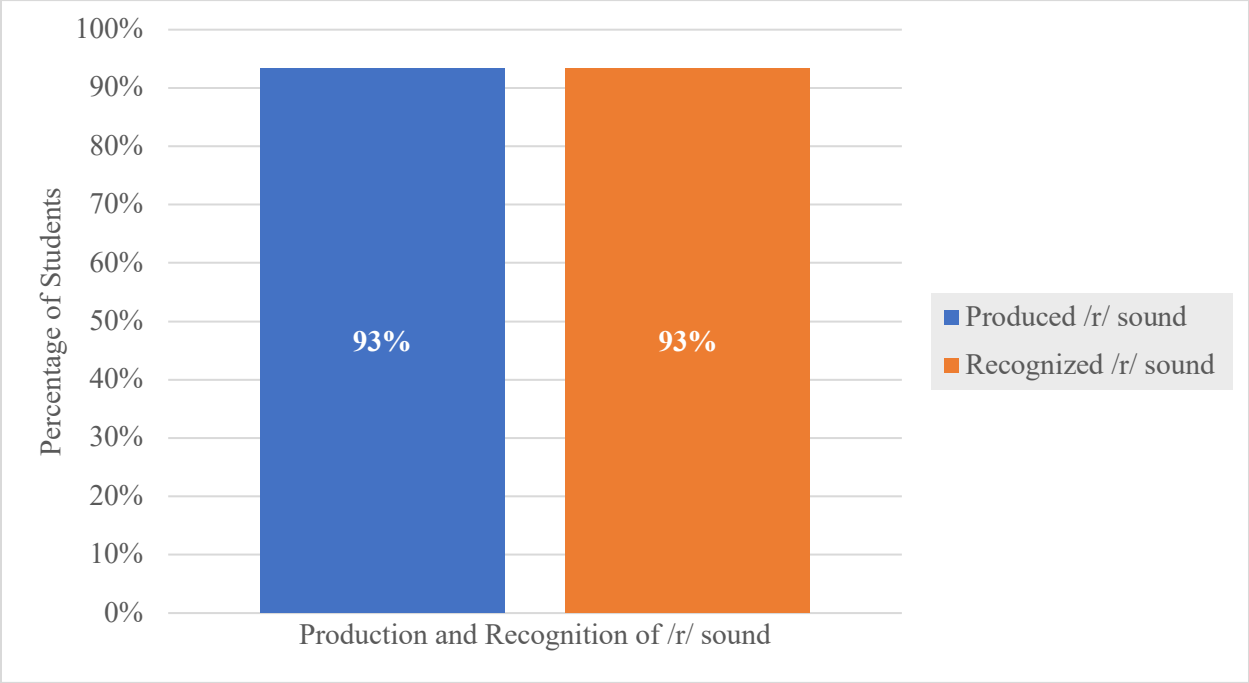
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies were largely successful in teaching the /p/ sound. Further reinforcement could bring the remaining students to full proficiency.

Figure 41

Tittle: Students Recognition and Production of the Consonant Sound /r/

The **Figure 41** shows that 93.33% of the students recognized and produced the consonant sound /r/ as in "rat."



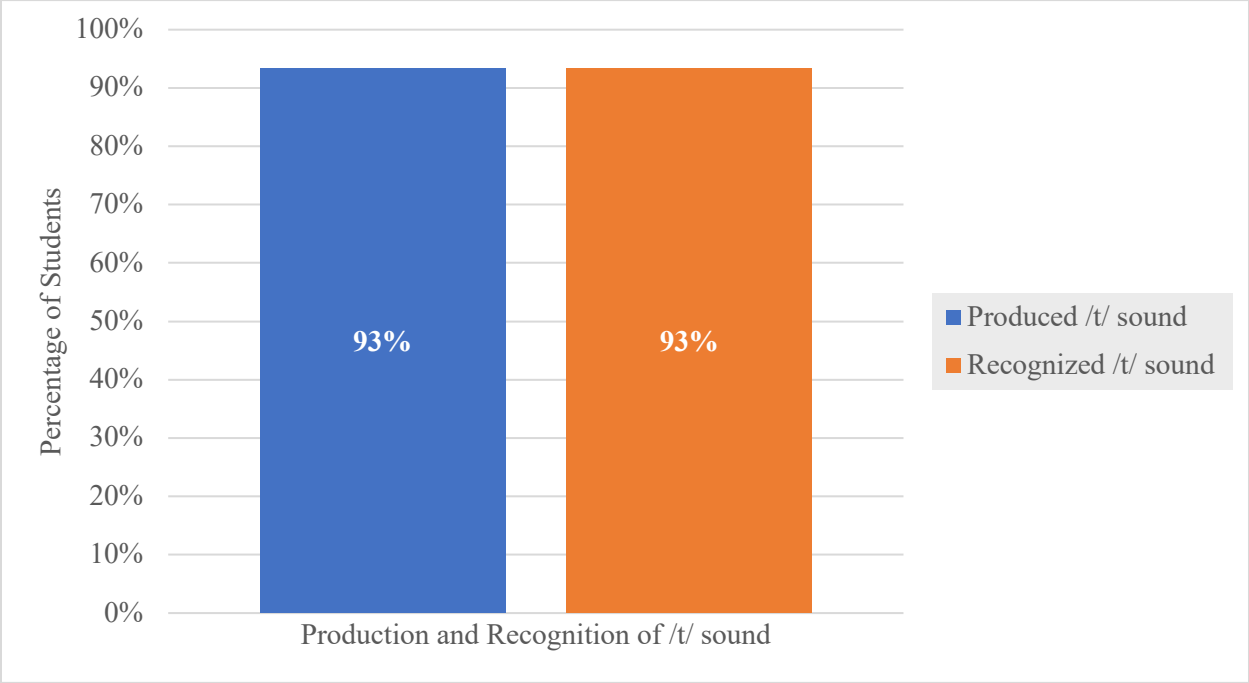
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The strong performance for the /r/ sound demonstrates the effectiveness of the kinesthetic approach. Engaging students through physical movement supported their understanding of this sound.

Figure 42

Tittle: Students Recognition and Production of the Consonant Sound /t/

The **Figure 42** presents that 93.33% of the students were able to recognize and produce the consonant sound /t/ as in "tiger."



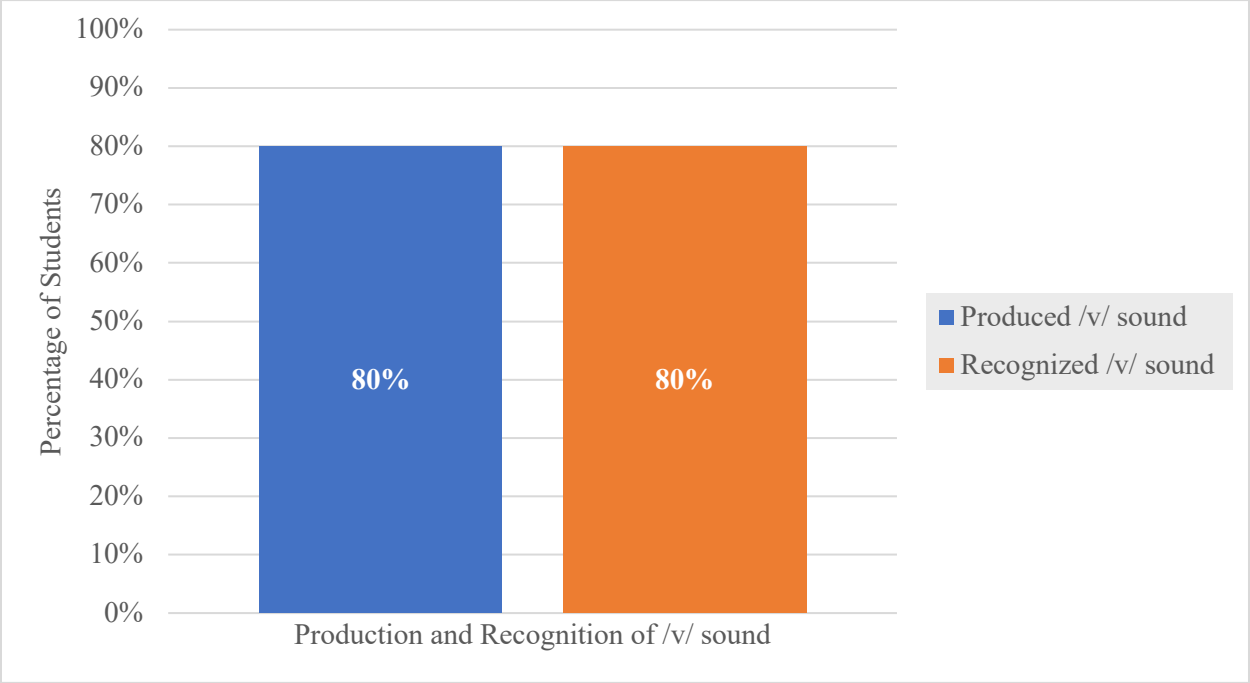
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies were effective in supporting students' understanding of the /t/ sound. Additional practice may help achieve full mastery for all students.

Figure 43

Tittle: Students Recognition and Production of the Consonant Sound /v/

The **Figure 43** shows that 80% of the students recognized and produced the consonant sound /v/ as in "van."



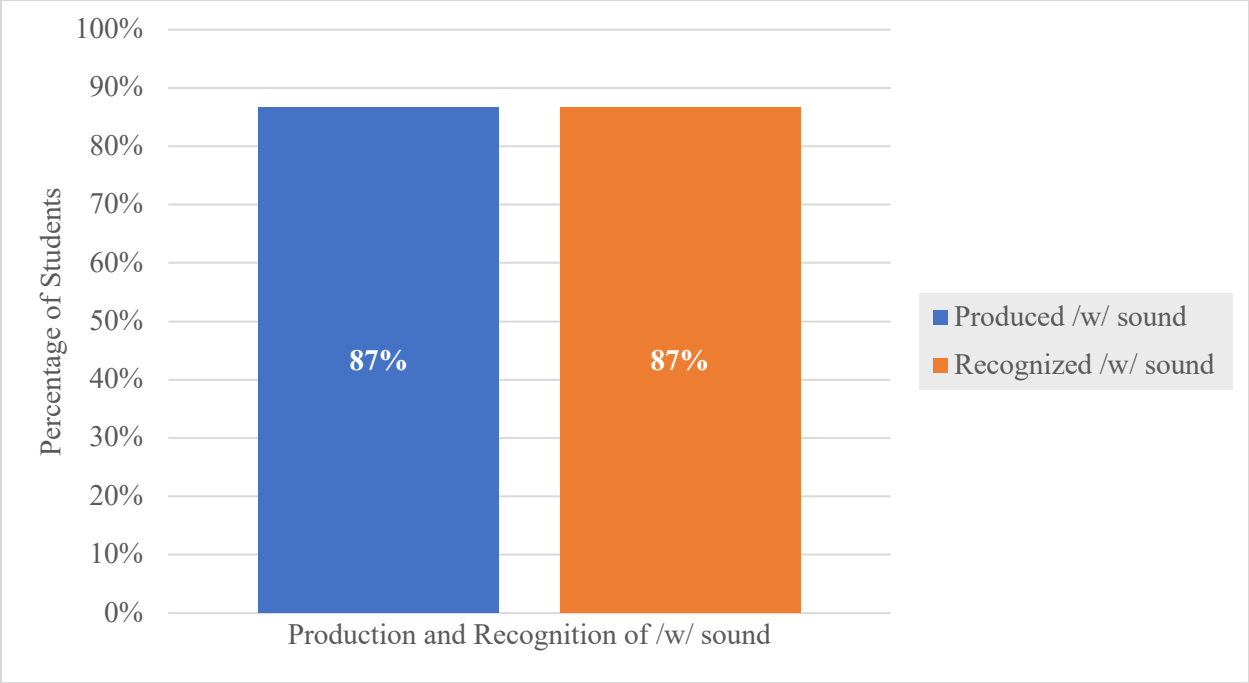
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The lower success rate for /v/ suggests that additional kinesthetic strategies may be needed to help students fully grasp this sound.

Figure 44

Tittle: Students Recognition and Production of the Consonant Sound /w/

The **Figure 44** illustrates that 80% of the students successfully recognized and produced the consonant sound /w/ as in "wig."



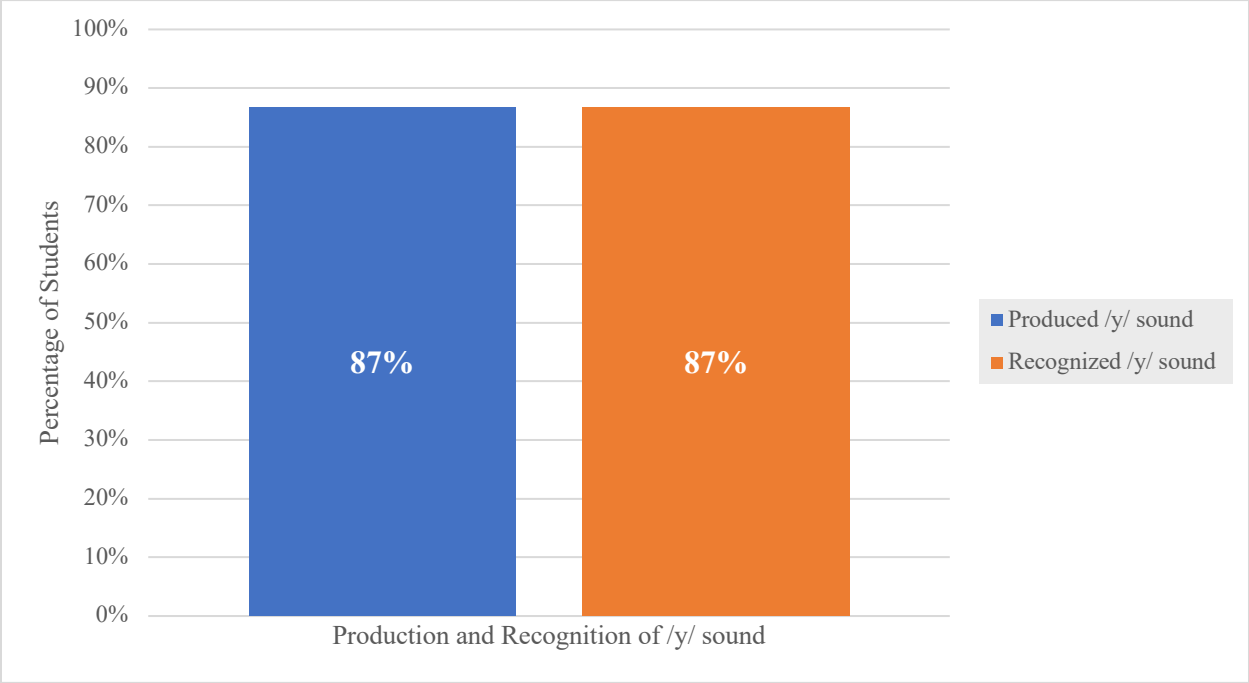
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

While most students showed proficiency with the /w/ sound, the kinesthetic strategies should be further reinforced for the remaining students who struggle with this sound.

Figure 45

Tittle: Students Recognition and Production of the Consonant Sound /y/

The **Figure 45** presents that 80% of the students recognized and produced the consonant sound /y/ as in "yoyo."



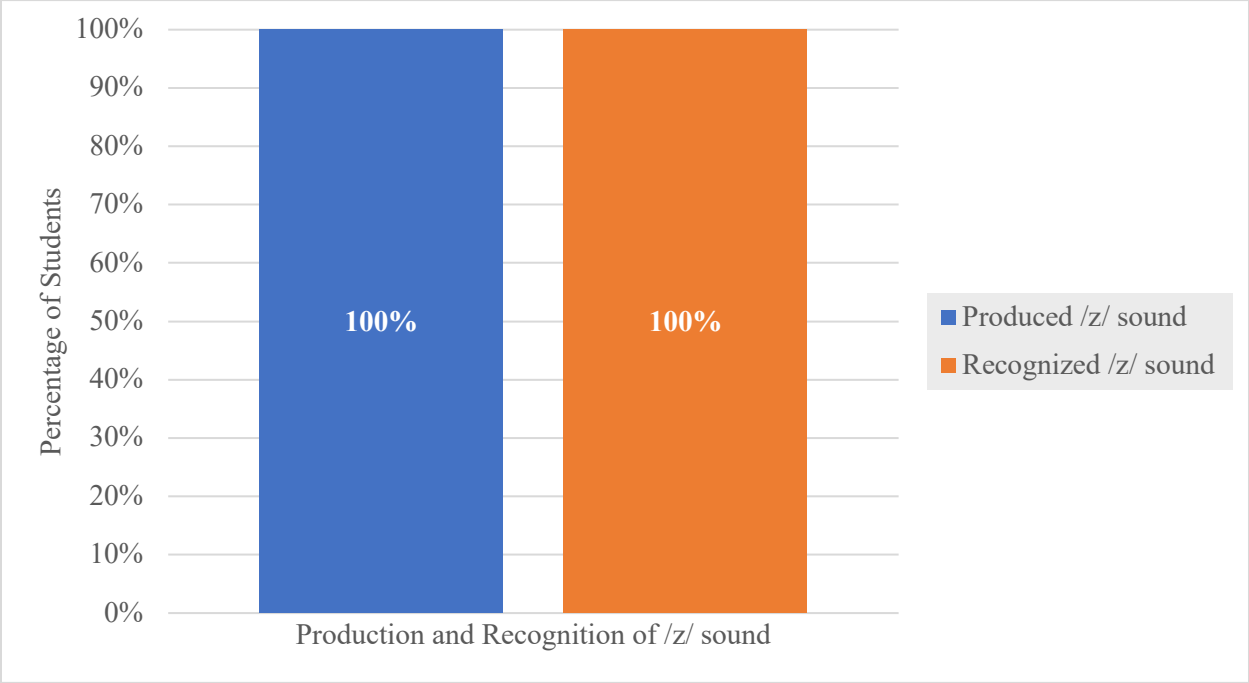
Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The recognition and production rates for /y/ indicate that the kinesthetic strategies were mostly effective, but additional activities could help ensure that all students reach full mastery.

Figure 46

Tittle: Students Recognition and Production of the Consonant Sound /z/

The **Figure 46** shows that 93.33% of the students were able to recognize and produce the consonant sound /z/ as in "zebra."



Source: Checklist applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high success rate for /z/ demonstrates the effectiveness of the kinesthetic approach. Engaging students physically with the sound helped secure their understanding and production of this phoneme.

The results demonstrate that all students successfully recognized and produced vowel phonemes, and most consonant sounds were also recognized and produced. 12 of 15 students achieved perfect accuracy. Nonetheless, the lower success rates for consonant phonemes /g/, /j/, /v/, /w/, and /y/ point to areas that may require further support. The checklist results show a

significant improvement in vowel and consonant phoneme recognition and production among kindergarten students.

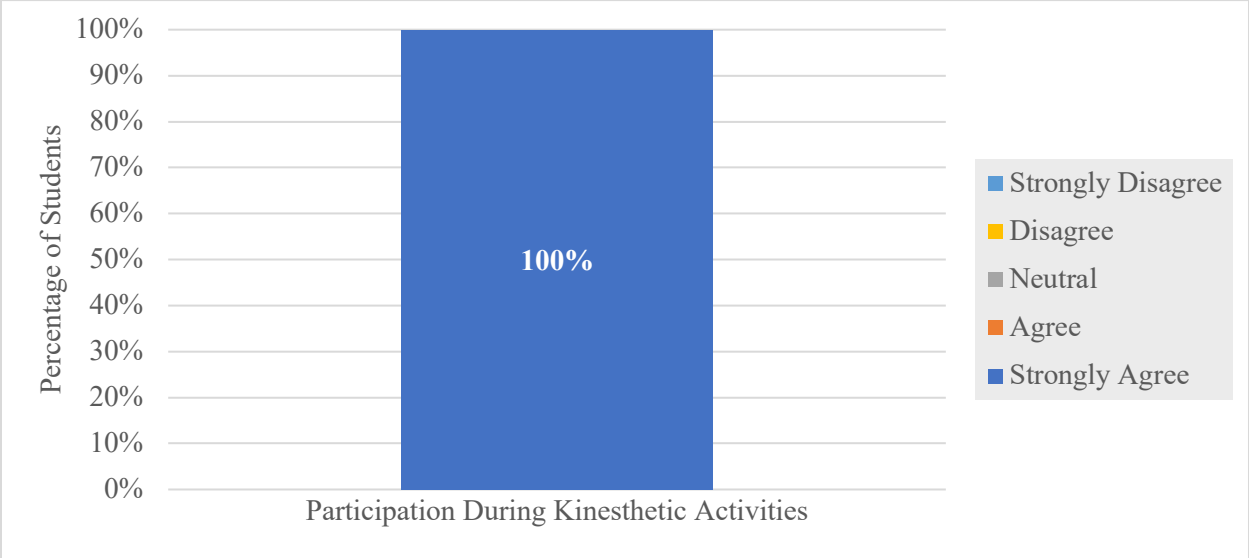
4.1.4 Analysis of the Likert Scale

The Likert scale (see Annex 4) was implemented to evaluate the impact of kinesthetic strategies on students' participation, behavior, engagement, and improvement in phonological awareness. The data gathered provides insight into how these interactive methods influenced student performance and phonemic awareness. The following figures represent the students' responses and improvements observed during the investigation.

Figure 47

Tittle: Students Participation During Kinesthetic Activities

The **Figure 47** shows that 15 out of 15 students actively participated in the kinesthetic activities.



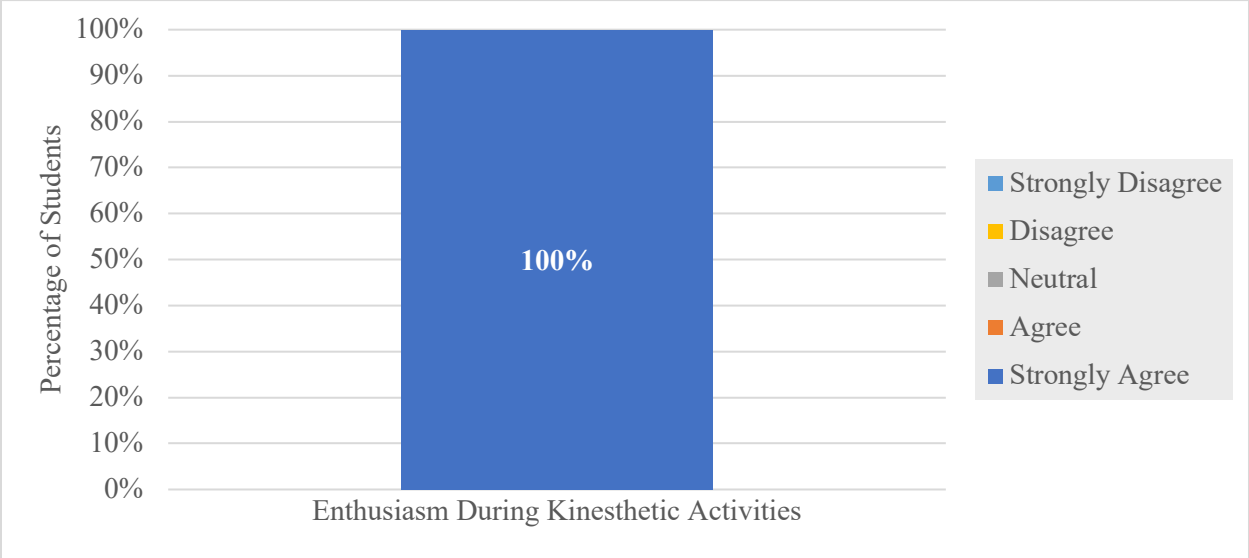
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The full participation rate indicates that the kinesthetic strategies were highly engaging, prompting all students to involve themselves fully in the learning process. This suggests that incorporating movement-based activities can effectively capture students' attention and encourage active involvement.

Figure 48

Tittle: Students Enthusiasm During Kinesthetic Activities

The **Figure 48** shows that all 15 students demonstrated enthusiasm during the kinesthetic activities.



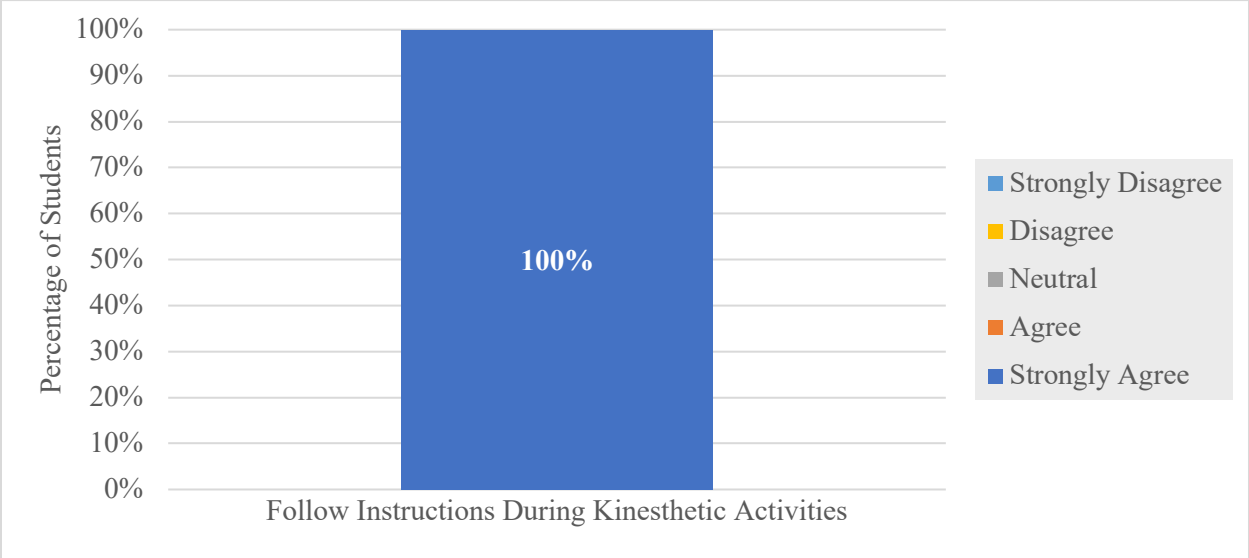
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The global exhibition of enthusiasm among students suggests that kinesthetic strategies not only engage students but also make the learning process enjoyable. The positive emotional response observed during these activities likely contributed to the overall effectiveness of the phonological awareness development.

Figure 49

Tittle: Students Follow Instructions During Kinesthetic Activities

The **Figure 49** indicates that 15 of 15 students successfully followed instructions during the kinesthetic activities.



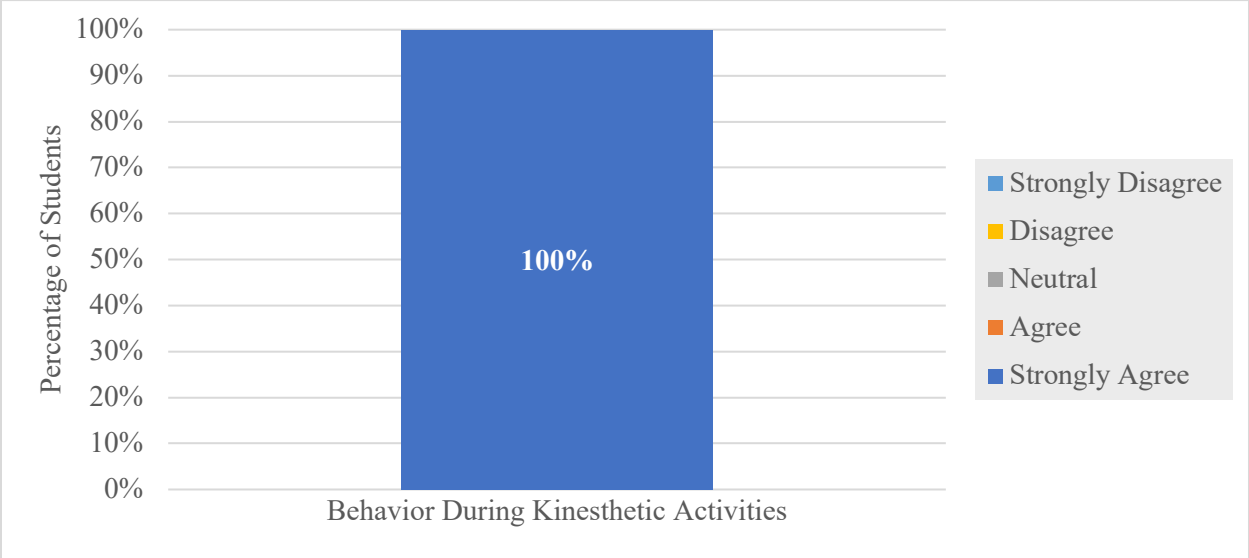
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

This result highlights the structured nature of kinesthetic learning, emphasizing the necessity of clear and engaging instructions are crucial. The high compliance rate indicates that students were not only engaged but also capable of following guidelines, reinforcing the orderly of kinesthetic strategies.

Figure 50

Tittle: Students Behavior During Kinesthetic Activities

The **Figure 50** shows that all students demonstrated appropriate behavior throughout the kinesthetic activities.



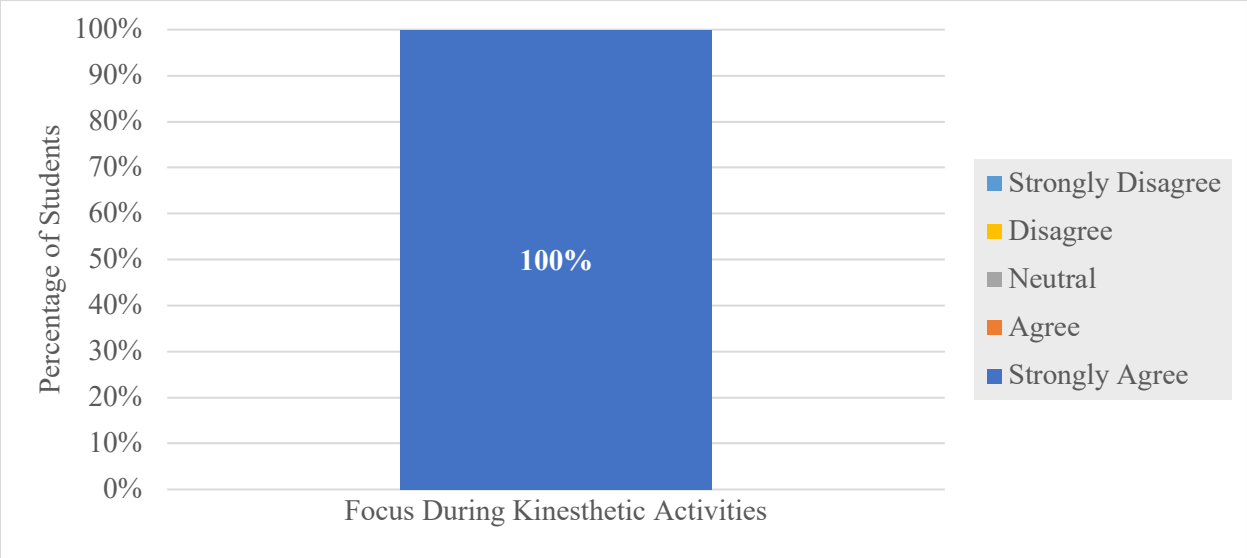
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The positive behavioral outcomes observed suggest that kinesthetic strategies foster a supportive learning environment that encourages good behavior. This finding highlights the benefits of movement-based learning in maintaining classroom management and cultivating a respectful and cooperative atmosphere.

Figure 51

Tittle: Students Focus During Kinesthetic Activities

The **Figure 51** illustrates that all 15 students remained focused during the kinesthetic activities.



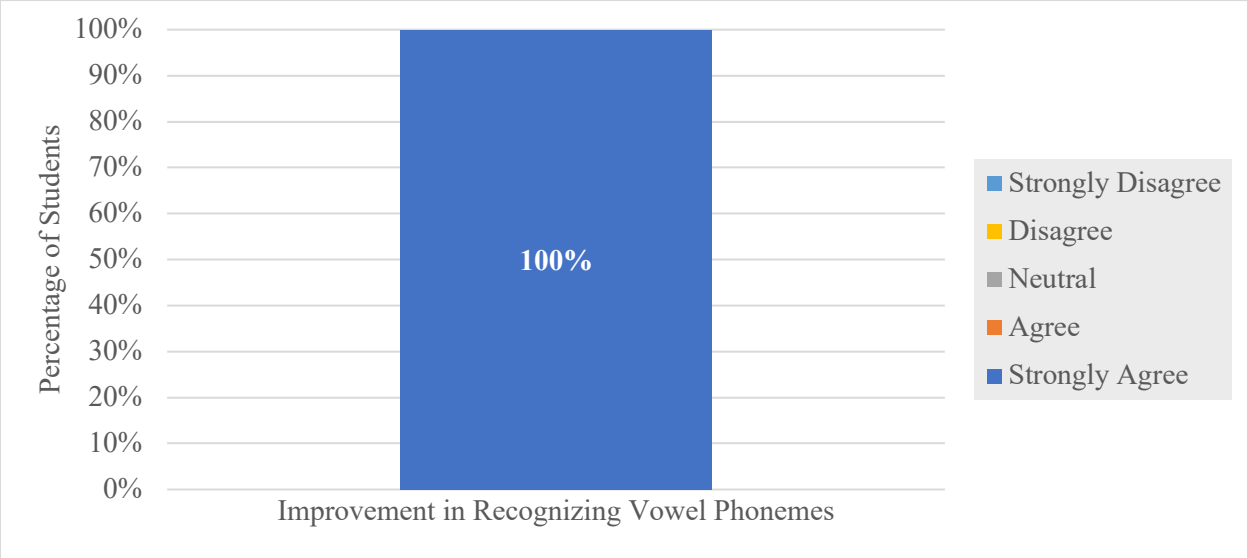
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The high level of concentration observed during the kinesthetic sessions demonstrates the effectiveness of these strategies in capturing and sustaining attention, likely due to their interactive and engaging nature.

Figure 52

Tittle: Students Improvement in Recognizing Vowel Phonemes

The **Figure 52** indicates that all 15 students showed improvement in recognizing vowel phonemes.



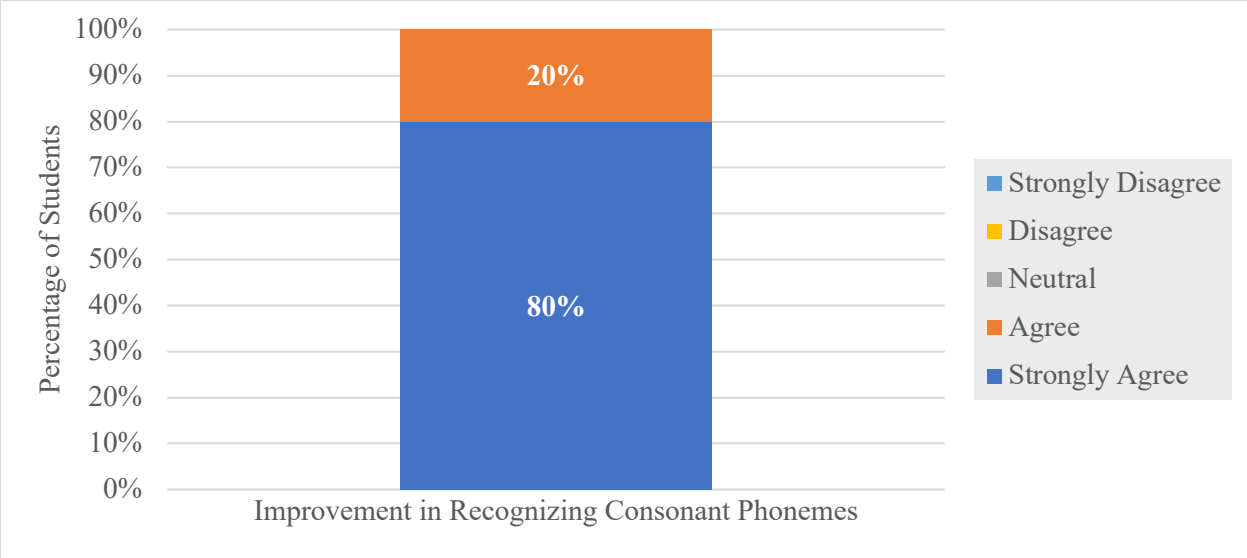
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The universal enhancement in recognizing vowel sounds confirms the effectiveness of kinesthetic learning in enhancing phonemic awareness. The hands-on, multisensory approach offered students with repeated and varied exposure to vowel sounds, boosting in their retention and recall.

Figure 53

Tittle: Students Improvement in Recognizing Consonant Phonemes

The **Figure 53** reveals that 12 of 15 students achieved proficiency in recognizing consonant phonemes, while all 15 students showed improvement overall.



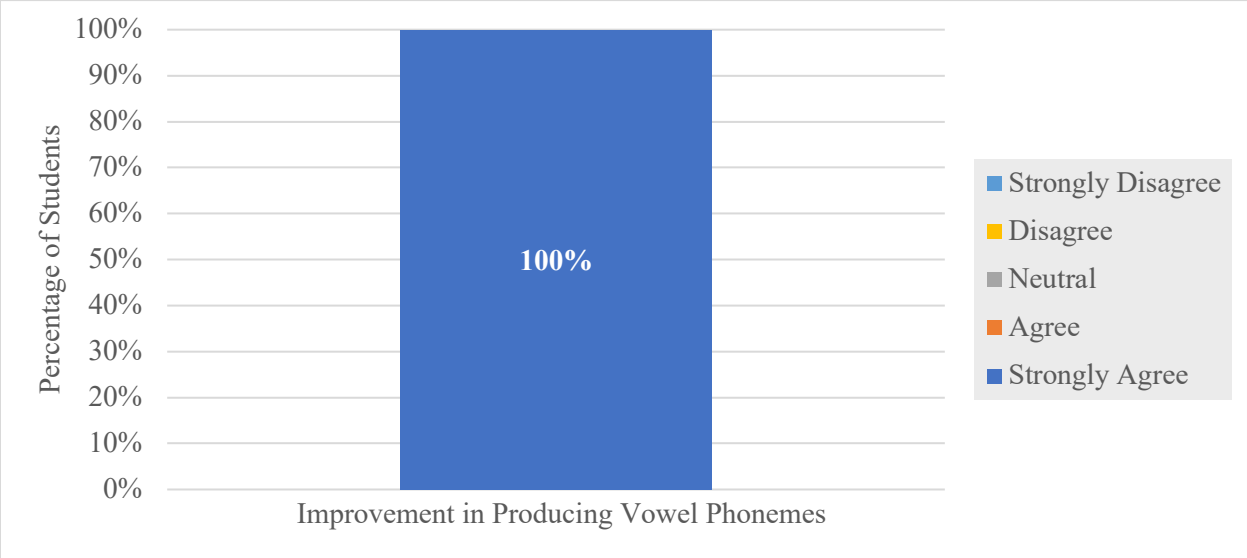
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Although not all students reached perfect recognition, the overall improvement highlights the kinesthetic strategies' positive impact. Continued reinforcement through movement-based learning could further assist students struggling with specific consonant sounds.

Figure 54

Tittle: Students Improvement in Producing Vowel Phonemes

The **Figure 54** shows that all 15 students improved their ability to produce vowel phonemes.



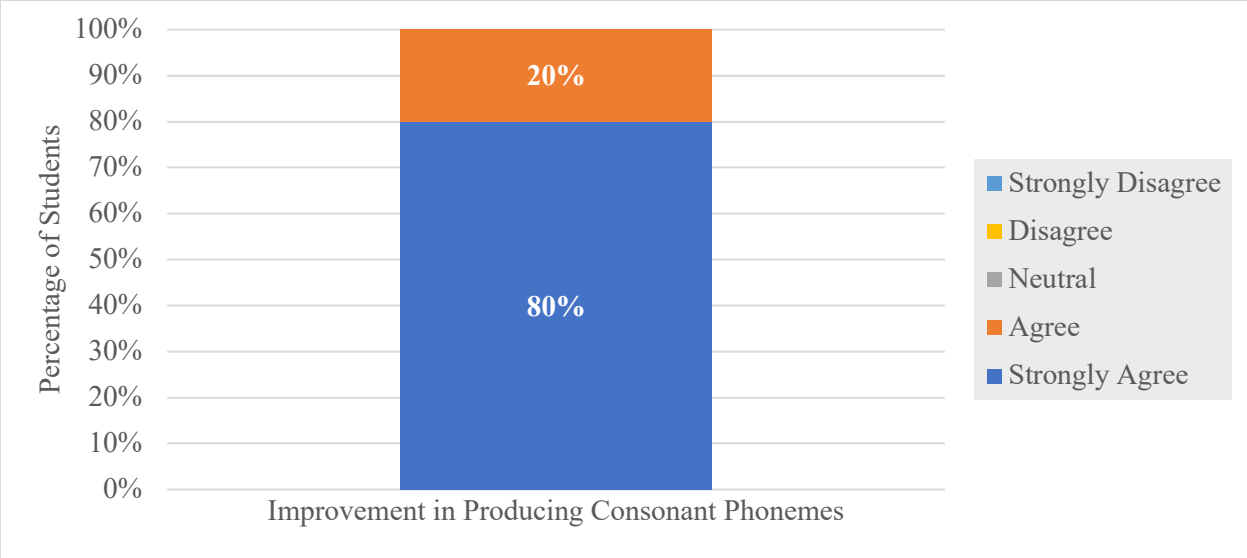
Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The success in producing vowel phonemes reflects the effectiveness of kinesthetic strategies that integrate physical movement with sound production.

Figure 55

Tittle: Students Improvement in Producing Consonant Phonemes

The **Figure 55** indicates that 12 of 15 students achieved a perfect score in producing consonant phonemes, and all 15 improved their ability overall.



Source: Likert scale applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The progress observed in consonant sound production underscores the impact of kinesthetic strategies on enhancing phonemic skills.

4.1.5 Analysis of the journal and comparison of the pre-test and post-test results.

4.1.5.1 Analysis of the Session Journal

Table 8

Tittle: Analysis of the First Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	15 of 15 students actively participated.	The high participation rate indicates that the kinesthetic and exploratory nature of the activities was engaging and effectively captured students' interest. This active involvement is crucial in developing phonological awareness, as it fosters a hands-on learning environment where students feel motivated to participate.
Behavior	All students exhibited positive behavior, followed instructions, and participated cooperatively.	The cooperative behavior and adherence to instructions suggest that the activities were well-structured, creating a comfortable and supportive learning environment. This positive

		atmosphere likely fostered students' willingness to engage and explore phonological concepts actively.
Engagement	High levels of engagement were observed throughout the activity.	The consistent engagement observed highlights the success of the kinesthetic approach in maintaining students' attention. By engaging students through physical movement and interactive exploration, this approach helps sustain focus, which is crucial for effective learning in early childhood education.
Challenges	4 of 15 students faced difficulty finding the hidden objects and needed some extra clues to complete the task.	The challenges observed indicate that while most students were able to navigate the activity with ease, a few required more guidance. This suggests a need for differentiated support within the kinesthetic activities, ensuring that all students can access the learning experience effectively

		and gain confidence in their phonological skills.
Success	With some guidance, all students were able to name the vowels, produce their sounds, and identify objects corresponding to those sounds.	The overall success of the students in recognizing and producing vowel sounds highlights the effectiveness of the activity in enhancing phonological awareness. Incorporating physical movement and object identification created a multisensory experience that reinforced learning and solidified students' understanding of vowel sounds.
Recognition of vowel phonemes	10 of 15 students demonstrated the ability to recognize and identify vowel sounds accurately.	While most students successfully recognized vowel sounds, there is room for improvement to ensure all students reach proficiency. Continued use of kinesthetic strategies, combined with additional support for those who struggle, can help close this gap and further develop phonological recognition skills.

Production of vowel phonemes	The practice of producing vowel sounds was universally successful, indicating that kinesthetic activities provided students with ample opportunities to vocalize and refine their phonemic production. This success underscores the value of incorporating movement-based and multisensory learning strategies in phonological awareness instruction.	The practice of producing vowel sounds was universally successful, showing that kinesthetic activities offered students ample opportunities to vocalize and refine their phonemic production. This success underscores the importance of incorporating movement-based and multisensory learning strategies in phonological awareness instruction.

Source: First session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 9

Tittle: Analysis of the Second Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All students showed enthusiasm and actively participated in the session, enjoying the challenge of forming letters with their bodies and finding objects that corresponded to the consonant sounds.	The high level of participation and enthusiasm observed during the activity highlights the effectiveness of kinesthetic strategies in engaging students. The opportunity to physically interact with consonant sounds through movement and exploration fostered a fun and stimulating learning environment that encouraged all students to participate fully.
Behavior	All students demonstrated positive behavior, remembering the instructions and following them with ease.	The positive behavior observed suggests that the kinesthetic approach not only engaged the students but also promoted a sense of structure and cooperation. The physical activities likely helped channel

		the students' energy into productive learning, resulting in a well-managed classroom dynamic where students felt motivated to adhere to instructions.
Engagement	All students showed sustained interest throughout the activity.	The consistent engagement observed reinforces the value of integrating physical movement into learning activities. The kinesthetic approach, combined with hands-on exploration, kept students attentive and involved, which is crucial for effective phonological instruction.
Challenges	5 out of 15 students had difficulty recognizing and producing some consonants, specifically /g/, /j/, /v/, /r/, /h/, /b/, /d/, /w/, and /y/.	The challenges faced by some students highlight the need for ongoing, targeted support for specific consonant sounds.
Success	All 15 students were able to name consonants, produce their sounds, and identify	The success of all students in naming and producing consonant sounds demonstrates the overall effectiveness of the kinesthetic

	corresponding objects with guidance.	approach. By linking sounds with physical movements and objects, students engaged in a multisensory learning experience that reinforced phonemic recognition and production. Even those who initially struggled were able to succeed with guidance, highlighting the adaptability of the strategies employed.
Recognition of consonant phonemes	All students demonstrated an increased ability to recognize and identify consonant sounds throughout the activity.	The improvement in consonant recognition confirms that the kinesthetic strategies employed were beneficial in enhancing students' phonological awareness. The hands-on, movement-based approach allowed students to internalize consonant sounds in a meaningful way, supporting their overall literacy development.
Production of consonant phonemes	All 15 students practiced producing consonant sounds clearly while naming and identifying objects.	The clear production of consonant sounds by all students highlights the role of kinesthetic activities in strengthening

	phonemic skills. By integrating movement with vocal practice, students were able to build confidence in their ability to articulate consonant sounds, which is critical for their continued phonological growth.

Source: Second session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 10

Tittle: Analysis of the Third Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students actively participated in finding the letters and responding to the vowel sounds.	The full participation rate underscores the effectiveness of the kinesthetic strategies in engaging students. By actively involving students in sound recognition and letter identification, the activity facilitated hands-on learning, which is essential for reinforcing phonological awareness in young learners.
Behavior	Students displayed positive behavior, followed instructions, and took turns appropriately.	The students' ability to follow instructions and behave cooperatively highlights the structure and clarity of the kinesthetic activities. These strategies not only engage students physically but also provide a clear framework that

		encourages respectful interaction and focus, which are crucial in maintaining an effective learning environment.
Engagement	High engagement was observed throughout the activity, with students appearing to enjoy the entire session.	The observed engagement level indicates that the kinesthetic approach successfully captured students' attention and made learning enjoyable. The combination of movement and sound recognition created a dynamic learning experience that kept students interested and motivated, enhancing their ability to learn and retain phonological concepts.
Challenges	Three out of 15 students had difficulty distinguishing between the sounds of /e/ and /a/ and required additional cues.	While the majority of students were able to distinguish between the vowel sounds, the challenges faced by a few indicate that specific phonemes might require additional reinforcement. The kinesthetic approach still provided valuable support, but

		these observations suggest a need for more targeted guidance during similar activities to ensure all students can fully grasp these distinctions.
Success	All students were able to associate vowel sounds with their corresponding letters.	The success in sound-letter association among all students reflects the effectiveness of kinesthetic strategies in enhancing phonological awareness. The tactile and auditory components of the activity helped students internalize the sounds, bridging the gap between auditory perception and visual recognition.
Recognition of vowel phonemes	All students demonstrated an increased ability to recognize and identify vowel sounds.	The improvement in vowel phoneme recognition illustrates that kinesthetic strategies effectively enhance students' phonological skills. The active involvement in sound recognition allowed students to better grasp and retain the sounds, thereby

		boosting their overall phonemic awareness.
Production of vowel phonemes	All 15 students practiced producing vowel sounds as they identified the corresponding letters.	The consistent practice of sound production in a kinesthetic context proved to be highly effective. The hands-on approach encouraged students to engage physically and vocally with the vowel sounds, fostering a deeper understanding and solidifying their ability to articulate phonemes correctly.

Source: Third session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 11

Tittle: Analysis of the Fourth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students actively participated, finding the letters and responding to the sounds with enthusiasm.	The full participation rate demonstrates the engaging nature of kinesthetic strategies. The combination of sound recognition and active letter identification kept students involved and motivated
Behavior	All students exhibited positive behavior, following instructions and taking turns appropriately.	The positive behavior observed suggests that the structure of the kinesthetic activities helped guide students' focus and cooperation. The clear expectations and interactive elements provided a supportive learning environment, encouraging students to engage constructively with the task.
Engagement	High engagement was observed throughout the entire activity.	The consistent engagement highlights the success of kinesthetic learning in capturing

		students' interest. The use of physical movement and hands-on letter identification created a dynamic and enjoyable learning experience.
Challenges	4 out of 15 students had difficulty recognizing some consonant letters (/g/, /j/, /v/, /w/, /y/) and needed additional cues to identify them correctly.	The challenges faced by these students indicate that some consonant sounds may require further reinforcement. While kinesthetic strategies provided valuable support, additional support and repetition may be necessary to ensure all students can confidently recognize these more challenging phonemes.
Success	Most students (11) were able to associate all the consonant sounds with their corresponding letters without help, and the remaining four students achieved the goal with some assistance.	The overall success rate demonstrates the effectiveness of the kinesthetic approach in helping students make connections between sounds and letters. Even those who struggled initially were able to meet the activity’s objectives, highlighting the adaptability and inclusivity of

		these strategies in supporting diverse learning needs.
Recognition of vowel phonemes	All students effectively recognized and identified consonant sounds during the activity.	The improvement in consonant recognition reflects the positive impact of kinesthetic strategies on phonological awareness. The multisensory nature of the activity allowed students to engage more deeply with each sound, enhancing their ability to recognize and remember consonant phonemes.
Production of vowel phonemes	All 15 students practiced producing consonant sounds as they identified the letters.	The consistent practice of sound production within a kinesthetic framework reinforced students' phonemic skills. By integrating movement and vocalization, the activity provided a comprehensive approach that supported both recognition and production.

Source: fourth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 12

Tittle: Analysis of the Fifth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students participated in finding the letters and producing the corresponding sounds.	Full participation in the activity highlights the engaging nature of the kinesthetic strategies used. The active process of identifying letters and producing sounds kept students involved and attentive, reinforcing their phonological skills through hands-on learning.
Behavior	Students demonstrated excellent behavior, following instructions easily and taking turns appropriately.	The positive behavior observed throughout the session suggests that the structured kinesthetic activities provided a clear and supportive framework for learning. The combination of movement and sound production helped students stay focused and respectful of the learning process.
Engagement	High engagement was observed, with students	The observed enthusiasm indicates that kinesthetic

	showing excitement and enthusiasm throughout the activity.	activities effectively capture students' interest. By physically involving students in the learning process, the session created a fun and stimulating environment that promoted active participation and learning retention.
Challenges	4 out of 15 students had difficulty distinguishing between certain consonants (/g/, /j/, /v/, /m/, /n/, /d/, /b/, /w/, /y/) and needed additional cues to identify them correctly.	The challenges faced by some students highlight the need for additional reinforcement of specific consonant sounds. While kinesthetic strategies offered crucial support, targeted repetition and guidance may be necessary to help students fully grasp these more complex phonemes.
Success	All students successfully associated vowel names with their sounds, and most (11 of 15) associated consonant names with their sounds without extra help.	The overall success rate demonstrates the effectiveness of kinesthetic learning in enhancing sound-letter associations. The physical engagement and repetitive sound production allowed students to internalize

		the phonemes, integrating the gap between auditory perception and visual recognition.
Recognition of vowel phonemes	All students recognized and identified vowel phonemes during the activity.	The full recognition of vowel phonemes by all students reflects the impact of kinesthetic strategies on enhancing phonological awareness. The active identification of letters paired with sound production provided students with a multisensory approach that reinforced their understanding of vowel sounds.
Recognition of consonant phonemes	11 out of 15 students recognized and identified consonant sounds during the activity.	While most students successfully recognized consonant phonemes, the data suggests a need for continued focus on kinesthetic reinforcement for the remaining sounds. The physical involvement and sound articulation supported students' learning, but additional

		repetitions might be necessary to achieve full proficiency.
Production of vowel phonemes	11 out of 15 students produced vowel sounds correctly.	The kinesthetic strategies used in this session effectively supported students in producing vowel phonemes. The combination of hearing, seeing, and articulating the sounds through movement allowed students to strengthen their vocalization skills, though ongoing practice could further enhance accuracy.
Production of consonants phonemes	12 out of 15 students correctly produced the consonant sounds as they identified the letters.	Kinesthetic strategies proved effective in supporting students' production of consonant phonemes, with most students achieving the expected outcomes. Continuous application of these strategies, particularly for the more challenging consonants,

	could further support students in mastering these phonemes.

Source: Fifth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 13

Tittle: Analysis of the Sixth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students actively participated in forming letters and enjoyed the activity.	The active participation of all students indicates the effectiveness of the kinesthetic approach in maintaining engagement. The physical interaction with letter formation allowed students to connect bodily movement with phonemic recognition, reinforcing their understanding of both letter shapes and sounds.
Behavior	Students exhibited cooperative behavior, worked well in groups, and followed instructions attentively.	The cooperative nature of the activity facilitated positive group dynamics, encouraging students to collaborate and support each other. This behavior reflects the capacity of kinesthetic activities to foster not only phonological awareness but also social skills,

		such as teamwork and communication.
Engagement	High engagement was observed, with students finding the activity both enjoyable and challenging.	The observed engagement suggests that the kinesthetic activity successfully captured the students' attention and interest. By making learning physical and interactive, the session created a stimulating environment where students were eager to participate and learn.
Challenges	4 out of 15 students initially struggled to form certain letters and required additional assistance.	The initial difficulties some students faced in forming letters highlight areas where kinesthetic strategies can be further refined. Providing more structured guidance could help students overcome these challenges and improve their letter formation skills.
Success	Students successfully associated letters with their sounds, and the activity	The combination of physical letter formation and sound articulation reinforced students' phonological awareness. By

	fostered teamwork among participants.	physically embodying the shapes of the letters, students were able to create a multisensory connection between visual, auditory, and kinesthetic learning, enhancing both recognition and production skills.
Recognition of vowel phonemes	All students were able to recognize and identify vowel sounds as they formed the corresponding letters with their bodies and practiced the sounds.	The full recognition of vowel phonemes indicates that kinesthetic learning methods effectively supported the students' understanding of these sounds. By actively engaging in the learning process, students were better able to internalize the vowel sounds and relate them to their physical representations.
Recognition of consonants phonemes	All students recognized and identified consonant sounds during the activity,	The ability of all students to recognize consonant sounds demonstrates the impact of the kinesthetic approach on

	associating them with the letters they created.	phonological development. The physical creation of letter shapes reinforced the link between the sound and its visual representation, facilitating sound recognition.
Production of vowel phonemes	All students practiced and improved their ability to produce vowel sounds clearly.	The kinesthetic activity helped solidify students' ability to articulate vowel sounds accurately. By linking movement with vocalization, students were able to enhance their phoneme production skills in a fun and engaging way.
Production of consonants phonemes	All students demonstrated improvement in producing consonant sounds.	The improvement observed in consonant sound production suggests that the physical and vocal combination was effective in reinforcing phoneme articulation. Continued use of kinesthetic

		strategies can further enhance these skills, providing a solid foundation for reading and phonemic awareness.

Source: Sixth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 14

Tittle: Analysis of the Seventh Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students participated enthusiastically, jumping to the letters and responding to the sounds.	The high level of participation indicates that the kinesthetic activity was engaging and effective in capturing the students' interest. The physical movement involved in identifying sounds not only made the learning process more enjoyable but also reinforced the connection between auditory and visual recognition of phonemes.
Behavior	Students demonstrated positive behavior, followed instructions, and took turns appropriately.	The structured nature of the activity fostered discipline and cooperation among students. The kinesthetic elements kept students focused, reducing distractions and encouraging organized participation, which are essential

		for maintaining a productive learning environment.
Engagement	High engagement was observed throughout the activity.	The students' high level of engagement underscores the attraction of incorporating movement into phonemic learning. By transforming sound identification into an active game, the activity captured students' attention and motivation, making the learning process both dynamic and effective.
Challenges	3 of the 15 students had difficulty distinguishing between certain consonants (/g/, /j/, /v/, /w/, /y/) and needed additional cues	The challenges observed suggest that, although kinesthetic activities are effective, some phonemes may need additional reinforcement. Providing extra cues helped students overcome these difficulties, demonstrating that tailored support can enhance the effectiveness of kinesthetic strategies.

Success	Students successfully associated sounds with letters and improved their phonological awareness through repeated practice.	The success of students in associating sounds with letters highlights the effectiveness of repeated kinesthetic practice. The physical engagement allowed students to internalize phonemes more thoroughly, demonstrating the benefits of active learning in reinforcing phonological skills.
Recognition of vowel phonemes	All students demonstrated an increased ability to recognize and identify vowel sounds.	The improvement in vowel phoneme recognition reflects the positive impact of kinesthetic learning on phonological awareness. The combination of auditory and physical cues helped solidify students' understanding of vowel sounds.
Recognition of consonants phonemes	All students effectively recognized and identified consonant sounds during the activity.	The universal recognition of consonant phonemes suggests that kinesthetic strategies effectively support the learning of both vowel and consonant sounds. The jumping activity provided a multisensory approach

		that reinforced phonemic recognition.
Production of vowel phonemes	All 15 students practiced producing vowel sounds as they identified the corresponding letters.	The production of vowel sounds was enhanced by the kinesthetic approach, which encouraged students to vocalize the sounds they identified.
Production of consonants phonemes	All 15 students practiced producing consonant sounds when identifying the letters.	The opportunity to produce consonant sounds during the kinesthetic activity further solidified students' phonological skills. By actively engaging in both recognition and production, students were able to connect sounds with their corresponding letters more effectively.

Source: Seventh session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 15

Tittle: Analysis of the Eighth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All 15 students actively participated, enjoying both the writing and guessing aspects of the activity.	The high participation level indicates that the kinesthetic and interactive nature of the activity successfully engaged all students. The combination of tactile and auditory elements provided a compelling way to learn, enhancing students' enthusiasm and willingness to participate.
Behavior	All students demonstrated positive behavior, worked well with their partners, and listened attentively to instructions.	The teamwork approach fostered a cooperative learning environment where students could support one another. Positive behavior was maintained throughout, highlighting the success of collaborative learning in maintaining discipline and focus.
Engagement	High engagement was observed, with students showing consistent interest and	The tactile and interactive elements of the activity kept students engaged, proving that hands-on, peer-assisted strategies

	enthusiasm throughout the activity.	effectively capture students' attention.
Challenges	7 of the 15 students had difficulty guessing the letters based on the tactile sensation alone and required auditory assistance.	The challenges faced by nearly half of the students highlight the importance of multimodal learning approaches. While tactile learning is beneficial, combining it with auditory prompts provided essential reinforcement, indicating that a blended approach may be most effective for students who struggle with tactile identification alone.
Success	All students successfully improved their auditory association with letters.	The integration of tactile writing and verbal feedback enhanced students' ability to connect letters with sounds. This success indicates that kinesthetic activities, combined with auditory support, significantly aid in strengthening phonological awareness.

Recognition of vowel phonemes	All students demonstrated an increased ability to recognize and identify vowel sounds, particularly when given auditory assistance.	The improved recognition of vowel phonemes highlights the effectiveness of combining tactile and auditory methods.
Recognition of consonants phonemes	All students effectively recognized and identified consonant sounds, especially when auditory cues were provided.	The use of both tactile and auditory reinforcement proved beneficial for consonant sound recognition. This finding supports the continued use of multisensory strategies to enhance consonant phoneme identification.
Production of vowel phonemes	All students practiced producing vowel sounds when helping their partners guess the letters.	The kinesthetic and verbal nature of the activity facilitated phoneme production, allowing students to reinforce their phonological skills actively.
Production of consonants phonemes	All students practiced producing consonant sounds as auditory cues for their partners.	The exercise encouraged students to articulate consonant sounds, enhancing their phonological production skills.

Source: Eighth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 16

Tittle: Analysis of the Ninth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All students actively participated, moving to the cones and responding to the sounds.	The active nature of the task engaged all students, highlighting the effectiveness of kinesthetic learning.
Behavior	All students exhibited excellent behavior, followed instructions, and waited their turn to move.	The activity's clear rules and engaging nature encouraged students to follow directions and participate respectfully, showing that kinesthetic strategies support not only learning but also classroom management.
Engagement	High engagement was observed, with students showing excitement to participate.	The dynamic and movement-based activity captured students' attention and maintained high levels of engagement. The excitement observed suggests that kinesthetic strategies are particularly effective in sustaining students' interest and

		motivation during learning sessions.
Challenges	3 of the 15 students had difficulty distinguishing between certain consonants (/g/, /j/, /v/, /w/, /y/) and required additional support.	The observed difficulties highlight the need for continued multisensory approaches. The support needed by some students suggests that, while movement aids learning, reinforcement through repeated practice and diverse kinesthetic methods could further strengthen students' phonemic recognition.
Success	All students successfully associated sounds with letters, with three students needing some assistance.	The overall success of the activity demonstrates the value of kinesthetic learning in strengthening the association between sounds and letters. Even those needing assistance showed progress, indicating that the active engagement promoted by this strategy aids students in

		overcoming phonological challenges.
Recognition of vowel phonemes	All students demonstrated the ability to recognize and identify vowel sounds.	The activity's combination of movement and sound recognition solidified students' understanding of vowel phonemes, emphasizing the effectiveness of kinesthetic learning in improving phonological skills.
Recognition of consonants phonemes	12 of the 15 students effectively recognized and identified consonant sounds during the activity.	The success in recognizing consonant phonemes highlights the positive impact of kinesthetic strategies. The movement-based identification process appears to have enhanced students' auditory discrimination skills, although additional practice may be needed for some students.
Production of vowel phonemes	All 15 students practiced producing vowel sounds and creatively used words with the same beginning sound for extra points.	The incorporation of sound production into the activity facilitated deeper phonemic learning. The added challenge of generating words with the same beginning sound encouraged

		students to actively engage with and apply their phonological knowledge.
Production of consonants phonemes	All students practiced producing consonant sounds using words with the same beginning sound for extra points.	This aspect of the session highlights the effectiveness of kinesthetic activities in promoting not only recognition but also the application of phonemic knowledge.

Source: Ninth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

Table 17

Tittle: Analysis of the Tenth Session with Kindergarten Students at Saint Francis College Using Kinesthetic Strategies to Improve Phonological Awareness

Observation	Result	Analysis
Participation	All students actively participated in searching for matching pictures and naming them aloud.	The high participation rate reflects the engaging nature of the activity, which combined visual and auditory elements with kinesthetic movement. This approach allowed students to actively connect phonemes with visual representations, reinforcing their understanding in an interactive manner.
Behavior	All students showed positive behavior, followed instructions, and cooperated with peers.	The structured and collaborative nature of the activity supported positive behavior. The task's clear expectations and the opportunity for peer interaction promoted cooperative learning, demonstrating how kinesthetic activities can also enhance social

		skills alongside phonemic awareness.
Engagement	High engagement was observed, with students displaying excitement and sustained interest throughout the activity.	The combination of movement, sound, and visual matching kept students engaged. This highlights the effectiveness of kinesthetic strategies in maintaining student interest, making learning feel like an interactive game rather than a traditional lesson.
Challenges	3 out of 15 students had difficulty identifying beginning sounds and required additional guidance.	While the majority of students benefited from the activity, the observed challenges indicate that some students may need further support in linking phonemes with their corresponding letters. This suggests that continued use of multisensory strategies could help bridge these gaps.
Success	Students successfully matched letters with pictures and improved their phonological awareness.	The successful matching of letters with pictures indicates that the activity effectively reinforced students' phonemic recognition skills. By engaging multiple

		senses, students were able to better internalize the sounds associated with each letter, enhancing both recognition and production of phonemes.
Recognition of vowel phonemes	All students demonstrated an increased ability to recognize and identify vowel sounds.	The activity's emphasis on visual and auditory cues helped students strengthen their recognition of vowel sounds, affirming the benefits of integrating kinesthetic methods into phonological instruction.
Recognition of consonants phonemes	2 of 15 students had difficulty recognizing consonants /g/, /j/, /w/, /y/, and 3 students struggled with /v/.	The challenges with certain consonants suggest that while kinesthetic activities were broadly effective, targeted reinforcement for specific phonemes is necessary. Repeated practice and more hands-on activities may help address these areas of difficulty.
Production of vowel phonemes	All students practiced producing vowel sounds when	By articulating the sounds aloud, students were able to further solidify their phonemic

	naming the pictures that matched the letters.	knowledge. This active practice underscores the importance of kinesthetic approaches in supporting both recognition and production of sounds.
Production of consonants phonemes	2 of 15 students had difficulty producing consonants /w/ and /y/, while 3 students had challenges with /j/, /g/, and /v/.	The production difficulties observed highlight the need for continued kinesthetic reinforcement. Physical engagement combined with auditory feedback helps students better internalize and produce phonemes, suggesting that ongoing kinesthetic activities could further improve these skills.

Source: Tenth session with kindergarten students at Saint Francis College using kinesthetic strategies to improve phonological awareness

4.1.5.2 General analysis of the sessions

The implementation of kinesthetic strategies over the 10 sessions showed significant positive effects on the phonological awareness development of kindergarten students at Saint Francis College. Each session incorporated multisensory activities that engaged students through physical, auditory, and visual elements. These activities, which included body movement, sound articulation, and letter recognition, were effective in improving students' ability to recognize and produce both vowel and consonant phonemes. The results demonstrate the value of kinesthetic learning in enhancing phonological awareness, aligning with Kindervater (2002), who emphasizes the value of movement in reinforcing phonemic awareness through physical engagement, helping students internalize sounds more effectively.

Throughout the sessions, all 15 students actively participated, showing high levels of engagement and motivation. Kinesthetic activities, such as forming letters with their bodies and jumping onto letter cards, kept students interested and eager to participate. This high level of engagement suggests that kinesthetic strategies not only captured students' attention but also helped maintain their interest. McIlroy (2023) supports the importance of engaging multiple senses to reinforce phonological skills, highlighting that integrating auditory and kinesthetic elements significantly enhances early literacy development.

Behavioral outcomes were also favorable. Students followed instructions well and demonstrated cooperative behavior during group activities. These results highlight the additional benefit of kinesthetic strategies in promoting social skills alongside academic skills. The positive behavior observed supports the idea that kinesthetic learning contributes to a structured

classroom environment, as also noted by McGraw (2021), who found that multisensory approaches improve classroom management by engaging students holistically.

In terms of phoneme recognition, students showed noticiable improvement, particularly with vowel phonemes. By the end of the sessions, all students could correctly recognize vowel sounds, demonstrating the success of kinesthetic strategies in reinforcing fundamental phonemic skills. For consonants, the results were also positive, although some sounds (/g/, /j/, /v/, /w/, /y/) posed challenges. This aligns with Kindervater's (2002) findings that while kinesthetic strategies are effective, certain phonemes may require additional support and repetition.

The production of phonemes improved significantly, with all students demonstrating increased proficiency in producing vowel sounds, and most showing similar improvement with consonants. The kinesthetic activities, which involved articulating sounds while physically forming letters, helped bridge the connection between sound and symbol. This multisensory approach contributed to deeper learning and better retention of phonemic concepts, as McGraw (2021) emphasizes the importance of connecting movement with phonemic awareness to improve literacy outcomes.

Challenges during the sessions, such as distinguishing between certain phonemes, were addressed through additional cues and assistance. The flexibility of kinesthetic strategies allowed immediate adjustments, meeting diverse learning needs, reinforcing Gardner's (2011) theory that varied instructional methods cater to different learning styles effectively.

In conclusion, the overall analysis of the 10 sessions highlights the effectiveness of kinesthetic strategies in improving phonological awareness among young learners. By engaging multiple senses and incorporating movement, these strategies helped students actively engage

with phonemic content, improving both recognition and production of sounds. The consistent improvements suggest that continuing to use kinesthetic strategies can build a strong foundation for future literacy development, as suggested by the evidence from Kindervater (2002), McGraw (2021), and McIlroy (2023).

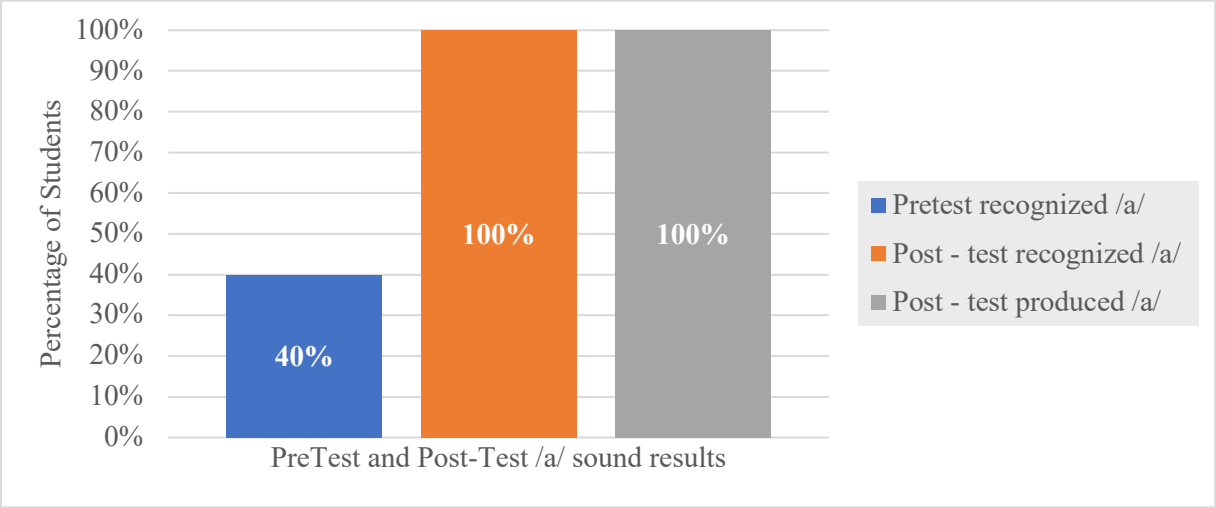
4.1.5.3 Comparison of the pre-test and post-test results

The following analysis focuses on comparing the pretest and post-test results to assess the effectiveness of kinesthetic strategies on the recognition and production of both vowel and consonants phonemes among kindergarten students at Saint Francis College, Alajuela. This comparison aims to highlight the improvement in students' phonological awareness after applying the kinesthetic strategies.

Figure 56

Tittle: Students Improvement of Vowel /a/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 56** illustrates the pretest and post-test results for the vowel sound /a/. The pretest showed that 40% of students recognized this sound, while the post-test indicated that 100% of the students recognized and could produce this vowel sound. This reflects a 60% improvement in recognition and production, underscoring the effectiveness of kinesthetic strategies in enhancing phonological awareness. The significant increase suggests that incorporating physical movement and multisensory learning approaches contributed positively to students' understanding and retention of the vowel sound /a/.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

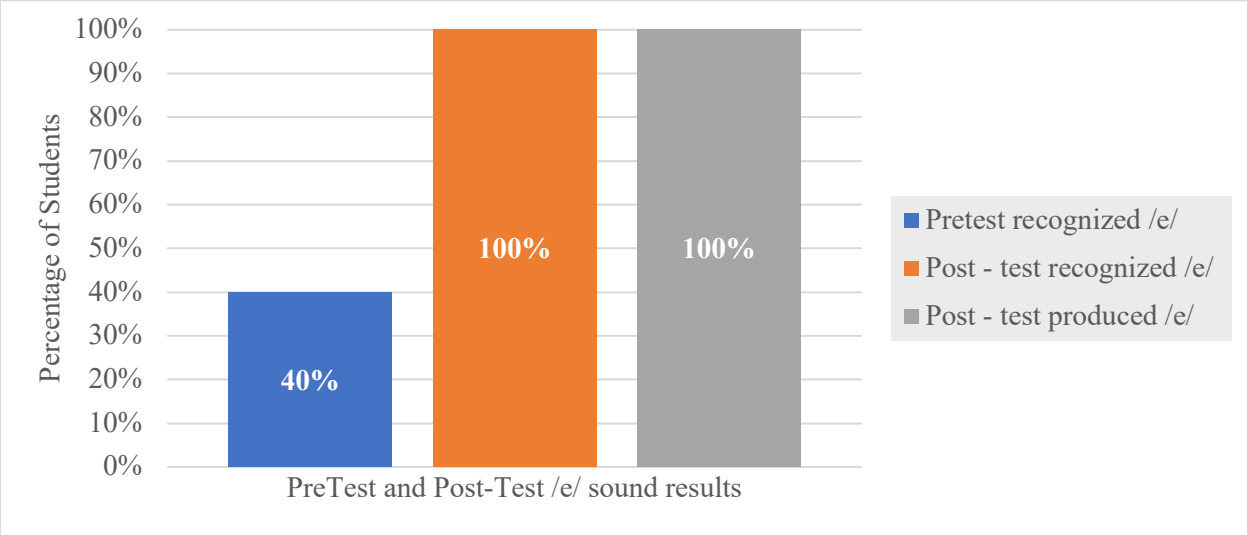
The 60% improvement in recognizing and producing the /a/ sound emphasizes the success of the kinesthetic approach. Activities that involved students physically forming letters with their bodies and engaging in sound articulation likely reinforced their ability to connect phonemes with their corresponding symbols. This active engagement not only improved

phonological skills but also maintained student interest and motivation, confirming the value of integrating movement-based strategies into early literacy instruction.

Figure 57

Tittle: Students Improvement of Vowel /e/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 57** illustrates the pretest and post-test results for the vowel sound /e/. In the pretest, 40% of students recognized this vowel sound, while the post-test showed that 100% of students could recognize and produce the sound. This 60% improvement highlights the effectiveness of kinesthetic strategies in enhancing phonological awareness. The substantial increase suggests that the multisensory and movement-based learning methods significantly strengthened students' understanding and retention of the vowel sound /e/.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

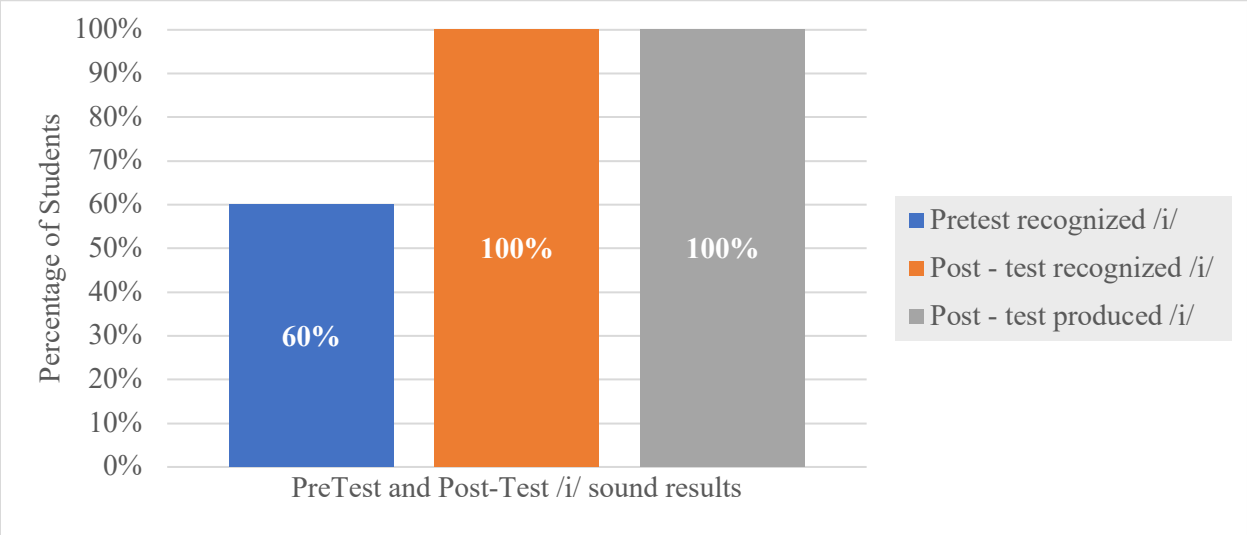
The 60% increase in recognizing and producing the /e/ sound indicates that kinesthetic strategies effectively reinforced phonemic skills. Activities that engaged students through body

movement, sound articulation, and visual representation likely supported deeper learning connections. This active engagement maintained high levels of student interest and participation, demonstrating the impact of movement-based approaches on early literacy skills.

Figure 58

Tittle: Students Improvement of Vowel /i/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 58** compares pretest and post-test outcomes for the vowel sound /i/. Initially, 60% of students recognized this sound, but after implementing kinesthetic strategies, 100% could recognize and produce it. This 40% improvement shows the positive effect of incorporating physical and multisensory learning techniques on phonological development, emphasizing how kinesthetic engagement helped solidify students' grasp of the /i/ sound.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

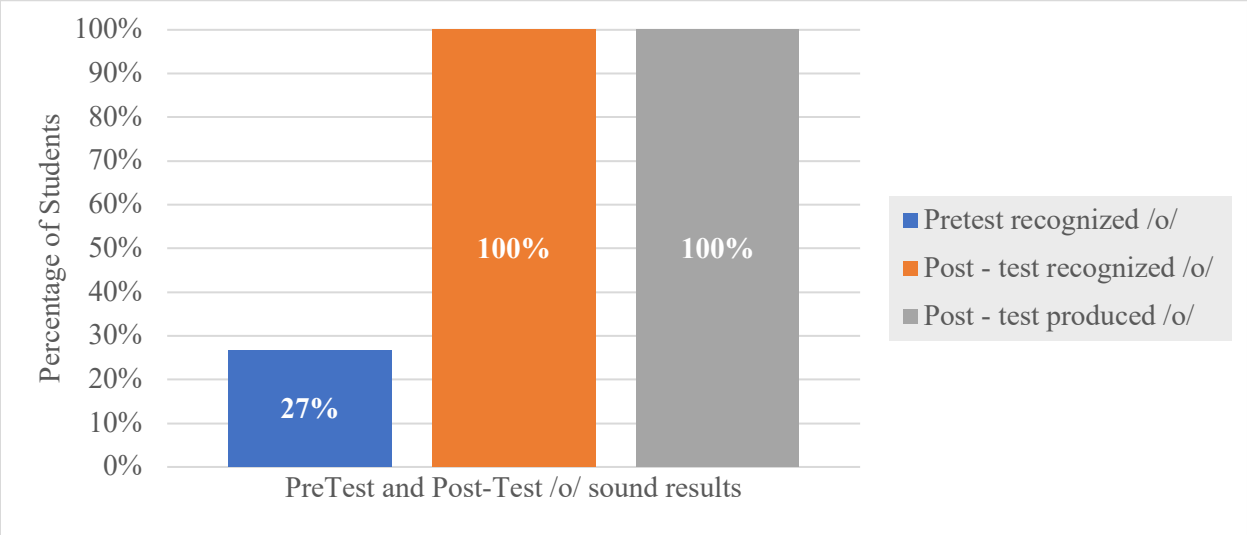
The 40% improvement in the recognition and production of the /i/ sound underscores the success of kinesthetic strategies in enhancing phonemic awareness. Physical activities, such as

forming letters and vocalizing sounds, helped students establish a stronger connection between the sound and its representation, supporting retention and engagement. This improvement reflects the broader benefits of active, multisensory approaches in phonological instruction.

Figure 59

Tittle: Students Improvement of Vowel /o/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 59** presents the results for the vowel sound /o/ showing a notable increase in recognition from 26.67% in the pretest to 100% in the post-test. This 73.33% improvement highlights the impact of kinesthetic strategies in bridging the gap in phonemic awareness. The dramatic gain suggests that incorporating movement and interactive learning significantly enhanced students' ability to recognize and produce the /o/ sound.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

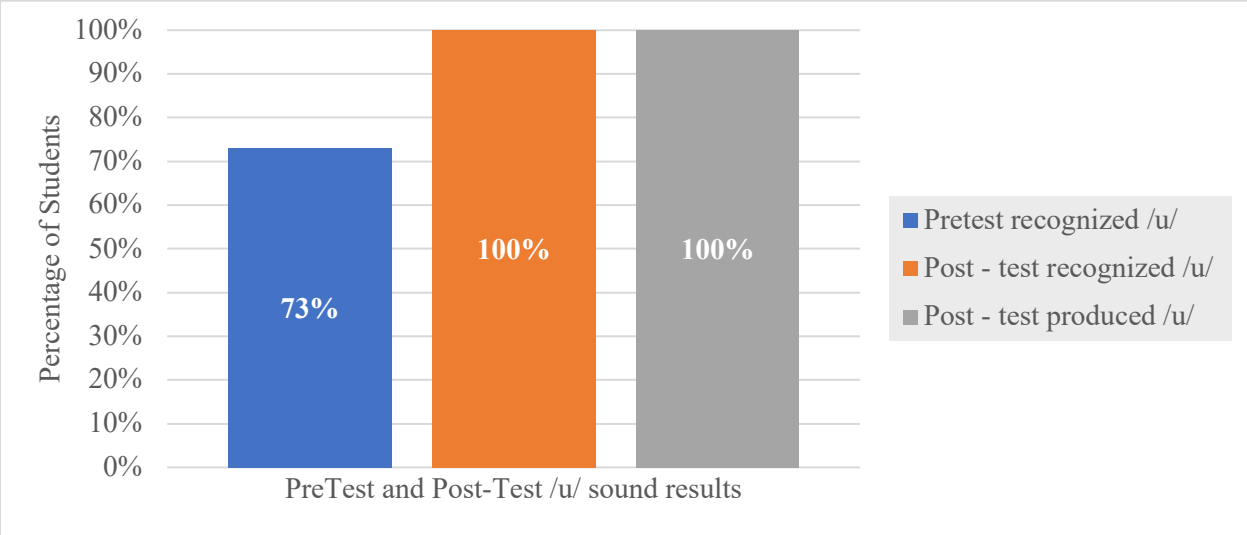
The 73.33% improvement in recognizing and producing the /o/ sound reveals the effectiveness of kinesthetic strategies in phonological learning. Activities that combined physical

movement with sound articulation provided the sensory input needed to improve retention and mastery. This substantial improvement emphasizes the critical role of multisensory engagement in supporting students' phonological development.

Figure 60

Tittle Students Improvement of Vowel /u/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 60** shows the progress in recognizing the vowel sound /u/ with pretest recognition at 73.33% rising to 100% in the post-test. This 26.67% improvement indicates that kinesthetic strategies were effective in refining students' phonemic skills, though initial recognition was already relatively high compared to other vowels.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

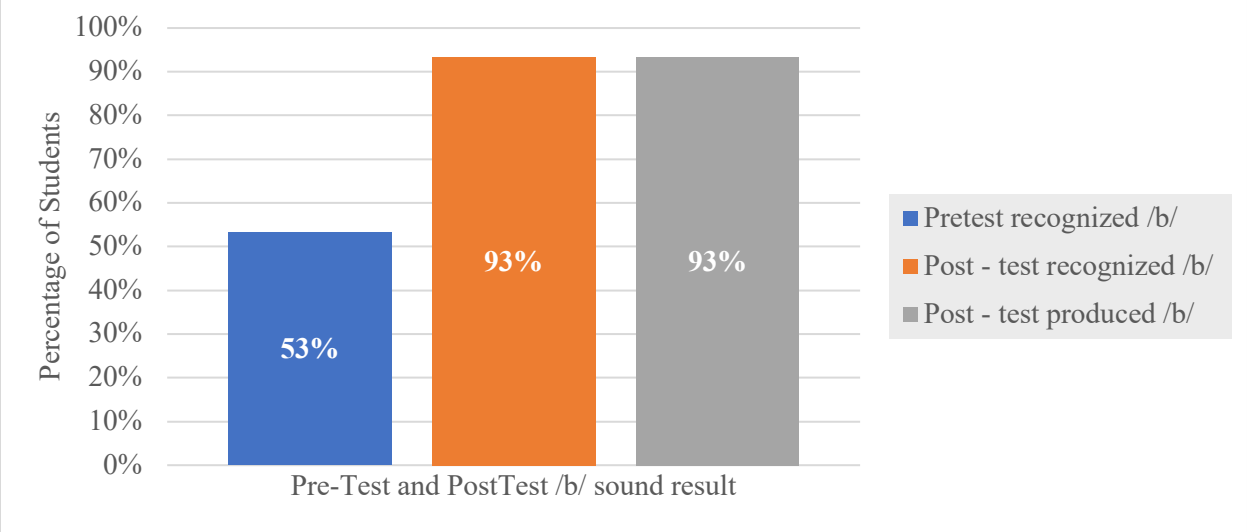
The 26.67% improvement in the /u/ sound demonstrates that kinesthetic activities further solidified students' recognition and production skills. Even though initial performance was strong, the added kinesthetic reinforcement helped all students reach full mastery, confirming

that movement-based strategies enhance phonemic awareness and support consistent student progress across different levels of initial ability.

Figure 61

Tittle: Students Improvement of Consonant /b/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 61** shows the pretest and post-test results for the consonant sound /b/. Initially, 53.33% of students recognized this sound, which increased to 93.33% in the post-test, reflecting a 40% improvement.



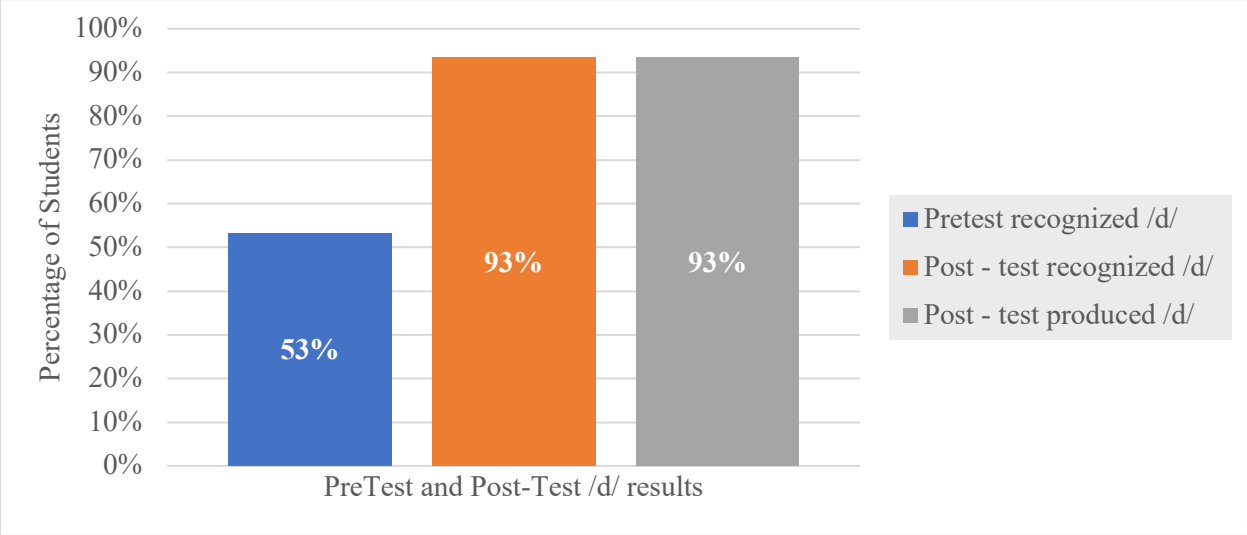
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The notable improvement in recognizing and producing the /b/ sound underscores the effectiveness of kinesthetic strategies. Activities involving body movement and sound articulation enhanced students' phonological awareness, fostering better retention and engagement.

Figure 62

Tittle: Students Improvement of Consonant /d/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 62** illustrates the pretest and post-test outcomes for the consonant sound /d/. The initial recognition rate of 53.33% improved to 93.33% in the posttest, indicating a 40% enhancement.



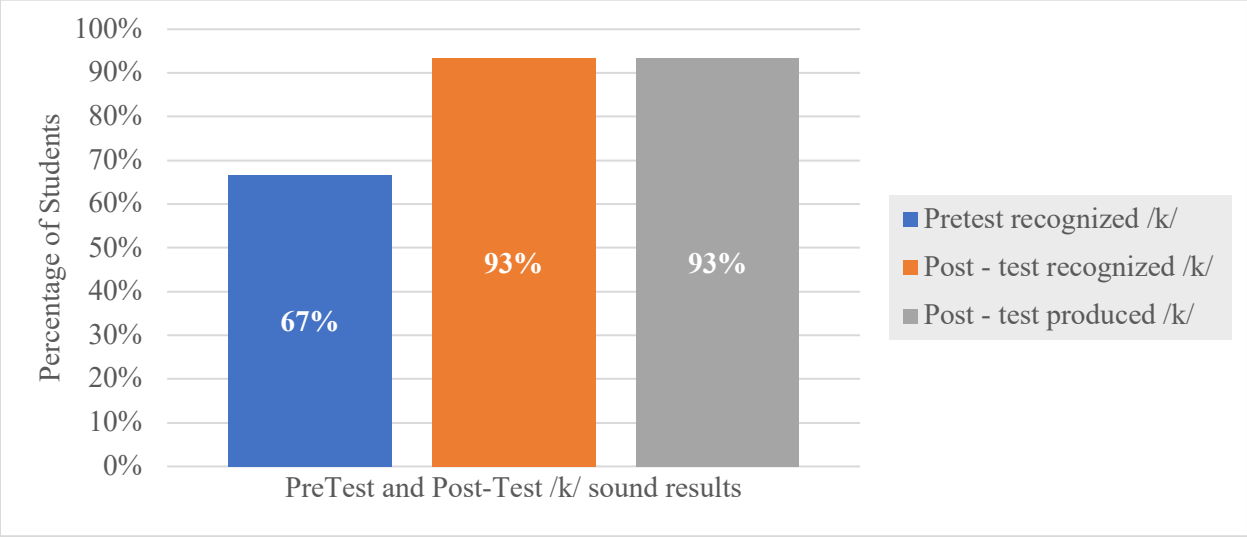
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The significant improvement in recognizing and producing the /d/ sound suggests that kinesthetic learning approaches effectively enhance phonemic awareness. Physical engagement through movement helped students internalize the sound, showing that these strategies are beneficial for developing early literacy skills and ensuring retention of phonemes.

Figure 63

Tittle: Students Improvement of Consonant /k/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 63** illustrates the pretest and post-test results for the consonant sound /k/. Recognition climbed from 66.67% to 93.33%, marking a 26.66% improvement.



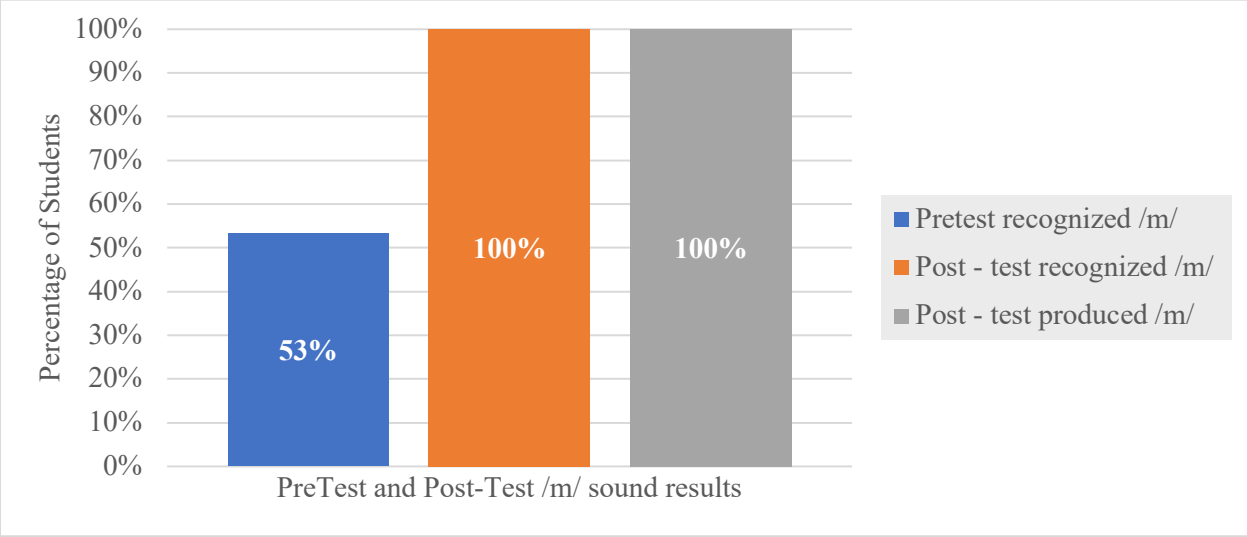
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The increase in /k/ sound recognition reflects how kinesthetic strategies effectively reinforce learning through interactive methods. The improvement, while smaller than others, suggests that continued exposure to these strategies can gradually enhance phonological skills reinforcing students understanding of the sound.

Figure 64

Tittle: Students Improvement of Consonant /m/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 64** shows the recognition rates for the consonant sound /m/, improving from 53.33% in the pretest to 100% in the post-test, resulting in a 46.67% improvement.



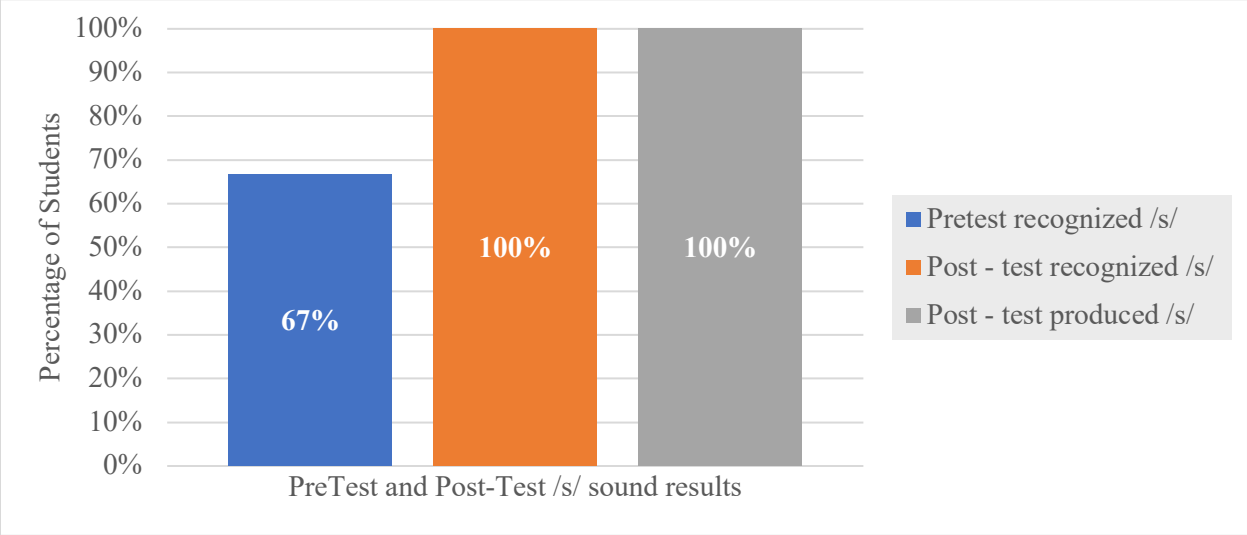
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Achieving full recognition and production of the /m/ sound indicates that kinesthetic strategies significantly benefit students' phonological awareness. The success of these activities highlights the effectiveness of engaging students through physical movement and sound articulation.

Figure 65

Tittle: Students Improvement of Consonant /s/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 65** shows the pretest and post-test results for the consonant sound /s/. Initially, 66.67% of students recognized this sound, which increased to 100% in the post-test, reflecting a 33.33% improvement.



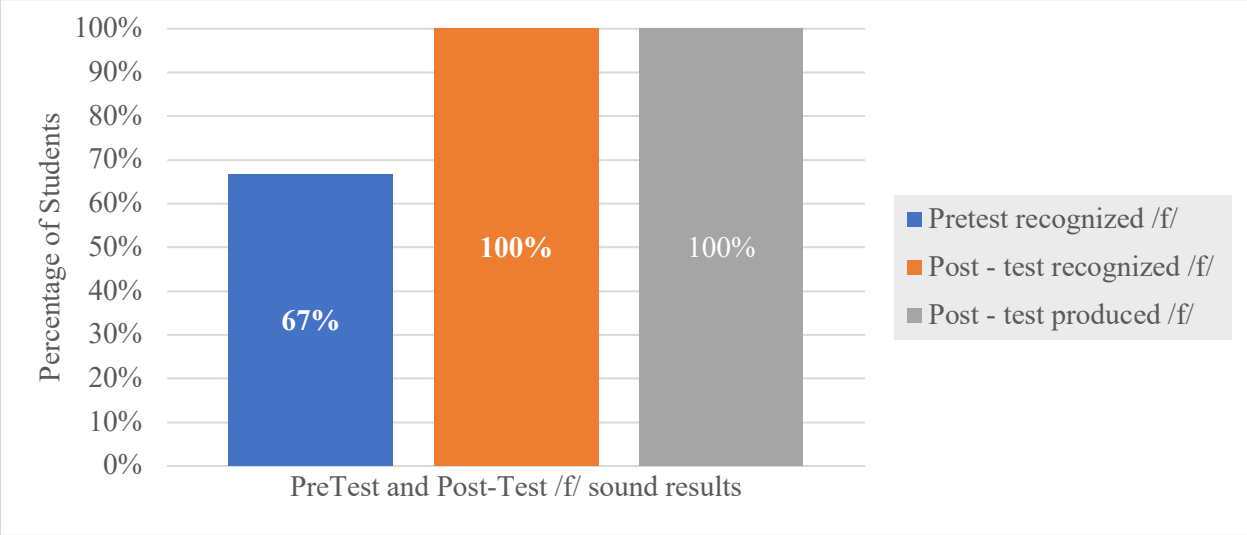
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The fully mastery in /s/ sound recognition and production illustrates the positive impact of kinesthetic strategies on phonological awareness. Engaging students physically in sound recognition reinforced their understanding and retention, making these multisensory approaches an essential part of effective literacy instruction.

Figure 66

Tittle: Students Improvement of Consonant /f/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 66** shows the recognition and production rates of the consonant sound /f/. Pretest recognition was at 66.67%, which increased to 100% in the post-test, showing a 33.33% improvement.



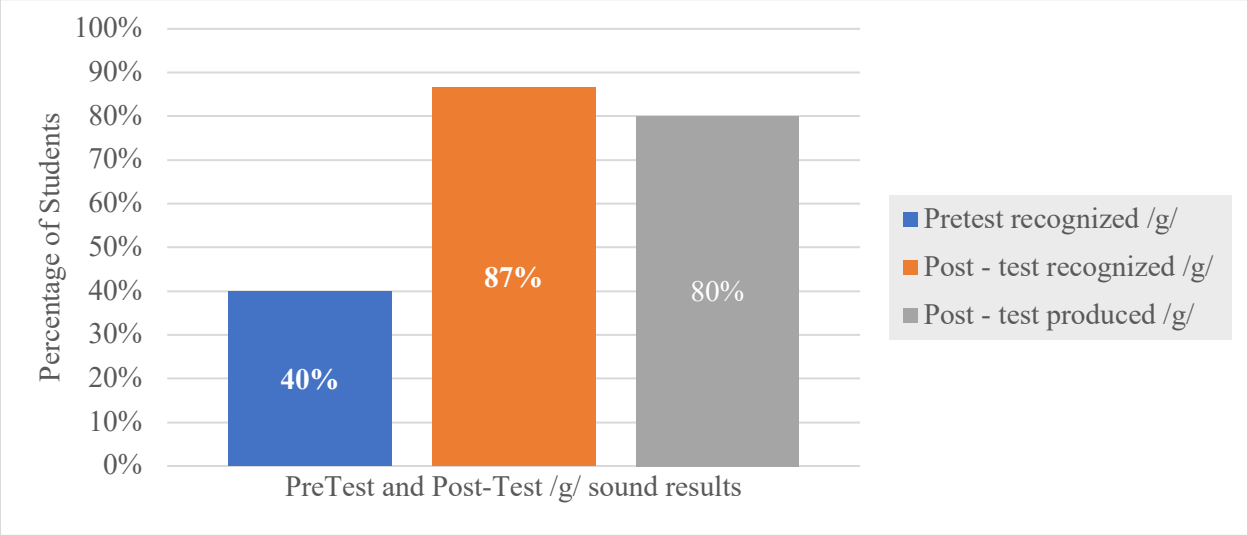
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The improvement in recognizing and producing the /f/ sound demonstrates the effectiveness of kinesthetic strategies in strengthening phonemic awareness. Multisensory activities that connect physical movements with sounds strengthened students' ability to recognize and produce phonemes, proving the value of kinesthetic learning in early education.

Figure 67

Tittle: Students Improvement of Consonant /g/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 67** represents the pretest and post-test recognition rates for the consonant sound /g/. The pretest showed 40% recognition, which increased to 86.67% post-test, reflecting a 46.67% improvement.



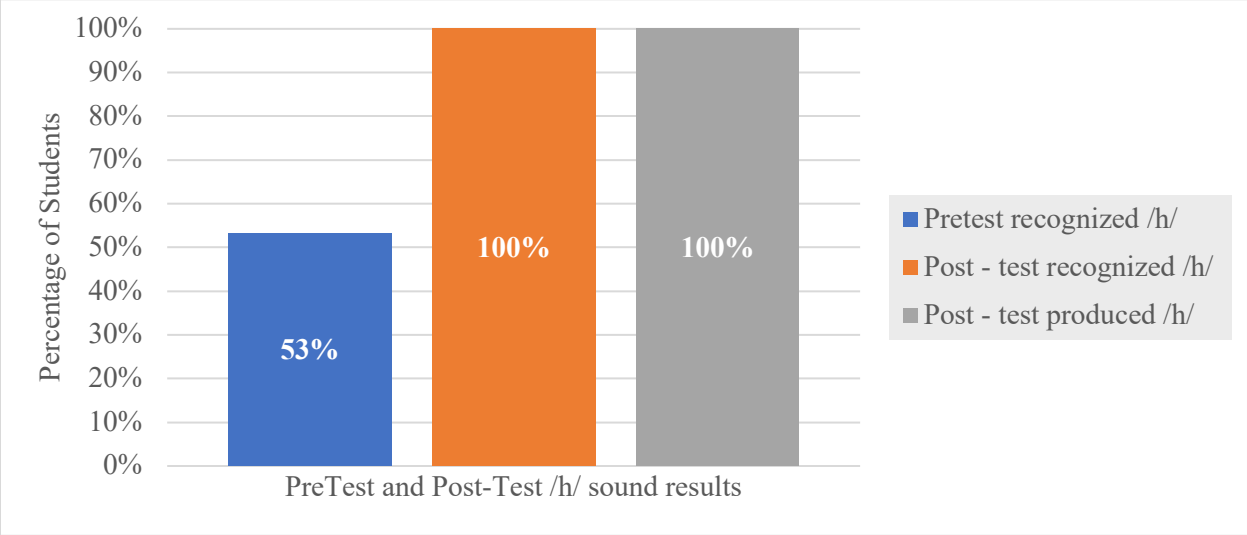
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Despite improvements, /g/ remains a challenging sound for some students, suggesting that additional kinesthetic reinforcement could further enhance their recognition and production skills. Continued practice with movement and sound articulation may be beneficial.

Figure 68

Tittle: Students Improvement of Consonant /h/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 68** shows the recognition and production rates for the consonant sound /h/. The recognition improved from 53.33% in the pretest to 100% in the post-test, an increase of 46.67%.



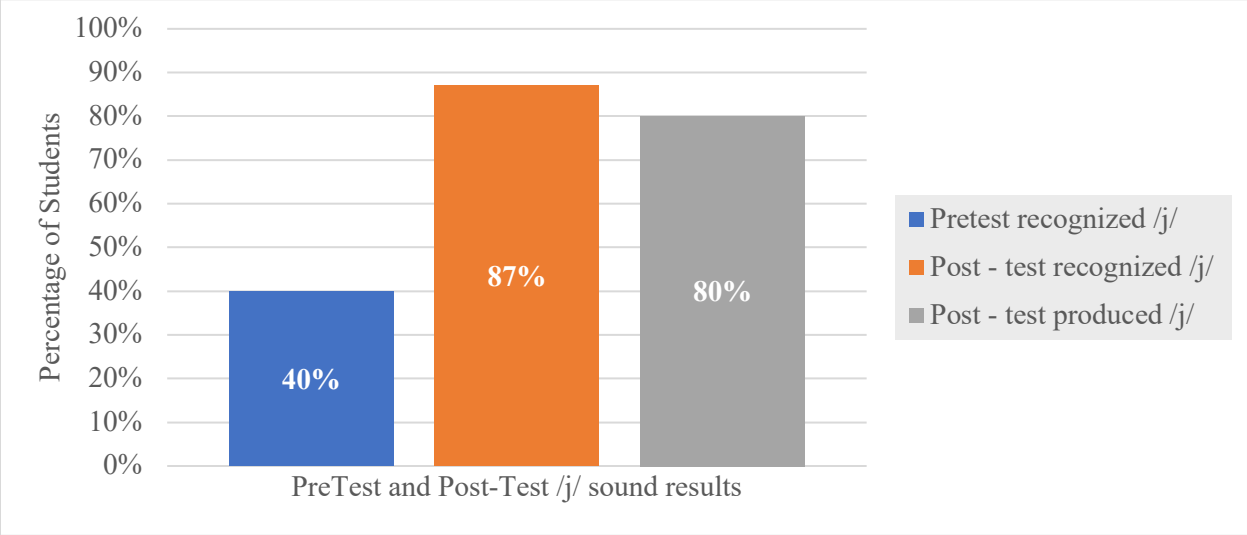
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

This significant improvement highlights the impact of kinesthetic strategies in helping students connect the /h/ sound with its physical representation. Engaging multiple senses proved crucial in achieving full recognition and production.

Figure 69

Tittle: Students Improvement of Consonant /j/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 69** shows the pretest and post-test results for the consonant sound /j/. Pretest recognition was 40%, which increased to 86.67% in the post-test, reflecting a 46.67% improvement.



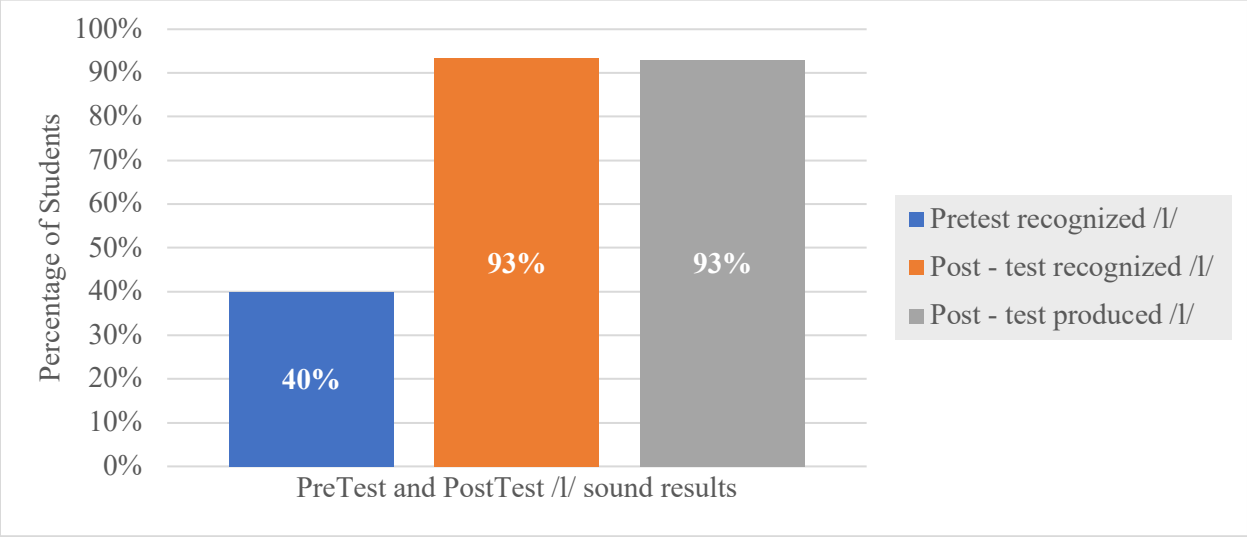
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Though the improvement is notable, the /j/ sound continues to present challenges for some students, indicating a need for more targeted kinesthetic strategies to address these specific phonemes.

Figure 70

Tittle: Students Improvement of Consonant /l/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 70** shows that recognition of the /l/ sound improved from 40% in the pretest to 93.33% in the post-test, marking a 53.33% enhancement.



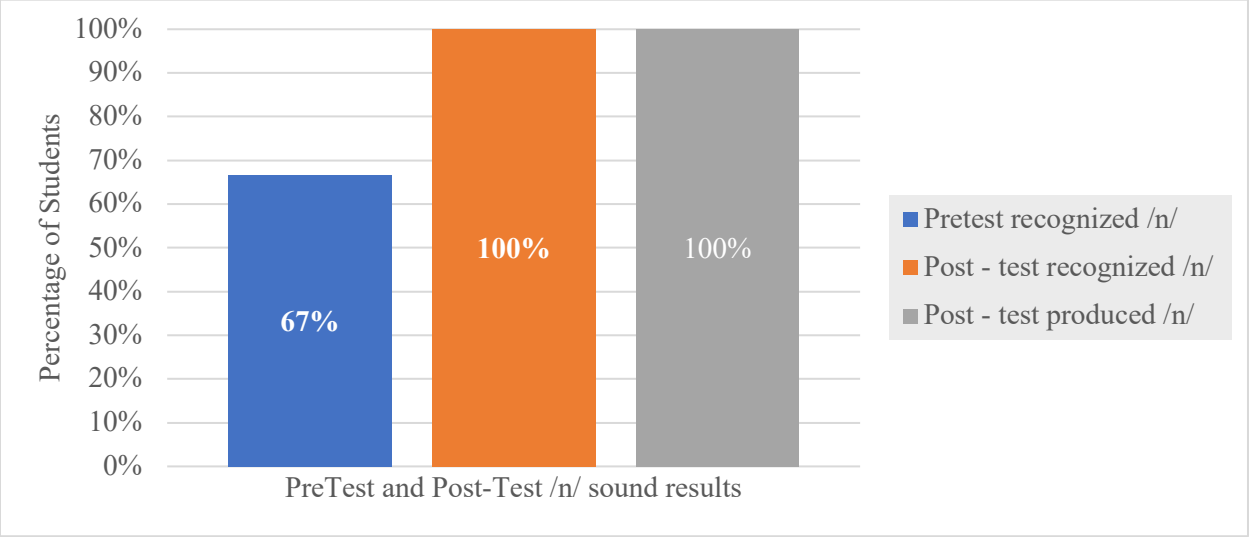
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic strategies proved highly effective for the /l/ sound, reinforcing phonological skills through physical and auditory engagement, which aided in the substantial improvement observed.

Figure 71

Tittle: Students Improvement of Consonant /n/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 71** illustrates that recognition of the /n/ sound increased from 66.67% in the pretest to 100% in the post-test, showing a 33.33% improvement.



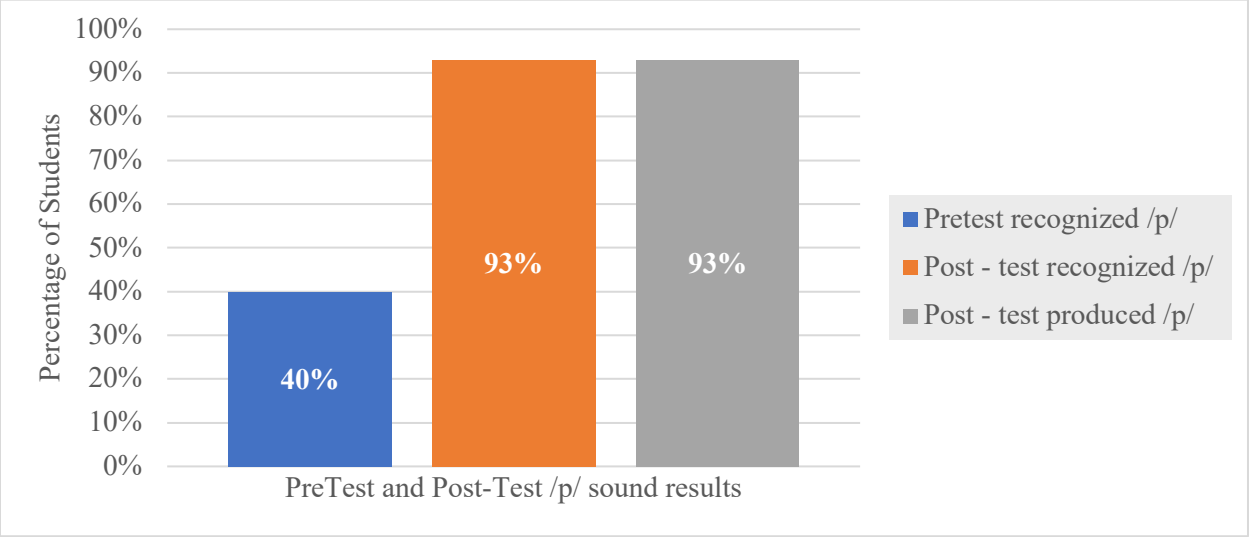
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The full mastery of the /n/ sound reflects the power of kinesthetic activities in enhancing phonemic awareness, making it a valuable method for teaching challenging consonants.

Figure 72

Tittle: Students Improvement of Consonant /p/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 72** shows that recognition and production of the /p/ sound improved from 40% in the pretest to 93.33% in the posttest, indicating a 53.33% increase.



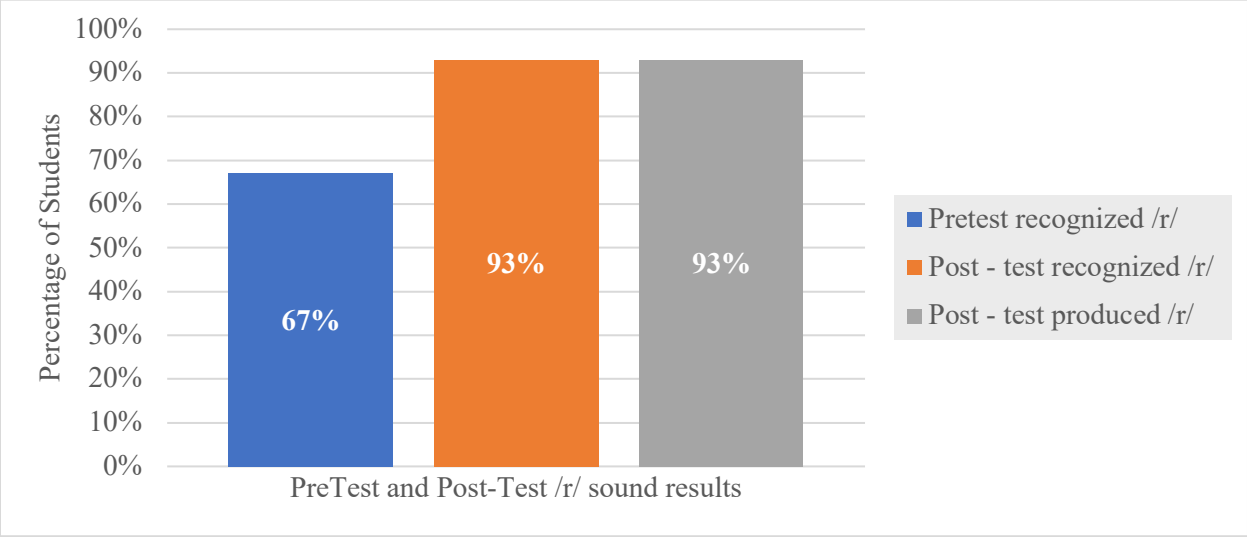
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The success with the /p/ sound highlights the effectiveness of kinesthetic learning, particularly in helping students solidify their understanding through multisensory approaches.

Figure 73

Tittle: Students Improvement of Consonant /r/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 73** illustrates that recognition of the /r/ sound increased from 66.67% in the pretest to 93.33% in the post-test, a 26.66% improvement.



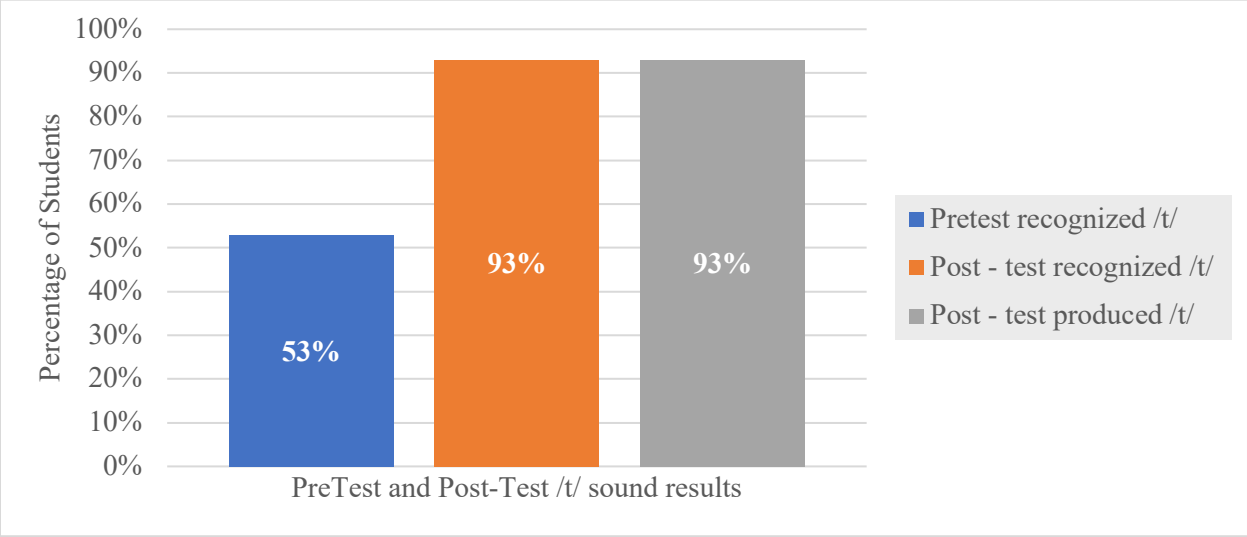
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

This moderate improvement shows that while kinesthetic strategies are beneficial, consistent practice and reinforcement are crucial for mastering the /r/ sound.

Figure 74

Tittle: Students Improvement of Consonant /t/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 74** demonstrates that recognition of the /t/ sound improved from 53.33% in the pretest to 93.33% in the posttest, resulting in a 40% increase.



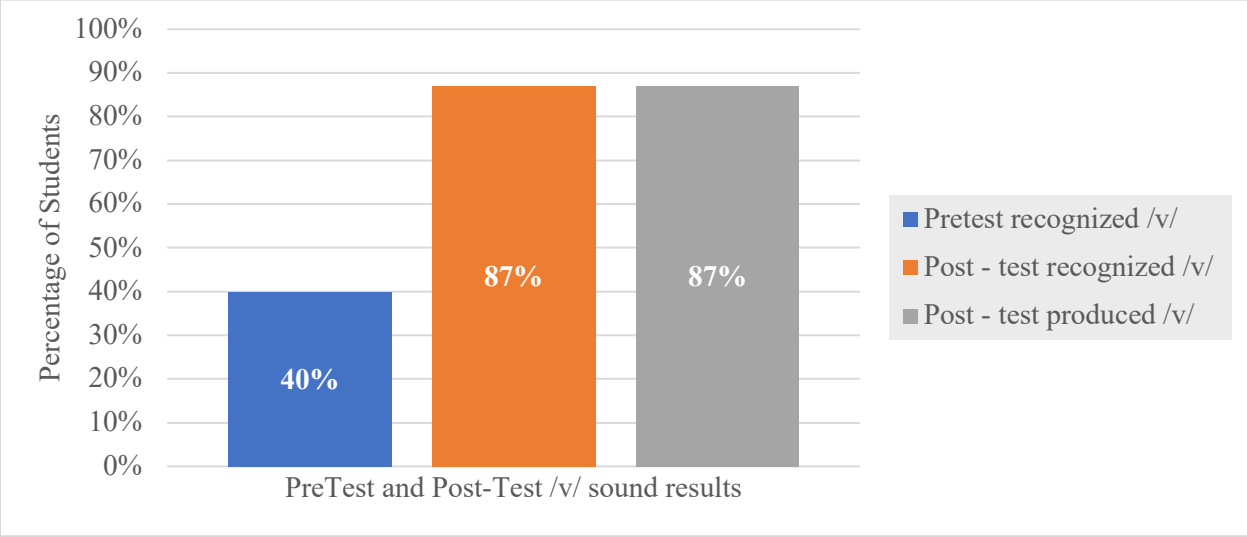
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The improvement for the /t/ sound reaffirms the positive influence of kinesthetic strategies, highlighting their role in facilitating phonemic recognition through active learning.

Figure 75

Tittle: Students Improvement of Consonant /v/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 75** shows that recognition and production of the /v/ sound improved from 40% in the pretest to 86.67% in the post-test, marking a 46.67% improvement.



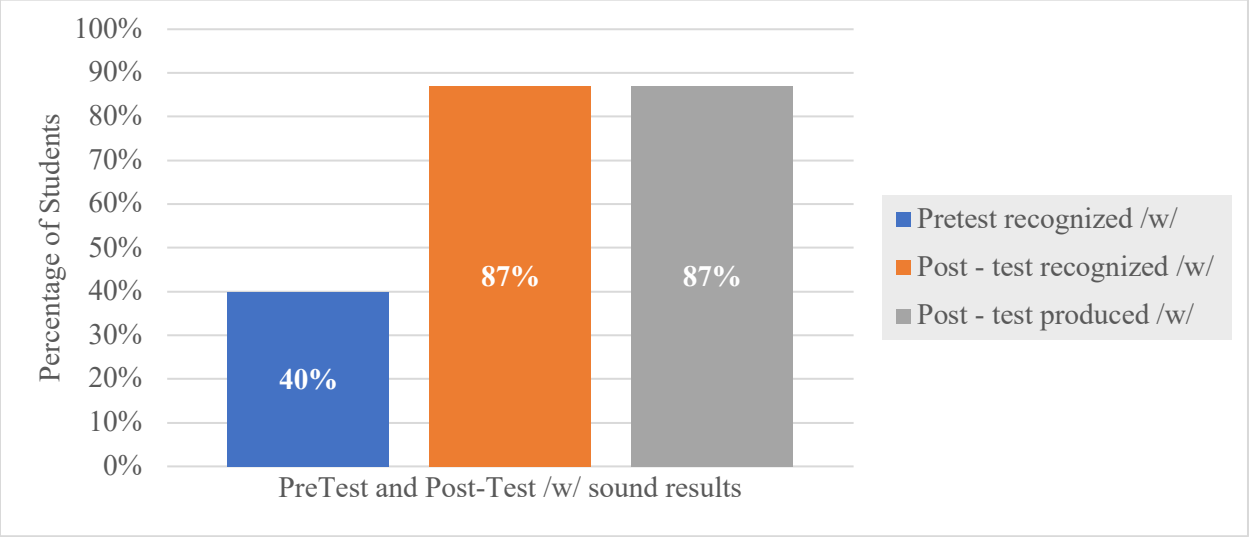
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Although there was a significant increase, the /v/ sound remains challenging, suggesting that continued kinesthetic reinforcement could further enhance student outcomes.

Figure 76

Tittle: Students Improvement of Consonant /w/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 76** illustrates that recognition of the /w/ sound improved from 40% in the pretest to 86.67% in the posttest, reflecting a 46.67% increase.



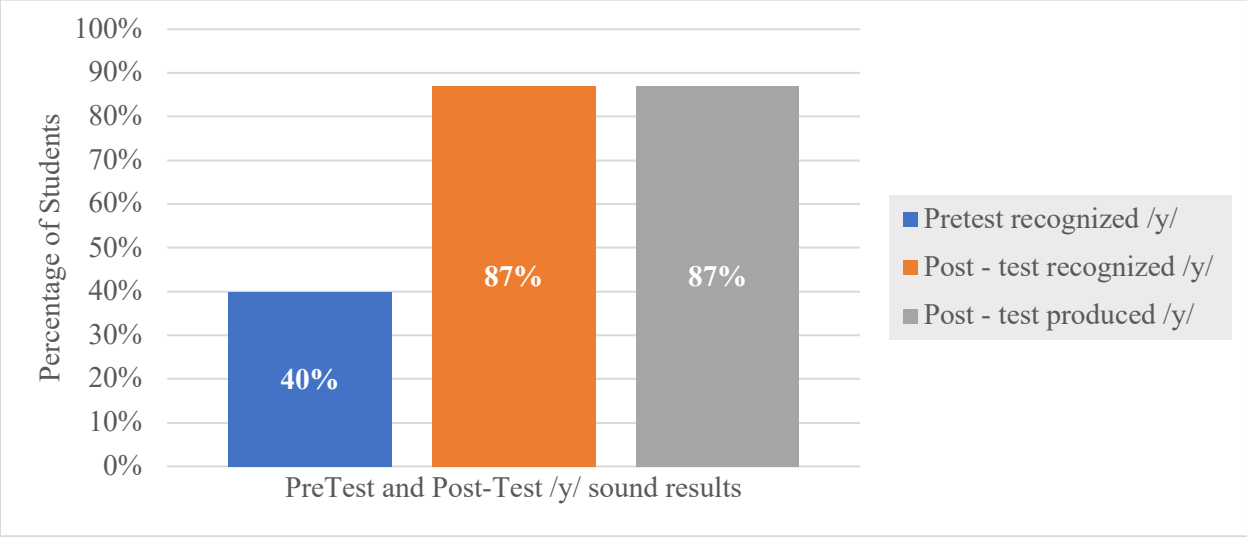
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The kinesthetic strategies helped bridge the gap in recognizing and producing the /w/ sound, although some students still require additional support to achieve full mastery.

Figure 77

Tittle: Students Improvement of Consonant /y/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 77** demonstrates that recognition of the /y/ sound increased from 40% in the pretest to 86.67% in the post-test, resulting in a 46.67% improvement.



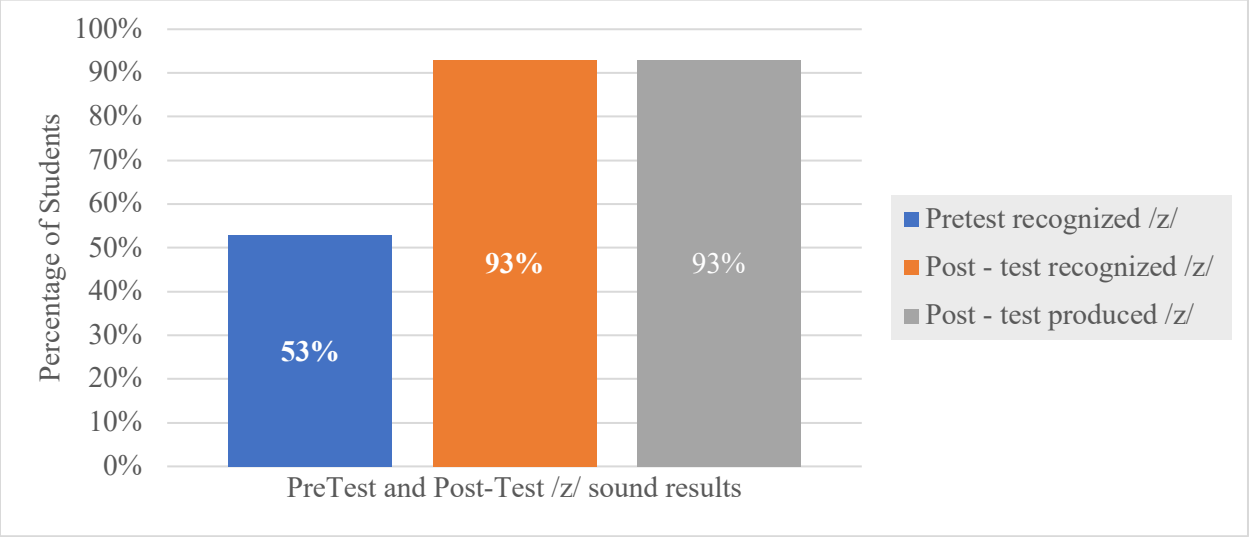
Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

Kinesthetic methods effectively aided in phonemic recognition and production of the /y/ sound, demonstrating the need for ongoing multisensory reinforcement.

Figure 78

Tittle: Students Improvement of Consonant /z/ Recognition Following the Implementation of Kinesthetic Strategies

The **Figure 78** shows that the recognition of the /z/ sound improved from 53.33% in the pretest to 93.33% in the post-test, marking a 40% enhancement.



Source: Pre-test and post-test applied to kindergarten students at Saint Francis Collage, Alajuela, 2024.

The substantial improvement in /z/ sound recognition highlights the effectiveness of kinesthetic strategies in enhancing phonemic awareness. The multisensory approach allowed students to connect physical movement with auditory recognition, reinforcing their learning and retention of the sound. Continued use of these strategies can further support students in mastering more challenging consonants, demonstrating the valuable role of kinesthetic learning in early literacy development.

Analysis of the results

The comparison between the pretest and post-test results shows significant improvements in vowel and consonant sound recognition and production after implementing kinesthetic strategies.

Vowel Sounds

The results demonstrate significant improvements across all vowel sounds, with the most notable progress in the recognition and production of /o/, which increased by 73.33% of the students. By the end of the strategies, all students achieved 100% proficiency in recognizing and producing vowel sounds. This outcome highlights the effectiveness of kinesthetic strategies in enhancing vowel phonemic awareness.

Consonant Sounds

All consonant sounds showed notable improvements in recognition and production, ranging from 26.66% to 53.33% after the kinesthetic activities. The most substantial improvement was seen with /l/ (as in "lamp") and /p/ (as in "pig"), both of which improved by 53.33%. The consonants /g/ and /j/ indicated considerable improvement as well, although the post-test results indicate that some students still require additional practice to reach the 100% proficiency level.

The pre-test results evidenced a wide range of initial recognition and production levels in the students, with many sounds being recognized by less than half of the class. The post-test results demonstrate substantial gains across all vowel and consonant sounds highlighting the effectiveness of incorporating kinesthetic learning techniques in early childhood education, as

they can improve students' ability to recognize and produce vowel and consonant sounds, leading to stronger foundational literacy skills.

Chapter V

Conclusions and Recommendations

5.1 CONCLUSIONS

The research aimed to determine the impact of kinesthetic strategies on improving phonological awareness; and based on the analysis of the collected data, along with the observed student responses, it has been demonstrated that these strategies are highly effective. The kinesthetic approach successfully engaged students by creating a dynamic learning environment that incorporated movement, resulting in a heightened sense of excitement and engagement in each session. Additionally, the collaborative aspect of peer interaction played a crucial role, as students were able to support one another, thereby enhancing their learning experience and contributing to the achievement of the desired outcomes.

5.1.1 Conclusion referent to the general objective

In evaluating the effectiveness of implementing kinesthetic strategies to improve phonological awareness in kindergarten students, the analysis of the collected data determined significant improvements in both the recognition and production of vowel and consonant phonemes. Additionally, these kinesthetic strategies fostered active participation during the learning process, leading to increased student interest and attention. This positive engagement not only sustained students' interest and attention but also made each session an anticipated, enjoyable, and valuable experience for them.

5.1.2 Conclusion referent to the first specific objective

Based on the results of the pretest carried out at the beginning of the research with kindergarten students at Saint Francis College, the initial phonemic awareness of the students was determined. The results indicated that certain consonant sounds, such as /k/, /s/, and /f/, were

recognized by 66.67% of the students, reflecting high recognition rates. In contrast, consonants like /g/, /j/, and /l/ were recognized by only 40% of the students, suggesting areas where additional support may be needed. Likewise, the vowel sounds /u/ and /i/ were better recognized by 73.33% and 60% of the students while the vowel sound /o/ was recognized by only 26.67%, highlighting a significant area for improvement.

This data was crucial for accurately measuring the effectiveness of the kinesthetic strategies employed later in the study, as these findings established a clear baseline for evaluating the students' progress in recognizing and producing vowel and consonant phonemes.

5.1.3 Conclusion referent to the second specific objective

The checklist results and Likert scale data demonstrate a significant positive impact of kinesthetic strategies on the phonological awareness of kindergarten students at Saint Francis College. The checklist revealed that all students successfully recognized and produced vowel phonemes, with the majority also recognizing and producing consonant phonemes. While 12 out of 15 students achieved perfect accuracy across all sounds, some consonants such as /g/, /j/, /v/, /w/, and /y/ showed lower success rates, indicating potential areas for further instructional focus.The Likert scale supported these findings, showing that all students actively participated in the kinesthetic activities, exhibited enthusiasm, followed instructions, and demonstrated appropriate behavior. Also, the data demonstrated that every student remained focused during the activities, which is essential for significant learning.

In conclusion, the data strongly suggests that the kinesthetic strategies were highly effective in this study by enhancing the phonological awareness of kindergarten students, fostering both engagement and skill development in a dynamic and interactive learning environment.

5.1.4 Conclusion referent to the third specific objective

The third objective of the study aimed to analyze the improvement of phonological awareness in kindergarten students at Saint Francis College during the second quarter of 2024 by comparing pre-test results, post-test results, and observations. The analysis reveals significant gains in both vowel and consonant phoneme recognition and production following the implementation of kinesthetic strategies.

The data shows notable enhancement in the recognition and production of all vowel sounds, with the most notable progress seen in the sound /o/, which increased by 73.33% of the students. By the end of the strategies, every student achieved 100% proficiency in both recognizing and producing vowel sounds, underscoring the effectiveness of kinesthetic strategies in enhancing vowel phonemic awareness. Likewise, all consonant sounds demonstrate improvements in recognition and production, with gains ranging from 26.66% to 53.33%. The most significant advancements were observed with the consonants /l/ and /p/, each improving by 53.33%. While consonants like /g/ and /j/ also showed considerable progress, some students still require additional practice to reach full proficiency.

The observations corroborated the quantitative findings, students were highly engaged and enthusiastic about the kinesthetic activities. The activities, perceived as "games" by the students, fostered collaboration and peer support, with students eagerly participating in recognizing and producing phonemes. This active and enjoyable learning environment contributed significantly to the students' phonological development and maintained the students' focus.

In conclusion, the comparison of the instruments highlights the effectiveness of kinesthetic learning techniques in early childhood education. These strategies have been shown to enhance students' ability to recognize and produce vowel and consonant sounds, thereby strengthening their foundational literacy skills and fostering a positive and collaborative learning atmosphere.

5.2 RECOMMENDATIONS

The purpose of this research was to address the inconsistency between the movement needs of kindergarten students at their developmental stage and the traditional academic style implemented at Saint Francis College for developing phonological awareness. The integration of kinesthetic strategies into the regular curriculum effectively addresses this gap, as evidenced by significant improvements in students' recognition and production of vowel and consonant phonemes. By engaging students physically and incorporating multisensory approaches, educators can enhance learning outcomes, ensure full proficiency in challenging phonemes, and cater to diverse learning styles. To support educators, administrators, and parents in implementing these strategies, detailed recommendations are provided, emphasizing movement,

collaboration, active learning, and ongoing assessment. These approaches contribute to the continued success and literacy development of young learners, fostering a supportive and dynamic educational environment.

The first recommendation is to integrate kinesthetic strategies into the regular curriculum. These strategies effectively engage students, making learning more dynamic and enjoyable, thereby enhancing their phonological awareness. Incorporating physical movements such as forming letters with their bodies, using hand gestures to represent sounds, and participating in movement-based games facilitates better understanding and retention of phonetic concepts. Rule et al. (2006) emphasize that hands-on and kinesthetic activities enhance memory retention and comprehension of phonetic principles, as children physically interact with educational content. This approach aligns with the developmental needs of kindergarten students, who benefit from active and multisensory learning experiences.

The second recommendation is to provide additional support for challenging phonemes. It is advisable to implement targeted kinesthetic activities that focus on these more challenging phonemes to ensure all students reach 100% proficiency. Personalized strategies might include associating specific movements or gestures with difficult phonemes. Tailoring instruction to address difficult phonemes makes learning more interactive and memorable. Differentiated instruction, which adjusts teaching methods to meet individual learning needs, helps students overcome specific hurdles and achieve mastery (Tomlinson, 2014).

The third recommendation is to foster collaborative learning environments because group activities and peer-assisted learning should be encouraged to build a supportive classroom culture. Collaborative kinesthetic activities not only enhance phonological awareness but also

promote social skills, communication, and teamwork. By engaging in group movement games, and partner exercises, students can learn from one another, fostering a sense of community and shared responsibility in the learning process. Langille and Green (2021) suggest that peer interaction in multisensory learning contexts promotes language development and phonological awareness, as students benefit from observing and imitating their peers.

The fourth recommendation is to encourage active learning across the curriculum. The enthusiasm and focus demonstrated by students during the kinesthetic sessions suggest that applying similar active learning strategies in other subjects could enhance engagement and participation. Incorporating movement and hands-on activities throughout various areas of the curriculum can help maintain high levels of student involvement. Recognizing that movement enhances brain functioning, educators should design curricula that integrate physical activity across different subjects. Movement stimulates neural connections responsible for learning, attention, memory, emotional regulation, and decision-making, thereby supporting cognitive abilities and readiness to learn (Idiculla, 2021). Additionally, research indicates that physical activity positively affects cognitive development, reinforcing the inclusion of movement in educational settings (Zeng et al., 2017). By embracing active learning strategies, educators can create a more dynamic and interactive learning environment that not only boosts academic achievement but also fosters essential skills such as critical thinking, problem-solving, and collaboration, contributing to the overall development of students.

The fifth recommendation encompasses training teachers, integrating technology, and encouraging parental involvement to enhance kinesthetic learning. Training teachers on designing and implementing engaging, movement-based lessons is essential to improve student

learning outcomes. Professional development programs can equip educators with the knowledge and skills necessary to integrate kinesthetic strategies effectively. Teachers who are prepared to facilitate motion and movement-based learning experiences can better meet the developmental needs of their students (Kindervater, 2002). Additionally, integrating technology into kinesthetic learning can enrich educational experiences. Utilizing tools such as interactive whiteboards, educational apps, and motion-based games offers interactive platforms that engage students physically and cognitively. Technology complements traditional methods by providing innovative ways for students to interact with phonemes and other learning materials, making learning both effective and enjoyable (Kindervater, 2002). Furthermore, encouraging parental involvement by promoting simple kinesthetic activities at home reinforces the skills learned in the classroom and strengthens the relationship between students, parents, and the institution. This approach extends learning beyond the classroom environment, as parents play a crucial role in supporting phonological awareness through interactive activities. Schools can provide resources and suggestions for at-home activities, such as clapping games for syllable counting or movement-based storytelling, to facilitate this involvement (Kung, 2020).

The sixth recommendation is to implement ongoing assessment and feedback mechanisms. Regular assessment of students' phonological awareness is essential to monitor progress and provide timely interventions. Tools such as observation checklists, phoneme recognition tests, and student portfolios can help track development. Providing immediate feedback during kinesthetic activities reinforces learning and corrects misunderstandings promptly, ensuring that all students progress toward full proficiency (Rule et al., 2006).

Continuous monitoring allows educators to adjust instructional strategies to meet individual student needs.

The seventh recommendation is to research and share best practices to promote awareness of kinesthetic learning benefits. Educators should engage in ongoing research to identify effective kinesthetic strategies and share their findings with colleagues. Collaborative efforts lead to innovative approaches and the refinement of existing methods. Schools can encourage participation in professional learning communities, conferences, and workshops, contributing to the broader educational discourse on kinesthetic learning (Langille & Green, 2021). Educators, administrators, and parents should be informed about the benefits of kinesthetic learning to fully support its implementation. Sharing research findings and practical applications through workshops and meetings can increase awareness.

Chapter VI

Proposal

6.1 PROPOSAL OF THE RESEARCH

This proposal highlights activities and strategies aimed at improving phonological awareness in kindergarten students at Saint Francis College through the application of kinesthetic learning approaches. The combination of movement, collaboration, and sensory engagement aims to provide a dynamic learning environment that fosters academic and social development. This framework serves as a foundation for future research and practice in early childhood education, highlighting the potential of kinesthetic learning to enhance foundational literacy skills.

6.2 Place to be developed

This proposal is projected for implementation within the educational setting of Saint Francis College in Alajuela, Costa Rica. The strategies are designed for kindergarten students aged 4 and 5; however, this proposal is adaptable and can be effectively implemented in any institution, whether within the public or private educational sector.

6.2 General and Specific Objectives

6.2.1 Proposal General Objective

To enhance the phonological awareness of kindergarten students by incorporating kinesthetic activities that are engaging, interactive, and designed to meet the needs of early learners.

6.2.2 Proposal Specific Objectives

a) To improve the recognition and production of vowel sounds among kindergarten students.
b) To develop phonological awareness through a multi-sensory approach that includes auditory, visual, and kinesthetic learning.
c) To promote the production and recognition of challenging consonants (/g/, /j/, /v/, /w/, and /y/) through targeted activities.
d) To foster a collaborative learning environment.

6.3 Suggested activities

Based on the results, these activities have been designed to refresh the identification and production of phonemes and reinforce the consonants that require further practice. The activities are adaptable, allowing modifications to meet the specific needs and phonological awareness levels of each group.

Activity 1

Objective: To improve recognition and production of vowel sounds.

Description

- Play music and have students dance around the room. When the music stops, the teacher will hold up a flashcard with a vowel on it and call out a word that includes the vowel sound. Students must freeze and say the sound of the vowel aloud. For an added challenge, students can form the shape of the letter with their bodies.

Activity 2

Objective: To strengthen recognition and production of consonant sounds.

Description

- Students take turns hopping through the grid, saying the sound of the consonant they land on. When they reach the end, they must say a word that starts with each consonant sound they hopped on.

Activity 3

Objective: To develop phonological awareness through a multi-sensory approach.

Description

- Students search for objects, and when they find one, they must say the initial sound of the object aloud and check it off their list. At the end, students gather to share the objects they found and the sounds they represent.

Activity 4

Objective: To promote the production and recognition of difficult consonants (/g/, /j/, /v/, /w/, and /y/).

Description

- Set up relay stations, each focusing on a challenging consonant sound. At each station, students must say the sound and a corresponding word before they can move to the next station.

Activity 5

Objective: To integrate mindfulness with phonological awareness practice.

Description:

- Yoga poses (movement flashcards) and phoneme sounds will be combine. Students will say the sound of a vowel or consonant and then use it in a word while holding a pose.

Activity 6

Objective: To improve recognition and production of both vowel and consonant phonemes through a physical matching game.

Description: Students will be divided into pairs, and each pair will be given a set of phoneme cards. They will run or walk to the mat and place the phoneme card next to the corresponding picture while saying the sound aloud.

Activity 7

Objective: To encourage collaboration, tactile learning, and phonemic awareness by having students write difficult consonants (/g/, /j/, /v/, /w/, and /y/) on their friends' backs and guess the letters based on the feeling and sound.

Description: Students will pair up to practice challenging phonemes. Each pair will take turns to write the letter they see on their partner's back using their finger. The partner will try to guess the letter, but if the partner cannot guess, the writer can make the sound of the letter to help him/her.

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Annexes

Annex 1

Instrument #1

Objective: To identify the amount of consonants and vowels phonemes that students from kindergarten at Saint Francis Collage during the second quarter, 2024.

Instrument: Interview for identifying teacher's methods and curriculum expectations regarding phonological awareness

Teacher Information

- Name:
- Grade Level:
- Date:
- Interviewer:

Part 1: Teaching Methods

1. **Instructional Approaches**

Can you describe your general approach to teaching phonological awareness in your classroom?

What specific methods or strategies do you use to teach consonant and vowel phonemes?

2. **Materials and Resources**

What materials and resources do you use to support phonological awareness instruction (e.g., books, manipulatives, digital tools)?

How do you select these materials?

3. **Activities and Exercises**

Can you provide 2 examples of activities or exercises you use to help students recognize and produce consonant and vowel phonemes?

4. **Differentiation**

How do you differentiate instruction to meet the diverse needs of your students in phonological awareness?

What strategies do you use for students who struggle with phonological awareness?

Part 2: Curriculum Expectations

5. **Curriculum Goals**

What are the specific goals of the kindergarten curriculum regarding phonological awareness?

6. **Assessment**

How do you assess students' phonological awareness throughout the year?

7. **Standards and Benchmarks**

What are the benchmarks or standards for phonological awareness that students are expected to achieve by the end of kindergarten?

Classroom Observation Notes

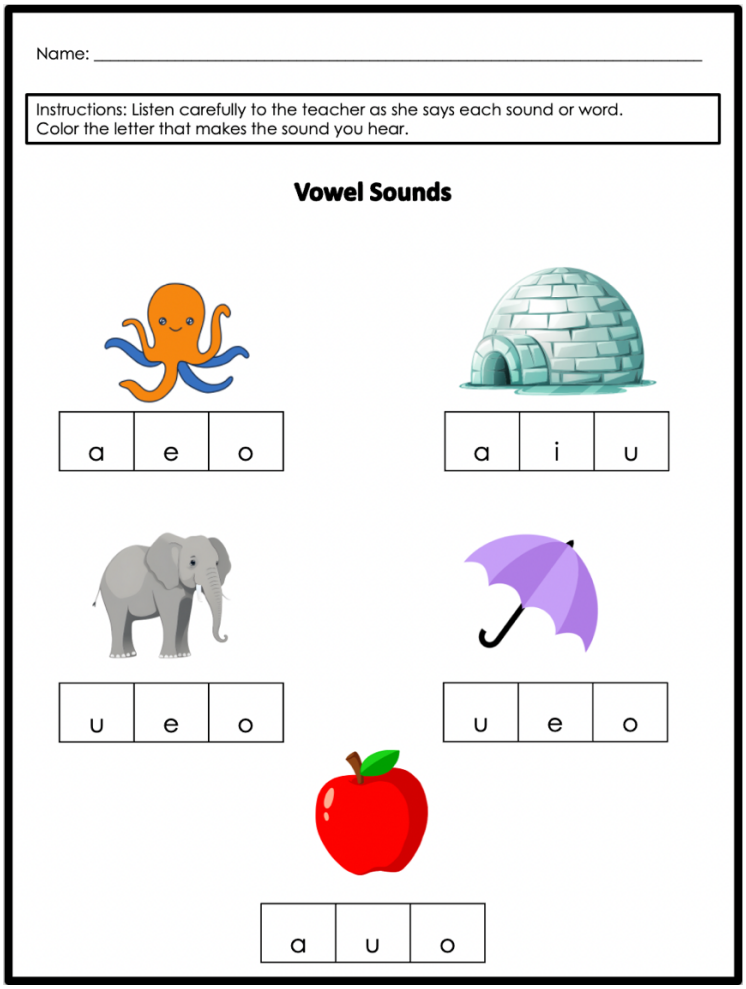
Annex 2

Instrument #2

Objective: To identify the amount of consonants and vowels phonemes that students from kindergarten at Saint Francis Collage during the second quarter, 2024.

Instrument: A pre-test to know the number of phonemes that students manage at the beginning of the investigation.

Phoneme Recognition – Pre-Test Worksheets.



Consonant Sounds

6. 

m	t	p

7. 

b	d	f

8. 

r	k	j

9. 

s	t	g

10. 

f	c	n

11. 

h	k	p

12. 

l	f	b

13. 

q	j	w

14. 

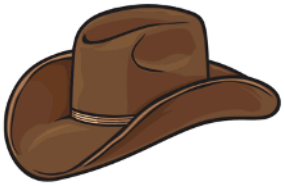
z	v	m

15. 

x	y	s

16. 

t	r	x

17. 

j	s	h

Consonant Sounds

18. 

m	b	z

19. 

v	p	f

20. 

r	p	t

21. 

b	t	l

22. 

g	z	n

23. 

l	k	p

24. 

y	w	t

25. 

l	v	t

Annex 3

Instrument #3

Objective: To determine how kinesthetic strategies improve phonological awareness in kindergarten students at Saint Francis Collage during the second quarter, 2024.

Instrument: Checklist designed to identify the number of phonemes and vowels that students recognize at the end of the investigation.

Student Information:

Name: _____

Date: _____

Class: _____

Instructions: For each phoneme, indicate whether the student can recognize and produce the sound by marking the appropriate column.

Vowel Phonemes

Vowel Sound	Recognizes (R)	Produces (P)	Notes
/a/ (as in "apple")			
/e/ (as in "elephant")			
/i/ (as in "igloo")			
/o/ (as in "octopus")			
/u/ (as in "umbrella")			

Consonant Phonemes

Consonant Sound	Recognizes (R)	Produces (P)	Notes
/b/ (as in "ball")			
/d/ (as in "dog")			
/k/ (as in "kite")			
/m/ (as in "mat")			
/s/ (as in "sun")			
/f/ (as in "fan")			
/g/ (as in "goat")			
/h/ (as in "hat")			

/j/ (as in "juice")			
/l/ (as in "lamp")			
/n/ (as in "net")			
/p/ (as in "pig")			
/r/ (as in "rat")			
/t/ (as in "tiger")			
/v/ (as in "van")			
/w/ (as in "wig")			
/y/ (as in "yoyo")			
/z/ (as in "zebra")			

Evaluator:

- **Name: _____**
- **Date: _____**

Annex 4

Instrument # 4

Objective: To determine how kinesthetic strategies improve phonological awareness in kindergarten students at Saint Francis Collage during the second quarter, 2024.

Instrument: Likert scale for evaluating the impact of kinesthetic activities on phonological awareness

Student Information

Name: _____

Date: _____

Class: _____

Instructions: For each statement, please indicate the extent to which you agree or disagree based on your observations. Use the following scale:

(A) Strongly Disagree
(B) Disagree
(C) Neutral
(D) Agree
(E) Strongly Agree

Participation

1. The student actively participates in kinesthetic activities.

(A) Strongly Disagree

(B) Disagree

(C) Neutral

(D) Agree

(E) Strongly Agree

2. The student shows enthusiasm during kinesthetic activities.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutra
   (D) Agree
   (E) Strongly Agree

Behavior

3. The student follows instructions during kinesthetic activities.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

4. The student demonstrates appropriate behavior during kinesthetic activities.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

Engagement

5. The student remains focused during kinesthetic activities.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

Improvement in Phonological Awareness

6. The student's ability to recognize vowel phonemes has improved.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

7. The student's ability to recognize consonant phonemes has improved.
   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

8. The student's ability to produce vowel phonemes has improved.

   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

9. The student's ability to produce consonant phonemes has improved.

   (A) Strongly Disagree
   (B) Disagree
   (C) Neutral
   (D) Agree
   (E) Strongly Agree

Additional Comments

_____

_____

Evaluator

Name: _____

Date: _____

Annex 5

Instrument # 5

Objective: To analyze the improvement of phonological awareness in kindergarten students at Saint Francis Collage during the second quarter, 2024 by comparing pre-test results, post-test results, and observations.

Instrument: A journal to obtain detailed information on each session.

Session Details

Session Number: 1

Duration: 15 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session

- To enhance phonological awareness and vowel recognition by having students name vowels, produce their short sounds, form the letters with their bodies, and identify objects that start with those vowels.

Activity Conducted

Description: Students will see a vowel flashcard and must name the vowel and produce its short sound. Afterward, they will use their bodies to form the shape of the vowel. Finally, they will look around the room to find and identify an object that starts with that vowel.

Materials Used: Vowel flashcards, space for students to move and form letters with their bodies, and various objects around the room that start with different vowels.

Student Engagement: Students are expected to be highly engaged as the activity involves visual, auditory, and kinesthetic learning.

Observations

Student Participation: 15 of 15 students actively and joyfully participated, forming letters with their bodies and finding objects.

Behavior: 15 of 15 students behave positively. They follow instructions and participate cooperatively.

Engagement: High engagement was observed during the whole time. The students showed excitement throughout the activity.

Challenges Observed: 4 of 15 students had difficulty finding the hidden objects and needed some extra clues.

Successes: All students, with some guidance, named vowels, produced their sounds, and identified objects.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: 10 of 15 students demonstrated the ability to recognize and identify vowel sounds.

Recognition of Consonant Phonemes: N/A

Production of Vowel Phonemes: All students practiced producing vowel sounds clearly while naming and identifying objects.

Production of Consonant Phonemes: N/A

Session Number: 2

Duration: 15 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session

- To enhance phonological awareness and consonant recognition by having students name consonants, produce their sounds, form the letters with their bodies, and identify objects that start with those consonants.

Activity Conducted

Description: Students will see a consonant flashcard and must name the consonant and produce its sound. Afterward, they will use their bodies to form the shape of the consonant. Finally, they will look around the room to find and identify an object that starts with that consonant.

Materials Used: Consonant flashcards, space for students to move and form letters with their bodies, and various objects around the room that start with different consonants.

Student Engagement: Students are expected to be highly engaged as the activity involves visual, auditory, and kinesthetic learning, making it interactive and fun.

Observations

Student Participation: All students were happy to have a session again. They actively participated, enjoying once again, the challenge of forming letters with their bodies and finding objects.

Behavior: All students had positive behavior. follow instructions, and participate throughout the activity.

Engagement: High engagement was observed. All students showed enthusiasm throughout the activity.

Challenges Observed: 8 of 15 students had difficulty recognizing and producing some consonants (/g/ /j/ /v/ /r/ /h/ /b/ /d/ /w/ /y/)

Successes: 15 of 15 students named consonants, produced their sounds, and identified objects with guidance.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: N/A

Recognition of Consonant Phonemes: All students demonstrated increased ability to recognize and identify consonant sounds throughout the activity.

Production of Vowel Phonemes: N/A

Production of Consonant Phonemes: 15 of 15 Students practiced producing consonant sounds clearly while naming and identifying objects.

Session Number: 3

Duration: 15 minutes

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance phonological awareness and letter recognition by having students listen to a sound and find the corresponding letter to name it.

Activity Conducted

Description: Students will listen to a sound (vowel phoneme) provided by the instructor. They will then find the letter that corresponds to the sound and name the letter.

Materials Used: Letter cards on the floor and space for moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves auditory learning and physical movement.

Observations

Student Participation: 15 of 15 students eagerly participated, actively finding the letters, and responding to the sounds.

Behavior: Students showed positive behavior, following instructions, and taking turns appropriately.

Engagement: High engagement was observed throughout the activity. Students seemed to have fun the whole time.

Challenges Observed: 3 of 15 students had difficulty distinguishing (e and a) and needed additional cues.

Successes: All students associated all the vowel sounds with letters.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students demonstrated an increased ability to recognize and identify vowel sounds.

Production of Vowel Phonemes: 15 of 15 students practiced producing vowel sounds as they identified the corresponding letters.

Session Number: 4

Duration: 15 minutes

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance phonological awareness and letter recognition by having students listen to a sound and find the corresponding letter to name it.

Activity Conducted

Description: Students will listen to a sound (consonant phoneme) provided by the instructor. They will then find the letter that corresponds to the sound and name the letter.

Materials Used: Letter cards on the floor and space for moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves auditory and kinesthetic learning.

Observations

Student Participation: 15 of 15 students actively participated, finding the letters and responding to the sounds with joy.

Behavior: All students showed positive behavior, following instructions, and taking turns appropriately.

Engagement: High engagement was observed the whole time.

Challenges Observed: 4 of the 15 students had difficulty recognizing some letters (/g/ /j/ /v/ /w/ y/) and needed additional cues.

Successes: Most students (11) associated all the consonant sounds with letters without help and a few (4) required some help but achieved the goal.

Phonological Awareness Improvement

Recognition of Consonant Phonemes: 15 of 15 effectively recognized and identified consonant sounds during the activity.

Production of Consonant Phonemes: 15 of 15 students practiced producing consonant sounds when identifying the letters.

Session Number: 6

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance phonological awareness and letter recognition by having students listen to the letter name and find the corresponding letter to produce the sound.

Activity Conducted

Description: Students will listen to the name of a letter provided by the instructor. They will then find the letter and produce the sound that corresponds to it.

Materials Used: Letter cards on the floor and space for moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves auditory and kinethetic learning.

Observations

Student Participation: 15 of 15 students eagerly participated, actively finding the letters, and producing the corresponding sound.

Behavior: Students showed positive behavior, following instructions, and taking turns appropriately.

Engagement: High engagement was observed, with students showing excitement and enthusiasm throughout the activity.

Challenges Observed: 4 of 15 students had difficulty distinguishing between consonants (/g /j/ /v/ /m/ /n/ /d/ /b/ /w/ /y/) and needed additional cues.

Successes: All students successfully associated vowel names with their sounds and most of them (11 of 15) associated consonant names with their sounds without extra help.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students recognize and identify vowel phonemes.

Recognition of Consonant Phonemes: 11 of 15 students recognized and identified consonant sounds during the activity.

Production of Vowel Phonemes: 11 of 15 students produce vowel sounds correctly.

Production of Consonant Phonemes: 12 of 15 students correctly produce the consonant sound as they identify the letter.

Session Number: 7

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session

- To enhance letter recognition and phonemic awareness through kinesthetic learning by having students form letters using their bodies and practicing the corresponding sounds.

Activity Conducted

Description: Students will work individually or in small groups to form letters of the alphabet using their bodies. Once a letter is formed, they will say the corresponding sound aloud.

Materials Used: Alphabet flashcards and a large space for movement.

Student Engagement: Students are expected to be highly engaged as they use their bodies to create different shapes and sounds, making learning active and fun.

Observations

Student Participation: 15 students actively participated in forming letters and enjoyed the activity.

Behavior: Students displayed cooperative behavior, working well in groups, and listening to instructions.

Engagement: High engagement was observed as students found the activity enjoyable and challenging.

Challenges Observed: 4 of 15 students had difficulty forming certain letters and required additional assistance.

Successes: Students successfully associated letters with their sounds, and the activity fostered teamwork and communication skills.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students were able to recognize and identify vowel sounds as they formed corresponding letters with their bodies and practiced the sounds.

Recognition of Consonant Phonemes: All students effectively recognized and identified consonant sounds during the activity, associating them with the letters they created.

Production of Vowel Phonemes: All students practiced and improved their ability to produce vowel sounds clearly while forming the respective letters.

Production of Consonant Phonemes: All students demonstrated improvement in producing consonant sounds accurately as they engaged in the kinesthetic activity.

Session Number: 7

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session

- To enhance phonological awareness and letter recognition by having students listen to a sound and jump onto the corresponding letter.

Activity Conducted

Description: Students will listen to a sound (either a vowel or consonant phoneme) by the instructor. They will then jump onto the letter corresponding to the sound on letter cards on the floor.

Materials Used: Letters cards on the floor and a space for jumping and moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves kinesthetic and auditory learning.

Observations

Student Participation: 15 of 15 students eagerly participated, actively jumping to the letters, and responding to the sounds.

Behavior: Students showed positive behavior, following instructions, and taking turns appropriately.

Engagement: High engagement was observed, with students showing excitement and enthusiasm throughout the activity.

Challenges Observed: Three students had difficulty distinguishing between consonants (/g/ /j/ /v/ /w/ /y/) and needed additional cues.

Successes: Students successfully associated sounds with letters and improved their phonological awareness through repeated practice.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students demonstrated increased ability to recognize and identify vowel sounds.

Recognition of Consonant Phonemes: All students effectively recognized and identified consonant sounds during the activity.

Production of Vowel Phonemes: 15 of 15 students practiced producing vowel sounds as they identified the corresponding letters and said words with the same beginning sound.

Production of Consonant Phonemes: 15 of 15 students practiced producing consonant sounds when identifying the letters and said words with the same beginning sound.

Session Number: 8

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance letter recognition, tactile learning, and phonemic awareness by having students write letters on their friends' backs and guess the letters based on the feeling and sound.

Activity Conducted

Description: Students will pair up and take turns. One student will see a letter and write it on their partner's back using their finger. The partner will try to guess the letter. If the partner cannot guess, the writer will make the sound of the letter to help them.

Materials Used: Alphabet flashcards and space for pairs to work comfortably.

Student Engagement: Students are expected to be highly engaged as the activity involves tactile, auditory, and cooperative learning, making it interactive and fun.

Observations

Student Participation: 15 of 15 students actively participated, enjoying both writing and guessing the letters.

Behavior: All students displayed cooperative behavior, working well with their partners, and listening to instructions.

Engagement: High engagement was observed, with students showing interest and enthusiasm throughout the activity.

Challenges Observed: 7 of 15 students had difficulty guessing the letters based on the tactile sensation alone and needed the auditory cue.

Successes: All students successfully improved their auditory association with letters.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students demonstrated increased ability to recognize and identify vowel sounds, especially when given auditory cues.

Recognition of Consonant Phonemes: All students effectively recognized and identified consonant sounds during the activity.

Production of Vowel Phonemes: All students practiced producing vowel sounds when helping their partners guess the letters.

Production of Consonant Phonemes: All students practiced producing consonant sounds as auditory cues for their partners.

Session Number: 9

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance phonological awareness and letter recognition by having students listen to a sound and stop at the cone that displays the corresponding letter.

Activity Conducted

Description: Students will listen to a sound (either a vowel or consonant phoneme). They will then move around the space and stop at the cone that has the letter matching the sound they heard.

Materials Used: Cones with letters attached to them and space for moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves kinesthetic and auditory learning.

Observations

Student Participation: All students eagerly participated, actively moving to the cones, and responding to the sounds.

Behavior: All students displayed positive behavior, following instructions, and waiting for their turn to move.

Engagement: High engagement was observed, with students showing excitement and enthusiasm throughout the activity.

Challenges Observed: 3 of 15 students had difficulty distinguishing between consonants (/g/ /j/ /v/ /w/ /y/).

Successes: All students successfully associated sounds with letters (3 with help)

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students demonstrated the ability to recognize and identify vowel sounds.

Recognition of Consonant Phonemes: 12 of 15 students effectively recognized and identified consonant sounds during the activity.

Production of Vowel Phonemes: 15 of 15 students practiced producing vowel sounds and said words with the same beginning sound for “extra points”

Production of Consonant Phonemes: 15 of 15 students practiced producing consonant sounds and said words with the same beginning sound for “extra points”

Session Number: 10

Duration: 30 min

Instructor: Kristhel Chinchilla Quirós

Objective of the Session:

- To enhance phonological awareness and letter-sound correspondence by having students match letters with pictures that share the same beginning sound and practice producing the sounds.

Activity Conducted

Description: Students will pick a letter card and then search for a picture card that begins with the same sound. After finding the matching picture, students will name the picture aloud to produce the corresponding sound.

Materials Used: Letter cards, picture cards or objects with corresponding beginning sounds, and space for spreading out cards and moving around.

Student Engagement: Students are expected to be highly engaged as the activity involves visual, auditory, and kinesthetic learning, making it interactive and enjoyable.

Observations

Student Participation: All students actively participated, eagerly searching for matching pictures and naming them aloud.

Behavior: All students displayed positive behavior, following instructions, and cooperating with peers.

Engagement: High engagement was observed, with students showing excitement and interest throughout the activity.

Challenges Observed: 3 of 15 students had difficulty identifying the beginning sounds and needed additional guidance.

Successes: Students successfully matched letters with pictures and improved their phonological awareness through repeated practice.

Phonological Awareness Improvement

Recognition of Vowel Phonemes: All students demonstrated an increased ability to recognize and identify vowel sounds.

Recognition of Consonant Phonemes: 2 of 15 students had difficulty recognizing consonants /g/ /j/ /w/ /y/ and 3 of 15 students recognized /v/.

Production of Vowel Phonemes: All students practiced producing vowel sounds when naming the pictures that matched the letters.

Production of Consonant Phonemes: 2 of 15 students had difficulty producing consonants /w/ /y/ and 3 of 15 students to recognize /j/ /g/ /v/.