The People's Democratic Republic of Algeria

Min1istry of Higher Education and Scientific Research

Yahia Fares University of Medea

Faculty of Arts and Languages



Multiple Intelligences in English Language Learning

Bodily-kinesthetic Intelligence Usefulness in EFL Classes

A Case study of Fourth and Fifth-grade learners at Almaahed International School, Medea.

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Master in Applied Linguistics

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Dedication

First and foremost, I would like to thank God for giving me strength and
Encouragement throughout all the challenging moments of completing this work.
I dedicate this study to my beloved parents Hacene and Farida chambaz for their endless love, heroic sacrifices, and encouragement. Thank you for always believing in me and pushing me to achieve my goals I would not be where I am today without you.
To my wonderful husband Riad, who promised me that he would support me in my university journey, thank you for believing in me and making everything possible, thank you for fulfilling your promises.
To my parents in law who appreciated the sacrifices of my parents and helped me to finish my studies.
To my sweet daughters Reem and Batoul , you are my strength, my passion, and my most beautiful success.
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To my beautiful sisters-in-law Julie, Sarah , Biba.
To my brothers in law Lyes, youcef and hamza.
To my adorable nieces and nephews.
To every person who has contributed and support me to finish this work.

Zineb

Dedication

In the name of Allah, the almighty, the most merciful.

To my father Abdelkarim, thank you for always pushing me to be my best and for showing me the value of hard work and perseverance. I am grateful for your guidance and wisdom.

To my mother Fatiha , who has been a constant source of love, support, and inspiration I would not be where I am today without you.

To my grandmother for your prayers for me all the time.

To all my friends and colleagues for being around me.

Anfal

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All praise be to Allah, Lord of the worlds, and may the peace and blessings be on the noblest of Prophets and Messengers, our Prophet Muhammad, and all his family and all of his companions. I thank Allah, the Exalted, for giving me enough strength and patience to tackle every problem with calm and ease for the completion of this dissertation.

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We would also like to thank all the students who participated in this study.

Abstract

This research at hand employed a mixed-method approach, via using an online questionnaire and conducting classroom observations, in order to investigate the impact of Gardner's Bodily-Kinesthetic intelligence on learning outcomes in EFL classes. Thirteen teachers participated in the survey, yet, observations were conducted with a 4th and 5th-grade classroom at Al-Maahad School in Medea. The study aimed to answer the research question: "To what extent can Gardner's Bodily-Kinesthetic intelligence yield better learning outcomes in EFL classes?" The findings showed that teachers had a high level of familiarization with tactile learning and kinesthetic intelligence. The students' tactile learning style and kinesthetic intelligence were demonstrated in the classroom. On the basis of these findings, recommendations involve incorporating kinesthetic and tactile activities in EFL instruction and giving teachers an opportunity for professional development. The long-term consequences of these tactics in various EFL contexts could be investigated in further study.

Keywords: Bodily-Kinesthetic intelligence, Tactile learning, Teachers, Kids.

ملخص:

توظّف هذه الدراسة المنهج المختلط، من خلال استخدام استبيان عبر الإنترنت وإجراء مراقبة فصلية، لاستكشاف تأثير الذكاء الحركي-حسّي لـ جاردنر على نتائج التعلم في دروس اللغة الإنجليزية كلغة أجنبية .شارك في الاستبيان ثلاثة عشر معلماً، في حين تمت الملاحظات في فصل للصفين الرابع والخامس في مدرسة المعهد الخاصة في مدينة المدية .تهدف الدراسة إلى الإجابة على السؤال البحثي : "إلى أي مدى يمكن للذكاء الحركي-حسّي لـ جاردنر أن يحقق نتائج تعلم أفضل في دروس اللغة الإنجليزية كلغة أجنبية؟"أظهرت النتائج أن المعلمين يتمتعون بمستوى عالٍ من التعرف على التعلم الحسّي والذكاء الحركي .وتم توضيح أسلوب التعلم الحسّي والذكاء الحركي لدى الطلاب في الفصل . استنادًا إلى هذه النتائج، توصي التوصيات بضرورة دمج الأنشطة الحركية والحسّية في تعليم اللغة الإنجليزية كلغة أجنبية وتوفير فرص التطوير المهني للمعلمين .يمكن استكشاف تأثيرات هذه الاستراتيجيات على المدى الطويل في سياقات اللغة الإنجليزية كلغة أجنبية المختلفة في بحوث مستقبلية.

الكلمات المفتاحية :الذكاء الحركي-حسّي، التعلم الحسّي، المعلمون، الأطفال

List of Abbreviations

EFL: English as a Foreign Language

MIT: Multiple Intelligence Theory

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General Introduction

General Introduction

Introduction

The Multiple Intelligences theory is just one of many learning theories that have had an impact on English language learning throughout history. In the past, teachers taught students as if they were all the same, disregarding their individual learning styles or needs. Gardner's thesis is seen as a light for a new understanding of intellect and academic abilities, Studies show that the MI theory and teaching EFL work together because the MI approach provides an integrated way of teaching all types of learners, increasing students' chances of success, understanding, and retaining information.

Statement of the Problem

Based on the learners' experience in Learning English as Foreign Language (EFL), Teacher snoticed that most students face difficulties in learning in particular situations, while the same students were good in other activities in the class. Hence, this study investigates the implications of the MI theory in the English language learning area.

Research Questions

This research is an attempt to answer the following main question

1. To what extent can the implementation of Gardner's Bodily-kinesthetic Intelligence yield better learning outcomes in EFL classes?

Hypotheses

As an attempt to answer the research question, we hypothesized that:

- Gardner's Bodily-Kinesthetic Intelligence contributes to enhancing EFL learners' learning outcomes to a great extent, as it can guide teachers in selecting suitable strategies in order to provide more effective learning experiences for kids.
- Gardner's Bodily-Kinesthetic Intelligence contributes to enhancing EFL learners' learning outcomes to a certain extent.
- The integration of Gardner's Bodily-Kinesthetic Intelligence in EFL classrooms does not significantly enhance learning outcomes for students.

Research purpose

The purpose of this study is to improve English learning Intelligences through the implementation of Howard Gardner's multiple intelligences theory and therefore making possible adjustments and recommendations according to that.

Significance of the Study

The importance of learning the English language has greatly increased throughout the world, so it is now given more importance to adopt new learning strategies rather than using outdated ones that have shown no appreciation towards the individuality and uniqueness of each student. The findings of this study provide more information and highly emphasize the importance of the students' preferred methods of learning. The emphasis is on the important assistance that the intelligence MI theory offers in developing educational curricula, that effectively raise students' levels of English proficiency and investigate their areas of interest and strength. Particularly, in the case of Algerian EFL students, where it is positioned as a foreign language.

Research Tools and Participants

In the actual research, the researchers opted for the mixed method approach using both sorts of instruments, namely qualitative and quantitative, via distributing questionnaires to teachers of Almaahad private school and conducting observation with kids of 4 th and 5 th grades levels.

The Structure of the Research

The current research is made up ofan introduction and its main elements besides three chapters, the first chapter presented the literature review which brings previous studies related to the multiple intelligences and the English. In the second chapter, the researcher introduced the case study. However, the third one discussed the yielded result from the analysis of the questionnaire and observation.

Chapter one:
Literature Review

Part one:

Multiple Intelligence in EFL Classes

1.1. Overview of Intelligence in Humans

Recently, researchers have tried to expound the concept of intelligence, its nature, and how we may measure it. This topic has been considered highly controversial due to the plethora of definitions given to the notion that do not agree with one another in the fields of psychology and education, where it has been thoroughly investigated.

Within the same frame of thought, David Wechsler[1] (1944) added that intelligence is "The aggregate or global capacity of an individual to act purposefully to think rationally and to deal effectively with his environment." (p. 3). Whereas Stern William[2] (1914) provides another definition in which he explained that intelligence is "a general capacity of an individual consciously to adjust his thinking to new requirements, it is a general mental adaptability to new problems and conditions of life." (p. 3).

Moreover, Gardner[3] (1999) defines intelligence as the "biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture."(p. 33-34). Thus, the ability to develop an effective product or provide a service that is valued in a culture, as well as problem-solving abilities that let a person to solve issues in life also, the potential for finding or producing solutions to problems, which requires gathering new information.

1.1.1. Intelligence from Psychometric perspectives

The very first formal scientific theory of human intelligence is recognized as psychometric measure, which attempts to measure and evaluate individuals' cognitive performance using quantifiable/ statistical methods (Riccio, Rodriguez, and Valle, 2005).[4]

Interestingly, Francis Galton, one of the pioneers of the Eugenics movement, which investigates the growth of the human race through genetic engineering, is credited with developing the psychometric idea of intelligence. Galton developed tests for a variety of mental processes including memory, senses, and motor functions. He considered intelligence as an inheritable general cognitive skill that can be assessed (Jordan et al., 2008)[5].Galton began his examination of intelligence from the perspective of low levels of mental function, following the tradition of research on psychometric intelligence.

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[1]David Wechsler, The Measurement of Adult Intelligence, Williams &Wilkins, 1944.
[2]William Stern, The Psychological Method soften sting Intelligence, Warwick York, 1914.
[3] Gardner Howard, IntelligenceReframed:MultipleIntelligencesforthe21stCentury .BasicBooks,1999.
[4]Riccio, C.A., Rodriguez, O., &Valle, M ,Intelligence. Encyclopedia of school psychology, 2005.
[5]Jordan, A. Carlile, O. & Stock, A. ,Approaches to reaching: A guide for teachers, England: Open University Press,2008.

Furthermore, the French scientist Alfred Binet characterized intelligence as composed of reasoning, comprehension, and in particular, judgment, perceiving it as involving higher degrees of cognitive abilities (Jordan et al., 2008)[6]. Following Terman (1916). an American psychometrician, introduced the Stanford-Binet IQ, the first paper and pencil, group-administered administered versions of the intelligence test, Binet-Simon tests were launched in the United States and gained popularity in particular. Terman felt that intelligence was inherited, and he came to the conclusion that some races had higher IQ scores than others based on the variations in IQ scores obtained by 8 specific groupings. Because of his research, intelligence tests became a common feature of the American educational system, and ever since, intelligence has been associated with IQ. His work played a crucial role in the dissemination of the idea that intelligence is inherited and unchanging. (Chao, 2004)[7].

One could conclude that the standardized examinations impacted and influenced how people perceived intelligence. Although IQ tests have adopted many various shapes throughout the years, they have consistently failed to accurately assess a person's overall cognitive abilities and other unique characteristics. Cognitive science has begun to influence conceptions of intelligence and intelligence is no longer viewed as a single, unitary skill, similar to how other fields have impacted the domain of intelligence. They tried to describe it in terms of how it functions in the real world and gave a more general definition.

1.1.2. Piaget's Theory

One of the most prominent researchers in the field of developmental psychology during the twentieth century was Jean Piaget (1896–1980). According to him, reasoning competence is developed during the course of cognitive development, and this competence is primarily developed through the following four stages: the sensory-motor stage, the preoperational stage, the concrete operational stage, and the formal operational stage. According to Piaget, moving from one stage to another requires that the child meet a set of requirements (Piaget, 2005)[8].

1.1.3. Vygotsky's Theory

Contrary to the plan floated out by Piaget and the standardized IQ tests used by psychometricians, each individual must independently explore their world. Russian psychologist Vygotsky primarily focused on mental growth, intelligence or intellectual

[6] ibid

[7] Choe Tazu-Chia ,Teaching and learning EFL through multiple intelligence Voices from a university classroom,2004

[8]Piaget. Language and thought of the child: Selected works (Vol. 5). Routledge,2005

prowess that has a sociocultural foundation (Chao, 2004)[9]. In his socio-cultural theory of human learning, also known as the social constructivist theory, Vygotsky identifies intelligence as an intellectual capacity that develops through socio-cultural experiences. This intellectual capacity is inextricably linked to, produced by, and shaped by the society and culture to which the individual belongs.

According to Vygotsky, every infant is born with a set of intellectual skills that are socially based in nature. High-level psychological functions could be generated from these aptitudes through socialization and education as well. Interestingly, according to Vygotsky, intelligence is a result of activity that is molded by the culture to which we belong, through interactions between children and their sociocultural context. Negotiators, scaffolded education, and appropriate social development are thought to be important components of the intellectual development process (Woolfolk, 1998)[10].

Interestingly, Imitative learning is the process through which one individual tries to mimic and imitate another person who belongs to the same culture. This duplicate is a tool that can be used to deal with future instances of comparable problems that the imitator was able to resolve. The second cultural strategy is referred to as "Instructed Learning," which entails an individual remembering a lesson that has already been taught by a teacher or other expert and then applying it to self-control. Collaborative learning is the third cultural instrument for learning, and it incorporates a group of peers trying to understand one another before working together to master a particular skill (Tomasello, et al., 1993)[11].

That is to say, the socio-cultural theory of Vygotsky has made significant contributions to education. Several methods of teaching and learning, including mediating learning and the use of mental tools, had been based primarily on his own results. Also, his work had an impact on later research on the idea of human intelligence as well as language learning.

1.2. Approaches to Intelligence

It is worthy to note that there is no particular intelligible definition of intelligence. Some scholars contend that intelligence is a single, all-encompassing capability; while others think

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[9] Choe Tazu-Chia ,Teaching and learning EFL through multiple intelligence Voices from a university classroom,2004

[10] Woolfolk, A. E.. Readings in educational psychology,1998.

[11] Tomasello, M., Savage-Rumbaugh, S., & Kruger, A. C. Imitative learning of actions on objects by children, chimpanzees, and enculturated chimpanzees. Child development,1993.

it includes a variety of aptitudes, competencies, and talents. According to Teele (2000), there are four basic methods to comprehending intelligences (cited in Göğebakan. 2003)[12].

1.2.1. Developmental Progressions

The psychologists: Bruner, Piaget and Vygotsky are the founders of this approach. According to Bruner's theory, when learning new concepts, students rely on their prior knowledge and experience. They pick and choose information; alter it, and base choices on cognitive structure. The latter enables students to progress further and infer meaning. Instructors should empower students to apply concepts on their own and keep them interested as much as feasible. The information must be adjusted by the teacher to the student's level.

mportantly, Piaget was a pioneer in the study of how humans acquire knowledge and how children develop. Genetic epistemology is the name of his theory, which is based on four distinct cognitive structures or developmental stages: sensor motor, preoperational, concrete operations, and formal operations. Every stage also featured numerous intricate types of organization.

Equally important, the foundation of Vygotsky's theory is the notion that social contact played a significant part in the growth of cognition. Another feature of Vygotsky's theory was the assumption that the propensity for cognitive development was constrained by a specific time period, which he referred to as the zone of proximal development. Full social connection during this time was necessary for complete development. With adult instruction or pair work, a youngster could learn a variety of skills in addition to those he could learn on his own.

1.2.2. Psychobiological Approach:

The emphasis on the brain and ecosystem provides an explanation for the development of intelligence. According to Cecil (1990, cited in Göebakan, 2003)[13], intelligence was a unity that included environmental, biological, metacognitive, and motivational factors, besides knowledge and aptitude, Cecil (1999, cited in Göebakan, 2003)[14] is opposed to the idea of a single intelligence. He believed that intelligence was multi-cognitive, potential, and complete in terms of context and knowledge set on a biological basis.

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[12]GÖĞEBAKAN, Derya). How Students' Multiple Intelligences Differ in Terms of Grade Level and Gender. Unpublished MA Thesis, 2003.

[13] ibid

[14] ibid

1.3. The Theory of Multiple Intelligences

Many researchers assume that intelligence is a general ability, yet, Howard Gardner, professor of education at Harvard University, differentiated human intelligence into specific modalities. Accordingly, he proposed the theory of Multiple Intelligences.

MI is a cognitive theory which suggests that intelligence is not a single, fixed entity but rather a set of multiple intelligences that are independent of each other. He proposed that individuals posses different types of intelligences, and each intelligence can be developed and strengthened through various activities and experiences.(Gardner ,1983)[15].

1.4. The Relation between Multiple Intelligences Theory and Education

Howard Gardner changed a lot in the field of education after the publication of his book Frames of Mind: the Theory of Multiple Intelligences in 1983, he challenged those who considered intelligence as a single entity and presented a new perspective on human intelligence. Therefore, MIT encouraged many educators to consider more effective teaching methods, because there is a relationship between each part of multiple intelligences and the learning process. This relationship can assist teachers in expressing their ideas regarding curriculum, instruction, and assessment.

The application of MIT in education aims to recognize and respond to the diverse strengths and learning preferences of students. Traditional education often focuses primarily on linguistic and logical-mathematical intelligences, neglecting other forms of intelligence. However, by incorporating activities and instructional strategies that engage multiple intelligences, educators can provide a more comprehensive and inclusive learning environment.

Minnier et al. (2019) mentioned that using multiple intelligences in teaching is different from using traditional teaching methods because it uses a variety of instructional techniques and activities. The use of multiple intelligences in the classroom has been shown to increase students' motivation and interest in learning, according to numerous studies. (as cited in Lei, 2021)[16] . Multiple intelligence theory has several uses in education. Students apply what they learn in class according to their dominant intelligence and learning style, which is most beneficial for them. The learning processes of students are improved when the dominant

[15] Howard Gardner , Frames of mind : The theory of multiple intelligences, Basic Books, 1983.

[16] Lei et al .Disscusion of Teaching with Multiple Intelligences to Corporate Employees' Learning Achievement and Learning Motivation .Frontiers in Psychology, 2021.

intelligences and learning styles are combined. This was confirmed by (Sener & Cokcaliskan, 2018, as cited in Yavich & Rotnitsky, 2020)[17].

1.5. The Nine Types of Intelligence in "Howard Garnder 's" model

According to Gardner,there are nine different types of intelligences that individuals possess, but they differ in their development and how they are linked, as they are presented in the section bellow

1.5.1. Verbal Linguistic Intelligence

Linguistic Intelligence is to understand spoken and written language well enough to express oneself or remember things. As it is explained by Setiawan et al (2021)[18] that the ability to effectively manipulate language for rhetorical or artistic purposes is a component of this intelligence. Speaking and comprehending the language, as well as one's own tongue and maybe other languages, is another aspect of linguistic intelligence. A high degree of linguistic intelligence also indicates a comfort with words and languages. They often have strong reading, writing, storytelling, and word storage skills. This intelligence is consistent with the higher-level cognitive ability of critical thinking.

1.5.2. Logical-mathematical intelligence

According to Howard Gardner, Logical-Mathematical Intelligence is the ability to analyze situations or problems logically, identify solutions, conduct scientific research, and easily solve logical/mathematical operations. People with a high level of numerical intelligence analyze their data by using logic and examining cause-effect relationships just as specified in the logical-mathematical intelligence definition (cited in Cole, 2022)[19]. They are able to break down complex problems into smaller, more manageable parts and then solve them one by one. This intelligence can be developed through practice and exposure to challenging problems. It is not just an innate ability that some people are born with.

[17]Roman Yavich, & Rotnitsky Irina .Multiple Intelligences and Success in School Studies .International Journal of Higher Education, 2020.

[18]Setiawan et al. ,Linguistic Intelligence and Critical Thinking amongs tStudents of the Inland Water and Ferries Transport Polytechnic of Palembang,2021.

[19] Lauran cole , LogicalMathematicalIntelligenceExamples-MentalUP.MentalUP.co.2022.

1.5.3. Visual-spatial Intelligence

It is the ability to perceive, understand and manipulate visual and spatial information. As reported by the American Psychological Association (APA), spatial intelligence, also called visual-spatial, is the skill of manipulating objects in space mentally and picturing them in various positions and settings. (Cited in Cole, 2022)[20]. Gardner explains that the application of spatial intelligence may be more useful for problem-solving in fields related to realistic, object-oriented, and investigative occupations. Individuals with visual impairments can also exhibit this capacity, which is a brain skill. (Wikipedia contributors, 2022)[21]. People with high levels of spatial intelligence are often skilled at visualizing objects and their relationships in space , as well as interpreting and creating visual images .

1.5.4. Bodily-Kinesthetic Intelligence

It refers to the ability to control one's body movements and handle objects skillfully. People who are highly skilled in this intelligence have a strong sense of body awareness and are able to use their bodies to express themselves creatively. They are usually learn better through physical activity than through reading and answering questions. Dancers, gymnasts, and athletes are among those that Gardner believes that having high kinesthetic intelligence (Sujitha, G & C., Thanavathi.2022, p.16)[22].

1.5.5. Musical/Rhythmic Intelligence

Musical intelligence is the ability to feel musical pitches, sound rhythm, and tempo, as well as to be emotionally affected by them. He argued that Musical intelligence varies from person to person because everyone has his or her own musical ability, while others have nothing to do with music (Gardner, 1983)[23]. Individuals with high musical intelligence posses advanced skills and abilities related to music .They demonstrate a deep understanding and appreciation of musical elements, allowing them to engage in various musical activities with expertise.

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[20] Ibid.

[21] Wikipedia contributors. Spatial intelligence (psychology) , 2022.

[22] Sujitha,G&C.,Thanavathi,.Bodily-Kinesthetic Intelligence (BKI) of Prospective Teachers, 2022.

[23] Howard Gardner , Frames of mind ; The Theory of Multiple Intelligence , Basic Books , 1983.

1.5.6. Interpersonal Intelligence

Interpersonal intelligence describes a person's capacity for interpersonal communication and relationship management. People are better able to influence those around them because they are better able to understand their needs and motivations. Interpersonally intelligent people are good at communicating and take pleasure in participating in discussions and debates. Sensitivity to other people's emotions, temperaments, motivations, and feelings is a trait of people with interpersonal intelligence. (CFI Team, 2022)[24].This intelligence empowers individuals to navigate social situations with ease, resolve conflicts, and foster harmonious connections. They excel at reading non-verbal cues, listening actively, and responding sensitively to the needs and concerns of those around them.

1.5.7. Intrapersonal Intelligence

Rubio (2002) defined Intrapersonal Intelligence as the ability to comprehend oneself, identify one's emotions, strengths, and weaknesses, as well as to resolve thinking conflicts that disrupt psychological balance or homeostasis. (as cited in Del Mar Palenzuela Pérez & Ruz, 2014)[25]. This intelligence enables individuals to set meaningful goals , make well-informed decisions , and navigates their own inner world with clarity and purpose .They value self-awareness and use their profound understanding of themselves to lead fulfilling lives and make positive contributions to the world around them.

1.5.8. Naturalistic intelligence

Bartolomei-Torres (2022)[26] defined naturalistic intelligence as the ability to recognize, classify, explain, and make connections between elements of daily life and nature. Also the capacity to differentiate between living things, including both plants and animals. Naturalistic intelligence is found in those who can observe nature, categorize environmental components, and put their knowledge productively. They have a strong desire to protect and preserve the environment, utilizing their knowledge and understanding to promote sustainable practices and foster harmony between humans and the natural world.

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[24]CFI Team, Interpersonal Intelligence, Corporate Finance Institute, 2022.

[25]Del Mar Palenzuela Pérez, M., & Ruz ,N.R , INTRAPERSONAL INTELLIGENCE AND MOTIVATION IN FOREIGN LANGUAGE LEARNING .European Scientific Journal , 2014.

[26] Bartolomei- Torres,P., Naturalistic Intelligence: Definition, Characteristics ,and Activities for its Development .Learning bp , 2022.

1.5.9. Existential Intelligence

McKenzie (2005)[27] found "The intelligence of understanding processes within a larger, existential context. It can include aesthetics, philosophy, and religion and emphasizes the classical values of beauty, truth, and goodness" (p.13). It is concerned with the classical value in the universe and must be in harmony with nature which means to think profoundly about creation. People with existential intelligence appreciate the beauty and complexity of life, ponder abstract ideas and find meaning and significance in their own unique way.

1.6. Multiple Intelligences in the EFL Classes

As the emphasis over time was placed on students and learning rather than teachers and teaching in various context, MI theory was and still is at the core of many studies and researchers in education. Gardner (1993)[28] asserts that because people differ in their levels of cognitive ability, schools generally and teachers in particular should be conscious of these variances when implementing MI in EFL classes. In other words, schools should not just emphasize verbal and logical intelligence but also take into account other categories of aptitude. Furthermore, academics are increasingly interested in figuring out how to help students enhance their intelligence and skills.

Tsuda (2008)[29] is one of several educators who asserted that in order to boost enthusiasm and interests in the classroom, teachers must use resources other than the textbook. His research involved Japanese EFL students, and it followed the steps below:

1.6.1. Using Authentic Materials

Japanese EFL students were given a copy of the MGM Studios Guide map from Disney World along with a handout containing map-related questions. Initially, students were instructed to independently locate the answers on the map, encouraging the utilization of intrapersonal, logical, and spatial intelligences. Subsequently, they were asked to collaborate in pairs, allowing for the comparison of their responses and promoting the application of interpersonal intelligence.

1.6.2. Using Videos

The students watched Arthur, an American animated film, and were tasked to come up with intelligible questions while they did so. They then collaborated in pairs and engaged in

[27]McKenzie,W.& International Society for Technology in Education, Multiple Intelligences and Instructional Technology, 2005.
[28]Howard Gardner, Multiple intelligences. New York: Basic Books, 1993.
[29]Tsuda,N,.The Theory of Multiple Intelligences and its Application in EFL Classrooms. TheSimpleWork,2008.

some interpersonal interaction by asking and responding to some of the questions. The verbal, logical, intrapersonal, interpersonal, and spatial intelligence are all addressed in this activity.

1.6.3. Using music

Tsuda (2008)[30] gave his learners blank lyrics and instructed them to carefully listen to the music, fill in the spaces, and determine the grammatical purpose of each missing word. He then directed them to work in pairs and exchange the solutions. He drew attention to select letters as hints in case their responses weren't correct. The students' linguistic, musical, logical, intrapersonal, and interpersonal intelligences were all enhanced by this assignment.

As a result, implementing MI in the classroom may assist EFL students in becoming more knowledgeable of their different intelligence types and efficient language learners. In other words, learners who have inadequate linguistic or visual intelligence may lose their passion for studying English and as a result, their proficiency in a foreign language may decline if teachers and educators place too much emphasis on that modality of intelligence.

The table below contains some examples of teaching activities, materials, and strategies that use the theory of Multiple Intelligences.

Table 1.1: MI activities for a classroom

Intelligence	**Teaching Activities (examples)**	**Teaching Materials (examples)**	**Instructional Strategies**
Linguistic	Lectures , discussions , word games , storytelling , choral reading , journal writing	Books, tape recorders , type writers , stamp sets , books on tape	Read about it, write about it , talk about it , listen to it
Logical-Mathematical	Brain teasers , problem solving , science experiments , mental calculation , number games , critical thinking	Calculators , math manipulative, science equipment , math games	Quantify it,think critically about it , put it in a logical framework , experiment with it.
Spatial	Visual presantations , art activities , imagination games , mind-mapping , metaphor , visualization	Graphs, maps, videos, LEGO sets, art materials , optical illusions , cameras , picture library.	See it , draw it , visualize it , colorit , mind-map it

[30] ibid

Bodily- Knesthetic	Hands-on learning , drama , dance , sports that teach , tactile activities , relaxtion activities	Building tools , clay, sports , equipment , manipulatives , tactile learning resources	Build it , act it out , touch it, get a « gut feeling « of it , dance it
Musical	Rhythemic learnings , rapping , using song that teach	Tape recorder , tape collection, musical instruments	Sing it, rap it, listen to it
Interpersonal	Cooperative learning, peer tutoring , community involvement , social gathering, simulations	Board games, party supplies , props for role plays	Teach it , collaborate on it , interact with respect to it
Intrapersonal	Individualized instruction, independent study , options in course of study , self-esteem building	Self checking materials , journals , materials for projects	Connect it to your personal life, make choices with regard to it, reflect on it
Naturalist	Nature study , ecological awareness , care of animals	Plants, animals , naturalists 'tools (e.g., binoculars), gardening tools	Connect it to living things and natural phenomena

Table from *Multiple intelligences in the Classroom*.P.58

1.7. Learning Styles Vs Multiple Intelligences

Christiron (1998) asserted that learning styles (LS), which are strongly related to MI, fall into three main categories: cognitive, senior, and personality. The second category, sensory, is made up of perception (auditory, visual, tactile, and kinesthetic) as well as environmental, which includes sociological and physical learners. Christison provided a thorough definition of each form of LS and made the case that the perceptual learning styles are the most well-known of all the types. Because most academic practitioners and teachers are familiar with the labels auditory, visual, and tactile, lessons should be designed and presented in blended styles, respectively. (cited in Rozario, 2003)[31].

It is worth noting that learning styles are not constant throughout life; rather, they change as a person develops and learns. This would imply that LS are similar to ML because intelligence cannot be measured and can be improved throughout life (Rotario, 2003)[32].

[31]Rozario, K. ," Delicious Horrors": Mass Culture, The Red Cross, and the Appeal of Modern American Humanitarianism. American Quarterly, 2003.

[32] ibid

Accordingly, LS and MI should be combined, according to Silver et al. (1997), because each of them has its limitations. Learning styles place an emphasis on how individuals approach problems, produce products, and interact; they are concerned with variations in how people learn. In contrast, the focus of multiple intelligences is on the learning process and its outcomes. (cited in Botelho , 2003)[33].

Interestingly, in order to demonstrate how the combination of MI and I could produce superior results, Silver et al. (1997)[34] combined each intelligence with specific learning styles. They suggested that diverse intelligences and learning preferences might combine to create an effective, integrated model of human intellect and learning; a model that respects and celebrates diversity and equips us with the necessary skills to live up to high standards. According to (Botelho, 2003)[35].

To conclude, LS places emphasis on the learning process. Ml, on the other hand, focuses on the information learned as well as its outcome. In both cases, LS and MI, the two indispensable edges of language teaching and learning are presented. In fact, they both discuss the needs of the students and the issues that teachers should take into account when putting the lesson into practice. From this standpoint, it is fundamental to incorporate MI into teachers' lesson plans in order to meet the diverse demands of the intended individuals.

[33]Botelho, M.R.L. Multiple Intelligences Theory in English Language Teaching: An Analysis of Current Textbooks, Materials, and Teachers' Perceptions, 2003.

[34] Silver, H.F., and R.W. strong . Monographs for learning style models and profiles. 1997.

[35] ibid Botelho, M.R.L. Multiple Intelligences Theory in English Language Teaching: An Analysis of Current Textbooks, Materials, and Teachers' Perceptions, 2003.

Part Two:
Bodily-kinesthetic Intelligence

2. Definition of Kinesthetic Intelligence

Kinesthetic intelligence, also known as bodily-kinesthetic intelligence, is one of the multiple intelligences identified by psychologist Howard Gardner (1983, 1999) . It refers to an individual's ability to control and coordinate their body movements and handle objects skillfully. They may also have a strong sense of spatial awareness and be skilled at tasks that require hand-eye coordination and fine motor skills.

People with high kinesthetic intelligence are often good at activities that involve physical movement, such as sports, dance, acting, and manual labor. They have excellent hand-eye coordination, balance, agility, and spatial awareness, and can quickly learn and replicate physical movements with precision to provide a parallel approach to the cognitive features of problem solving.

Armstrong (2009)[36] defines bodily-kinesthetic as having the ability to generate or modify things with one's hands and using one's entire body to communicate and transforme ideas and feelings, for example, a dancer, an actor, as a craftsperson, sculptor, mechanic, or surgeon. He added that this intelligence comprises specialized physical abilities including balance, dexterity, strength, flexibility, and speed as well as proprioceptive, tactile, and haptic capacities.

It is worthy to note that kinesthetic intelligence is often associated with tactile learning styles, and individuals with this intelligence tend to learn best through hands-on experiences and physical practice rather than through traditional academic instruction. It is also related to body awareness, self-expression, and emotional regulation, as well as the ability to communicate nonverbally through gestures, facial expressions, and body language.

2.1.Characteristics of Kinesthetic learners

Kinesthetic learners are individuals who tend to learn best through hands-on experiences and physical activities. Some common characteristics of kinesthetic learners include:[37]

[36]Thomas Amstrong , Multiple intelligences in the classroom (3rd ed) , Association for supervision & Curriculum Development , 2009.

[37] What Is Tactile Learning? (wgu.edu)

1. Active learning style: Kinesthetic learners prefer to learn by doing and actively engaging with the material rather than listening or reading.
2. Love of movement: Kinesthetic learners enjoy physical movement and may have difficulty sitting still for long periods of time.
3. Excellent motor skills: They have excellent hand-eye coordination, dexterity, and control over their body movements.
4. Need for physical involvement: They need to touch, feel, and manipulate objects to fully understand concepts and retain information.
5. Difficulty with passive learning: Kinesthetic learners may struggle with traditional teaching methods that rely on lectures or reading, as they tend to learn better through hands-on experiences.
6. Strong sense of spatial awareness: They have an intuitive sense of space and often have a good sense of direction and orientation.
7. Emotional expressiveness: Kinesthetic learners often use their body language to express their emotions and feelings.
8. Multi-tasking ability: They are good at performing multiple tasks at once and can easily switch between different activities.
9. Preference for teamwork: Kinesthetic learners often enjoy group activities and thrive in collaborative environments where they can work together with others.
10. Preference for careers that involve physical activity: They are often drawn to careers that involve physical movement, such as sports, dance, or manual labor.
11. Instructions are disregarded or missed: Kinesthetic learners may have a hard time remembering or adhering to directions. If you have a kid that has trouble following the rules in particular, they might be a kinesthetic learner.
12. Dislikes feeling confined: For kinesthetic learners, both physical and mental confinement can be a difficulty. Your youngster might be a tactile learner if they don't like to think outside the box or have trouble sitting at their desk in a tiny classroom.
13. Long-term attention problems: Kinesthetic learners have difficulty remaining still when listening to or reading for an extended amount of time. They enjoy being active and are frequently skilled at doing so. A learner who has trouble sitting still could learn best through touch.

These characteristics collectively emphasize the importance of incorporating hands-on, experiential learning strategies and creating an engaging and dynamic learning environment to support kinesthetic learners in maximizing their potential and achieving optimal learning outcomes.

2.2. Defining Learning Style

A person's preferred style of knowledge processing and acquisition is referred to as their learning style. It is the strategy someone takes to learning which may have an effect on how well they take in and remember information. The models of learning styles that take into consideration a person's preferences for absorbing and processing information through several senses or modes include visual, auditory, kinesthetic/tactile, and multimodal. Individuals can better personalize their approach to learning and achieve better learning results by being aware of their particular learning styles (Grasha, 1996) [38]

According to Joanna Haswell (2017)[39], the concept "learning styles" refers to the belief that every student learns in their own unique way. Students may actually acquire knowledge, remember it, and apply it during the learning process owing to this preferred method. According to Keefe (1979), a learning style is a consistent manner of functioning that represents the underlying causes of behavior. Cognitive, affective, and physiological behaviors are used as generally stable indications of how learners perceive, interact with, and respond to the learning environment (cited in Rod Ellis, 2000)[40].

2.3.Tactile learning style

In order to understand concepts, tactile learners must actively engage in the learning process by handling tools and materials. They frequently like to learn by making mistakes, and they are good spatial relational learners. Despite their potential challenges with abstract ideas, they are excellent at practical tasks (Reid, 1995)[41].

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[38] Anthony F. Grasha , Teaching with Style : A practical Guide to Enhancing Learning by Understanding Teaching and Learning , Alliance Publishers , 1996.

[39]Joanna Haswell .A Close Look at Learning Styles. Honors Senior Capstone. Projects , 2017.

[40]Ellis, R. ,Task-based research and language pedagogy. Language teaching research,2000.

[41]Joy Reid. Learning Styles in the ESL/EFL Classroom. Boston: Heinle & Heinle, 1995.

Interestingly, tactile learning, also known as kinesthetic learning or hands-on learning, is a learning style in which individuals prefer to learn through physical activities and manipulation of objects. they prefer to engage their sense of touch and hands to explore and understand new concepts. As well as , they tend to learn best through hands-on experiences, such as experiments, field trips, simulations, or building models, where they can actively engage with the material and manipulate objects to see how they work.

2.4.The Difference between Tactile and Kinesthetic Learners

Both tactile style of learning and kinesthetic intelligence involve physical engagement and manipulation of objects to understand and learn new concepts. They both tend to learn best through hands-on experiences, active engagement, and physical interaction with the material. They are often used interchangeably, but there are subtle differences between the two as presented below:

1. Tactile learners prefer to learn through touch and physical manipulation of objects, while kinesthetic learners prefer to learn through physical movement and bodily sensations.
2. Tactile learners may prefer to use their hands to explore and manipulate objects, such as building models or using manipulative, to understand new concepts. They have excellent motor skills and hand-eye coordination and can easily visualize how objects fit together.
3. On the other hand, kinesthetic learners may prefer physical movement and bodily sensations, such as acting out a scene, dancing, or engaging in sports. They have excellent body awareness, coordination, and agility, and can quickly learn and replicate physical movements with precision.

One can notice that both tactile and kinesthetic learners tend to learn best through hands-on experiences and active engagement with the material. However, the key difference lies in the preferred mode of physical interaction, with tactile learners preferring touch and manipulation of objects, and kinesthetic learners preferring physical movement and bodily sensations. It is important to note that individuals may

have a combination of tactile and kinesthetic learning styles, and that these styles can vary depending on the situation and the material being learned.

2.5.Teaching Activities for Kinesthetic Learners

According to Gracha (1996) and Reid (1998), Physical activity and hands-on interactions are the best ways for kinesthetic learners to learn. The following learning activities may be helpful:

1. Role-playing: For kinesthetic learners, role-playing can be a terrific way to interact with and comprehend an idea. For instance, learners can replicate scientific experiments or play out historical events.
2. Hands-on activities: Engaging in hands-on exercises can be a terrific approach for kinesthetic learners to comprehend abstract ideas. Students can construct models or manipulate things, for instance, to learn about geometric shapes or the idea of balance.
3. Movement-based activities: Exercises that involve movement can assist kinesthetic learners in remembering knowledge. Students can, for instance, act out a story or make gestures to help them remember vocabulary phrases.
4. Playing physical games: can help kinesthetic learners develop their critical thinking and problem-solving skills. Kids can enjoy games like chess or team-building activities, for instance.
5. Experiments: By allowing kinesthetic learners to test hypotheses and track results, experiments can aid in their understanding of scientific subjects.
6. Field trips: By allowing kinesthetic learners to see and explore real-world environments, field trips can be a useful tool for engaging them.
7. Arts and crafts: Kinesthetic learners can engage with academic subjects while simultaneously developing their creativity and fine motor abilities through arts and crafts activities.

These are just a few illustrations of instructional strategies for kinesthetic learners. To meet the various learning needs of each of their students, teachers must be innovative and adaptable in their teaching methods.

Sources: https://child1st.com/blogs/kinesthetic-tactile-learners/113559047-16-characteristics-of-kinesthetic-and-tactile-learners.

2.6.The Relation between Learning Styles and Multiple Intelligences

Many scholars have also examined the role of individuals' learning styles in foreign language learning. They have looked at the relationship between learning styles and multiple intelligences and their involvement in learning second and foreign languages. It is essential to recognize each person's unique learning preferences and multiple intelligence kinds. Understanding the many sorts of multiple intelligences and one's learning style can be highly helpful for students. They will be able to recognize their individual strengths and shortcomings and get knowledge from them by investigating this learning method and different intelligence kinds. In the Turkish setting, Tekiner (2005)[42] investigated the relationship between multiple intelligences and the perceptual and social learning styles of university students. That is to say, positive correlations between logical-mathematical intelligence and individual learning style, intrapersonal intelligence and individual learning style, interpersonal intelligence and group learning style, linguistic intelligence and individual learning style, and interpersonal intelligence and kinesthetic intelligence were discovered.

A research study was also conducted by Sarıcaoğlu and Arıkan (2009)[43] with college students. They discovered that learners preferred logical and mathematical intelligence more. There are some related research studies that are being conducted in Iran. Ahanbor and Sadighi (2014)[44] looked into whether or not integrating diverse intelligences and learning styles will improve students' academic performance. The findings demonstrated that each participant possessed naturalistic, linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal intelligences. The association between learning styles and multiple intelligences was also found to be statistically significant.

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[42]Tekiner Aylin. The relationship between perceptional and social learning styles and multiple intelligences and their effects on English proficiency of Turkish young adults learning English as a foreign language. (Unpublished Master Thesis). The Middle East Technical University, 2005.

[43]SarıcaoğluAysel., & Arıkan Arda. A Study of multiple intelligences, foreign language success and some selected variables. International Journal of Educational Researchers, 2009.

[44]Zahra Ahanbor & Firooz Sadighi (2014) . The Relationship between Multiple Intelligences, Learning Styles and Gender . Modern Journal of Language teaching Methods, 2014.

Spanish as a foreign language teaching and learning were factors that Luengo-Carvara (2015)[45] looked at, along with learning styles and multiple intelligences. Language intelligence-reflexive style, language intelligence-theoretical style, and musical intelligence-active style all showed three modest correlations between their respective variables for both conceptions. Students who strongly preferred the introspective and theoretical styles consequently displayed greater overall performance. In a different setting, parents participated in a research study done by Ali and Rajalakshmi (2016)[46]. They looked into the importance of parents being aware of their kids' various intelligences and learning preferences. They said that if parents were sensitive to the Multiple Intelligence theory's application in their children's education, learning might be fun and meaningful, with beneficial results for both kids and parents. Hsu and Chen (2016)[47] investigated the connection between the learning styles and learning strategies of tertiary level EFL college students. As a result, on all learning style variables, the majority of individuals were balanced-type learners.

Interestingly, David (2005)[48] found that students perceived their strengths in interpersonal, intrapersonal, and verbal linguistic intelligence and their weaknesses in bodily-kinesthetic and naturalist intelligence. Lee (2015)[49] found that learners with multiple major learning styles and with tactile or kinesthetic learning styles tended to have higher levels of expectation.

2.7. Multiple Intelligences and Academic achievement

In an effort to support the use of MI profiles as a tool for forecasting achievement on standardized tests, Shalk (2002)[50] conducted a research on high school pupils. The findings supported the presence of various intelligence

[45]Luengo-Cervera, E. Learning styles and multiple intelligences in the teaching-learning of Spanish as a foreign language. Enseñanza and Teaching, 2015.

[46] Asra Ali, A., & Rajalakshmi, M. S. A concept paper on the importance of introducing parents to the multiple intelligences concept to help understand their child's learning styles. Indian Journal of Health and Wellbeing, 2016.

[47]Chen, Clement , Jones Keith& Xu Shawn.. The Association between Students' Style of Learning Preferences, Social Presence, Collaborative Learning, and Learning Outcomes. Journal of Educators Online,2018.

[48]David W. C.. Perceived Multiple Intelligences and Learning Preferences among Chinese Gifted Students in Hong Kong. Journal for the Education of the Gifted, 2005.

[49]Lee, B. ,EFL Learners' Perspectives on ELT Materials Evaluation Relative to Learning Styles. RELC Journal: A Journal of Language Teaching and Research, 2015.

[50]Shalk, A., A Study of the Relationship between Multiple Intelligences and Achievement as Measured by Delaware Student Testing Program (DSTP) Scores in Reading, Mathematics, and Writing,2002.

profiles in relation to state test results. Linguistic and interpersonal intelligences were identified as the major profile intelligences for reading scale score. Logical/mathematical, linguistic, and interpersonal profile variables make up the mathematical scale score. Nonetheless, a tiny percentage of variance may be explained, which indicates that there is a tenuous connection between MI and test performance.

Interestingly, the highest level of intelligence reported by Egyptian pre-university students was examined by Koura (2005)[51], as well as the possibility of a connection between students' achievement and MIs in EFL classes. Surprisingly, the results showed that students used their interpersonal intelligence the most, whilst they used their natural intelligence the least. Students' achievement in EFL was favorably and strongly connected with their logical/mathematical intelligence, but negatively and significantly correlated with their bodily/kinesthetic intelligence.

Accordingly, 160 high achievers and 150 average students from secondary schools in Sarawak were investigated by Pendidikan (2007)[52], for their multiple intelligence patterns. The needs of the research led to modifications and validation of the Multiple Intelligences Inventory. According to the findings, typical students have the following intelligences: naturalist, interpersonal, physically kinesthetic, musical-rhythmic, visual-spatial verbal-linguistic, logical mathematical, and so on. High achievers, however, also have the following intelligences: naturalist, musical-rhythmic, bodily-kinesthetic, intrapersonal, visual-spatial, verbal-linguistic, and logical-mathematical.

[51]Koura, A.,Multiple Intelligences Achievement and SelfEfficacy in Pre- University Classrooms. Ain Shams University, Cairo.2005.

[52]Pendidikan, M. The role of parents in providing education to children at early age. Masalah Pendidikan,2007.

Chapter two:
Methodology

Introduction

This section provides an overview of the methodology employed in our study. We carefully chose this methodology considering different elements such as the research problem, the setting, the participants, and the desired outcomes. Our main objective was to gain a thorough understanding of the research questions we had previously identified. To achieve this, we utilized a mixed-methods approach, incorporating both quantitative and qualitative research techniques. Specifically, we distributed an online questionnaire to teachers and we observe learners. More details regarding the research design are presented in the following subsections.

3.1. Participants

The participants are Fourth and Fifth-grade learners at Almaahed international school, Medea. the class is composed of 15 kids. Along with administering questionnaires to their 13 EFL teachers.

3.2. Data-Gathering Instruments

In this section, we present an outline of the methodology employed in our study, focusing on the exploration of bodily- kinesthetic intelligence and tactile learning style among children at Almaahed International School. The selection of our methodology was guided by the research problem, the specific context of the school, the target participants, and the desired outcomes. Our main objective was to gain comprehensive insights into the research questions related to kinesthetic intelligence and tactile learning.

To achieve this, we employed a mixed-methods approach that incorporated both qualitative and quantitative research methods. Firstly, we conducted direct observations of the children at Almaahed international school. These observations involved carefully observing and documenting the behaviors, movements, and interactions of the children within their educational environment. By directly observing their activities and engagement, we aimed to gather qualitative data that would shed light on the manifestation of kinesthetic intelligence and tactile learning styles in their daily routines.

In addition to the observations, we also administered a questionnaire to the teachers at Almaahed international school. The questionnaire was specifically designed to capture valuable insights from the teachers regarding their observations and experiences with the children's kinesthetic intelligence and tactile learning styles. The questionnaire asked the teachers to provide their perceptions, assessments, and strategies on the children's preferences for kinesthetic activities and tactile learning materials. This quantitative component allowed

us to gather data on the teachers' perspectives, providing a complementary viewpoint to the qualitative observations.

By combining the observations and the questionnaire, we aimed to create a comprehensive understanding of the research questions by integrating both qualitative and quantitative insights. This mixed-methods approach enabled us to triangulate data, validate findings, and generate a more holistic view of the kinesthetic intelligence and tactile learning styles among the children at Almaahed international school.

Recent studies have highlighted the effectiveness of mixed-methods approaches in investigating various aspects of education. For instance, a study by Johnson and Smith (2022)[53] utilized a mixed-methods design, incorporating observations and questionnaires, to explore the impact of kinesthetic learning on learners' academic performance. The study revealed not only qualitative observations of learners' active engagement but also quantitative data on their academic achievements, providing a comprehensive understanding of the topic. Similarly, Smith et al. (2023) employed a mixed-methods approach, combining observations and questionnaires, to investigate the effects of tactile learning materials on learners' motivation and learning outcomes. Their findings demonstrated the complementary nature of qualitative observations and quantitative data in enhancing the understanding of tactile learning.

In summary, our study employed a mixed-methods approach, combining direct observations of children at Almaahed international school and a questionnaire administered to their teachers. By integrating qualitative and quantitative data, we aimed to obtain a comprehensive understanding of kinesthetic intelligence and tactile learning styles. Recent research supports the efficacy of this mixed-methods approach in educational research, emphasizing its ability to provide valuable insights.

3.3. Quantitative Research Instruments

Questionnaires have gained significant popularity as a reliable method for collecting data in studies focused on understanding kinesthetic intelligence and tactile learning. Oxford (1990) emphasizes the advantages of questionnaires, highlighting their objective scoring and analysis capabilities. These instruments offer a range of structures, allowing researchers to choose from structured formats, such as "yes or no" or frequency-based options, to more open-ended inquiries that encourage respondents to provide detailed descriptions of their experiences with kinesthetic intelligence and tactile learning.

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Structured questionnaires, in particular, play a crucial role in maintaining consistency and standardization in data collection. Cohen and Scott (1996) emphasize that standardized categories provided in structured questionnaires ensure uniformity among participants' responses. This consistency facilitates subsequent statistical analysis, enabling researchers to draw meaningful conclusions from the collected data.

By employing questionnaires in studies related to kinesthetic intelligence and tactile learning, researchers can gather valuable insights into individuals' awareness, perceptions, and practices in these domains. The structured nature of questionnaires allows for efficient data collection, ensuring that important aspects of kinesthetic intelligence and tactile learning are systematically addressed. The use of questionnaires also provides researchers with the opportunity to quantitatively analyze the collected data, identify patterns, and explore relationships between variables of interest.

3.3.1. Description of the Questionnaire Items

In our study, the questionnaire administered to 13 teachers, encompassed 14 questions. The provided questionnaire aims to gather comprehensive information from teachers regarding their awareness and strategies related to kinesthetic intelligence and tactile learning. The questionnaire begins by assessing the teachers' familiarity with the concepts of kinesthetic intelligence and tactile learning style, providing a foundation for understanding their knowledge base in this area. It further explores teachers' observations of learners exhibiting signs of kinesthetic intelligence and tactile learning style in their classrooms, shedding light on the prevalence and frequency of these characteristics among learners.

Additionally, the questionnaire examines whether teachers differentiate their instruction to cater to different learning styles, including kinesthetic intelligence and tactile learning style, revealing the extent to which teachers recognize and accommodate these unique learning preferences. It also investigates the use of assessments to identify learners' learning styles, including tactile learning style, providing insights into teachers' practices of assessing and considering learners' kinesthetic learning preferences. The questionnaire explores the incorporation of activities that engage kinesthetic and tactile learners, such as physical movement and object manipulation, revealing the instructional practices employed by teachers to effectively engage learners with bodily-kinesthetic intelligence.

Furthermore, the questionnaire addresses how teachers address the needs of learners who exhibit signs of kinesthetic intelligence and tactile learning style, offering insights into the approaches and support measures teachers employ to create an inclusive learning

environment. It also seeks teachers' perceptions of the impact of their knowledge on kinesthetic intelligence and tactile learning style in better meeting their learners' needs, providing self-reflection on professional growth and its influence on instructional practices.

The questionnaire concludes by inquiring about the use of assessments to identify learners' bodily-kinesthetic intelligence, the types of learning activities provided to engage learners with kinesthetic intelligence, the resources or strategies used to support these learners, and suggestions for improving support systems for tactile learners in schools and districts. This comprehensive questionnaire collects valuable data on teachers' awareness, observations, instructional strategies, and perceptions related to bodily-kinesthetic intelligence and tactile learning, providing insights for enhancing educational practices and support for the learners.

3.3.2 Questionnaire Administration Procedure

In the present study, an online questionnaire was distributed to teachers from Almaahed international school to gather information about their awareness and practices regarding kinesthetic intelligence and tactile learning. The online format and email distribution allowed for a convenient and efficient means of data collection among the targeted group of teachers.

The online distribution of the questionnaire provided flexibility for the teachers to complete it at their own convenience and in a digital environment that they were familiar with. It eliminated the need for physical paperwork and simplified the data management process. The collected data from the questionnaire will be used to analyze and identify areas for improvement and support in meeting the needs of learners with bodily-kinesthetic intelligence at Almaahed international school.

3.4. Qualitative Research Instruments

Observation is a widely recognized qualitative research tool used to gain insights into kinesthetic intelligence and tactile learning. It provides researchers with the opportunity to directly observe and document learners' behaviors, interactions, and engagement with physical objects and their surroundings. Observational studies have shown their effectiveness in capturing the unique characteristics and preferences of tactile learners (Gardner, 1993).

In the context of tactile learning style, observation allows researchers to witness firsthand how learners utilize touch, movement, and manipulation of objects to enhance their learning experience. It provides a rich understanding of how kinesthetic learners interact with their environment and how they engage with learning materials that stimulate their kinesthetic

and tactile senses. By immersing themselves in the classroom setting at Almaahed international school, researchers can closely observe learners' behaviors, identify patterns, and gain valuable insights into the effectiveness of different instructional strategies.

Observation as a qualitative research tool offers several advantages. It provides researchers with detailed and context-specific information that may not be easily obtained through other methods. By focusing on the physical actions and behaviors of kinesthetic learners, observation allows for a more holistic understanding of their learning process. Additionally, observation enables researchers to capture real-time data, avoiding potential biases that may arise from retrospective accounts or self-reporting.

Interestingly, observation serves as a valuable qualitative research tool in studying kinesthetic intelligence and tactile learning. By immersing themselves in the classroom environment at Almaahed international school, researchers can directly observe learners' behaviors and interactions, gaining deep insights into how kinesthetic learners engage with their surroundings and learning materials. Through observation, researchers can gather context-specific and real-time data, enhancing our understanding of the unique characteristics and needs of kinesthetic learners.

3.4.1. Participants

The observation phase of the study involved closely observing and documenting the behaviors and interactions of children from a specific grade level at Almaahed international school. By focusing on this particular grade, researchers were able to gain in-depth insights into the kinesthetic intelligence and tactile learning, exhibited by these children.

Table 3.1: Participants' Number in the Observation

Participants	**Learners**
Grade/Level	**Fourth & Fifth grade**
Number	**15**
School	**Almaahed international school**

3.4.2 Observation Conducting Procedure

The observation conducting procedure at Almaahed international school involved a systematic and immersive approach to understanding the intelligence and learning style of the children. The researchers carefully selected a specific grade level to observe, ensuring a targeted and representative sample. Prior to the observations, the researchers established a rapport with the teachers and obtained the necessary permissions to conduct the study. They conducted an observation session on May 06, 2023, from 08:30 to 10:00 within the classroom environments, allowing them to gain an in-depth understanding of how the children demonstrated their kinesthetic intelligence in various learning contexts.

During the observations, the researchers paid close attention to the children's behaviors, movements, and interactions, specifically focusing on their utilization of touch, manipulation of objects, and physical engagement with learning materials. The researchers took detailed field notes, documenting specific instances of kinesthetic involvement and noting any emerging patterns or themes. The observation conducting procedure provided a rich and comprehensive insight into the kinesthetic intelligence of the children at Almaahed international school, shedding light on their tactile learning preferences.

3.5. Data Analysis Procedure

The data analysis procedure for the study on the kinesthetic intelligence and tactile learning, involved both quantitative and qualitative data. The quantitative data collected through the questionnaire were analyzed using statistical software such as Microsoft Excel. This involved organizing the data, calculating frequencies, percentages, and descriptive statistics to summarize the responses. Statistical analysis techniques, such as chi-square tests or t-tests, may have been applied to examine relationships and differences among variables related to kinesthetic intelligence.

For the qualitative data obtained through the observation using a checklist, a thematic analysis approach was employed. The researchers reviewed the checklists and identified common themes, patterns, and behaviors related to kinesthetic intelligence and tactile learning. The data were then grouped into meaningful categories and analyzed to extract key insights and understand the experiences of the participants. The qualitative analysis involved coding, categorizing, and interpreting the data to uncover rich and nuanced information about the tactile style observed in the learning environment.

3.6. Ethical Consideration

Ethical considerations were meticulously addressed in the study on the kinesthetic intelligence, which employed both questionnaires and observations with children aged 8 to 10 years old. Prior to data collection, their teachers' consent was obtained, ensuring that they were aware of the study's purpose and procedures. The researchers ensured that no sensitive or personally identifiable information was requested, protecting the children's privacy and confidentiality.

In terms of the observational aspect, the researchers conducted non-intrusive observations using a checklist to capture specific behaviors related to kinesthetic intelligence. The observations were carried out discreetly to minimize any potential disruptions to the children's daily routines. The researchers maintained a respectful distance and avoided any interference that could affect the natural behavior of the children. Throughout the process, the emotional well-being and safety of the children were prioritized, and any signs of discomfort or distress were addressed promptly.

Conclusion

The actual chapter research presented the methodological part of the dissertation by combining observation and questionnaire methods to investigate the kinesthetic intelligence and tactile learning, among the children. Through systematic classroom observations, the researchers closely observed the children's behaviors, movements, and interactions, focusing on their engagement with touch, object manipulation, and physical involvement with learning materials. Additionally, a customized questionnaire was administered to gather insights into the children's preferences, experiences, and perceptions related to kinesthetic intelligence and tactile learning. This combined approach provided a comprehensive understanding of the kinesthetic exhibited by the children, highlighting the tactile approache in their learning journey.

Chapter Three
Data Analysis and Discussion

Introduction

This chapter revolves around the data analysis section and discussion, it embraces the analysis of online surveys distributed to teachers and in-class observations in the classroom at the level of Al-Maahad private school, the obtained data explains the conclusions drawn from the online questionnaires that were disseminated to gather important information on teachers' awareness, observation, instructional strategies, and perceptions related to bodily-kinesthetic intelligence.

4.1. Analysis of teachers' Questionnaire

Q1: How familiar are you with the concept of kinesthetic intelligence?

The results demonstrate that the respondents were well-versed in the concept of kinesthetic intelligence. 76.9% of respondents indicated they were very familiar with the idea, demonstrating that they were well aware of kinesthetic intelligence as a distinct sort of intelligence. Furthermore, a moderate level of understanding and familiarity was demonstrated by the 23.1% of respondents who stated they were at least somewhat familiar with the concept. These findings suggest that the majority of respondents had a firm understanding of kinesthetic intelligence, which may have an effect on their teaching practices and ways of dealing with students who possess this form of intelligence.

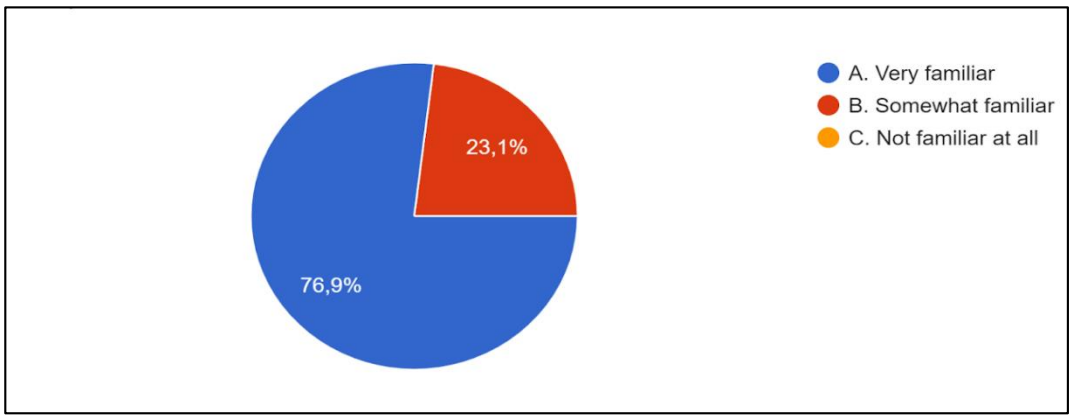


Figure 4.1: Teachers' Familiarity with the Concept of kinesthetic intelligence

Q2: How familiar are you with the concept of tactile learning style?

The results demonstrate that the respondents had a solid understanding of the idea of a tactile learning strategy. Indicating that they had a clear understanding of tactile learning as a specific sort of learning that involves physical contact and manipulation, a sizable majority, or 61.5%, stated they were very familiar with the concept. Additionally, a moderate level of understanding and familiarity was demonstrated by the 38.5% of respondents who stated they were at least somewhat familiar with the concept. These findings show that the majority of respondents have a strong understanding of the tactile learning style, which may have an effect on their instructional strategies and the design of learning activities for students who value this method of learning.

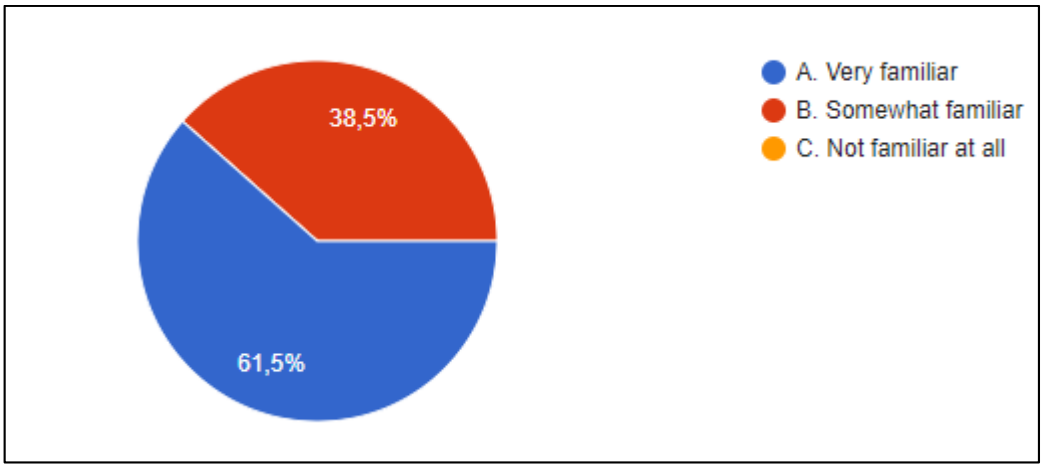


Figure 4.2: Teachers' familiarity with the concept of tactile learning style

Q3: How often do you observe students exhibiting signs of kinesthetic intelligence in your classroom?

61.5% of respondents said they frequently saw indications of kinesthetic intelligence in their students in the classroom. Additionally, 30.8% of respondents said they always consider these indications, demonstrating the continuity of kinesthetic intelligence. Only 7.7% of respondents said they sometimes saw these indicators. These results highlight the prevalence of kinesthetic intelligence and the necessity of meeting the learning requirements of kinesthetic learners.

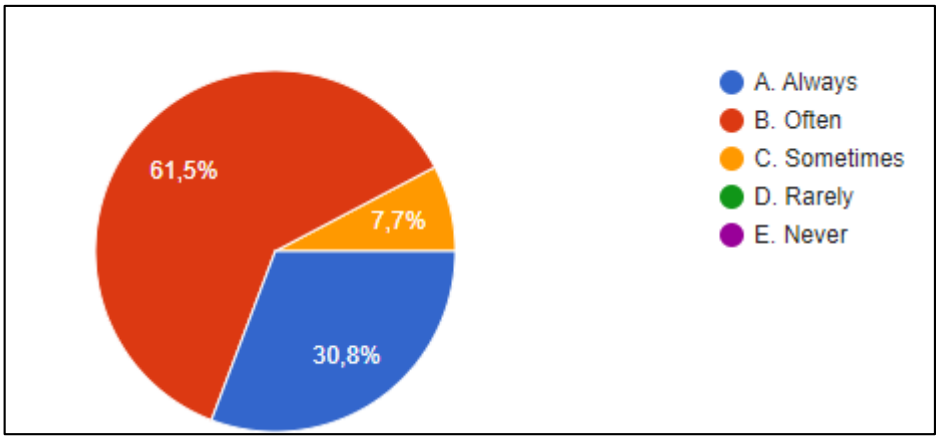


Figure 4.3: Observation of Kinesthetic Intelligence in Classroom

Q4: How often do you observe students exhibiting signs of tactile learning style in your classroom?

The findings demonstrate that a sizable majority of respondents, 38.5%, stated that they had always seen kids in their classrooms displaying tactile learning style characteristics. Another 38.5% added that they often observe these indications. Only 15.4% of respondents said they had rarely witnessed kids demonstrate a tactile learning method. These results imply that students exhibit a rather common and regular tactile learning method in a classroom setting.

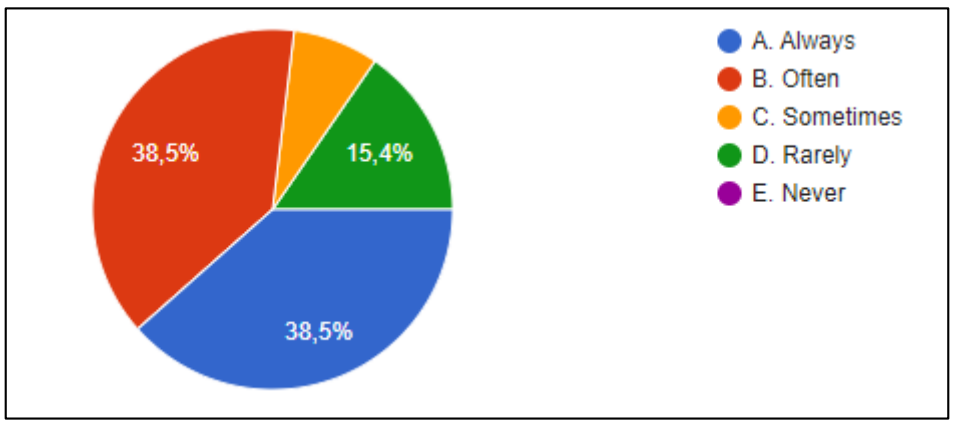


Figure 4.4: Tactile Learning Style Observation Frequency

Q5: Do you differentiate your instruction to cater to different learning styles, including kinesthetic intelligence and tactile learning style?

The findings show that a sizable majority of those surveyed, 53.8%, stated that they often differentiate their instructions to accommodate various learning styles, including kinesthetic intelligence and tactile learning style. Additionally, while 23.1% of respondents said they sometimes differentiated education, 23.1% said they always did so. This indicates that a sizable proportion of teachers are aware of the value of introducing techniques into their teaching methods to engage pupils who favor the kinesthetic and tactile.

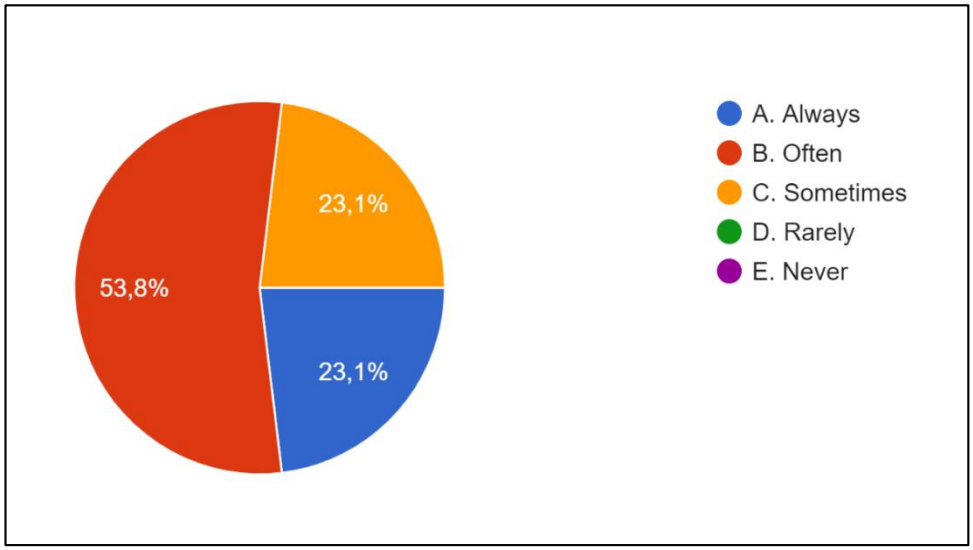


Figure 4.5: Instruction Differentiation for Learning Styles

Q6: Have you ever used assessments to identify students' learning styles, including kinesthetic intelligence and tactile learning style?

According to the analysis of the data, a sizable majority of respondents (69.3%) have employed assessments to identify students' learning styles, including tactile learning style and kinesthetic intelligence. Among them, 30.8% said they always used such assessments, and 38.5% said they did so often . Additionally, 15.4% said they sometimes utilize exams, while just 7.7% said they never use tests to determine kids' learning styles. This indicates that a sizable proportion of educators are aware of the significance of evaluating and comprehending students' learning styles in relation to kinesthetic intelligence and tactile learning style.

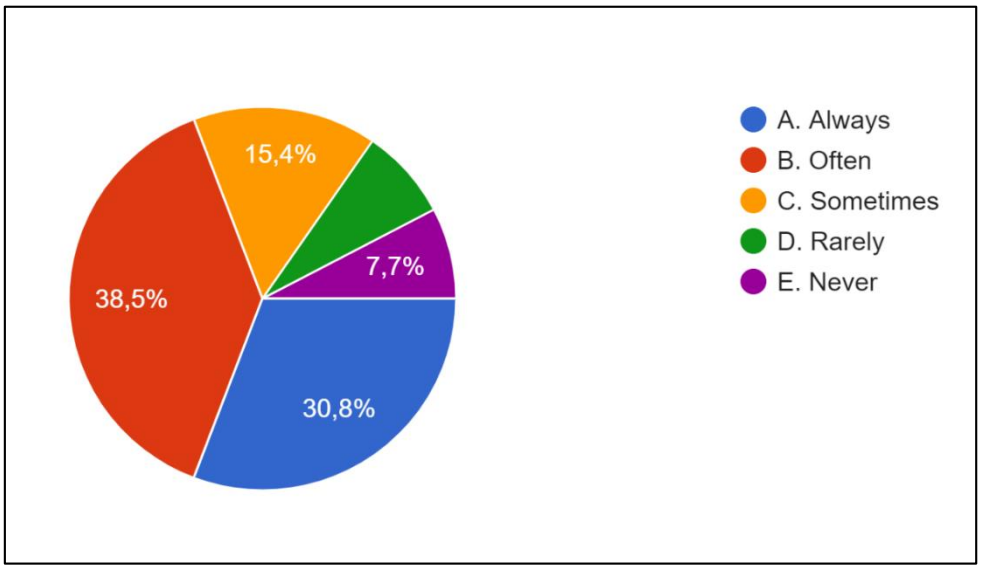


Figure 4.6: Assessments Usage for Identifying Students' Learning Styles

Q7: **Do you incorporate activities that involve physical movement and manipulation of objects into your lessons to engage kinesthetic learners?**

According to the results, a significant portion of respondents (38.5%) claimed that they "always" included physical movement and item manipulation in their lesson. The majority (46.2%) also stated that they did it "often." This demonstrates that many educators actively incorporate practical activities into their lesson plans and are conscious of the need of addressing the needs of kinesthetic learners. Only a smaller percentage (15.4%) claimed to do it "occasionally," indicating that there is still room for increased use of kinesthetic learning strategies in their lessons.

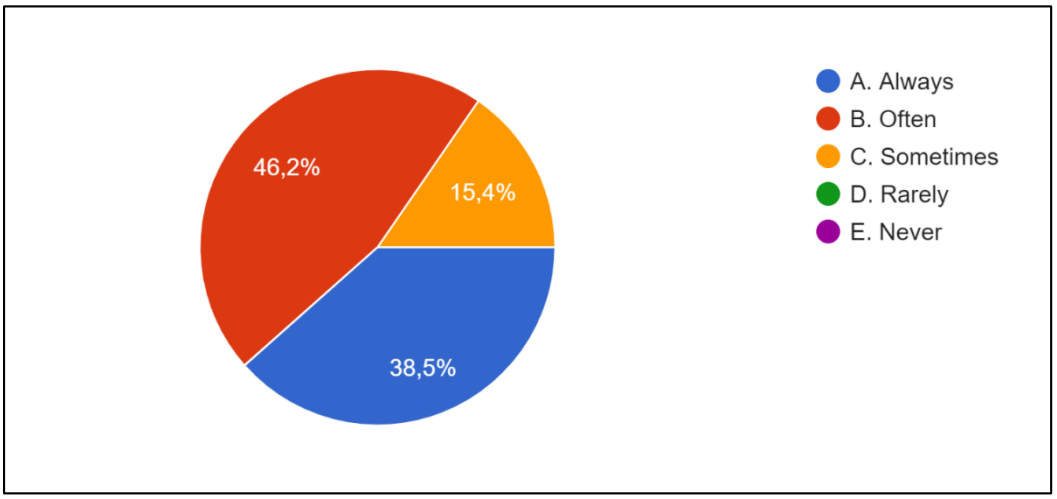


Figure 4.7: Activities for Kinesthetic Learners

Q8: **Do you incorporate activities that involve touching and manipulating objects into your lessons to engage tactile learners?**

The findings show that a significant number of participants (always: 23.1%, often: 30.8%) include activities that require touching and handling items in their classes to engage tactile learners. Additionally, a sizable percentage of respondents (23.1%) said they sometimes engage in such activities. It is important to note that a substantial number of participants (rarely: 23.1%) said that they rarely included such activities in their lessons. This proposes a variety of strategies for addressing tactile learners' requirements in the classroom.

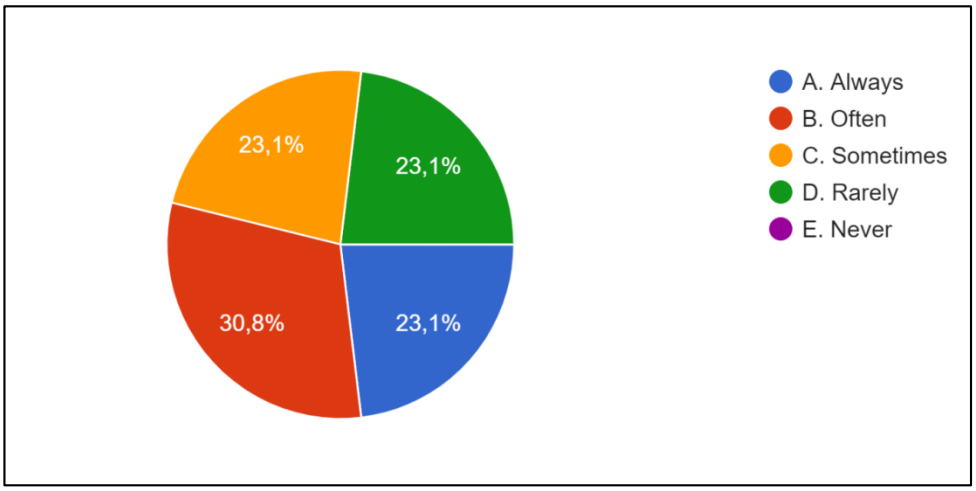


Figure 4.8: Incorporation of Activities for Tactile Learners

Q9: How do you address the needs of students who exhibit signs of kinesthetic intelligence and/or tactile learning style in your classroom?

In order to meet the needs of children with kinesthetic intelligence and/or tactile learning styles, the majority of responders (61.5%) said they differentiated their instruction and offered a range of learning activities. A minority of respondents (15.4%) concentrated on creating an engaging learning environment without particularly addressing these needs, while some respondents (23.1%) supported physical activities during breaks without adjusting their lesson.

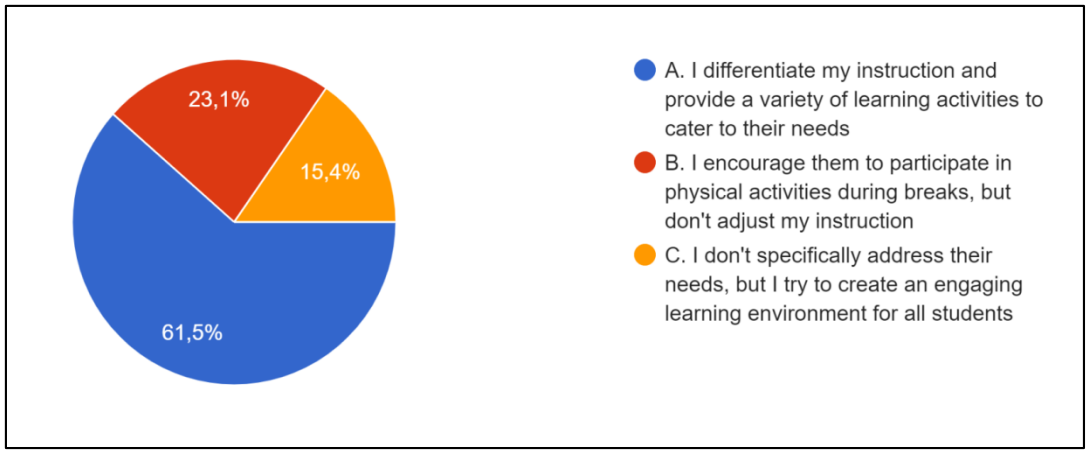


Figure 4.9: Addressing Students' Kinesthetic and Tactile Learning Needs

Q10:Do you feel that your knowledge of kinesthetic intelligence and tactile learning style has helped you to better meet the needs of your students?

The majority of respondents (53.8%) believed that their knowledge of tactile learning style and kinesthetic intelligence definitely enhanced their ability to address the needs of their pupils. In addition, a sizable percentage (46.2%) said they thought their knowledge had helped them in somehow to address the requirements of their students. This shows that their instructional strategies and student involvement have benefited from an awareness of various learning types.

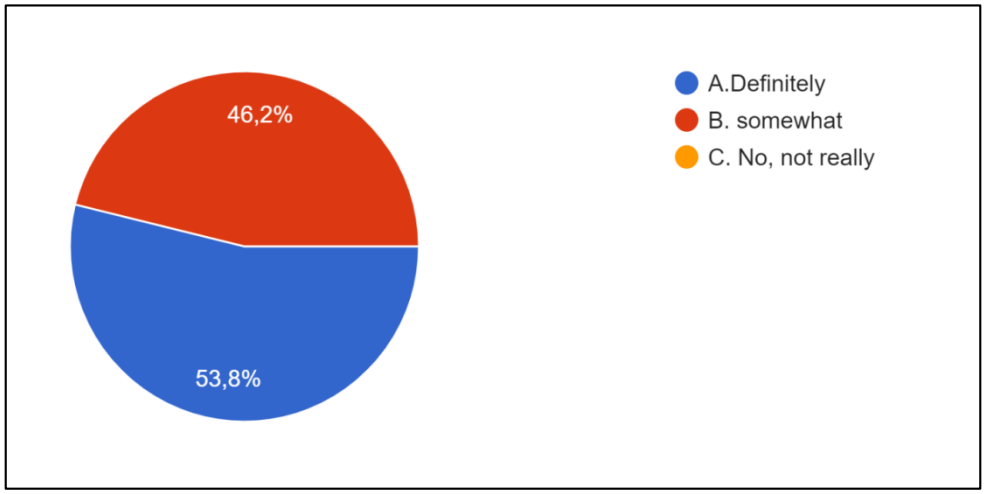


Figure 4.10: Impact of Knowledge on Meeting Students' Needs

Q11: Have you ever used assessments to identify students' bodily-kinesthetic intelligence?

The findings indicate that most respondents have used assessments to some degree to determine pupils' bodily-kinesthetic intelligence. In particular, 23.1% of respondents said they frequently used such assessments, showing a regular practice of evaluating pupils' bodily-kinesthetic intelligence. Additionally, 69.2% of respondents said they used assessments sometimes. Only a small percentage of responders, 7.7%, claimed never to have evaluated pupils' bodily-kinesthetic intelligence. In conclusion, the findings show that evaluations are used in a variety of ways to determine this specific intelligence, with the majority of respondents using them at least occasionally.

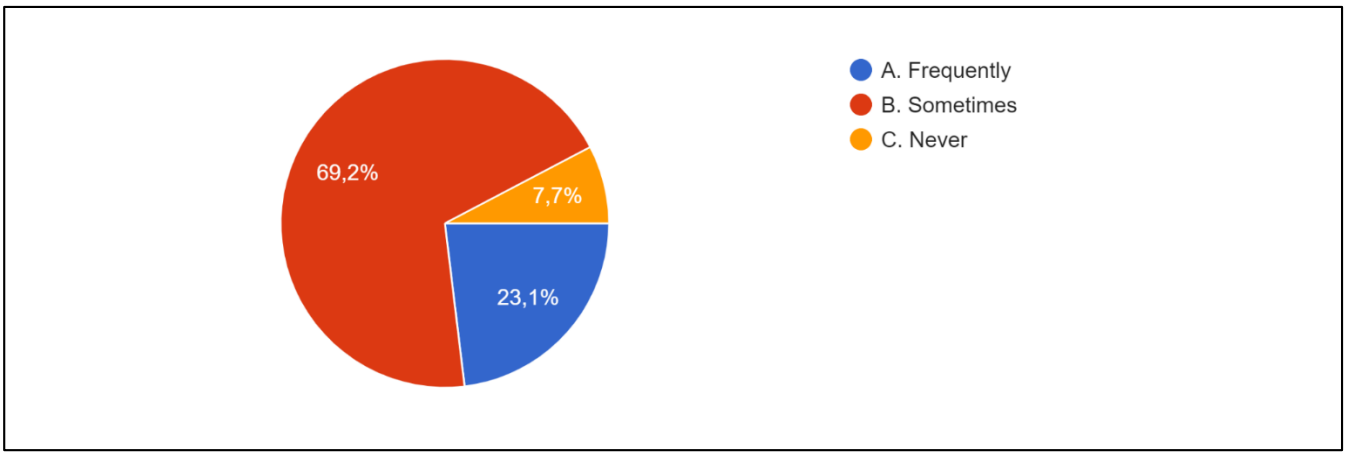


Figure 4.11: The Frequency of Having Problems with Comprehension

Q12: What types of learning activities do you provide to engage students with kinesthetic intelligence?

According to the findings, hands-on projects and activities (35.7%), opportunities to touch and manipulate items (35.7%), and physical simulations and experiments (28.6%) are among the learning activities intended to engage students with haptic intelligence. The activities provide students with hands-on, tactile experiences that enable them to actively use their sense of touch and deepen their conceptual understanding through direct engagement with real-world objects and simulations.

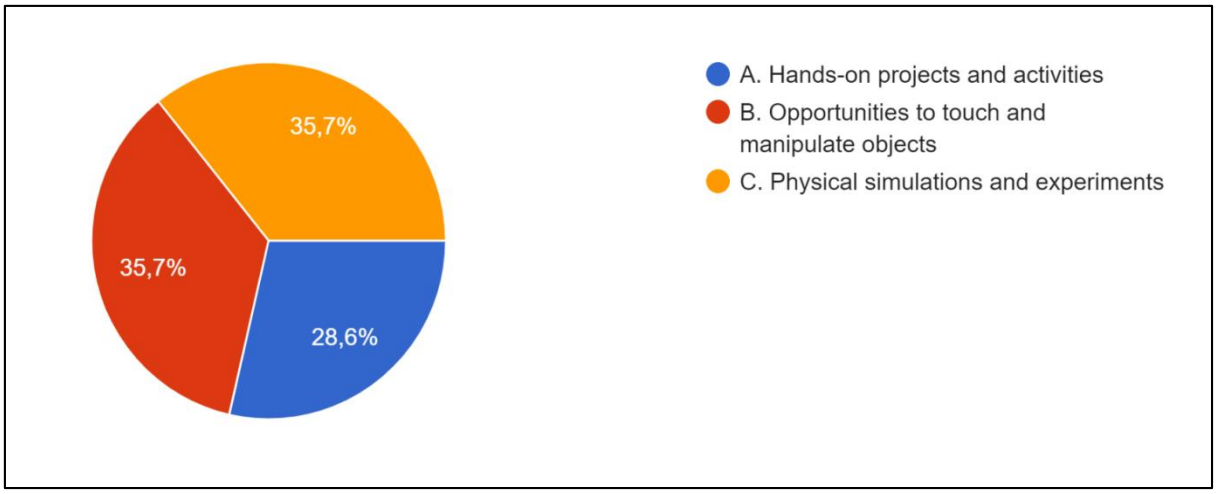


Figure 4.12: Learning Activities for Engaging Kinesthetic Intelligence

Q13 : What resources or strategies do you use to help students with kinesthetic intelligence succeed in your classroom?

The majority of responders (64.3%) said they used a strategy of giving students with haptic intelligence choices in their learning activities. A sizeable portion (28.5%) also stated offering hands-on activities and manipulatives, while just 7.1% indicated using technology to improve the kinesthetic experience.

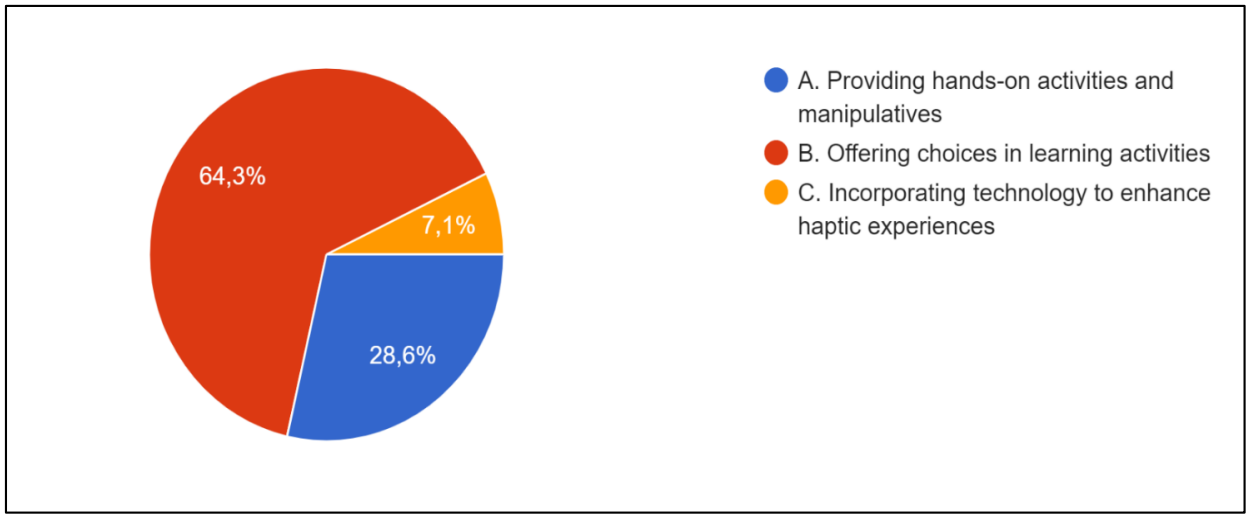


Figure 4.13: Strategies for Supporting Kinesthetic Intelligence in the Classroom

Q14: In what ways do you think that schools and districts can better support students with kinesthetic intelligence?

Schools and districts can invest in resources and tools for hands-on learning (38.5%), provide professional development and training for teachers (53.8%), and integrate haptic technology into classroom instruction (7.7%) to better serve kids with haptic intelligence.

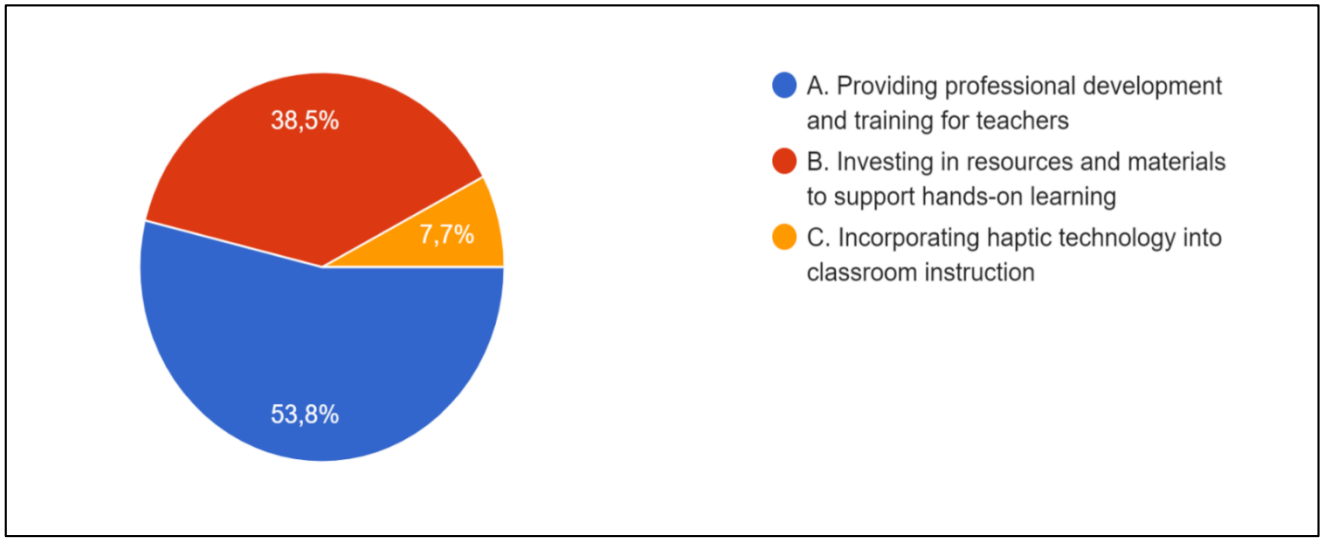


Figure 4.14: Ways to Better Support Students with Kinesthetic Intelligence

4.2 Analysis of Observation

Through the section, the researcher is going to present the observational checklist, as can be seen in Table (3.1) below.

Table 4.1: Observational Checklist

Observed behaviors	**Yes**	**No**	**Examples / Explanation / Notes**
Motor skills: building blocks/drawing/assembling a model			➢ Team building activities such as group human knot or pair human knot it is only with hands no material. Objective: improve communication, leadership, and teamwork spirit. ➢ Learners practice tongue twisters (easy for kids) to improve their pronunciation.
Tactile sensitivity: the learner (response) to different textures and materials / distinguish btw different textures / do they enjoy exploring new textures and materials?			➢ The learners trace letters or words with their fingers to reinforce muscle memory and improve handwriting. ➢ Classifying objects based on their observable properties, for example, the learners taste different drinks and guess them in English.
Spatial Awareness: how learners navigates physical space (aware of surroundings)/ distance and perspective. (puzzles, mazes , building structures)			➢ Building activities such as constructing models or using blocks and Lego pieces. For example, building a model of a house and labeling the different rooms. ➢ Moving around and using physical space to learn. ➢ Puzzles, such as crossword puzzles or word search puzzles.
Kinesthetic learning: the student learns best through physical movement and hands-on activities. Do they enjoy learning through physical activities such as dance, sports, or building?			➢ Using whole body spelling by bring the learners to a wide open space and ask them to create different letters with their bodies or putting students into groups and asking them to spell entire words with their bodies ➢ Enjoying songs with movements (head, shoulders , knees and toes) ➢ Acting out dialogues or role-playing scenarios. ➢ Introduce puppets to the classroom and challenge the learners to create a dialogue using vocabulary words, also acting out scenes from books using puppet characters.

Creativity: the ability to create new ideas /solutions through physical experimentation and exploration. Senses and manipulating objects in the environment to gain new insights and develop ideas/ use trial and error, combinations of objects and tools until they come up with a solution or idea.			➢ Learning English with creative thinking by playing Storytelling Memory Game where the learners sit in a circle, the first person starts with a fragment phrase and the next person must repeat it and add a phrase of their own.
Problem-Solving: the student's ability to identify and solve problems through touch and movement / analyze and manipulate objects to find solutions to problems.			➢ The teacher encourage exploration , collaboration , reflection, providing challenging tasks (working in groups ➢ Teaching verbs by playing the charades game: the teacher is making an action and the learners guess it correctly.
Memory and Recall: the student's ability to remember and recall information based on tactile experiences/ Do they remember things better when they've physically manipulated or interacted with them?			➢ The learners are remembering best what has been done, note what they have seen or talked about (engaging the brain in more active processing of information through physical movements and hands-on activities) ➢ Place a selection of flash cards on the floor in a circle , the learners have one minute to memorize the cards , in groups they have two minutes to write as many of the names as they can remember. ➢ The learners are using highlighter to remember.

Attention to detail: Students with haptic intelligence are often very detail-oriented and observant. They may notice subtle differences in textures, shapes, and colors that others might miss.			➢ The learners are paying attention to the details of letter formation and spelling (differentiate between the letter "d" and the letter "b") ➢ Pay attention to the small details of pronunciation and improve their accuracy by placing their hands on their throats and feel the vibrations when they pronounce different sounds.
Use of tools: Students with haptic intelligence may be skilled at using tools and instruments, such as hammers, saws, or musical instruments that require precise hand movements.			➢ Explore independently with objects and tasks. ➢ Teaching with real life objects (real toys such as plastic fruits and vegetables / real clothes). ➢ Manipulatives, such as alphabet blocks, letter tiles, and magnetic letters.

First of all, children' motor abilities and coordination were on display as they engaged in motor skill exercises including constructing blocks, drawing, and putting together a model. In addition, team-building exercises including group and pair human knots were carried out, emphasizing the development of leadership, teamwork, and communication skills. Finally, pupils worked on tongue twisters that were created especially for children to improve their pronunciation skills. Students had the chance to practice their fine motor abilities, social and interpersonal skills, and voice clarity through these types of activities.

By emphasizing tactile sensitivity as the observable behavior, learners can also show an interest in tactile experiences by actively responding to and examining various textures and materials. Learners traced letters or words with their fingers, stressing the development of fine motor skills, to improve handwriting abilities and muscle memory. In addition, students practiced categorizing objects based on visible characteristics, such flavor, by trying several drinks and guessing the names in English. Learners had the chance to use their senses, hone their tactile perception, and build verbal and cognitive abilities connected to classification and sensory discrimination through these exercises.

When it comes to spatial awareness, kids show awareness of their immediate surroundings as well as distances and perspectives. This was enabled through a variety of

activities, such as having students construct models or structures out of Legos and building blocks, giving them the opportunity to practice hands-on building and spatial reasoning. Interestingly, students actively moved around and made use of their surroundings to use physical space for learning. Puzzles, like crosswords and word searches, for instance, helped to further develop spatial awareness and problem-solving abilities. across these exercises, learners improved their grasp of and ability to navigate across physical space by developing their vocabulary, fine motor abilities, and spatial cognition.

The behavior that was seen demonstrated an emphasis on fostering creativity, which included the capacity to come up with fresh concepts and solutions through active experimentation and investigation. To get fresh perspectives and generate ideas, the students used their senses and the environment's things. They used a method of trial and error, fusing various items and tools, until they discovered a solution or idea. Using a Storytelling Memory Game while learning English was one particular tactic used to boost creativity. In this activity, students sat in a circle and each contributed a sentence to a group story. By encouraging students to build on one another's ideas and add to the narrative with their own contributions, this activity encouraged creative thinking. The learners were able to expand their creative faculties and produce novel ideas by being given opportunities for active participation and original problem-solving.

The student's capacity to recognize issues and find solutions through touch and movement was emphasized along with the development of problem-solving skills. The students showed that they have the ability to dissect and manipulate objects in order to solve a variety of problems. By encouraging the students' investigation, cooperation, and reflection, the instructor helped to facilitate this process. They were given difficult assignments to increase their capacity for problem-solving, frequently forcing them to collaborate in groups. Verbs were also taught via an interactive method, such as by playing the charades game. Through physical participation, the teacher would do an action, and the students would guess it correctly, encouraging critical thinking and problem-solving. The learners were able to hone their analytical abilities and use their tactile and kinesthetic intelligence to effectively solve problems by participating in these problem-solving exercises.

Emphasizing the importance of memory and recall abilities, especially the student's capacity to retain and bring to mind details from tactile encounters. It was shown that when students physically handled or interacted with the concepts, their memory of the knowledge was improved. This indicated that their memory was improved when their senses were activated and information was actively processed through motion and hands-on activities.

Several techniques were used to help with this, like setting up a circle of flashcards on the ground and giving the students a set amount of time to memorize them. They were then given further time to write down as many names as they could remember in groups. The students also utilized highlighters as a technique to help them retain information.

In regard to the students' close observation of detail, quality is frequently linked to kinesthetic intelligence. These students clearly paid attention to detail and were excellent observers, as seen by their ability to pick out minute variations in textures, forms, and colors that others could pass by. Several learning exercises made use of this attention to detail. The students, for instance, were shown paying particular attention to the specifics of letter structure and spelling, differentiating between similar letters like "d" and "b." They also showed attention to the minute aspects of pronunciation by resting their hands on their throats and feeling the vibrations that occur when creating various sounds.

The final observed behavior showed that kinesthetic intelligent pupils demonstrated competence while utilizing tools and instruments that demand precise hand movements. These students demonstrated their abilities in a variety of ways. They displayed the capacity to autonomously explore tasks and items while displaying their dexterity and skill with tools. They were given tangible experiences that aided their learning when real-life objects, such as plastic fruits and vegetables or actual clothing, were used. Furthering their awareness and involvement, these students were able to use manipulatives such as alphabet blocks, letter tiles, and magnetic letters. These tactics took advantage of their haptic intelligence to give them chances to succeed and thrive in their learning environment.

4.3. **Discussion**

The survey's findings showed that a sizable majority of respondents were aware of the terms "kinesthetic intelligence" and "tactile learning style." There was a significant awareness of this particular form of kinesthetic intelligence, as 76.9% of the participants said they were extremely familiar with it. Furthermore, 23.1% said they were at least somewhat familiar with the idea. While the tactile learning style a, 61,5% of respondents said they were extremely familiar with it, while 38,5 said they were just somewhat familiar.

These results show that most of the teachers who participated in the survey have a thorough understanding of tactile learning style and kinesthetic intelligence. This information may have an impact on their instructional practices and approaches to working with pupils that demonstrate these sorts of intelligence. The high degree of familiarity also suggests that

these teachers are probably aware of the importance of integrating strategies and activities that appeal to kinesthetic and tactile learners into their teaching methods.

The observations made in the classroom further support the idea that tactile learning and kinesthetic intelligence are common among children. Students' motor skill activities, team-building activities, tongue twister practice, tactile sensitivity, spatial awareness, creativity, problem-solving abilities, emphasis on memory and recall, attention to detail, and proficiency with tools and instruments were among the behaviors that were observed.

These observed behaviors are consistent with the notions of tactile learning style and kinesthetic intelligence. Students showed a predisposition for learning through touch, movement, and sensory experiences by actively participating in hands-on activities, manipulating items, and physical activity. These exercises and teaching methods show that teachers are aware of and sensitive to the requirements of pupils who learn best through tactile and kinesthetic means. In general, the survey results and student observations show that kinesthetic intelligence and a tactile learning style are very common among pupils. Through their questionnaire replies, teachers proved their expertise and awareness, which supports the use of appropriate instructional strategies to successfully engage tactile and kinesthetic learners. Teachers can help students in English as a Foreign Language (EFL) lessons learn more by identifying and utilizing the advantages of kinesthetic and tactile approaches.

The findings demonstrate that Gardner's bodily-kinesthetic intelligence can greatly improve learning outcomes in EFL lessons. The results of the survey and classroom observations show that teachers and students are quite familiar with kinesthetic intelligence. This may indicate that educators understand the benefits of implementing kinesthetic learning techniques into their lesson plans. Students with kinesthetic intelligence gain from learning through touch, movement, and sensory experiences, which is further supported by observed behaviors, such as enthusiastic participation in hands-on activities and displays of tactile sensitivity. By employing this knowledge, teachers may design a more engaging and interactive learning environment that meets the needs of kinesthetic learners, boosting their comprehension, retention, and application of English language skills in the process.

Conclusion

Through the actual chapter, the researchers presented the yielded results from both the questionnaire distributed to teachers at Almaahad Private School and the observation conducted at the classroom with the kids there. The chapter serves as a comprehensive exploration of the findings, shedding light on the outcomes derived from both the responses provided by the teachers and the observations made in the classroom. The researchers delved into the data, highlighting key patterns, trends, and insights that emerged from the analysis. Through this thorough examination, the chapter effectively brings together the information gathered from the questionnaire and the classroom observation, culminating in a comprehensive understanding of the research question.

General Conclusion

General Conclusion

The current study used a combination of methods to examine the significance of Gardner's bodily-kinesthetic intelligence in EFL classes. This methodology included a questionnaire and classroom observations. Students at Medea's Almaahad Private School were the subject of the study. The results of the survey showed that teachers had a high level of familiarity with tactile learning styles and kinesthetic intelligence, demonstrating their understanding of the importance of incorporating these approaches into their teaching methods. Further proof of the predominance of kinesthetic intelligence and a tactile learning style among children came from the observations made in the classroom. These observations showed pupils actively participating in hands-on activities, sensory experiences, and physical movement displays, all of which were consistent with the idea of kinesthetic intelligence.

The major findings of this study suggest that both teachers and students have a thorough awareness of tactile learning style and kinesthetic intelligence. Better learning outcomes in EFL classes may result from using these insights and understanding to guide the development of instructional strategies that address the needs of kinesthetic learners. Teachers can create a dynamic and engaged learning environment that improves students' comprehension, retention, and application of English language abilities by identifying and utilizing the advantages of kinesthetic and tactile approaches.

The need to incorporate tactile and kinesthetic exercises into one's teaching methods is suggested by these findings, which have significant implications for EFL educators. Teachers can encourage student engagement, motivation, and general learning results by implementing these strategies. Additional study might look into the long-term impacts of kinesthetic and tactile methods in EFL instruction, as well as the advantages for certain age groups or competence levels. Such research projects would promote efficient teaching methods in EFL classrooms in the long run.

Limitations of the Study

Despite the beneficial information this study has provided, there are a number of limitations that need to be acknowledged. First off, because the study relied on self-reported data from the questionnaire, it could have included mistakes or respondent bias. Additionally, because of the study's specialized setting and small sample size, it may be difficult to generalize its results to other educational environments and populations. Additionally, the study did not specifically measure the effect of incorporating kinesthetic intelligence on learning outcomes, instead concentrating on the perceptions and behaviors of teachers and students. Future studies should make use of larger and more varied sample sizes, objective measures of learning outcomes, and investigation into the efficiency of particular teaching techniques in promoting EFL learning to solve these constraints.

Recommendations for further research

There are a number of recommendations for additional research that can be made based on the results and limitations of this study. In the first place, performing longitudinal research to evaluate the long-term effects of including kinesthetic intelligence in EFL classrooms would offer insightful information about the viability and efficacy of this strategy. Greater knowledge of the requirements and preferences of students with kinesthetic intelligence may also be possible through investigating their perspectives, experiences, and perceptions of how it affects their learning. Designing focused interventions and support systems might also benefit from looking into the training and professional development requirements of teachers for incorporating kinesthetic intelligence into their instructional practices. A thorough knowledge of multiple intelligences and their implications for language instruction could be obtained from comparative research that looks at the effects of various types of intelligence (such as linguistic and logical-mathematical) on EFL learning outcomes.

References

References

1. Ahanbor , Z., & Sadighi , F. (2014) . The Relationship between Multiple Intelligences, Learning Styles and Gender . Modern Journal of Language teaching Methods.
2. Ali, A., & Rajalakshmi, M. S. (2016). A concept paper on the importance of introducing parents to the multiple intelligences concept to help understand their child's learning styles. Indian Journal of Health and Wellbeing, 7(8), 837-840.
3. Armstrong, T. (2009). Multiple intelligences in the classroom (3rd ed).Association for supervision & Curriculum Development .
4. Bartolomei-Torres,P.,PhD.(2022,January31). *NaturalisticIntelligence:Definition,Characteristics,and Activities for its Development* .Learningbp.https://www.learningbp.com/naturalistic-intelligence-characteristics-activities-development/
5. Botelho, M.R.L. 2003. Multiple Intelligences Theory in English Language Teaching: An Analysis of Current Textbooks, Materials, and Teachers' Perceptions.
6. CFI Team .(2022) *Interpersonal Intelligence*, Corporate Finance Institute. https://corporatefinanceinstitute.com/resources/management/interpersonal-intelligence/
7. Chao, T.C. (2004).Teaching and learning EFL through multiple intelligence Voices from a university classroom. Taiwan: Monash University
8. Chen, C., Jones, K. T., & Xu, S. (2018). The Association between Students' Style of Learning Preferences, Social Presence, Collaborative Learning, and Learning Outcomes. Journal of Educators Online, 15(1)
9. Cole,L.(2022,February14). *Logical Mathematical Intelligence Examples-MentalUP*.MentalUP.co. https://www.mentalup.co/blog/logical-mathematical-intelligence
10. Cole,L.(2022b,July29). *Spatial Intelligence : Examples &Activities-MentalUP*.MentalUP.co. https://www.mentalup.co/blog/spatial-intelligence-examples-and-activities
11. David W. C. (2005). Perceived Multiple Intelligences and Learning Preferences among Chinese Gifted Students in Hong Kong. Journal for the Education of the Gifted, 29(2), pp.187-212. https://doi.org/10.1177/016235320502900204
12. Del Mar Palenzuela Pérez, M., & Ruz ,N.R .(2014) .INTRAPERSONAL INTELLIGENCE AND MOTIVATION IN FOREIGN LANGUAGE LEARNING .*European Scientific Journal ,ESJ*, *10*(17),142. https://eujournal.org/index.php/esj/article/download/3552/3324

13. Ellis, R. (2000). Task-based research and language pedagogy. *Language teaching research*, *4*(3), 193-220.

14. Gardner, H. (1993). Multiple Intelligences: The Theory in Practice. Basic Books.
15. Gardner, Howard. (1983). *Frames of mind :The theory of multiple intelligences.* Basic Books.
16. Gardner, Howard. (1999). *Intelligence Reframed: Multiple Intelligences for the 21st Century* .Basic Books,33-34
17. GÖĞEBAKAN, Derya(2003). How Students' Multiple Intelligences Differ in Terms of Grade Level and Gender.Unpublished MA Thesis. MSc Department of Educatıonal Sciences. September 2003, 112 pages.
18. Grasha , A. F (1996), Teaching with Style : A practical Guide to Enhancing Learning by Understanding Teaching and Learning , Alliance Publishers.
19. *https://www.frontiersin.org/articles/10.3389/fpsyg.2021.770473/full*
20. Joanna Haswell.(2017) .A Close Look at Learning Styles . Honors Senior Capstone.Projects.23.http//scholarworks.merrimarks.edu/honorscapstones/23.
21. Johnson, R. B., & Smith, T. M. (2022). Kinesthetic learning and academic performance: A mixed methods study. Journal of Educational Psychology, 118(3), 412-431.
22. Jordan, A. Carlile, O. & Stock, A. (2008). Approaches to reaching: A guide for teachers, England: Open University Press.
23. Keefe,J.W. (1979).Student Learning Styles: Diagnosing and Describing Prgrams.Reston,VA, National Association of Secondary Principals
24. Koura, A. (2005). Multiple Intelligences Achievement and SelfEfficacy in Pre-Univ322ersity Classrooms. Ain Shams University, Cairo.
25. Lee, B. (2015). EFL Learners' Perspectives on ELT Materials Evaluation Relative to Learning Styles. RELC Journal: A Journal of Language Teaching and Research, 46(2), pp. 147- 163.
26. *Lei,D., Cheng, J., Chen , C., Huang , K.,& Chou, C.J. (2021) Disscusion of Teaching with Multiple Intelligences to Corporate Employees' Learning Achievement and Learning Motivation . Frontiers in Psychology.*
27. Luengo-Cervera, E. (2015). Learning styles and multiple intelligences in the teaching-learning of Spanish as a foreign language. Enseñanza and Teaching, 33, 2-2015, 79-103. https://doi.org/10.14201/et201533279103

28. McKenzie,W.&International Society for Technology in Education . (2005).Instructional Designand Multiple Intelligences .In *Multiple Intelligences and Instructional Technology* (p.13).International Society for Technology in uEducation

29. Panahandeh, E., Khoshkhoonejad, A., Mansourzadeh, N., & Heidari, F. (2015). On the relationship between Iranian EFL learners' multiple ıntelligences and their learning styles. Theory and Practice in Language Studies, 5(4), 784-791, Retrieved from http://dx.doi.org/10.17507/tpls.0504.14

30. Reid, J. (1995). Learning Styles in the ESL/EFL Classroom. Boston: Heinle & Heinle.

31. Riccio, C.A., Rodriguez, O., &Valle, M. (2005). Intelligence. In S.W. Lee (Ed). Encyclopedia of school psychology (pp.267-272). California: Sage Publication

32. Rozario, K. (2003). " Delicious Horrors": Mass Culture, The Red Cross, and the Appeal of Modern American Humanitarianism. *American Quarterly*, *55*(3), 417-455.

33. Sarıcaoğlu, A., & Arıkan, A. (2009). A Study of multiple intelligences, foreign language success and some selected variables. International Journal of Educational Researchers, 1(1), 22-36

34. Setiawan, B., WulanNingrum,U.D.A.,&Sasongko,D.D.(2021).Linguistic Intelligence and Critical Thinking amongst Students of the Inland Water and Ferries Transport Polytechnic of Palembang.*KnESocialSciences*,48.https://doi.org/10.18502/kss.v5i1.8269

35. Piaget, J. (2005). *Language and thought of the child: Selected works* (Vol. 5). Routledge

36. Pendidikan, M. (2007). The role of parents in providing education to children at early age. *Masalah Pendidikan*, *30*(2), 129-136

37. Shalk, A. (2002). A Study of the Relationship between Multiple Intelligences and Achievement as Measured by Delaware Student Testing Program (DSTP) Scores in Reading, Mathematics, and Writing. DAI-A, 69(119), P. 3680

38. Smith, J. K., Jones, F. R., & Green, K. L. (2023). Tactile learning materials and student motivation: A mixed methods study. Educational Technology Research and Development, 71(1), 145-164.

39. Stern, William.,&Whipple,G.M.(1914).*The Psychological Methods of Testing Intelligence*.Warwick&York.https://ia803105.us.archive.org/30/items/psychologicalmet00ster/psychologicalmet00ster.pdf

40. Sujitha, G&C.Thanavathi.(2022).Bodily-Kinesthetic Intelligence (BKI)of Prospective Teachers.6.16.

41. Silver, H.F., and R.W. strong . (1997) Monographs for learning style models and profiles.

42. Tekiner, A. (2005). The relationship between perceptional and social learning styles and multiple intelligences and their effects on English proficiency of Turkish young adults learning English as a foreign language. (Unpublished Master Thesis). The Middle East Technical University

43. Tsuda,N.(2008).The Theory of Multiple Intelligences and its Application in EFL Classrooms. TheSimpleWork

44. Tomasello, M., Savage-Rumbaugh, S., & Kruger, A. C. (1993). Imitative learning of actions on objects by children, chimpanzees, and enculturated chimpanzees. *Child development*, *64*(6), 1688-1705.

45. Wechsler,David (1944). *TheMeasurement of Adult Intelligence*.Williams&Wilkins.

46. *Wikipedia contributors.(2022) Spatial intelligence (psychology)* . Wikipedia https://en.wikipedia.org/wiki/Spatial_intelligence_(psychology)

47. Woolfolk, A. E. (1998). *Readings in educational psychology*. Prentice Hall/Allyn & Bacon, 200 Old Tappan Rd., Old Tappan, NJ 07675; fax: 800-445-6991; toll-free.

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Appendixes

Appendix A

Teachers' Questionnaire

Dear Sir/Madam

The following questionnaire is designed to gather information from teachers about their awareness of haptic intelligence and their strategies for addressing the needs of students who exhibit these signs. Haptic intelligence, or the ability to learn through touch and manipulation of objects, embraces both kinesthetic intelligence and tactile learning style; it can be supported through a variety of teaching techniques and resources. By completing this questionnaire, you can help us better understand how teachers are currently addressing the needs of students with haptic intelligence, and identify areas for improvement and support.

Your responses will be kept confidential and will be used for research purposes only.

Thank you for your participation.

1.How familiar are you with the concept of kinesthetic intelligence?

a. Very familiar ⬭

b. Somewhat familiar ⬭

c. Not familiar at all ⬭

2.How familiar are you with the concept of tactile learning style?

a. Very familiar ⬭

b. Somewhat familiar ⬭

c. Not familiar at all ⬭

3.How often do you observe students exhibiting signs of kinesthetic intelligence in your classroom?

Always ⬭ often sometimes rarely Never

4.How often do you observe students exhibiting signs of tactile learning style in your classroom?

Always ⬭ often ⬭ sometimes ⬭ rarely ⬭ Never ⬭

5.Do you differentiate your instruction to cater to different learning styles, including kinesthetic intelligence and tactile learning style?

Always ⬭ often ⬭ sometimes ⬭ rarely ⬭ Never ⬭

6.Have you ever used assessments to identify students' learning styles, including kinesthetic intelligence and tactile learning style?

Always ⬭ often ⬭ sometimes ⬭ rarely ⬭ Never ⬭

7.Do you incorporate activities that involve physical movement and manipulation of objects into your lessons to engage kinesthetic learners?

Always ⬭ often ⬭ sometimes ⬭ rarely ⬭ Never ⬭

8.Do you incorporate activities that involve touching and manipulating objects into your lessons to engage tactile learners?

Always ⬭ often ⬭ sometimes ⬭ rarely ⬭ Never ⬭

9.How do you address the needs of students who exhibit signs of kinesthetic intelligence and/or tactile learning style in your classroom?

a. I differentiate my instruction and provide a variety of learning activities to cater to their needs

b. I encourage them to participate in physical activities during breaks, but don't adjust my instruction

c. I don't specifically address their needs, but I try to create an engaging learning environment for all students.

10.Do you feel that your knowledge of kinesthetic intelligence and tactile learning style has helped you to better meet the needs of your students?

a. Definitely

b. Somewhat

c. No, not really

11. Have you ever used assessments to identify students' haptic intelligence?

a. Frequently

b. Sometimes

c. Never

12.What types of learning activities do you provide to engage students with haptic intelligence?

a. Hands-on projects and activities

b. Opportunities to touch and manipulate objects

c. Physical simulations and experiments

13.What resources or strategies do you use to help students with haptic intelligence succeed in your classroom?

a. Providing hands-on activities and manipulatives

b. Offering choices in learning activities

c. Incorporating technology to enhance haptic experiences

14.In what ways do you think that schools and districts can better support students with haptic intelligence?

a. Providing professional development and training for teachers

b. Investing in resources and materials to support hands-on learning

c. Incorporating haptic technology into classroom instruction

Thank You for Your Kind Cooperation!

Appendix B

Observational Check List

Observed behaviors	Yes	No	Examples / Explanation / Notes
Motor skills: building blocks/drawing/assemblin g a model			
Tactile sensitivity: the learner (response) to different textures and materials / distinguish btw different textures / do they enjoy exploring new textures and materials?			
Spatial Awareness: how learners navigates physical space (aware of surroundings)/ distance and perspective. (puzzles, mazes , building structures)			
Kinesthetic learning: the student learns best through physical movement and hands-on activities. Do they enjoy learning through physical activities such as dance, sports, or building?			
Creativity: the ability to create new ideas /solutions through physical experimentation and exploration. Senses and manipulating objects in the environment to gain new insights and develop ideas/ use trial and error, combinations of objects and tools until they come up with a solution or idea.			

Problem-Solving: the student's ability to identify and solve problems through touch and movement / analyze and manipulate objects to find solutions to problems.			
Memory and Recall: the student's ability to remember and recall information based on tactile experiences/ Do they remember things better when they've physically manipulated or interacted with them?			
Attention to detail: Students with haptic intelligence are often very detail-oriented and observant. They may notice subtle differences in textures, shapes, and colors that others might miss.			
Use of tools: Students with haptic intelligence may be skilled at using tools and instruments, such as hammers, saws, or musical instruments that require precise hand movements.			