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Department of Foreign Languages

English Major

The Influence of Differentiated Instruction on Meaningful Learning for decoding Skills in Reading Comprehension Among 10th Grade EFL Students at Ulises Tapia Roa Public High School during the Second Semester of 2024.

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DEDICATORY

To those who believe that every obstacle is an invitation to learn, who create their own doors when none appear, and know that each step forward is a lesson in itself.

ACKNOWLEDGEMENT

First and foremost, we thank God, the Creator of life, for blessing us with the abilities, talents, intelligence, and perseverance needed to achieve this significant accomplishment. His guidance has illuminated our path, and His grace has allowed us to complete this project in service to the educational field.

We also extend our heartfelt gratitude to our parents, whose immense sacrifices and unwavering support have shaped us into successful, responsible, and honest individuals. Their love and encouragement have enabled us to accomplish two of our greatest aspirations: completing our professional studies and making them proud of us.

We would also like to extend our deepest gratitude and appreciation to those professors who agreed to participate in this work. Their collaboration and contributions have greatly enriched this research, and their unwavering support and encouragement have been a constant source of inspiration, motivating us to strive for excellence. We are profoundly grateful for the time and effort they devoted to guiding us, and for believing in our potential even when challenges seemed insurmountable. The completion of this thesis is as much a testament to their efforts as it is to ours.

ABSTRACT

This paper analyzes the impact of **differentiated instruction** on the development of decoding skills in English reading comprehension among 10th-grade students at Ulises Tapia Roa Public High School during the second semester of 2024. The study is based on the premise that students face significant difficulties in decoding English texts due to their diverse learning styles and socioeconomic limitations. The **main aim** is to evaluate how differentiated instruction can influence meaningful learning by personalizing teaching according to the students' individual abilities. A qualitative and cross-sectional methodological approach was employed, collecting data through observations, interviews, and analysis of academic results. The **results** show that differentiated instruction enhances decoding and reading comprehension skills, particularly in contexts with limited resources. Additionally, there was an observed increase in motivation and academic performance, demonstrating that personalized teaching is key to overcoming educational barriers in socioeconomically disadvantaged communities. **Contributions**: This study provides both theoretical and practical insights into the effectiveness of differentiated instruction in teaching English, offering recommendations for its implementation in resource-limited environments.

Keywords: Decoding, differentiated instruction, reading comprehension.

Resumen

Este trabajo de investigación analiza el impacto de la **enseñanza diferenciada** en el desarrollo de habilidades de decodifica en la comprensión lectora del inglés como lengua extranjera en estudiantes de 10° básico del Instituto Público Ulises Tapia Roa durante el segundo semestre de 2024. El estudio se basa en la premisa de que los estudiantes enfrentan dificultades significativas para decodificar textos en inglés debido a sus diversos estilos de aprendizaje y limitaciones socioeconómicas. El **objetivo principal** es analizar cómo la enseñanza diferenciada puede influir en el aprendizaje significativo, personalizando la enseñanza según las capacidades individuales de los estudiantes. Para ello, se utilizó un enfoque metodológico cualitativo y transversal, con recolección de datos a través de observaciones, entrevistas y análisis de resultados académicos. Los **resultados** destacan que la instrucción diferenciada mejora las habilidades de decodificación y comprensión lectora, especialmente en contextos con recursos limitados. Además, se observó un aumento en la motivación y el rendimiento académico, lo que demuestra que la personalización de

la enseñanza es clave para superar las barreras educativas en comunidades socioeconómicamente desfavorecidas. **Contribuciones**: Este estudio proporciona una base teórica y práctica sobre la efectividad de la instrucción diferenciada en la enseñanza del idioma inglés, ofreciendo recomendaciones para su implementación en entornos de recursos limitados.

Palabras clave: Instrucción diferenciada, decodificación, comprensión lectora.

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I.   INTRODUCTION

The Ulises Tapia Roa Public Institute is located in Nindirí municipality, Masaya, department of Nicaragua, English as a second language and as part of the direct intervention of the English career at the UNAN Managua, a significant challenge has been identified in the teaching of English as a foreign language, especially in the 10th grade. During a recent visit, the improvement of the academic performance of the English subject was observed as a challenge. The diagnosis carried out revealed a particular concern around decoding and reading comprehension skills, underlining the need to intervene to improve these critical competencies.

This study, developed within the framework of the graduation modality of the English career of the Department of Foreign Languages of the UNAN Managua, seeks to generate a relevant scientific product that contributes to the continuous improvement of the teaching of English. The research focuses on the implementation of the differentiated teaching method, a pedagogical strategy that personalizes instruction to suit the individual needs of students. Although this student-centered method has been shown to be effective in other contexts, its applicability and effectiveness at the Ulises Tapia Roa Public Institute has not yet been exhaustively investigated.

Differentiated teaching has the potential to provide customized solutions that can more effectively address difficulties in decoding and reading comprehension. This method adjusts to the learning styles and rhythms of each student and could offer an adequate response to the problems identified in the diagnosis. The main objective of the research is to analyze how differentiated instruction can influence the development of English decoding skills among 10th grade students at the institute. Specific objectives include evaluating the impact of this pedagogical method on decoding skills, identifying challenges and strengths in its implementation, and determining its effect on the overall improvement of academic achievement in English.

This research is conducted using a qualitative approach with a cross-sectional methodology. This methodology will allow a detailed evaluation of the experiences and perceptions of students and teachers, establishing relationships between the application of differentiated strategies and academic results. Data collection techniques such as observations, interviews, and analysis of academic results will be used, providing a comprehensive view of the effectiveness of differentiated teaching in this specific context.

Historical-Social Context of the Object of Study

The Ulises Tapia Roa Public Institute is in Nindiri, a municipality in the department of Masaya, Nicaragua, characterized by a wide socioeconomic diversity. Students at this institution come from family backgrounds with limited resources, which negatively impacts their access to educational materials and academic support at home. The lack of adequate academic training of parents and the lack of educational resources contribute to the difficulties that students face in their learning, especially in complex areas such as learning a foreign language.

Nicaragua's education system in general faces significant challenges, with a notable discrepancy between available resources and students' educational needs. This context limits the ability of educational institutions to implement effective and personalized pedagogical methods. The research at the Ulises Tapia Roa Public Institute not only seeks to address the specific difficulties observed in this institution, but also to offer solutions applicable to similar contexts in Nicaragua. The study aims to promote more effective pedagogical practices adapted to local realities, with the aim of ensuring meaningful and continuous learning.

II.   STATEMENT OF THE PROBLEM

As part of the graduation process in the English career of the Department of Foreign Languages of the UNAN Managua, and with the aim of applying the knowledge acquired for the benefit of Nicaraguan society, a visit was made to the Ulises Tapia Roa Public Institute in the city of Nindirí, department of Masaya. During this visit, poor academic performance in the English subject was identified, especially in 10th grade. To address this problem, a diagnosis was applied to better understand the factors that affect English learning and, consequently, poor academic performance, highlighting reading comprehension and, in particular, the ability to decode texts in English as one of the most critical areas that require intervention.

Despite the implementation of traditional pedagogical methods in teaching English, students continue to face significant difficulties in interpreting and comprehending texts written in English. This challenge is accentuated by the socioeconomic context of the students, who come from diverse family backgrounds and economic conditions, often limited in resources, and whose parents lack adequate academic training to support their children's educational process.

Historically, pedagogical methods to teaching English have been homogeneous, without adequate adaptation to the individual needs of students. This lack of personalization has contributed to a persistent gap in the development of decoding skills. Differentiated instruction, a recent pedagogical method, offers the possibility of personalizing instruction to address the specific needs of each student. However, its effectiveness in the context of the Ulises Tapia Roa Public Institute has not yet been sufficiently researched.

This study aims to analyze how differentiated instruction can influence the significant development of decoding skill in reading comprehension in English. It is hoped that differentiated instruction will allow for a more precise adaptation of educational strategies, improving students' ability to interpret and understand texts in English. Given the context of the Institute, it is crucial to avoid that teaching practice is reduced to a mere transfer of information not focused on learning, especially when government policies in the development of English as a second language are not always aligned with the specific needs of the educational community.

The implementation of differentiated instruction could produce a marked improvement in decoding skills by providing personalized support that fits the abilities and learning rhythms of each student. This method has the potential to positively influence reading comprehension performance, facilitating more effective progress in decoding skill. Expected outcomes include

greater efficiency in interpreting English texts and an overall improvement in academic performance in the subject.

Key factors that will contribute to the effectiveness of differentiated teaching include personalization of instruction, adaptation to different learning styles, and the use of specific pedagogical strategies to improve decoding. This study seeks to determine the extent to which differentiated instruction can support the development of decoding skills and improve English reading comprehension for 10th graders.

The central research question is: What is the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024?

III. RESEARCH QUESTIONS

✓ How do demographic characteristics influence the development of decoding skills in reading comprehension among 10th-grade English as a Foreign Language (EFL) students at Ulises Tapia Roa Public High School during the second semester of 2024?

✓ What are the main challenges and strengths that affect the implementation of differentiated instruction in the development of decoding skills within English reading comprehension?

✓ What is the effect of differentiated instruction in promoting meaningful learning of decoding and reading comprehension skills in English among 10th-grade students?

IV. THEORETICAL FRAMEWORK

Introduction to the socio-educational context of the community

Community Overview

Ulises Tapia Roa High School is in a community facing several socioeconomic challenges. Lack of access to basic services and educational resources impacts on the quality of education. According to the community development report, "communities tend to have less access to adequate educational infrastructure and technological resources" (Patel, 2024). This highlights the need to adapt educational strategies to meet students' specific needs.

Figure 1

Impact of socioeconomic context on education
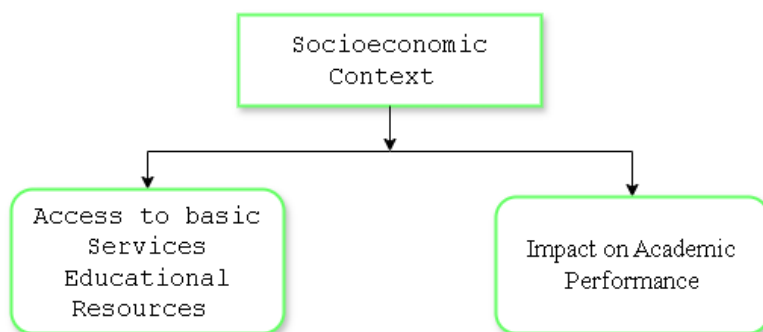
Impact of context on student education

The socioeconomic **context** significantly affects academic performance. Factors such as family income level and access to educational materials influence motivation and school engagement. Martínez (2022) shows that "students from disadvantaged backgrounds tend to show lower academic performance due to a lack of resources and support at home". This underscores the importance of implementing programs that offer additional support to these students.

Access to educational and technological resources

In areas with limitations, access to educational and technological resources is often scarce. The lack of electronic devices and internet connectivity hinders effective learning. According to a report by the Ministry of Education, "40% of schools in rural areas lack access to appropriate technologies for teaching" (Ministry of Education, 2023). This situation forces educational institutions to look for creative alternatives to provide resources that facilitate learning.

Foundations of Differentiated Instruction

Differentiated Instruction

The research on the influence of differentiated instruction on the decoding of reading comprehension skills among 10th grade students of English as a foreign language at the Ulises Tapia Roa Public High School is based on the importance of adapting teaching to the individual needs of students. This method is key to maximizing meaningful learning, especially in a foreign language learning context.

Differentiated instruction is particularly relevant in an English as a foreign language teaching environment, the challenge of ensuring educational quality and meaningful learning where students exhibit diverse language comprehension and fluency skills. In this context, it is crucial to implement strategies that address individual differences to maximize learning. Tucker (2023) highlights that this method can make a difference by addressing the specific needs of each student within the educational process. Through strategies such as individualized teaching and small group organization, the difficulties that each student faces in decoding the English language can be more efficiently addressed.

In addition, it is necessary for teachers to be trained not only in the use of differentiated strategies, but also in the management of the cultural and linguistic differences that characterize students in the classroom and allow teaching to be contextualized in a warmer, more efficient, and relevant way. As Sindhu (2022) suggests, differentiated instruction not only promotes academic learning, but also supports students' social and emotional development, facilitating a more inclusive and equitable learning environment.

Research on differentiated instruction in the context of learning English as a foreign language is essential to improving reading comprehension through more inclusive and flexible methods. Tailoring teaching to individual needs is not only promote more meaningful learning, but also support the holistic development of students.

Basis of Differentiated Instruction

Differentiated instruction is rooted in the need to provide an inclusive and effective education for students with different abilities and learning styles. This method has evolved significantly since the implementation of the IDEA Act (1975) and the "No Child Left Behind" program (2000). These regulations established a framework to ensure that all students, regardless of their abilities, receive an adequate education.

Recent research shows that active teaching methods, such as discussions and practice, are much more effective than traditional lectures. Roberts & Inman (2021) stresses that "the lecture is the least effective instructional strategy, with only 5 to 10 percent retention after 24 hours". This data underscores the importance of active methods that engage students in a more dynamic way.

Figure 2

Basis of Differentiated Instruction
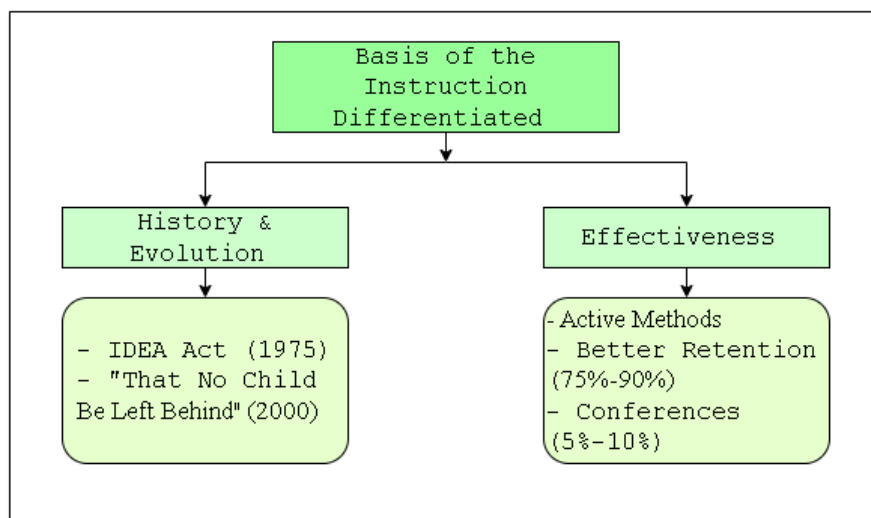
Purpose of Differentiated Teaching

The main purpose of differentiated teaching is to adjust teaching to meet students' diverse abilities and learning styles, customizing the process to maximize each student's potential. Being flexibility by continuously adapting to the changing needs of students; attending to diversity in recognition and respect for individual differences; allowing the active participation of the student in their own learning, promoting greater commitment and autonomy. Tomlinson (2023) points out that "differentiated teaching fosters students' autonomy and direct involvement".

Being the main elements of differentiated teaching, the implementation of multisensory materials that use resources that involve different senses (visual, auditory, and kinesthetic) is essential to attend to the different learning styles present in the classroom and continuous formative assessments allow instruction to be adjusted according to the student's progress, guaranteeing personalized teaching. According to Harnly y Harnly (2024), "formative assessment is a vital tool for adapting instruction and improving academic performance".

Figure 3

Elements of Differentiated Teaching
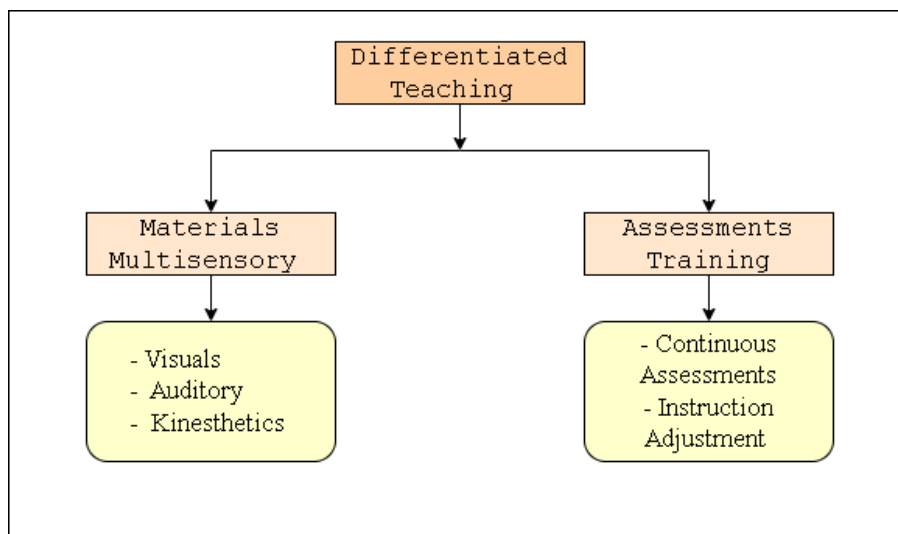
Universal Design for Learning (UDL) and Differentiated Instruction (DI)

Universal Design for Learning (UDL) and Differentiated Instruction (DI) share the goal of creating inclusive learning environments. Both focus on maximizing access and participation for all students, but they do so from different perspectives:

- DUA: "UDL is an approach to teaching in which teachers plan multiple pathways for students to access material or complete an assignment" (Braintrust Tutors, 2023). It focuses on designing learning from the beginning so that all students can participate, removing barriers to access.

- DI: Adapts during the educational process to the individual needs of students, adjusting instruction according to their abilities and learning styles.

Both are complementary, since while UDL anticipates the various needs, ID allows for the constant personalization of the teaching process. The implementation of UDL in English teaching allows students with different abilities and learning styles to be able to actively participate. Here are some key strategies:

1. Knowing students' strengths and barriers: Understanding individual needs is crucial to designing an accessible and inclusive learning environment. As Carroll (2022) points out, knowing these aspects is essential for effective lesson planning.

2. Use digital materials: Digital resources offer great flexibility by allowing students to access content through different mediums. This ensures that "students who struggle in one area are

not automatically left behind" (Carroll, 2022). In addition, digital materials can include interactive tools, videos, and accessibility options that benefit all students.

3. Offer options for how students demonstrate their knowledge: Allowing students to choose how to prove what they have learned (e.g., through presentations, essays, or digital projects) increases their chances of success and encourages creativity and autonomy (Carroll, 2022).

4. Provide multiple means of representation: Presenting information in a variety of ways (texts, images, videos, audios) ensures that all students, regardless of sensory or cognitive abilities, can access and understand the material. According to the Center for Teaching Innovation (2023), this reduces barriers in the learning process and increases content comprehension and retention.

Figure 4

Complementary approaches in education
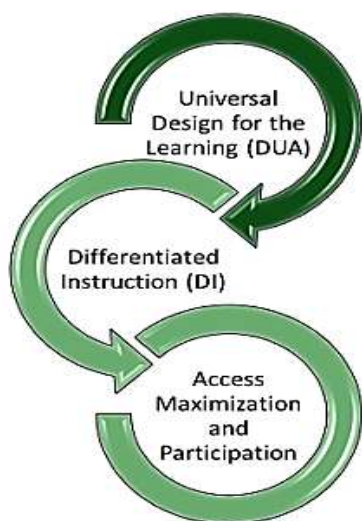
Universal Design for Learning (UDL) and Differentiated Instruction (DI) are essential tools in creating inclusive classrooms. By combining the advance planning of UDL with the flexibility and adaptability of ID, teachers can ensure access to learning for all students, regardless of their needs, individual characteristics, background, and prior knowledge. Implementing these strategies not only improves academic performance, but also promotes a more equitable, accessible, relevant, and quality education in accordance with the Nicaraguan educational model that focuses on the individual and the family, mainly in axes 1, 2, 3, 4, 5, 9, 12, 13, 14, 15 of the national education strategy.

 The illustration below represents the lines of action of the national education strategy, nicaragua (CNU, 2024, pag 17)

Figure 5

Practical Strategies of the UDL
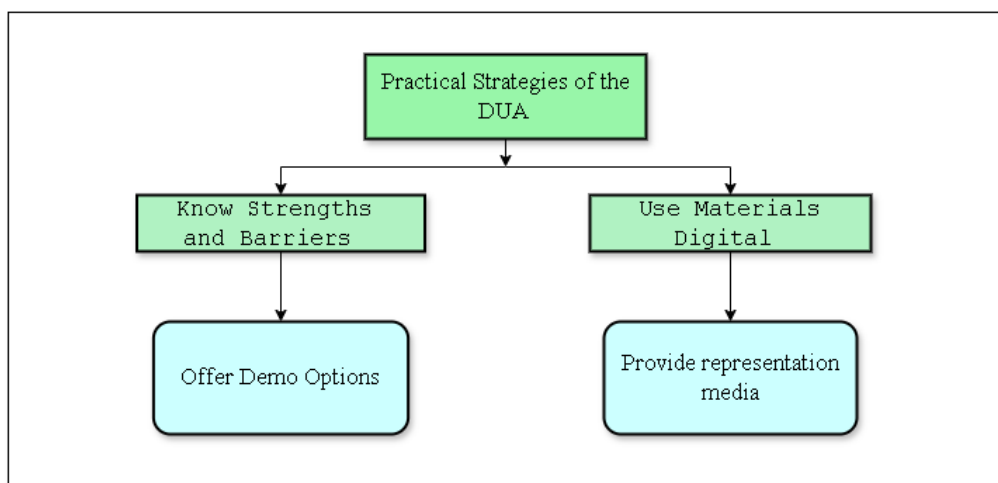
Cognitive Processes in English Learning

  Integration with Cognitive Development and Information Processing

1. Differentiated instruction aligns with neurodevelopmental principles, harnessing students' brain capabilities to maximize their learning from a neurodevelopmental context: Brain plasticity: The brain has a strong capacity for adaptation, making it easier to acquire a second language when properly harnessed.

2. Sensory reception: Information is received through sensory stimuli (visual, auditory, tactile, etc.), which implies the need to use multisensory materials.

3. Working memory: Strengthening working memory allows students to retain and manipulate linguistic information more efficiently.

4. Memory consolidation: The use of deliberate practice and spaced review helps consolidate long-term learning.

English Cognitive processing

Decoding Components

Decoding is a key process in the development of reading comprehension in English, and it is made up of several interrelated elements:

- Sound (phoneme) recognition: Students identify the sounds that make up words.

- Phoneme-graphed-matching skills: This skill allows students to associate letters or combinations of letters with their respective sounds.

- Word recognition: Once phonemes and graphemes are automatically recognized, students can identify words quickly, facilitating reading fluency.

- Access to meaning: Finally, decoding allows students to access the meaning of words and phrases, facilitating the overall understanding of the text.

Figure 6

Decoding Components
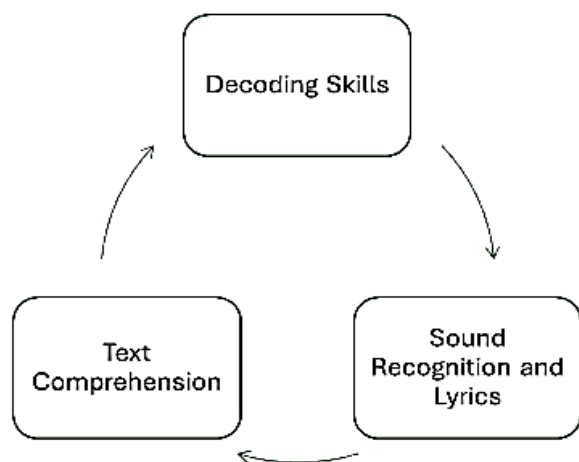
Meaningful Learning for Decoding Skills in English Reading Comprehension

Decoding skills are essential for developing reading comprehension in English. These skills allow students to convert letters and words into sounds, which is crucial for accessing the meaning of the text. As Snow (2023) points out, "decoding is a critical component of learning to read, as it allows students to access the meaning of the text" (Snow, 2023). This process is indispensable in learning a foreign language, as effective decoding opens the door to fluency and understanding of the language.

For students to develop effective decoding, it is necessary to consider several factors such as exposure to varied texts allows to improve their ability to recognize words and linguistic patterns, allowing constant practice when practicing word recognition helps to strengthen the cognitive connections necessary for language processing. Adding the use of phonological and orthographic strategies: Integrating sounds with written symbols contributes to improving decoding ability.

In a disadvantaged socio-educational context such as that of the Ulises Tapia Roa Secondary School, Universal Design for Learning (UDL) strategies, as well as the focus on the cognitive processing of English, can offer viable solutions to improve educational quality. Adapting pedagogical methods to students' specific conditions, taking into account their socio-economic background and technological limitations, is key to ensuring equitable access to education.

Information Processing Theory in English Learning

Information processing in English learning refers to how students perceive, interpret, and store language-related knowledge. This process involves several cognitive stages, from recognizing sounds and words to understanding grammatical structures.

According to Anderson (2023), "effective language processing requires cognitive stages ranging from sound recognition to comprehension and use of grammatical structures" (Anderson, 2023). Key phases in this process include:

- Initial Sound Perception: Students should identify specific sounds of the English language that may not exist in their native language.

- Encoding and storage of information: Sounds are organized into grammatical structures, being stored in long-term memory.

- Information retrieval: Students access previously stored information to comprehend and produce in English fluently.

Relationship with Differentiated Instruction (DI)

Differentiated Instruction adjusts to the way each student processes information. Tomlinson (2023) highlights that "teachers must be flexible and receptive to the various ways in which students process information" (Tomlinson, 2023). This involves adjusting teaching according to individual needs, considering different learning speeds and styles. Some ways in which Differentiated Instruction adapts to information processing include the implementation of varied teaching methods in order to fit the individual needs of students, some need more visual support, while others learn better through auditory or kinesthetic practice. Flexibility is also important as ID allows students to progress at their own pace, providing more time for those who require it.

Figure 7

Relationship between Information Processing and Differentiated Instruction
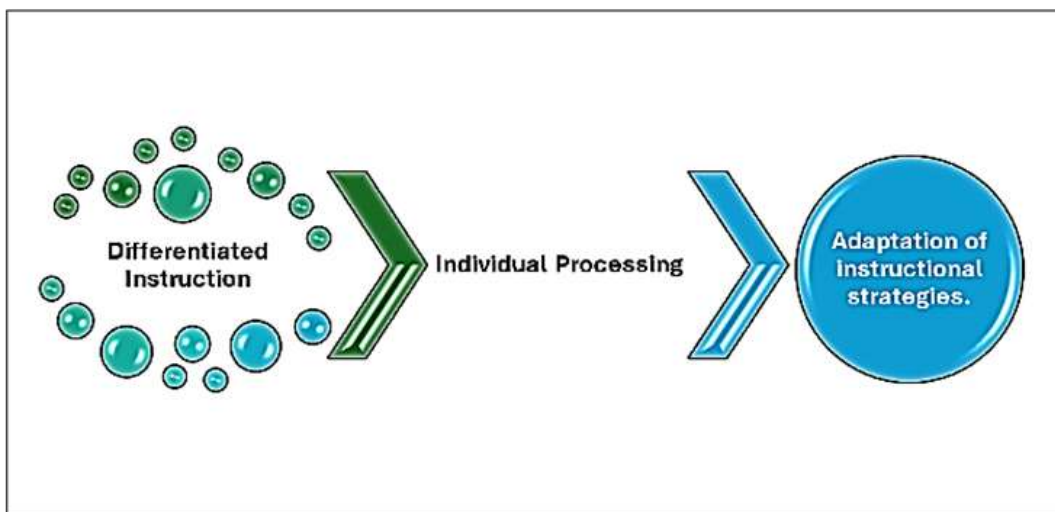
Characteristics of Information Processing in Meaningful Learning

Information processing in meaningful learning has the following characteristics:

- Attention and perception: Adapting teaching to different attention styles is crucial to capturing and maintaining the student's interest (Tomlinson, 2023). Some strategies include the use of visual resources, interactive activities, and variation in lesson times.

- Organizing and Decoding Information: Helping students organize new information into meaningful patterns facilitates decoding. According to Van Geel et al. (2018) "when students can relate new information to what they already know, they are more likely to understand and remember it".

- Information retrieval: Using strategies such as spaced repetition and concept maps favors long-term retention. Harnly y Harnly (2024) suggests that "repeated, but time-spaced practice strengthens the student's ability to accurately retrieve information".

The combination of decoding, information processing, and differentiated instruction creates an effective method to English language learning. This method allows teaching to be tailored to the individual needs and cognitive styles of students, ensuring greater retention and understanding of content.

Figure 8

Information Processing Characteristics
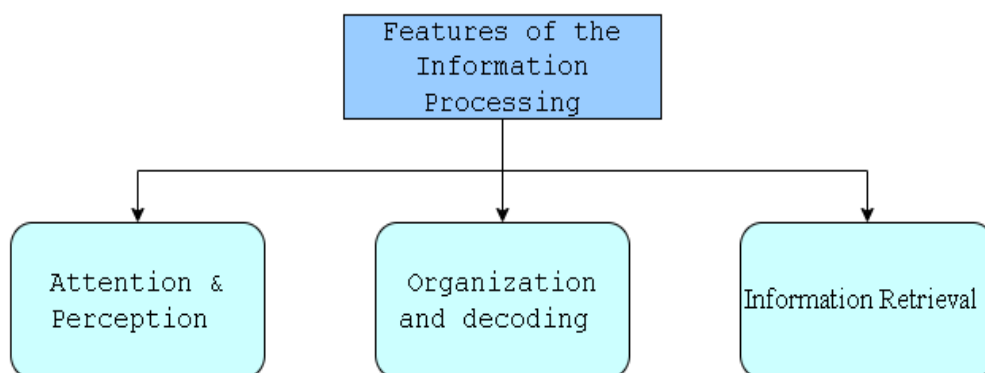
Implementation of Differentiated Instruction

Deployment in Constrained Contexts

Differentiated teaching faces various challenges in environments with limitations, such as lack of resources and insufficient teacher training. Despite these challenges, such constraints can be transformed into opportunities for innovation. For example, by adapting teaching strategies to what is available and relevant to students, teachers can be more effective. Sindhu (2022) highlights that "differentiated instruction is crucial in inclusive education, as it addresses diverse

needs in the classroom". In these contexts, creativity and flexibility become key tools to overcome barriers.

Relevance to Diverse Educational Needs

The differentiated instruction method is especially pertinent to addressing the diversity present in classrooms, whether cultural, linguistic, or ability. It facilitates the creation of an inclusive environment that supports both academic learning and students' social and emotional development. This responds to the demands of an environment where each student is unique and where strategies must be adapted to address their particularities (Sindhu, 2022). Meaningful learning is strengthened when students actively participate in their educational process.

Figure 9

Components of differentiated instruction
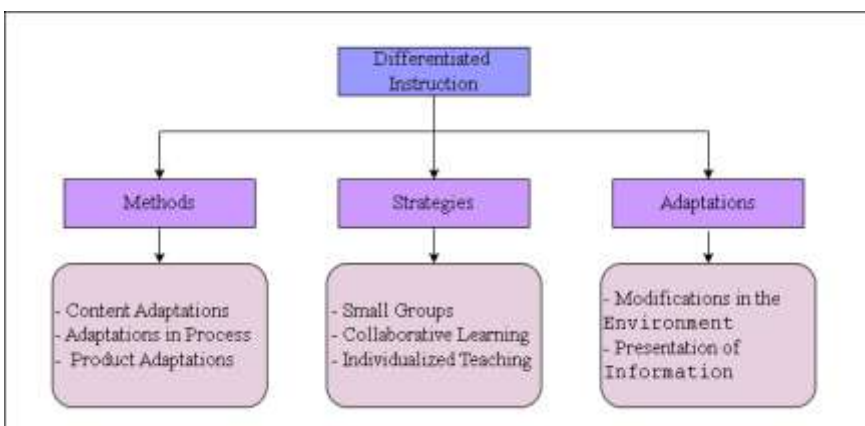
The Role of Differentiated Teaching in Inclusive Education

Differentiated instruction plays a critical role in creating inclusive learning environments by tailoring instruction to address each student's individual needs. Sindhu (2022) highlights that "differentiated instruction is a teaching method that helps create inclusive learning environments by tailoring instruction to individual needs" (Sindhu, 2022). This method not only benefits students with disabilities, but also promotes an environment where all students feel valued and respected.

To apply differentiated instruction in the educational tension of people with and/or without disabilities effectively, it is essential to use various pedagogical strategies that promote meaningful learning:

1. Multisensory Activities: Incorporating images, sounds, and movements reinforces learning through multiple sensory channels.

2.   Gamification: Integrating educational games motivates students and facilitates constant language practice.

3.   Immediate feedback: Providing instant feedback allows you to correct errors in real time and strengthen learning.

4.   Adapted materials: Resources should be aligned with students' cognitive development and accessible to their diverse learning styles.

5.   Educational technology: The use of innovative applications and platforms encourages interaction with content in a more attractive and accessible way.

6.   Case studies: Analysis of the effectiveness of strategies in specific context to adjust and improve practices through reflection and interpretation of reality.

7.   Continuous assessment: Constant monitoring of progress allows instruction to be adjusted according to the changing needs of students.

Application in Teaching English

Promoting Meaningful Learning Through Differentiation in English Teaching

Meaningful learning involves integrating new knowledge with prior knowledge, resulting in a deeper and more practical understanding. This approach is crucial for developing effective language skills. According to Snow (2023), "meaningful learning is essential for the development of effective language skills."

In the context of learning English as a foreign language, meaningful learning goes beyond memorizing vocabulary and applying grammar rules mechanically. It occurs when students can connect what they learn in the classroom to real-world situations. Sindhu (2022) notes that "language comprehension is facilitated when students can relate what they have learned to real experiences." This method allows students to not only learn the language but also use it effectively in authentic contexts.

Figure 10

Meaningful learning in English

Meaningful Learning in English

Connections with real world experiences

Comprehension in real and applied situations
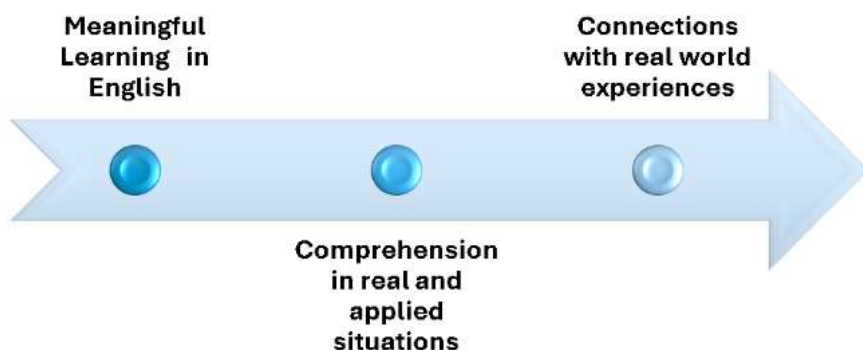
Differentiation in meaningful learning involves adapting activities and content to the individual abilities and needs of students, allowing each one to integrate new information at their own pace. This process ensures that all students, regardless of their level, can relate new linguistic information to their previous knowledge. Carroll (2022) highlights that "the personalization of learning is key to fostering meaningful learning." This means that assignments and activities should be designed to give all students the opportunity to understand the material deeply and apply it in meaningful contexts.

Figure 11

Differentiation in Meaningful Learning
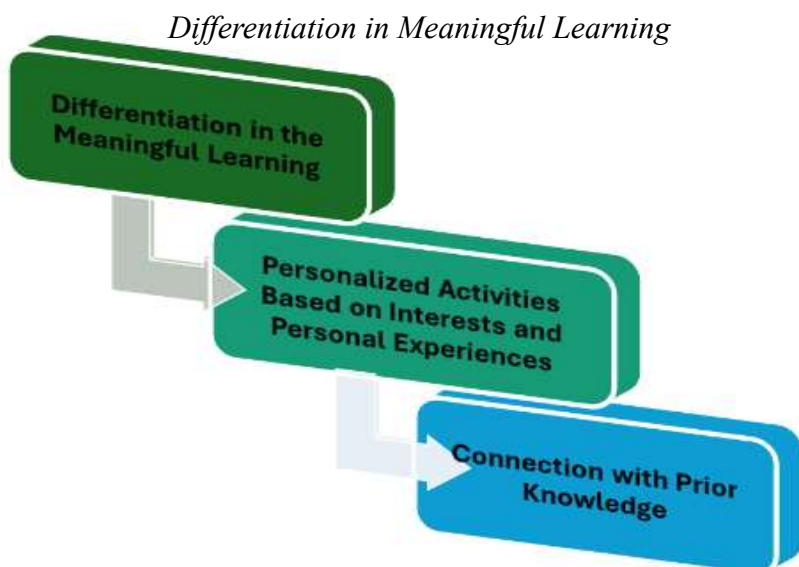
In the context of English as a second language, meaningful learning, supported by effective information processing and differentiation, allows students to integrate their prior knowledge with new language skills. This not only promotes a deeper understanding of the language but also ensures that students can apply what they have learned in real-life situations, ultimately enhancing their communicative competence.

Formative Assessment and its Role in Differentiated Instruction

1. Importance of formative assessment

Formative assessment is an ongoing process that allows teachers to collect data from multiple sources before, during, and after instruction. This assessment is crucial for identifying students' strengths and needs and is an essential component of differentiated instruction (DI). According to McGlynn (2017), "formative assessment allows teachers to adjust instruction to meet the needs of each student and ensure that all students progress".

Figure 12

Importance of formative assessment
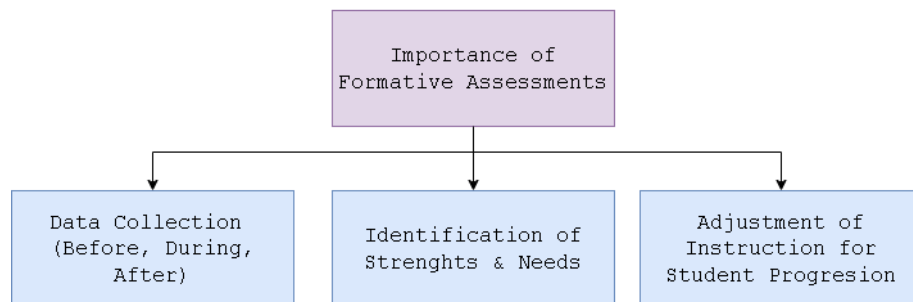
2. Key aspects of formative assessment

Evaluation must be frequent and continuous, focused both on the student's learning and progress and on the assessment of teaching actions. Formative assessments, aligned with learning objectives, are applied throughout the unit. In addition, incorporating co-evaluation and self-evaluation allows students to reflect on their own progress, while the teacher can adjust instruction based on each student's individual preparation and needs.

Figure 13

Frequent and ongoing assessment
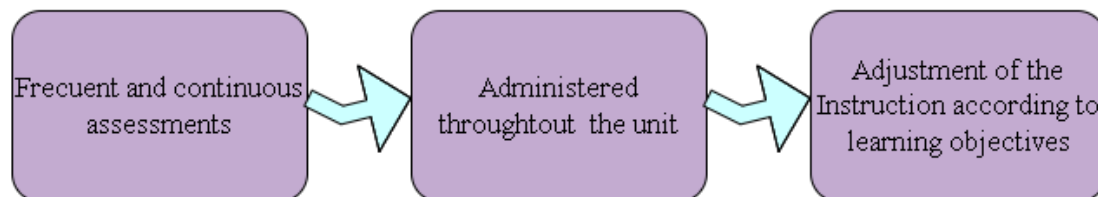
2.1 Variety of formats

Assessments can take a variety of forms, such as exit cards, journal entries, systematic teacher conversations with individual students, and problems to be solved.

Figure 14

Variety of assessment formats
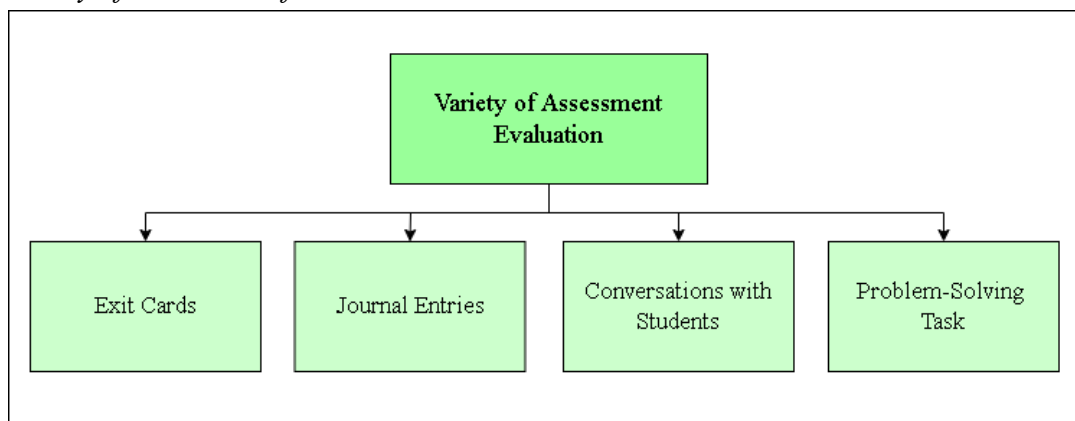
2.2 Feedback and self-evaluation

Providing specific and frequent feedback is essential. Feedback should be aligned with learning objectives, allowing the student to know what to do to continue growing.

Figure 15

Feedback and self-evaluation
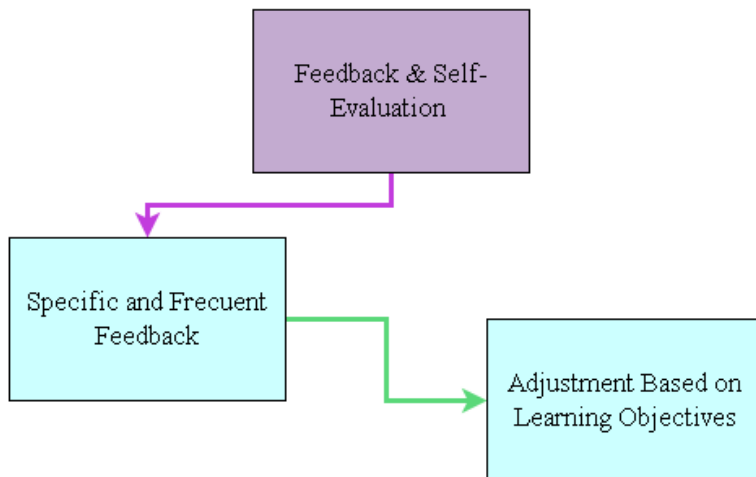
Differentiation of instruction through the data collected through formative assessments allows teachers to adapt their teaching to meet the diverse needs of students. Where students need to be involved so that they contribute to learning management, involving students in the assessment process can help them set their own learning goals and reflect on their progress (Tucker 2023).

Adaptation of teaching materials and resources

1. Use of multi-sensory materials

The implementation of **multisensory materials** is critical to addressing different styles of information processing in the classroom. The use of resources that stimulate multiple senses, such as picture cards for visual support, audio recordings for auditory support, and physical activities for kinesthetic learners, allows each student to access learning effectively. According to Tomlinson (2023), "students have multiple options for assimilating information, making sense of ideas, and expressing what they learn." Not only does this facilitate understanding, but it also fosters an inclusive environment where individual differences are valued.

Figure 16

Use of multisensory materials
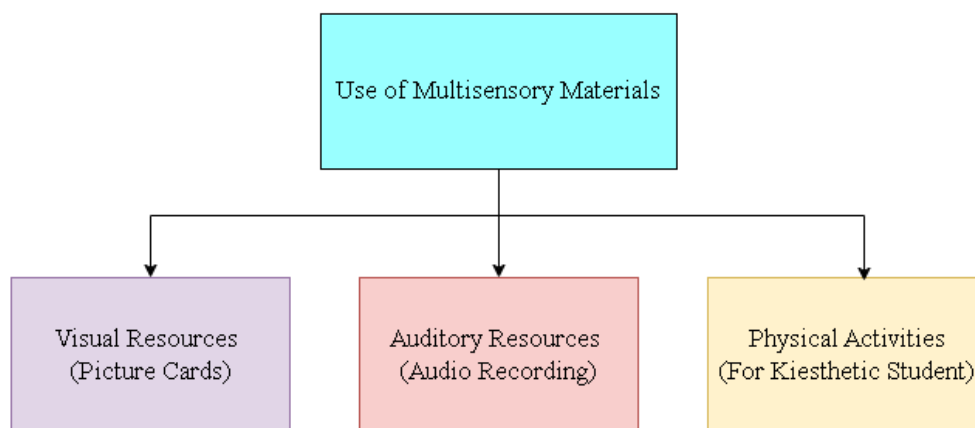
2. Personalization of texts and activities

Personalization **of texts and activities** is crucial to address the diverse needs of students. Providing readings adjusted to the level of decoding of each group allows students with greater difficulties to access simpler texts, while those with a more advanced command work with challenging readings. Van Geel et al. (2018) notes that "differentiated instruction should address the different ways in which students organize and encode information," thus facilitating meaningful learning.

Figure 17

Personalization of texts and activities
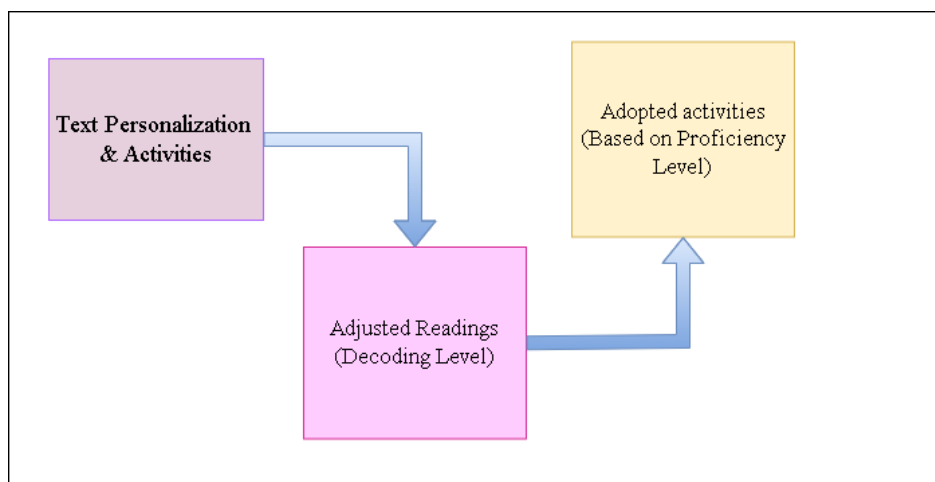
3. Didactic strategies for meaningful learning

3.1 Connection with prior knowledge

Using examples from students' everyday lives facilitates the connection between new vocabulary and English structures with their previous experiences. This strategy increases content relevance and improves learning retention. According to Snow (2023), "meaningful learning occurs when students integrate new knowledge with what they already know."

Figure 18

Connection to prior knowledge
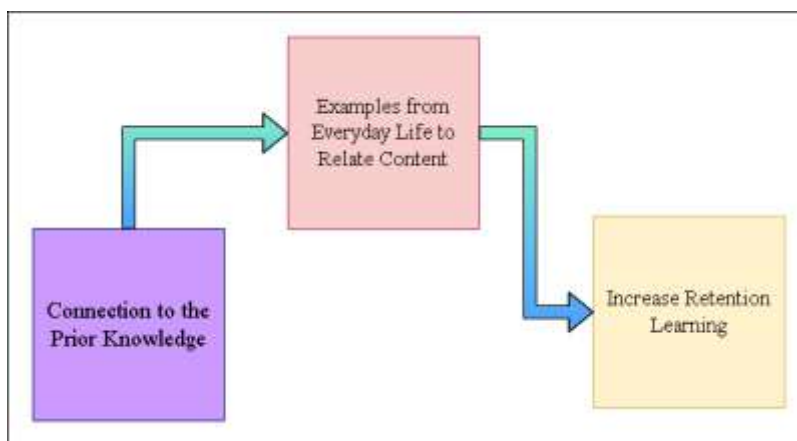
3.2 Project-Based Learning

Developing group **projects** where students can apply what they have learned in practical contexts is an effective strategy for fostering meaningful learning. This method allows students to work collaboratively and apply their skills in real-world situations. Harnly y Harnly (2024) mentions that "project-based learning helps students connect academic content to their daily lives."

3.3 Metacognition and reflection

Teaching students' **metacognitive strategies** allows them to reflect on how they learn and how they can improve their information processing. This encourages greater autonomy in learning, which helps students become more effective learners. According to Gheyssens et al. (2020), "metacognition is key to developing critical skills that allow students to evaluate their own learning process."

The researchers of this study agree that teaching metacognitive strategies allows students not only to reflect on their own learning, but also to identify effective methods to improve their information processing. This method promotes autonomy, making it easier for students to

become more effective learners and aware of their own abilities. As Gheyssens et al. (2020) point out, "metacognition is key to developing critical skills that allow students to evaluate their own learning process." In this context, the role of the teacher is essential: to act as a guide that facilitates meaningful learning experiences, organizing resources and strategies adapted to the needs of each student. The implementation of a differentiated strategy, moreover, requires a considerable effort from the teacher in terms of evaluation, planning, and creativity, ensuring that each student could build their knowledge in an experiential and autonomous way, adapting resources to promote deep and meaningful learning.

Components of Differentiated Instruction in Information Processing

1. Flexibility in Instructional Methods

Differentiated instruction emphasizes using a variety of techniques—such as visual, auditory, and kinesthetic approaches—to accommodate students' diverse information processing styles. For example, visual learners benefit from diagrams and charts, while auditory learners respond better to oral explanations or discussions. According to CAST (2020), "flexibility in methods allows educators to better serve individual needs," making learning more accessible and engaging for all students.

Initial evaluations, such as learning style assessments, help identify whether students process information more effectively through visual, auditory, kinesthetic, or literacy-based strategies. These assessments guide instructional planning by addressing students' comprehension, memory, and behavioral patterns.

Figure 19

Flexibility in instructional methods
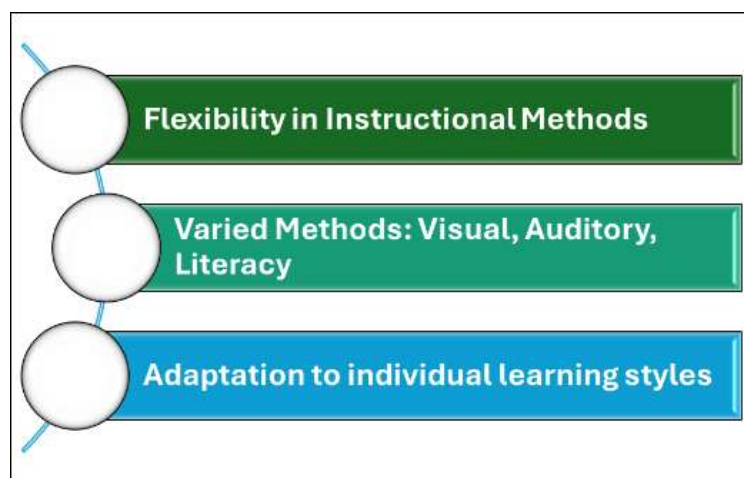
Evaluation is a fundamental part at all times, however the initial evaluation allows us to identify learning styles and cognitive needs that will guide the teaching work, for this we can implement a Learning Style diagnosis: Application of questionnaires or initial activities to identify if students learn better visually, auditorily, kinesthetically or through literacy, assessing levels of comprehension, processing, memory, cognition, and behavior.

2 Activities based on the level of cognitive development

Customized tasks are essential in differentiated instruction, ensuring that activities match students' current levels of decoding and comprehension. For beginners, basic tasks such as recognizing phonemes or matching sounds to graphemes help reinforce foundational skills. For more advanced learners, tasks like text analysis or synthesizing information provide challenges that encourage further development.

As Harnly y Harnly (2024) emphasizes, "adaptation to different cognitive levels is essential to promote effective learning." This method ensures that all students can progress at their own pace, bridging gaps in their knowledge and strengthening their linguistic abilities.

Figure 20

Activities based on the level of cognitive development
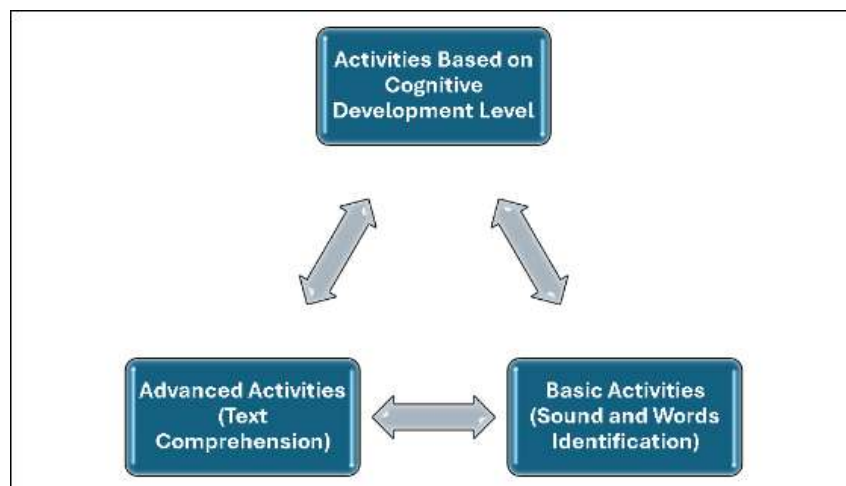
3 Continuous assessment and adaptive feedback

Formative assessments play a crucial role in differentiated instruction, enabling teachers to monitor how students process and apply new information. These assessments help identify strengths, areas for improvement, and evolving learning needs. For instance, quizzes, concept maps, and reflective journals offer valuable insights into students' progress.

Providing immediate, specific, and constructive feedback allows students to correct mistakes and deepen their understanding. Vahey and Benedikt (2022) emphasize that "continuous assessment provides teachers with valuable data to adapt their teaching to the changing needs of their students." Adaptive feedback ensures that learning remains dynamic and personalized, fostering a growth-oriented environment.

Figure 21

Continuous assessment and adaptive feedback

Implications of Differentiated Instruction for Language Learning

Secondary education in a semi-rural context

Within the semi-rural context, the implementation of ID is crucial due to the lack of resources, difficulties in accessing technologies and socioeconomic barriers. According to a report by the Ministry of Education (2023), *"socioeconomic factors significantly influence the development of reading skills and access to appropriate materials for teaching decoding".* This must be *implemented through the* Reasonable Accommodations in the application of the curriculum Sindhu (2022) highlights that *"the implementation of reasonable accommodations is key to ensuring a meaningful education for all students".*

It must be recognized that the student does not learn only because the teacher knows, nor because of his or her knowledge of the language, for this it is required the implementation of the Experiential Methodology for Meaningful Learning focused on sensory learning that uses visual, auditory and kinesthetic resources to support decoding. Harnly y Harnly (2024) points out that *"the integration of experiential experiences can enrich sensory learning by connecting concepts with real situations".*

This Experiential Methodology engages students in practical and contextualized activities that connect learning with their personal and community experiences. According to Van Geel et al. (2018) *"the connection between educational content and students' daily lives improves the relevance of learning".* For this, the implementation of effective strategies such as contextualized learning is required; Practical Activities and Community Projects; Experiential education.

Decoding Level Assessment

In the orientation of work and activities more efficiently, it is essential to integrate the Diagnosis of Learning Styles and the Assessment of the Decoding Level. This strategy allows the identification of the learning style and reading skills of each student through specific tests, thus facilitating the selection of personalized pedagogical strategies. The combination of both diagnoses ensures an inclusive and effective method, adapted to the diversity of abilities and styles present in the classroom.

Figure 22

Decoding Level Assessment
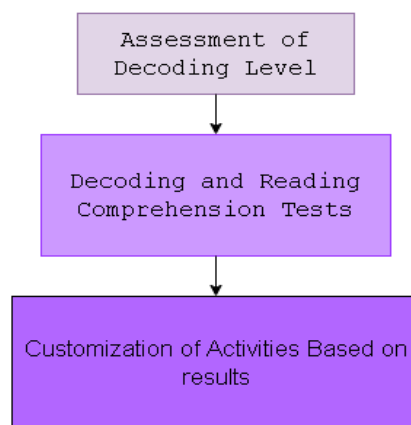
3. Role of the Teacher and Professional Development

3.1 Evolution of the Role of the Teacher

The role of the teacher has evolved, and educators must now be aware of cultural or linguistic barriers when developing assessments (Makovec, 2018). In addition, they must adapt to an educational environment that values diversity and promotes inclusive learning. Ensuring that the student himself participates responsibly in his or her learning according to the reasonable adjustments implemented by the teacher for his or her integral development.

Figure 23

Evolution of the role of the teacher

3.2 Professional development needs

To implement ID effectively, teachers must receive professional development in areas such as understanding ID principles, learning theories, and assessment strategies (Gheyssens et al., 2020).

Figure 24

Professional development needs
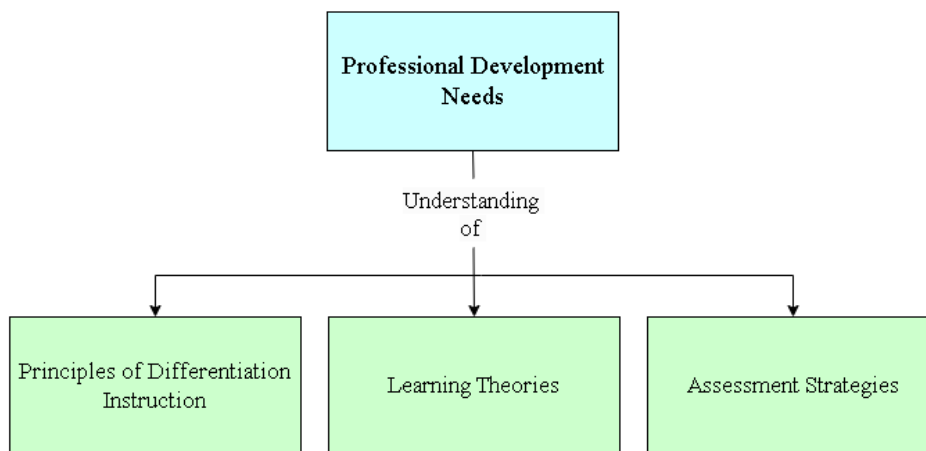
3.3 Strategies for developing ID competence among teachers.

- **Self-assessment and goal setting:** Teachers can self-assess their current competencies and set goals to improve in ID (Aurora Institute, 2022).
- **Professional Learning Communities (PLCs):** Participating in PLCs provides opportunities to collaborate, share ideas, and learn from each other.
- **Mentoring and coaching:** Support from experienced colleagues can guide new teachers in the effective implementation of ID strategies.

- **Continuing Professional Development**: Engaging in activities that simulate the experiences you will offer your students fosters a deeper understanding of differentiated learning (Edutopia, 2008).

Figure 25

Strategies for developing ID competence
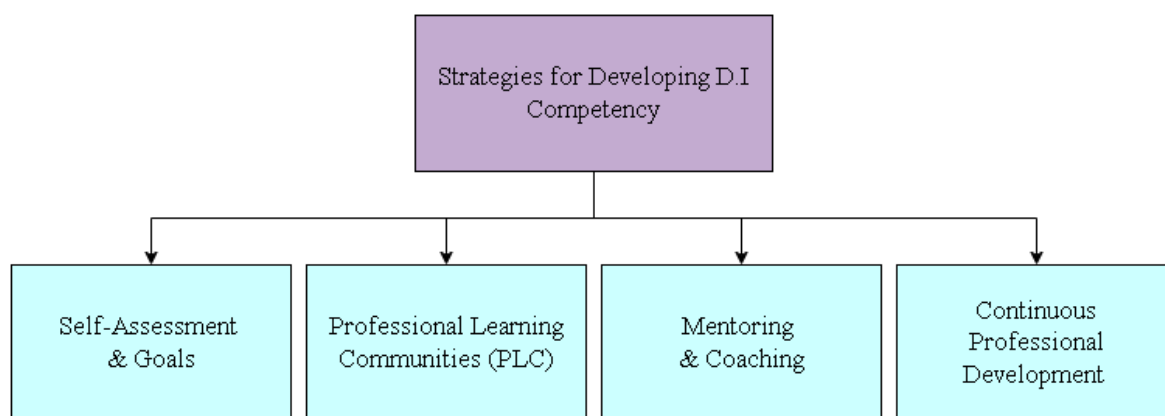
Language processing in reading comprehension

1 Language Processing Theory

Language **processing** theory includes the interaction of brain areas dedicated to production and understanding of language. Decoding words and interpreting their meaning is essential for understanding. In second language educational contexts, this can be more difficult due to phonological and spelling differences (Makovec, 2018).

Figure 26

Language Processing Theory
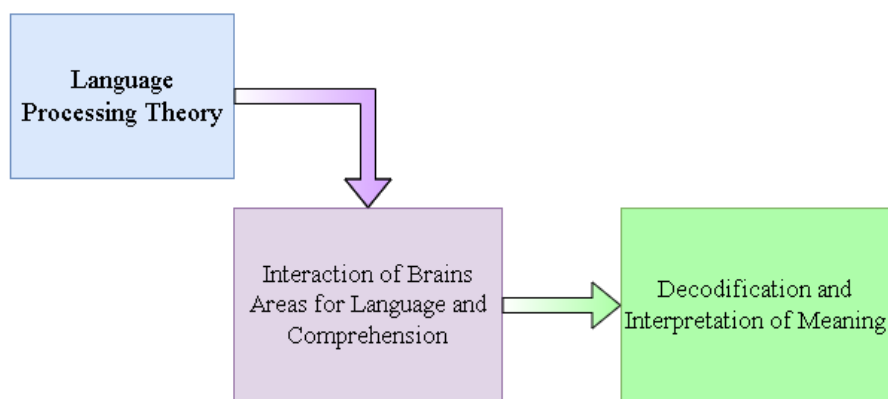
2. Key aspects of Decoding in Reading Comprehension

Decoding involves the conversion of graphemes into phonemes, a process crucial for reading fluency. Proficiency in decoding allows for the effective integration of textual information. According to Roberts & Inman (2021), "reading fluency is facilitated by a strong decoding ability."

Figure 27

Decoding and phonological processing
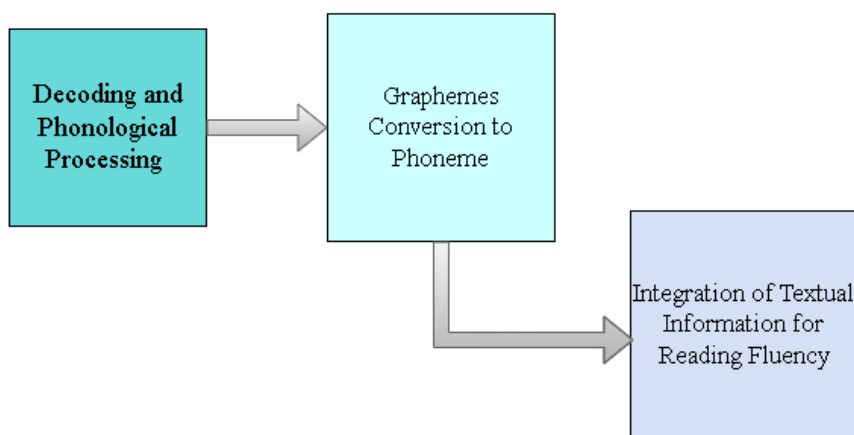
Connection between decoding and understanding

The simple reading model holds that comprehension depends on both decoding and interpreting language. The ability to decode allows access to the meaning of the text (Sindhu, 2022).

Automatic vs. Automated Controlled Processes

Decoding begins as a controlled process and becomes automatic with practice, freeing up cognitive resources for understanding. In second language learning, this process can be slower, highlighting the importance of having the right strategies in place from the outset (Tomlinson, 2023).

Figure 28

Factors in decoding and reading comprehension
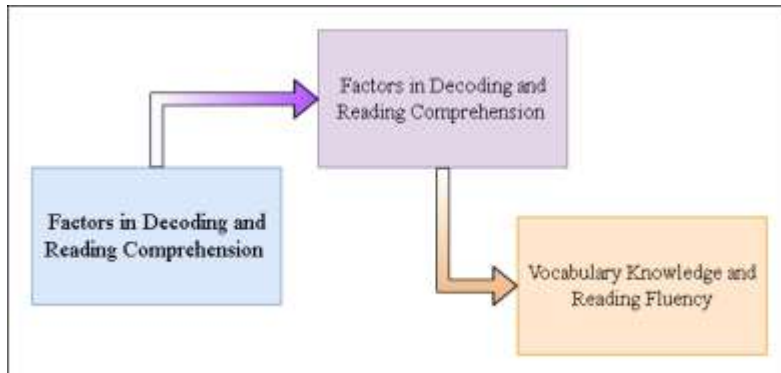
Among the theoretical models that explain decoding in reading comprehension Dual route model focused on the proposal of two forms of reading: **Phonological route** that progressively provides unfamiliar words. And **Lexical route** that applies known words.

Allowing students to access words through these paths, offering flexibility in the reading process. Roberts & Inman (2021) states that *"this method explains how experienced readers can quickly recognize familiar words, while new words require more careful processing."*

Interdependent equilibrium model, decoding and reading comprehension develop simultaneously and influence each other. Makovec (2018) mentions that *"the ability to decode effectively allows students to focus on the meaning of the text, which is essential for deep understanding."* It highlights the importance of a balance between both skills for effective learning,

BACKGROUND INFORMATION

According to Lillian L. Wong and David Nunan (Wong & Nunan, 2011), Learning Styles and Strategies of Effective Language Learners in Hong Kong Undergraduate Students, in their study University of Auckland, mentioned that learning styles and strategies among Hong Kong undergraduate students, classifying them as "more effective" or "less effective" based on their performance on a standardized public English test. The aim was to examine distinctions in learning styles, preferences for strategies, and use between these two distinct groups of students. This paper provided valuable insights into the differences between effective and less effective learners, focusing on their learning strategies and language proficiency.

In Stephen Joseph's (J, 2013) study, DIFFERENTIATING INSTRUCTION: Experiences of Pre-Service and In-Service Trained Teachers, he explored how in-service trained teachers understand and practice differentiated instruction in their classrooms, specifically in primary and secondary schools in Trinidad. The study examines the level of understanding of differentiated instruction among teachers and assesses the degree to which they differentiate content, process, and product in their classrooms. In addition, it identifies challenges related to the implementation of differentiated instruction. "The research highlights administrative support in effective differentiation, offering valuable information to improve differentiated instruction in educational settings."

According to Nanin Morgan (Morgan, 2014), Maximizing Student Success with Differentiated Learning, she underscored the importance of employing differentiated instruction as a means to optimize both student achievement and classroom participation. It focuses its focus on the recognition and personalized teaching of students according to their different abilities and learning styles, based on educational theories such as multiple intelligences and the zone of proximal development. "This study offers a fundamental contribution by emphasizing the essential role of differentiated instruction in educational settings, outlining its advantages, and demonstrates how differentiated instruction fosters better student learning outcomes, greater engagement, and greater motivation."

According to Tri Fanny Anggraeny and Dian Novita Dewi (Anggraeny & Dewi, 2021), AN ANALYSIS OF TEACHERS' STRATEGIES IN TEACHING ENGLISH USING DIFFERENTIATED LEARNING, emphasized the importance of adapting teaching methods to accommodate diverse learning styles, thereby enhancing students' knowledge acquisition by

aligning instruction with individual needs. The research also presents the findings of a qualitative case study that analyzes educators' strategies for implementing differentiated learning in an inclusive school. "This study reveals the need for differentiated learning to meet the diverse needs of students, highlighting the role of teacher drivers in the effective implementation of these strategies in education."

   According to Melek Sapan and Enisa Mede (Sapan & Mede, 2022), The Effects of Differentiated Instruction (DI) on Achievement, Motivation, and Autonomy among English Learners, argued the impact of Differentiated Instruction (DI) on English learner foreign language performance, motivation, and autonomy in a public school in Istanbul. It delves into the effectiveness of ID in improving foreign language teaching, explores the role of learner motivation in language learning, and assesses both teachers' and students' perceptions of ID and its influence on student achievement. "The study shows that ID positively influences learner language achievement, motivation, and autonomy in secondary level English learners. He suggests integrating ID into English classrooms, taking into account students' individual needs, and learning styles.

V. JUSTIFICATION

This research focuses on the implementation of differentiated teaching to address low academic performance in the subject of English at the Ulises Tapia Roa Public Institute, located in Nindirí, Masaya. This study arises in response to the identification of a significant deficit in the ability to decode English texts among 10th grade students, observed during a visit to the institute as part of the graduation process in the English career of the Department of Foreign Languages of the UNAN Managua.

The choice of qualitative research with a cross-sectional approach is based on the need to explore in depth the dynamics and effects of differentiated teaching in a specific context. This methodological approach is suitable for capturing the particularities of the educational experience and assessing how the personalization of instruction can influence the improvement of critical skills such as the decoding of English texts. Qualitative research allows for a detailed understanding of the experiences and perceptions of students and teachers. The cross-sectional approach provides an accurate view of the immediate impact of these strategies during a specific period of the educational process.

Historically, pedagogical methods to teaching English have been homogeneous, without adequate adaptation to the individual needs of students. This study aims to fill a gap in existing literature by investigating how differentiated instruction can offer a personalized solution to reading comprehension difficulties. The personalization of instruction is especially relevant in the context of the Ulises Tapia Roa Public Institute, where students come from diverse and resource-limited socioeconomic backgrounds, which affects their ability to receive adequate educational support at home.

The theoretical rationale for this research is based on the principles of differentiated teaching theory and the findings of cognitive neuroscience, which suggest that tailoring instruction to individual needs can significantly improve learning and academic performance. From a practical perspective, the research seeks to provide an effective solution to the observed decoding difficulties, thus improving students' ability to interpret and understand texts in English. The methodological justification lies in the adequacy of the qualitative approach to evaluating the effectiveness of differentiated strategies in a real educational context.

This research is necessary and timely because it addresses a significant educational problem in a challenging context, providing an opportunity to improve students' academic

performance through the implementation of pedagogical strategies adapted to their individual needs. The expected results could offer valuable insights for the optimization of educational practices and contribute to the development of more effective methods to teaching English in similar contexts.

VI. OBJECTIVES

General objective

To assess the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024.

Specific objectives:

✓ To describe the demographic characteristics of tenth-grade English as a Foreign Language (EFL) students at Ulises Tapia Roa Public High School during the second semester of 2024.

✓ To identify the main challenges and strengths that affect the implementation of differentiated instruction on meaningful learning for decoding skills in reading comprehension among tenth grade EFL students at Ulises Tapia Roa Public High School during the second semester of 2024.

✓ To evaluate the effectiveness of differentiated instruction in promoting meaningful learning of decoding in reading comprehension among tenth-grade EFL students at Ulises Tapia Roa Public High School during the second semester of 2024.

VII.   METHODOLOGICAL DESIGN

This section presents the methodological information of the study, which details the paradigm, type of research, design, and data collection methods used. This section provides a comprehensive view of how the research will be conducted, the specifics of the context and population studied, as well as the ethical considerations involved. The chosen methodology seeks to guarantee the validity and relevance of the results, ensuring a deep understanding of the factors that affect learning within the selected educational environment.

The paradigm

A pragmatic paradigm was adopted for this study due to its emphasis on practical application and the suitability for qualitative research. This paradigm prioritizes obtaining real-world insights into how Differentiated Instruction (DI) can improve decoding skills within the specific socio-economic and educational context of Ulises Tapia Roa Public High School.

The pragmatic approach allows for flexibility in focusing on real-world issues and provides a foundation for exploring how DI strategies can address the unique needs of students. Pragmatism also supports gathering descriptive data, which is essential for understanding how students' diverse learning styles, socio-economic backgrounds, and cognitive abilities influence their development of English language decoding skills in reading comprehension. According to Clark (2016), pragmatism emphasizes practical solutions to real-world problems, making it an ideal framework for this study.

Through this lens, the research seeks to evaluate how differentiated instruction can foster meaningful learning in a diverse classroom, enabling students to actively engage with content, collaborate with peers, and develop autonomy in their language acquisition journey (MacBlain, 2021). This paradigm supports the qualitative, cross-sectional design of the study, which focuses on gathering descriptive data to evaluate the impact of DI strategies in the specific educational context of Ulises Tapia Roa Public High School.

Type of Research

The research adopts a qualitative approach with a cross-sectional design. Qualitative research focuses on understanding complex phenomena from a holistic perspective, exploring participants' experiences and perceptions. According to Hernández et al. (2014), "qualitative research seeks to understand the meaning that people give to their experiences and how they

influence their behavior" (p. 15). This approach allows "capturing the richness of human experience" (Denzin & Lincoln, 2011, p. 3), facilitating the detailed exploration of the phenomena studied.

The cross-sectional design allows data collection at a single point in time, which facilitates obtaining an instantaneous and representative view of the factors that affect student learning. As Bhat (2023) points out, "cross-sectional studies are essential to obtain information quickly and pertinently, from a specific moment in time, which can be very valuable for understanding the status quo and informing future research directions". This approach is ideal for capturing the diversity of experiences and conditions at a specific time, providing an overview of the phenomenon investigated.

Period and Place of Research

The study is carried out during the second half of 2024 at the Ulises Tapia Roa Public Institute. This period will allow for continuous and meaningful data collection, aligned with the objectives of the study. The context of the Institute is fundamental to understanding the local factors that affect meaningful learning and the application of differentiated instruction strategies. According to Creswell (2014), "the social and cultural context is crucial for interpreting the results of qualitative research" (p. 177).

Population and Sample

The universe of study is composed of a group of 10th grade students in the afternoon shift of the Ulises Tapia Roa Public Institute. Students are approximately 13 to 15 years old. The total population is 45 students, of which 18 are male and 23 are female. Of these, 32 students have learning difficulties, with a distribution of 12 males and 20 females.

The sample will be selected intentionally, considering active participation in the classroom and equitable g ender representation. Given the small size of the population, the sample will be taken in its entirety, i.e., forty-five individuals. This is justified by the need to obtain a complete and detailed view of the group in question.

Sample Types

Census Sample: Instead of selecting a representative subset, all members of the universe will be included due to the manageable size of the population. This ensures that complete and comprehensive data is obtained on the students involved.

Methods

The research methods chosen are:

Empirical Methods:

✓ Observation: Allows the collection of data through the direct perception of phenomena in the natural environment.

✓ Hypothetical-Deductive Method: Uses hypotheses to derive conclusions and test theories.

According to Flick (2018), "empirical methods are essential to collect data that allow a deeper understanding of the phenomenon studied" (p. 45).

Selection of Variables or Descriptors

The variables will be selected according to the objectives of the study and the research problem.

Variables

1. **Differentiated Instruction**
2. **Meaningful Learning for Decoding Skills in English Reading Comprehension**

Procedures

a) Enter

b) Application

c) Exit

Variables	Definition	Sub- variables	Indicators	Measurement Method	Instrument
1. Differentiated instruction Method	Differentiated Instruction (DI) in EFL adapts content, process, product, and environment to meet students' diverse language abilities and learning styles. It allows for tailored materials and	Adaptation, Inclusion and Diversity	Adaptation of materials and activities to students' needs and learning styles	Lesson Planning Logs Psychological test to identify the different learning style Teacher Interview	Lesson planning log to document the use of varied strategies. Multiple choice online test. (Learning styles) Questions opened, where the adaptations

					made according to the students' proficiency levels are recorded.
		Demographic Characteristics	Individual and social characteristics	Questionnaire for students	Yes, no questions aimed at students to obtain a detailed understanding of group diversity.
		Challenges and strengths	Students' engagement, participation and classroom management	Classroom environment Observation	Observation Guide of the classroom environment, analyzing interactions and level of equity.
2. Meaningful Learning	Meaningful learning in the context of English decoding skills and reading comprehension emphasizes the active integration of new knowledge with students' prior experiences and contexts. Instead of depending on memorization, this approach encourages students to connect new vocabulary, enhancing reading comprehension.	Decoding Skills in Reading Comprehension	Relationship with Prior Knowledge	Pre-test	Decoding skills in reading comprehension
		Effectiveness of DI on the meaningful learning of Decoding skills	Comparison between initial and final performance	Post-test	Decoding skills in reading comprehension
				Interviews or Group Discussions	Interview or Discussion Log (Yes, no questions, Opened questions)

Data Collection Techniques

Type of Instrument

The instruments used in this study, including a psychological test, student questionnaire, teacher interviews, classroom observations, pre- and post-tests, and focus groups, were carefully selected for their alignment with the research questions and objectives.

- **The student questionnaire** is administered first to gather demographic data such as age, socio-economic status, and language proficiency, which help contextualize the research findings.

- **The psychological test** follows to assess cognitive and emotional factors that may influence students' learning, providing crucial insights into individual student profiles.

- **The teacher interview** is conducted next, with guided conversations designed to obtain detailed insights into the educator's views on Differentiated Instruction and its perceived impact on students' learning.

- **Classroom observations** provide a systematic recording of behaviors and classroom conditions, capturing real-time interactions and the effects of instructional strategies.

- The **pre-test** is then administered to measure students' initial decoding skills, followed by the **post-test** to assess changes in these skills after the intervention.

- Finally, **focus groups** are held to gather qualitative data on students' experiences, challenges, and perceptions of the learning strategies. These instruments collectively ensure that data collected is robust and accurately reflects the research focus.

Ethical Aspects

The informed consent of all participants will be guaranteed prior to data collection, in accordance with the ethical principles established to protect the privacy and well-being of the individuals involved (QuestionPro, 2023). This will include informing participants about the objectives of the study, the use of the data, and their rights during the research process. On the other hand, the interview serves to complete information of the main elements that will improve the learning process of students with different learning rhythms.

To ensure the reliability and validity of the selected instruments, they were reviewed and validated by two university professors specializing in English education and research methodology. This validation process involved assessing the instruments' alignment with the research objectives and clarity for the target population. Based on their feedback, minor

modifications were made to enhance the instruments' effectiveness in capturing accurate data on decoding skills and learning style preferences. This external validation underscores the methodological rigor of the study, strengthening the credibility of the findings.

VIII. ANALYSIS OF RESULTS

This analysis provides a detailed description of the research objectives, which are focused on the demographic characteristics of tenth-grade English as a Foreign Language (EFL) students and the factors influencing the implementation of differentiated instruction at Ulises Tapia Roa Public High School during the second semester of 2024. The findings highlight the socioeconomic context of the students and explore how this context impacts their English decoding and reading comprehension skills.

1. **To describe the demographic characteristics of tenth grade English as a Foreign Language (EFL) students at Ulises Tapia Roa Public High School during the second semester of 2024.**

The student questionnaire was designed to gather demographic information, focusing on age and gender. This instrument aimed to provide a clear understanding of the student population, essential for analyzing how demographic factors influence learning, particularly in the context of differentiated instruction. The data collected through the questionnaire offers valuable insight into student diversity and helps contextualize how these factors may interact with learning outcomes.

Diagram 1

Demographic Characteristics of 10th grade students
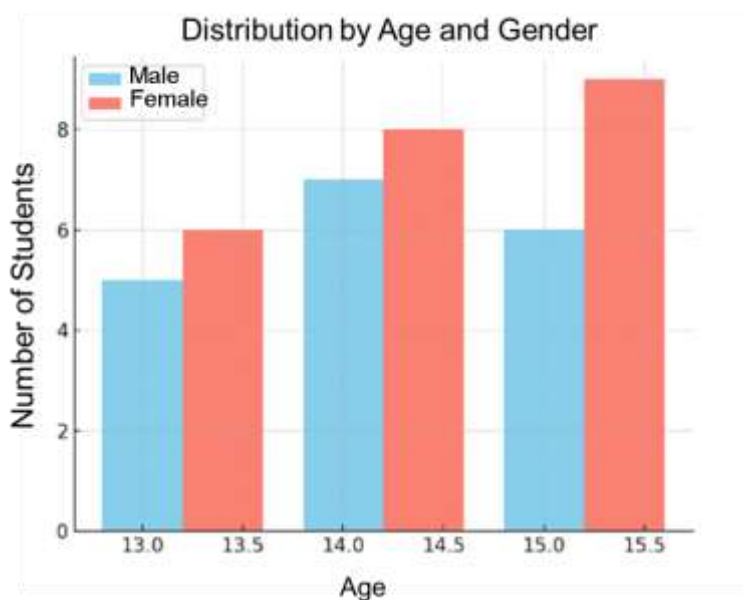
The graph illustrates the age and gender distribution of the 41 students who participated in the study. Most students are between the ages of 13 and 15, with a slight gender imbalance—

23 female students (56%) and 18 male students (44%). This demographic breakdown is critical for understanding the developmental stage of the students, which can influence how differentiated instruction is applied.

The data confirms that the group is relatively homogeneous in terms of age, which means that age-related cognitive and developmental factors may not significantly vary within this group. However, gender differences in educational performance have been documented in previous studies (Martínez, 2022), and it is crucial to consider whether the instructional strategies might need to be adjusted to ensure that both male and female students are equally supported. For example, gender-based differences in motivation and engagement, often observed in classroom settings, may require personalized strategies to boost participation from male students, as suggested by Harnly and Harnly (2024).

Furthermore, understanding the age and gender distribution helps contextualize the effectiveness of differentiated instruction. While cognitive abilities may be similar due to the age range, individual variations in learning preferences based on these demographic factors should be considered.

Socioeconomic Context

The parents of these students mostly work with physical exertion, with 46% in free zones, 18% in independent jobs, 7% in agriculture, 17% in animal husbandry, and 10% unemployed. These occupations limit both the time and resources available to support English learning at home.

Parent Education

49% of parents have completed High school, 23% have completed a technical course, 16% have only attended Elementary school, and 12% have higher education, which means that the family environment offers little or no academic support in English, negatively affecting the acquisition of language skills.

Diagram 2
Education Level of students' parents

Parents education Level
High school 49.0% | Elementary 16.0% | Technical 23.0% | University 12.0%
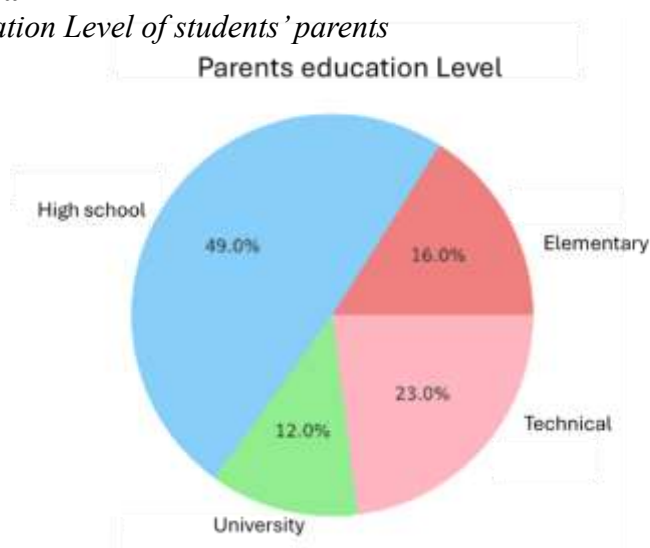
These demographic and socioeconomic characteristics underscore the need to adapt pedagogical strategies to students' circumstances to compensate for gaps in out-of-school support.

A psychological test was administered to determine the learning styles of the 41 students participating in the study. The results revealed that 14.29% (6 students) were kinesthetic learners, 66.66% (27 students) were auditory learners, and 19.05% (8 students) were visual learners. This distribution underscores the importance of employing Differentiated Instruction (DI) strategies that address various learning modalities. While the majority of students benefit from auditory support, kinesthetic and visual methods are equally important for engaging and supporting other learning styles. These findings guided the design of classroom activities to ensure that each student's preferred learning modality was effectively addressed.

Diagram 1

Psychological test result of 10th grade students
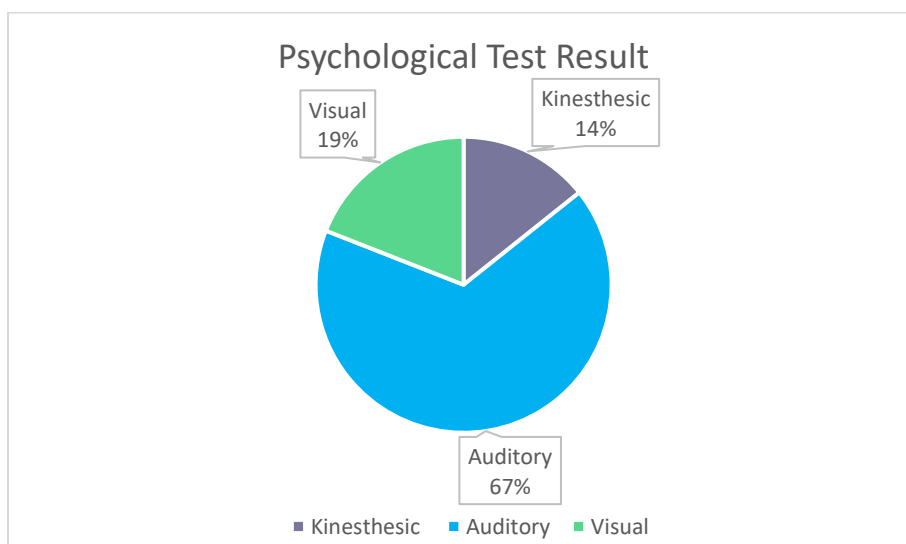
This finding highlights the importance of using differentiated instructional strategies that cater to a variety of learning styles. According to Sindhu (2022), the need for differentiated instruction arises from the fact that students have distinct cognitive preferences, which should be addressed in order to maximize their learning potential.

Analysis of Challenges and Strengths in the Implementation of Differentiated Instruction

The classroom checklist was used to observe student engagement, participation, and interactions during the implementation of differentiated instruction. This tool provided qualitative data on how students responded to various instructional strategies and activities. The

checklist tracked observable behaviors such as participation in group activities, use of materials, and overall engagement in the learning process.

Based on the observations recorded using the checklist, there was a noticeable increase in student engagement when differentiated strategies, such as visual aids, group work, and hands-on activities, were implemented. These activities aligned with students' preferred learning styles, as indicated by the psychological test results. Students were more actively involved in group discussions and hands-on tasks, suggesting that personalized instruction leads to higher motivation and participation.

This observation aligns with the findings of Tomlinson (2023), who argues that differentiated instruction fosters greater engagement and motivation by catering to students' individual needs. The checklist data revealed that students who had typically participated less in traditional instruction became more vocal and involved in differentiated activities. This supports Harnly and Harnly's (2024) argument that differentiated learning promotes a more inclusive and interactive classroom environment.

Interviews with the teacher were conducted to gather insights into the process and effectiveness of implementing differentiated instruction. The teacher's responses highlighted several key aspects of the DI process. The teacher noted that adapting lessons to students' individual learning styles significantly improved their ability to grasp content. Furthermore, an increase in student motivation was observed, particularly among those who had previously struggled with the traditional approach. The teacher also emphasized the importance of formative assessments and continuous feedback, which enabled real-time adjustments to instruction, ensuring that each student received the appropriate support.

These findings align with Tomlinson's (2023) assertion that differentiated instruction is a dynamic process requiring flexibility and adaptability from the teacher. The teacher's experience in adjusting materials and teaching strategies to meet student needs reflects the core principles of differentiated instruction, designed to ensure that every student receives appropriate challenges and support. As noted by Sindhu (2022), this personalized approach not only improves academic outcomes but also fosters a more inclusive and equitable learning environment.

Performance Levels for Decoding skills in Reading Comprehension based on a Pre-test

High Performance (27%): This group, composed of 11 students (10 females and 1 male), obtained scores between 90 and 100 points. The gender difference suggests the need for additional motivational strategies for males and to replicate success factors of the female group.

Intermediate Performance (41%): This group of 17 students (9 males and 8 females) has a developing competency, with grades between 70 and 89 points. The differentiated instruction method in this group should consolidate their skills so that they achieve better mastery of reading comprehension.

Low Achievement (32%): With 13 students in this group, serious difficulties in decoding and basic vocabulary were identified. Here, it is recommended to apply personalized mentoring and methods focused on individual needs to promote meaningful progress.

Diagram 4

Students' Performance in Decoding skills in Reading Comprehension
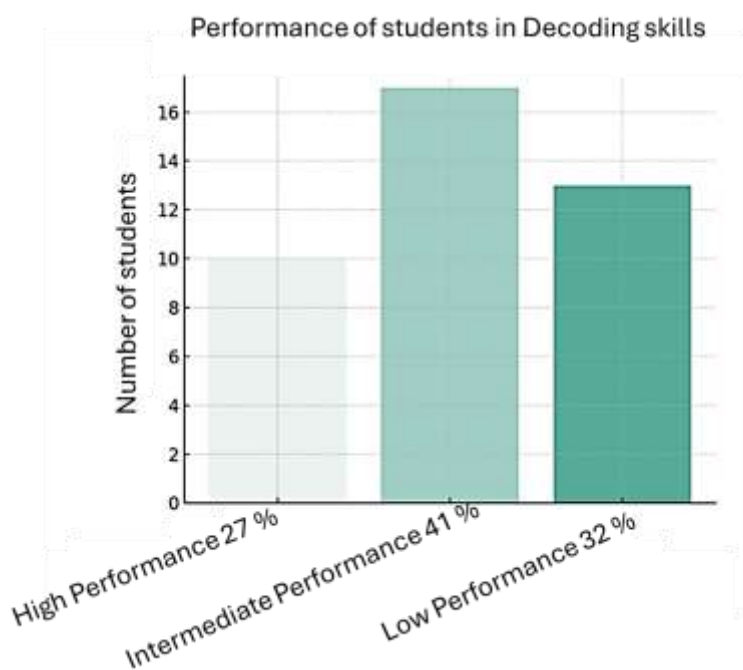
The pre-test results showed a significant gap in decoding skills, with 32% of students performing poorly, which reflects the initial difficulty many students had in recognizing words and sounds. This finding aligns with Anderson's (2023) theory of cognitive processing, where effective decoding requires the ability to recognize sounds and associate them with letters or

graphemes. These foundational skills are crucial for understanding and processing written language.

In response to these challenges, the differentiated instructional strategies were specifically designed to address decoding difficulties. This validates Tomlinson's (2023) assertion that differentiation is necessary to cater to the varying levels of student proficiency in the classroom. The need for targeted interventions was clear, as students required support that adapted to their current cognitive development and decoding abilities.

Technological Limitations

Access to technology represents a significant limitation in the educational context for students. Only 27% of students have electronic devices, and only 12% own a personal cell phone. This situation severely restricts the ability to use technological learning tools outside the classroom, preventing students from utilizing digital resources or engaging in virtual activities that could enhance their academic development. The lack of adequate access to technology poses a considerable challenge for the implementation of pedagogical strategies based on digital tools, limiting opportunities for autonomous and continuous learning.

Strengths in collaborative learning

Motivation in Group Activities

Students exhibit a strong interest and enthusiasm for engaging in collaborative activities, which significantly enhances peer-based learning. This motivation creates an environment where students are more willing to participate, share ideas, and contribute to collective problem-solving. The active involvement in group tasks fosters a sense of community within the classroom, promoting both individual and group learning outcomes. The inherent motivation within these activities allows students to deepen their understanding of the subject matter while developing important social and communicative skills.

Peer Collaboration

The promotion of a collaborative learning environment provides an opportunity for students with advanced skills to support their peers, thereby raising the overall performance of the class. Through peer collaboration, more knowledgeable students can offer guidance, clarify doubts, and help others grasp difficult concepts, which enhances the learning experience for all involved. This mutual support system not only reinforces the knowledge of those offering assistance but also helps the learners who receive support to better understand and retain the

material. As a result, the collaborative atmosphere contributes to a more inclusive and effective learning environment for all students.

Socioeconomic Context and its Influence

Parental Education and Occupation

The socioeconomic context plays a significant role in shaping the educational experiences of students. A majority of students come from families where parents have completed only high school education and are engaged in physical occupations. This limited level of parental education and the nature of their work often result in reduced academic support at home, which can have a direct impact on students' motivation and their ability to develop independent learning skills. Without the resources or knowledge to assist with academic challenges, students may struggle to engage with the material outside of school, hindering their academic progress. Furthermore, the lack of a strong academic support system at home may lead to lower self-confidence and a diminished sense of agency in their learning journey.

2. To identify the main challenges and strengths that affect the implementation of differentiated instruction on meaningful learning for the decoding skills in reading comprehension among tenth-grade English as a foreign language students at Ulises Tapia Roa Public High School during the second semester of 2024.

The socioeconomic, technological, and pedagogical factors observed in the context of tenth grade students at the Ulises Tapia Roa Public High School present significant barriers to English learning. Most of the parents of these students have occupations that require physical exertion and long hours, such as working in free zones, self-employment, agriculture, and raising animals. Not only does this restrict the time and resources available for academic support at home, but it also affects the emotional stability and motivation of students, who perceive a lack of educational support at home.

This gap in academic support has a psychological impact, as students may feel unmotivated or less able to achieve achievements in learning English, which makes them even more dependent on school as the only space for educational development. In addition, limited access to technology exacerbates this situation. Only 27% of students have electronic devices and only 12% have a personal cell phone, which seriously restricts the possibility of accessing digital resources that could complement learning outside the classroom.

This lack of technology imposes a challenge both in the independent practice of the language and in the exposure to interactive materials that facilitate learning. Consequently, the classroom becomes the only place where students can practice English and receive guided instruction.

The methodology used in school is also a crucial factor. Although teachers participate in Inclusive Participation Strategy (EPI) programs, they are usually based on a traditional methodology, with a method focused on the transmission of content without a differentiation adapted to individual needs. This can lead to frustration among students who require more support, especially those who struggle with English decoding and reading comprehension.

The traditional method, which lacks personalized accommodation, limits the full development of language skills in students with different levels of proficiency. In the face of these obstacles, the teacher has done an extraordinary job in implementing differentiated strategies in the classroom to meet the needs of each performance group.

It has incorporated experiential and collaborative activities that allow students to apply their knowledge in a practical way, such as guided reading exercises and teamwork, thus adapting learning to a more accessible and motivating environment. This has allowed students with more advanced skills to support their peers, strengthening peer-to-peer learning and promoting a supportive community within the classroom.

However, it is clear that additional strategies can still be incorporated to optimize learning in this context. Some possible improvements include the use of differentiated motivational strategies for low-achieving students, such as one-on-one tutoring programs or one-on-one mentoring sessions that allow students to work at their own pace in areas where they encounter greater challenges. In addition, it would be beneficial if the teacher could implement project-based learning techniques, where students explore topics of interest related to the English language, thus fostering greater motivation and personal commitment.

Challenges

1. **Socioeconomic Factors**: Most parents work in occupations that demand a lot of time and physical effort, which limits the academic support they can provide to their children. This lack of support not only affects academic performance, but also impacts the emotional stability and motivation of students, who may feel alone in their learning process.

2. **Access to Technology**: The low availability of electronic devices and Internet connections severely restricts students' opportunities to access digital and complementary resources. Not only does this limit their language practice outside of the classroom, but it also prevents exposure to interactive tools that could facilitate their learning.

3. **Traditional Methodology**: Although Inclusive Participation Strategy (EPI) programs are implemented, the methodology often lacks differentiation and customization. This can lead to frustration among students, especially those who face difficulties in decoding and reading comprehension, as they feel less empowered to learn and advance their language skills.

Strengths

1. **Teacher Commitment**: The teacher, a graduate of UNAN-Managua, has demonstrated exceptional commitment to implementing differentiated strategies. Its focus on experiential and collaborative activities not only encourages the practical application of knowledge, but also improves motivation and interaction among students.

2. **Peer Learning**: By allowing more advanced students to support their peers, the teacher has created a collaborative learning environment. This practice strengthens not only the learning of students with higher abilities, but also the confidence and self-esteem of those who need more support.

3. **Flexibility and Adaptation**: The teacher's ability to adapt learning to the needs of students is a key strength. Their efforts to integrate activities that respect individual learning rhythms and styles help build a more inclusive and accessible environment.

3. To evaluate the effectiveness of differentiated instruction in promoting meaningful learning of decoding in reading comprehension among tenth-grade English as a foreign language students at Ulises Tapia Roa Public High School during the second semester of 2024.

Following the application of D.I., a post-test was conducted to measure any improvements in their decoding abilities. The post-test results revealed a significant improvement, with the average score increasing to 76%. This represents a 21% improvement in students' ability to decode and comprehend reading texts.

Further breakdown of the post-test scores showed that:

- **56%** of students scored above 75%, indicating a strong grasp of decoding skills.
- **35%** of students scored between 65% and 74%, reflecting moderate improvement.
- **9%** of students scored between 55% and 64%, showing some progress but still in need of further support.

Diagram 6

Post-Test Results
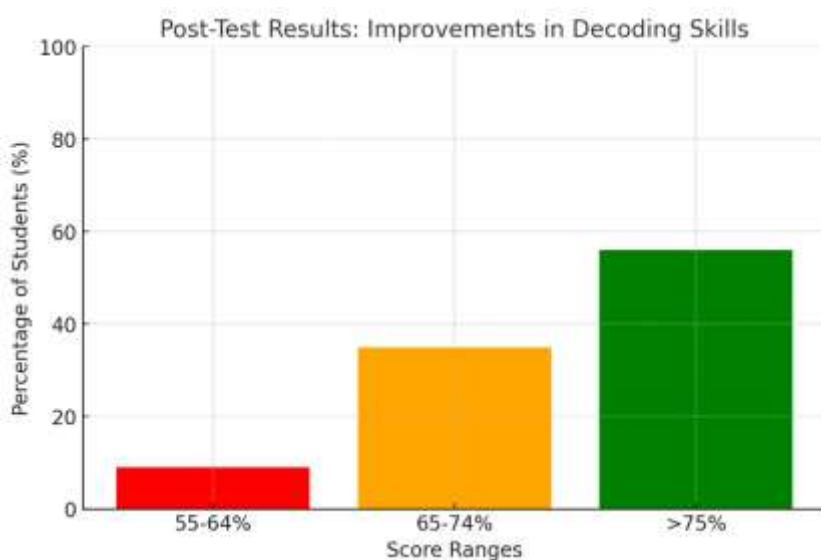
After the intervention, the post-test results indicated a 21% improvement in students' decoding abilities, with 56% of students achieving scores above 75%. This demonstrates the positive impact of differentiated instruction, particularly in relation to improving decoding skills. According to the information processing theory (Anderson, 2023), these improvements are likely a result of targeted teaching methods that better align with the students' cognitive processing needs.

The implementation of Differentiated Instruction (D.I.) showed significant improvements in their attitudes towards learning and their application of decoding skills in reading comprehension. The varied teaching methods, such as auditory, kinesthetic, and visual strategies, catered to students' individual learning styles and created a more engaging and inclusive classroom environment. As a result, students became more confident in their ability to decode and understand texts, demonstrating a greater sense of ownership in their learning journey.

The D.I. method fostered an active learning environment, where students were more willing to participate in class activities and engage in discussions. By using materials and strategies that aligned with their personal learning preferences, students were able to grasp decoding strategies more effectively. For example, visual learners benefited from graphic organizers that helped break down complex texts, while auditory learners thrived in discussions where they could hear and process information verbally. Kinesthetic learners engaged with hands-on activities that allowed them to physically interact with text, which made decoding practice more tangible and meaningful for them.

Classroom dynamics also shifted positively, with students collaborating more effectively in group activities. This collaboration allowed them to share decoding strategies with one another, reinforcing their learning and helping each other apply newly acquired skills. As students interacted with the material in different ways, they not only strengthened their decoding abilities but also built a stronger sense of community and collective learning.

Overall, Differentiated Instruction not only enhanced students' decoding skills but also contributed to a more disciplined and engaging classroom atmosphere, where students felt motivated and supported in their reading development. Their increased confidence in applying decoding strategies reflected a deeper understanding of reading comprehension and an improved attitude towards learning.

The post-test data suggests that students were able to process linguistic information more effectively through these varied methods, confirming the effectiveness of the differentiated instruction method in improving decoding skills.

Finally, focus group discussions were conducted with a sample of students to gather qualitative data on their perceptions of the learning experience after the implementation of differentiated instruction. The aim was to understand how students felt about the instructional strategies, what they found helpful, and any challenges they encountered during the learning process.

The students in the focus group expressed increased confidence in their decoding and reading comprehension skills following the intervention. Many reported that personalized activities, such as small group discussions, hands-on tasks, and the use of visual aids, made learning more accessible and less overwhelming. Students also appreciated the opportunity to collaborate with peers, which they felt enhanced their understanding of the material.

The positive feedback from the focus group reflects the idea that when students are given agency over their learning, they become more motivated and engaged. This aligns with the theoretical perspectives of Harnly and Harnly (2024), who emphasize the importance of collaborative learning and peer support in differentiated environments. The increase in student confidence and the improved perception of the learning process support Tomlinson's (2023) assertion that differentiated instruction fosters a more active and participatory classroom, where students feel empowered to take control of their learning.

To address the challenges and further enhance the strengths of the classroom, it would suggest the following strategies:

1. Personalized Tutoring: Implement one-on-one tutoring programs for low-achieving students, allowing them to work at their own pace and receive support in areas where they face the greatest challenges.

2. Project-Based Learning: To encourage project-based learning techniques that allow students to explore language-related topics of interest to them. This can increase their motivation and engagement, as well as facilitate meaningful learning.

3. Incorporation of Digital Resources: Whenever possible, use accessible digital resources, such as mobile applications or online learning platforms that can be used in class and require little or no technological resources at home.

4. Incorporation of Visual Resources: Encourage the creation of visual resources developed by students, such as infographics, graphic organizers, and materials for a pedagogical folder. This method not only enhances students' creativity and artistic expression, but also enriches their language learning by allowing them to visualize and organize information effectively.

The teacher's work has been instrumental in creating an inclusive and motivating educational environment, and her differentiating method has allowed class time to be valuable for students. By integrating differentiated strategies, the teacher has promoted collaborative learning and has encouraged interaction between students of different levels of competence, which has enriched the educational process.

However, the context demands a greater variety of strategies that address students' academic, emotional, and motivational needs. Socio-economic challenges, limited access to technology and traditional methodology can hinder effective English learning.

With the implementation of additional methods, these obstacles can be overcome and facilitate the development of English skills, allowing students to reach a more advanced level in their learning, despite the limitations of their environment. The combination of personalized tutoring, project-based learning, incorporation of digital resources and the use of visual materials developed by students can be key to optimizing the teaching of English as a second language in this context, making the artistic experience an integral part of language development.

The challenges and strengths identified underpin the need for differentiated instructional strategies to meet students' needs and foster inclusive learning. Recommendations include:

- **Strengthening the School-Family Bond:** Encouraging parental involvement in the educational process improves understanding of the importance of education.

- **Collaborative Learning Focus:** Using an interest in team activities helps students support each other.

- **Differentiated Support Strategies:** Implement specific interventions for low-achieving students through tutoring and basic vocabulary exercises.

IX. CONCLUSION

This research analyzes the impact of differentiated instruction on the learning of English as a second language in tenth grade students at the Ulises Tapia Roa Public High School, an environment characterized by adverse socioeconomic conditions and limited resources. Throughout the study, various dimensions have been examined, such as adaptation to the diversity of student needs, the impact on meaningful learning and strategies to overcome contextual barriers faced by students. This analysis is crucial to understand how the personalization of learning can optimize the development of language skills, especially in contexts where family support and access to technologies are insufficient.

1. Adapting to the Diversity of Needs: The application of differentiated instruction has proven to be crucial in addressing the diverse needs of tenth grade students at Ulises Tapia Roa High School, especially in a context marked by economic constraints and lack of educational resources. Personalization of learning allows individual differences in skills, learning styles, and rates of progress to be addressed, ensuring that each student receives the support needed to progress at their own pace. This strategy is particularly relevant in an environment where material and technological resources are limited, ensuring that each student, regardless of their context, can improve.

2. Impact on Meaningful Learning: The implementation of differentiated strategies has had a notable impact on the significant learning of decoding and reading comprehension skills in English. By adapting teaching methods to individual needs, students have improved in their ability to decipher words and understand English texts. These advances are not only reflected in academic results, but also in the motivation and active participation of students. By experiencing tangible progress, students develop a more positive attitude towards language learning, increasing their willingness to overcome contextual barriers.

3. Overcoming Contextual Barriers: In semi-rural and low-income contexts, where socioeconomic conditions limit access to technological resources and family support, differentiated instruction emerges as a key strategy to overcome these barriers. Demographic analysis of the school community reveals that 60% of parents have not completed primary education, making it difficult for students to receive academic support at home. In addition, long working hours for parents reduce the time available to

supervise their children's learning. Faced with this reality, the school assumes a significant role in the educational process, and the teacher's ability to adapt teaching methodologies compensates for the lack of support outside the classroom. This adaptation allows for maximized use of local resources and creates an equitable learning environment that meets the needs of all students.

4. Strengthening the Role of the Teacher: The success of differentiated instruction is intricately linked to the teacher's ability to adjust pedagogical strategies to the needs of the students, despite the limitations in the school infrastructure and the lack of technological resources. Only 27% of students have access to electronic devices, which limits the use of digital tools in learning. However, the teacher has shown flexibility and creativity in adapting her teaching, which has allowed positive results to be obtained in the development of students' language skills. Investment in continuing education for teachers, with an emphasis on differentiated strategies and the use of limited resources, is critical to further improve implementation and outcomes.

5. Strengths of Differentiated Instruction: Despite the challenges mentioned, differentiated instruction has proven to be an effective strategy to address the diversity of levels of proficiency in English. The teacher's ability to adapt pedagogical activities to different levels has allowed all students, regardless of their initial abilities, to progress in their learning. This flexible method has been reinforced by the intrinsic motivation of the students, who, despite economic constraints, show a high interest in learning English. In addition, collaborative learning, where students with greater language proficiency help their peers, has proven to be an effective strategy to improve both academic performance and students' motivation and self-esteem.

6. Challenges in the Implementation of Differentiated Instruction: Limited access to technology and insufficient school infrastructure represent significant challenges to the effective implementation of differentiated instruction. The lack of access to a functional computer classroom and electronic devices limits students' ability to use interactive resources that could enrich their learning. However, the teacher has managed to overcome these barriers through methodological adaptation and creative use of available resources.

The socioeconomic context and technological limitations of tenth grade students at the Ulises Tapia Roa Public High School present considerable barriers to learning English. However, the implementation of differentiated instruction has made it possible to mitigate some of these obstacles, providing a personalized method that responds to the diverse needs of the student body. This strategy has been particularly successful in an environment where a lack of technological resources and limited family support pose significant challenges.

To maximize the impact of differentiated instruction in these contexts, it is recommended to:

1. **Invest in continuous training** for teachers, focused on differentiated instruction strategies and the efficient use of available resources.
2. **Encourage the use of local and low-cost resources**, adapting learning to current technological limitations.
3. **Develop personalized tutoring and support programs** for students with lower performance, to reduce the skills gap.
4. **Promote community collaboration**, involving parents and the community in the educational process to increase the academic and emotional support students receive outside of the classroom.

These improvements will allow differentiated instruction to continue to be an effective tool for all students to develop meaningful English skills, overcoming the socioeconomic and technological barriers they face in their everyday environment.

In conclusion, the implementation of differentiated instruction at Ulises Tapia Roa Public High School has proven to be an effective strategy to address the barriers that students face in their English learning. Despite the challenges arising from the socioeconomic context and the lack of resources, the efforts made by the teacher to adapt teaching have allowed students to progress and be motivated in their learning process. It is essential to continue investing in teacher training and community collaboration to further enhance the results of this strategy. By strengthening the differentiated instruction method, it can be ensured that all students could develop meaningful language skills, regardless of their context.

X. RECOMMENDATIONS

Given the challenges and opportunities identified in the educational context of the Ulises Tapia Roa Public Institute, it is essential to adopt a comprehensive method to improve the teaching of English as a second language in the tenth grade. The implementation of Differentiated Instruction (DI) is presented as a promising solution to address the individual needs of students, who face significant difficulties due to economic constraints and limited resources. The following recommendations are addressed to the school, parents, principal, and teacher, and focus on optimizing educational practice, training educators, and strengthening family support to improve English learning in a meaningful and sustainable way.

1. Recommendations for the Educational Center:

- **Integrating Differentiated Instruction (DI) into the Curriculum:**
  - **Comprehensive Implementation:** Include the principles of ID in the tenth grade English curriculum, training teachers in the skills and resources necessary to personalize teaching strategies.
  - **Administrative Support:** Foster an educational environment that values and promotes innovative teaching methods, ensuring that school management supports the effective integration of ID.

- **Continuing Professional Development (CPD):**
  - **Training Programmes:** Implement CPD programmes that address the practical application of DI, providing solutions and guidance to teachers to navigate the complexities of differentiated teaching.
  - **Challenge Resolution:** Provide training that offers effective strategies to maximize the impact of ID in contexts with time and space constraints.

- **Monitoring and Evaluation System:**
  - **Periodic Evaluations:** Establish a robust monitoring and evaluation system that includes constant feedback and collaborative reflection sessions among teachers.
  - **Continuous Feedback:** Implement mechanisms to receive regular feedback from students and teachers on the effectiveness of the ID, adjusting practices as needed to improve educational outcomes.

- **Resource Allocation:**
  - ○ **Acquisition of Teaching Materials:** Allocate adequate resources for the development and acquisition of differentiated teaching materials, both digital and traditional, that adapt to the diverse learning styles of students.
  - ○ **Optimization of Existing Resources:** Efficiently utilize local resources and seek opportunities to collaborate with external organizations for additional materials and support.

2. Recommendations for Parents:

- **Education and Support:** Encourage the active participation of parents through workshops that teach them how to support learning English at home, providing them with tools and strategies that allow them to help their children practice effectively, even with limited resources.

- **Recognition of Educational Value:** To raise awareness among parents about the importance of ID and how they can collaborate with the school to support their children's progress in English.

3. Recommendations for the director:

- **Strategic Vision and Support:** Develop and communicate a clear strategic vision for the implementation of ID in the English department, ensuring that this vision is shared and supported by all staff, promoting an environment that fosters innovative educational practices.

4. Recommendations for the Teacher:

- **Application of Differentiated Strategies:** Implement differentiated strategies in a practical way and adapted to the individual needs of students, using diagnostic evaluations to personalize teaching and provide specific support to those who need it.

- **Training and Development:** Actively participate in CPD programs to improve skills in the implementation of the ID, staying informed about best practices and new methodologies in English teaching.

- **Motivation and Adaptation:** Foster a positive and motivating learning environment, using techniques that increase students' interest in learning English and adjusting activities according to their needs and learning styles.

Recommendations for the Ministry of Education (MINED)

1. **Develop Inclusion Policies:** Create policies that favor differentiated instruction, ensuring adequate resources and teacher training.

2. **Provide Teaching Resources:** Offer digital materials and resources that support the teaching of English.

3. **Facilitate Access to Technologies:** Implement programs for schools to obtain technological tools and training for their use.

4. **Assess Educational Progress:** Establish mechanisms that measure not only academic performance, but also the development of metacognitive and social skills.

Recommendations for English Students at UNAN Managua

1. **Active Participation:** Engage in collaborative learning activities and take advantage of peer-to-peer mentoring opportunities.

2. **Reflection on Learning:** Practice self-evaluation and reflect on their own learning process, identifying strengths and areas for improvement.

3. **Use of Additional Resources:** Seek out and use additional resources outside of the classroom to enrich your understanding of English.

4. **Peer Support:** Form study groups to share knowledge and support each other in learning.

The effective implementation of Differentiated Instruction at the Ulises Tapia Roa Public Institute represents a crucial opportunity to raise the level of English proficiency of tenth grade students, despite economic limitations and scarcity of resources. By prioritizing the ongoing professional development of teachers, creating a supportive educational environment, and providing appropriate teaching resources, the institute can offer a more personalized and effective learning experience. In addition, the active collaboration of parents and the support of the principal are essential to ensure the sustainability and success of these strategies. Together, these actions will contribute to significantly improving English performance, promoting more inclusive and equitable learning that responds to the individual needs of each student.

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XII. ANNEXES

Teacher of 10th Grade Students, Section C, at Ulises Tapia Roa High School.

Structure of the research paper

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Instrument Validation

UNIVERSIDAD NACIONAL AUTÓNOMA DE NICARAGUA, MANAGUA

Área de Conocimiento de Educación, Arte y Humanidades

Department of Foreign Languages

English Major

The Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in Reading Comprehension

Validation of the Questionnaire for Students

Authors:

Julia Susana Ortiz Avilés

Joseph Anthony García Blas

Eveling María Correa Rodríguez

September 2024

Admiro la calidad de su trabajo!

Expert Judgment

Respected Judge,

You have been selected to evaluate the Instrument " The Questionnaire for Students " that is part of the research: "The Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in Reading Comprehension."

The evaluation of the instruments is of great relevance to ensure that they are valid and that the results obtained from them are used efficiently.

We appreciate your valuable cooperation.

NAMES AND SURNAMES OF THE JUDGE:

Alba Francisco Sandra Alvarado

ACADEMIC BACKGROUND:

PhD in Education, MATESOL
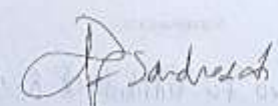
AREAS OF PROFESSIONAL EXPERTISE:

- Research
- Grammar
- Writing.

TIME

18 years

CURRENT POSITION

Professor of Research

INSTITUTION

UNAN – Managua

According to the following indicators, rate each of the items as appropriate.

CATEGORY	QUALIFICATION	INDICATOR
COHERENCE The item has a logical relationship with the dimension or indicator that is being measured.	1. You don't meet the criteria 2. Low level 3. Moderate level 4. High level	1. The item has no logical relationship to the dimension 2. The item has a tangential relationship with the dimension. 3. The item has a moderate relationship to the dimension you are measuring. 4. The item is completely related to the dimension you are measuring.
CLARITY Degree to which the item is written in a clear and precise way, facilitating its understanding by the surveyed subjects.	1. You don't meet the criteria 2. Low level 3. Moderate level 4. High level	1. The item is not clear 2. The item requires quite a few modifications or a very large modification in the use of words according to their meaning or by the order of them. 3. A very specific modification of some of the item's terms is required. 4. The item is clear, has adequate semantics and syntax.
RELEVANCE Importance of the item with respect to the contribution can provide for a better understanding of the characteristic or situation measured.	1. You don't meet the criteria 2. Low level 3. Moderate level 4. High level	1. It does not meet the criteria. 2. The item can be deleted without affecting the dimension measurement. 3. The item has some relevance, but another item may be including what it measures. 4. The item is essential or important, that is, it must be included
SUFFICIENCY Items belonging to the same dimension are sufficient to obtain the measurement of the dimension.	1. You don't meet the criteria 2. Low level 3. Moderate level 4. High level	1. Items are not enough to measure the dimension 2. Items measure some aspect of the dimension but do not correspond to the total dimension 3. Some items must be increased in order to fully evaluate the dimension. 4. The items are enough

Objective of the research:

To assess the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024.

Objective of the expert judgment:

Validate the content of the Questionnaire for Students.

Objective of the Questionnaire for Students.:

To analyze the demographic characteristics of the students in order to gain a detailed understanding of the diversity of the group and its impact on the English language learning process.

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (From 1 to 4)
Demographic Characteristics	(González, 2023)	Age	(1) Age (14, 15, 16, Other)	4	4	4	4
		Gender	(2) Gender (Male, Female)	4	4	4	4
		community	(3) Which neighborhood or community do you live in?	4	4	4	4
			Commentary/alternative formulation				
Learning Information	(Snow, 2023)	Years studying English	(4). How many years have you been studying English?	4	4	4	4
	(Martinez, 2022)	Where they first learned English	(5) Where did you first learn English?	4	4	4	4
	(Anderson, 2023)	Weekly English class hours	(6) How many hours of English classes do you have per week at school?	4	4	4	4

	(Ministry of Education, 2023)	Access to resources outside school	(7) Do you have access to resources for learning English outside of school (books, internet, apps, etc.)?	4	4	4	4
	(Tucker, 2023)	Perceived English level	(8) How would you rate your English level?	4	4	4	4
			Commentary/alternative formulation				
Learning Style	(Jllilis, 2022)	Preferred learning style	(9). How do you prefer to learn English?	4	4	4	4
	(Tomlinson, 2023)	Group or individual activity preference	(10) Do you like learning English in group activities or do you prefer to work alone?	4	4	4	4
	(Sindhu, 2022)	Frequency of English practice outside school	(11) Do you practice English outside of school?	4	4	4	4
	(CAST, 2020)	Tools used to improve English outside school	(12) What tools do you use to improve your English outside of school?	4	4	4	4
			Commentary/alternative formulation				

Objective of the research:

To assess the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024.

Objective of the expert judgment:

Validate the content of the teacher Interview.

Objective of the Interview for the teacher.:

To evaluate the teachers' perceptions, strategies, and experiences regarding differentiated instruction, available resources, and student characteristics in the context of English language instruction.

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Sufficiency (From 1 to 4)
Teaching Strategies	(Tomlinson, 2023)	Diversity of levels	1. What specific methodologies do you use to address the diversity of English proficiency levels in the classroom?	4	4	4	4
			2. How do you implement strategies such as group work, collaborative learning, or individualized activities to tailor teaching to different levels of your students?	4	4	4	4
	(CAST, 2020)	Adaptation to learning stylees	3. How do you adapt teaching activities to different learning styles (visual, auditory, kinesthetic, etc.)?	4	4	4	4
			4. Do you use multisensory activities or alternative approaches to make	4	4	4	N

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (from 1 to 4)	Proficiency (from 1 to 4)
			content accessible to all students?				
	(Jillis, 2022)	Application of the curriculum	5. How do you follow the guidelines of the national curriculum while adapting instruction for students with different paces and learning levels?	4	4	4	4
			6. Do you think the current curriculum offers enough flexibility to apply differentiated instruction effectively?	4	4	4	4
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (from 1 to 4)	Proficiency (from 1 to 4)
Resources and materials	(Ministry of Education, 2023)	Available resources	7. Do you have sufficient teaching resources (books, audiovisual materials, technologies, etc.) to apply differentiated instruction?	4	4	4	4
			8. Does the school provide you with access to digital platforms or technological tools that facilitate the teaching of English?	4	4	4	4
	(Tomlinson, 2023)	Use of materials	9. What types of materials do you use (texts, videos, apps, interactive games) to address the different needs and levels of students?	4	4	4	4
			10. Do you develop or adapt your own	4	4	4	4

			teaching materials to ensure that students with specific difficulties can participate fully in the activities?				
(Prodigy, 2023)	Creativity in the use of resources	11. Given the context of limited resources, how have you innovated or created alternative solutions to meet the educational needs of your students?	4	4	4	4	
		12. Have you employed any teaching strategies using low-cost resources or recycled materials?	4	4	4	4	
		Commentary/alternative formulation					

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (From 1 to 4)
Challenges in teaching	(Martinez, 2022)	Main difficulties	13. What are the main challenges you face in teaching English in this context (diversity of levels, lack of resources, limited family support, etc.)?	4	4	4	4
			14. How does the socioeconomic situation of students impact their English learning?	4	4	4	4
	(González, 2023)	Handling of limitations	15. How do you manage infrastructure and resource constraints, such as a lack of technologies or adequate spaces for teaching?	4	4	4	4
			16. How do you collaborate with other teachers or the administration to	4	4	4	4

			overcome these obstacles?				
(Sindhu, 2022)	Implemented solutions	17. What solutions have you personally developed to overcome the aforementioned difficulties? Any examples that have been especially effective?	4	4	4	4
		Commentary/alternative formulation					

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Sufficiency (From 1 to 4)
Evaluations and monitoring of teaching	(ProQuest, n.d.)	Evaluation of the process	18. How do you assess your students' progress, considering their different levels of proficiency?	4	4	4	4
			19. What kind of formative assessments do you conduct to adjust teaching strategies according to student progress?	4	4	4	4
	(Vahey & Benedikt, 2022)	Individualized feedback	20. Do you offer individualized feedback to your students? How do you ensure that each student understands their areas of improvements and strengths?	4	4	4	4
			21. How does your feedback adapt to each student's	4	4	4	4

				Coherence	Clarity	Relevance	Sufficiency
			abilities and levels?				
	(Tucker, 2023)	Long-term follow-up	22. Do you follow up on students with greater difficulties in English on a long-term basis? How do you manage the cases of students who require constant support?	4	4	4	4
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Sufficiency (From 1 to 4)
Perception of students ' interest and motivation	(Sindhu, 2022)	Level of interest	23. How would you describe the overall level of student interest and motivation to learn English? Does it vary significantly between different groups or levels?	4	4	4	4
			24. What factors do you think influence student motivation (family environment, access to materials, future expectations, etc.)?	4	4	4	4
	(Prodigy, 2023)	Strategies to increase motivation	25. What strategies do you use to increase student motivation, especially those who struggle with the language?	4	4	4	4
			26. Any activities or approaches that have been particularly	4	4	4	4

			effective in keeping students engaged?					
(Carroll, 2022)	Personal experience of the teacher	27. From your experience, what techniques or approaches have been the most successful in capturing and maintaining students' interest in English, especially in contexts of limited resources?	4	4	4		4	
		28. How have you adjusted your teaching style over the years to meet the challenges of today's school context?	4		4	4		4
		Commentary/alternative formulation						

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Validation of the Questionnaire for Students

Authors:

Julia Susana Ortíz Avilés

Joseph Anthony García Blas

Eveling María Correa Rodríguez

September 2024

Admiro la calidad de su trabajo!

Expert Judgment

Respected Judge,

You have been selected to evaluate the instrument " Classroom Observation Guide " that is part of the research: "The Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in Reading Comprehension."

The evaluation of the instruments is of great relevance to ensure that they are valid and that the results obtained from them are used efficiently.

We appreciate your valuable cooperation.

NAMES AND SURNAMES OF THE JUDGE:
Francisco José Sánchez Quintero

ACADEMIC BACKGROUND:
Bachelor's degree

AREAS OF PROFESSIONAL EXPERTISE:
Research

TIME 5 years.

CURRENT POSITION
Teacher.

INSTITUTION
UNAN-Managua

Objective of the research:

To assess the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024.

Objective of the expert judgment:

Validate the content of this Observation Guide.

Objective of the Observation Guide.:

To evaluate the demographic and contextual characteristics of students, in addition to identifying difficulties and strengths in the implementation of differentiated instruction.

Dimension	Sources	Description	Items	Coherence (1 to 4)	Clarity (1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Classroom Infrastructure	(González, 2023)	Condition of desks	(1) The classroom has enough desks in good condition.	3	3	3	3
	(CAST, 2020)	Access to technological resources	(2) There is access to technological resources (computers, projectors, etc.).	4	4	4	4
	(Ministry of Education, 2023)	Condition of facilities	(3) The facilities (bathrooms, ventilation, lighting) are in good condition.	3	3	3	3
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (1 to 4)	Clarity (1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Teacher · Student Interacti	(Tomlinson, 2023)	Use of differentiated strategies	(4) The teacher uses differentiated strategies according to the level of comprehension of English.	4	4	4	4

	(Sindhu, 2022)	Adaptations to student levels	(5) Adaptations are made according to the levels of the students.	4	4	4	4
	(Tucker, 2023)	Management of diverse learning styles	(6) The teacher adequately manages the diversity of learning styles in the classroom.	4	4	4	4
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (1 to 4)	Clarity (1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Student engagement	(Prodigy, 2023)	Interest and motivation in activities	(7) Students show interest and motivation in activities.	4	4	4	4
	(Snow, 2023)	Differences in level of participation	(8) There are notable differences in the level of participation among students.	3	4	4	3
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (1 to 4)	Clarity (1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Teaching Materials	(Jillis, 2022)	Variety of teaching materials	(9) The teacher uses a variety of teaching materials to adapt to the needs of the students.	4	4	4	4
	(Anderson, 2023)	Use of visual, auditory, kinesthetic, or other resources	(10) Visual, auditory, kinesthetic, or other resources are used.	4	4	4	4
			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (1 to 4)	Clarity (1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Formative Assessment	(ProQuest, n.d.)	Continuous evaluation	(11) The teacher carries out continuous evaluations.	4	4	4	4

	(Vahey & Benedikt, 2022)	Individualized feedback	(12) The teacher provides individualized feedback.	4	4	4	4
	(Wilson, 2023)	Effectiveness of teacher-student interaction during evaluation	(13) Teacher-student interaction is effective at the time of evaluation	4	4	4	4
			Commentary/alternative formulation				

Objective of the research:

To assess the Influence of Differentiated Instruction on Meaningful Learning for Decoding Skills in English Reading Comprehension Among 10th Grade Students at Ulises Tapia Roa Public High School in the Second Semester of 2024.

Objective of the expert judgment:

Validate the content of the Student Focus Group Guide.

Objective of the Questionnaire for Students.:

To know the students' perceptions about their English learning, their experiences in the classroom, family support, and the difficulties they face.

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (From1 to 4)
Perception of learning English	(Snow, 2023)	Importance of English	1. How important do you think learning English is in your daily life? Do you see it as a useful tool for your future?	4	4	4	4
			2. How do you think English can help you in your studies, jobs or travels?	3	2	3	3
	(Tomlinson, 2023)	Motivation and demotivation	3. What motivates them most to learn English (classes, songs, movies, games, etc.)?	4	4	4	4
			4. What demotivates them in the learning process (difficulty of lessons, lack of time, etc.)?	4	4	4	3
	(Prodigy, 2023)	Class preferences	5. What parts of the English class do you like best (games, group exercises, videos, etc.)?	4	4	3	3

2 How do you think English could help you....

			6. What activity or type of lesson do you find most fun or interesting	2	2	3	3
	(Jillis, 2022)	Feelings in class	7. How do you feel in English classes? Do they like to participate, or do they prefer to remain silent? Why?	3	3	3	3
			8. Do you feel comfortable asking the teacher for help when they don't understand something?	4	3	4	4

Commentary/alternative formulation

6. Which activities do you find ... ?

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Learning difficulties	(Wilson, 2023)	Areas of difficulty	9. What aspects of English do they find most difficult (vocabulary, grammar, pronunciation, comprehension, etc.)?	4	4	4	4

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (From 1 to 4)
	(Martinez, 2022)	Access to out-of-school resources	10. What strategies do they use to overcome these difficulties (taking notes, asking for help, searching for online resources, etc.)?	4	4	4	4
			11. Do they have access to books, the internet, or apps to study English outside the classroom?	4	4	4	4
			12. Do they use these tools to practice English at home or in their free time?	4	4	4	4
			Commentary/alternative formulation				
Support at home	(Martinez, 2022)	Help from the family	13. Do they get help from their parents or siblings with English homework? How do you support them?	3	4	3	3

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (From 1 to 4)
			14. Do your parents know English or would you like them to know more to help you better?	3	4	3	3
	(Ministry of Education, 2023)	Access to materials	15. Do they have materials such as English books, dictionaries or internet access at home to do their homework?	3	4	3	3
			16. If they don't have access, how do they manage to complete their homework or study?	2	2	2	2
			Commentary/alternative formulation 16. Right now students have Internet in their cell phones.				

Dimension	Sources	Description	Items	Cohernce (From 1 to 4)	Clarity (From 1 to 4)	Relevance (1 to 4)	Proficiency (1 to 4)
Experience with differentiated instruction	(Tucker, 2023)	Adaptation of the lesson	17. Do you feel that the teacher adapts the lessons according to your levels of English comprehension? How does it do it?	4	4	4	4
			18. Does each student feel supported individually when something is difficult to understand?	3	3	3	3
	(Sindh, 2022)	Usefulness of the activities	19. Do you find the activities carried out in class useful and entertaining? What activities do you enjoy the most and why?	4	4	4	4
			20. Do you think the activities are helping to improve your understanding of English?	4	4	4	4

			Commentary/alternative formulation				

Dimension	Sources	Description	Items	Coherence (From 1 to 4)	Clarity (From 1 to 4)	Relevance (From 1 to 4)	Proficiency (0From 1 to 4)
Proposals for improvement	(Tomlinson, 2023)	Improvements in Teaching	21. If you could change something in the English class, what would you change (teaching methods, type of activities, class length, etc.)?	3	3	3	3
			22. What do you think would help them learn better and have more fun in English classes?	3	3	3	3
	(CAST, 2020)	Preferred materials and methods	23. Do you prefer to learn English using videos, games, group activities, written	4	4	4	4

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English Major

The Influence of Differentiated Instruction on Meaningful Learning for decoding Skills in Reading Comprehension Among 10th Grade EFL Students at Ulises Tapia Roa Public High School during the Second Semester of 2024.

Authors:

Julia Susana Ortiz Avilés

Joseph Anthony García Blas

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Eveling María Correa Rodríguez

Advisor:

M.A. Roberto Carlos Villarreal Martínez

September 2024

Questionnaire for students

From the student's perspective.

Objective: To analyze the demographic characteristics of students to gain a detailed understanding of the diversity of the group and its impact on the English language learning process.

Instructions: Please answer the following questions honestly with a (✔) All information provided will be kept confidential.

Part 1: Demographic Characteristics

1. Age:
   a) 14 years _____
   b) 15 years _____
   c) 16 years _____
   d) Other (specify): ____

2. Gender:
   a) Male _____
   (b) Female _____

3. What neighborhood or community do you live in?

   (Specify): _____

Part 2: Information on learning English.

4. How long have you been studying English?
   a) Less than 1-year _____
   b) 1-2 years _____
   c) 3-4 years _____
   d) More than 4 years _____

5. Where did you first learn English?

   a) At school _____

   b) In a private course _____

   c) At home (with family or personal resources) ___

   d) Other (specify): _____

6. How many hours of English classes do you have per week at the school?

   a) Less than 1-hour _____

   b) 2 hours_____

   c) 3 hours_____

   d) More than 3 hours_____

7. Do you have access to resources for learning English outside of school (books, internet, apps, etc.)?

   a) Yes _____

   b) No_____

8. How would you rate your level of English?

   a) Beginner _____

   b) Intermediate_____

   c) Advanced_____

Part 3: Learning Style

9. How do you prefer to learn English?

   a) Listening and speaking (audios, dialogues, etc.) ___

   b) Reading and writing (texts, books, written activities) ____

   c) Through games or interactive activities ____

   d) Other (specify): _____

10. Do you like learning English with group activities, or do you prefer to work alone?

   a) In group_____

   b) alone_____

   c) I like both_____

11. Do you practice English outside the classroom?

  a) Yes, frequently _____

  b) Sometimes_____

  c) Rarely_____

  d) Never_____

12. What tools do you use to improve your English outside the classroom?

  a) Internet (YouTube, apps, etc.) _____

  b) Books or study guides_____

  (c) Television programmers or movies films in English _____

  d) I do not use any tools_____

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Advisor:

M.A. Roberto Carlos Villarreal Martínez

September 2024

Checklist: Classroom Observation Guide

From researchers' perspective,

Objective: To evaluate the demographic and contextual characteristics of students, in addition to identifying difficulties and strengths in the implementation of differentiated instruction.

Classroom infrastructure and resources:

Item	Yes	No	Remarks
1. The classroom has enough desks in good condition.			
2. There is access to technological resources (computers, projectors, etc.).			
3. The facilities (bathrooms, ventilation, lighting) are in good condition.			

Interaction of the teacher with the students:

Item	Yes	No	Remarks
4. The teacher uses differentiated strategies according to the level of comprehension of English.			
5. Adaptations are made according to the levels of the students.			
6. The teacher adequately manages the diversity of learning styles in the classroom.			

Student Engagement:

Item	Yes	No	Remarks
7. Students show interest and motivation in activities.			
8. There are notable differences in the level of participation among students.			

Materials used in teaching:

Item	Yes	No	Remarks
9. The teacher uses a variety of teaching materials to adapt to the needs of the students.			
10. Visual, auditory, kinesthetic, or other resources are used.			

Formative assessment:

Item	Yes	No	Remarks
11. The teacher carries out continuous evaluations.			
12. The teacher provides individualized feedback.			
13. Teacher-student interaction is effective at the time of evaluation.			

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Advisor:

M.A. Roberto Carlos Villarreal Martínez

September 2024

Extended Teacher Interview Guide

Objective: To evaluate the teachers' perceptions, strategies, and experiences regarding differentiated instruction, available resources, and student characteristics in the context of English language instruction.

1. Teaching strategies:

1.1. **Diversity of levels:**

- What specific methodologies do you use to address the diversity of English proficiency levels in the classroom?
- How do you implement strategies such as group work, collaborative learning, or individualized activities to tailor teaching to diverse levels of your students?

1.2. **Adaptation to learning styles:**

- How do you adapt teaching activities to different learning styles (visual, auditory, kinesthetic, etc.)?
- Do you use multisensory activities or alternative methods to make content accessible to all students?

1.3. **Application of the curriculum:**

- How do you follow the guidelines of the national curriculum while adapting instruction for students with different paces and learning levels?
- Do you think the current curriculum offers enough flexibility to apply differentiated instruction effectively?

2. Resources and materials:

2.1. **Available resources:**

- Do you have sufficient teaching resources (books, audiovisual materials, technologies, etc.) to apply differentiated instruction?
- Does the school provide you with access to digital platforms or technological tools that facilitate the teaching of English?

2.2. **Use of materials:**

- What types of materials do you use (texts, videos, apps, interactive games) to address the diverse needs and levels of students?
- Do you develop or adapt your own teaching materials to ensure that students with specific difficulties can participate fully in the activities?

2.3. **Creativity in the use of resources:**

- Given the context of limited resources, how have you innovated or created alternative solutions to meet the educational needs of your students?
- Have you employed any teaching strategies using low-cost resources or recycled materials?

3. Challenges in teaching:

3.1. **Main difficulties:**

- What are the main challenges you face in teaching English in this context (diversity of levels, lack of resources, limited family support, etc.)?
- How does the socioeconomic situation of students impact their English learning?

3.2. **Handling of limitations:**

- How do you manage infrastructure and resource constraints, such as a lack of technologies or adequate spaces for teaching?

- How do you collaborate with other teachers or the administration to overcome these obstacles?

3.3. **Implemented solutions:**

- What solutions have you personally developed to overcome the difficulties? Any examples that have been especially effective?

4. Evaluation and monitoring of learning:

4.1. **Evaluation of progress:**

- How do you assess your students' progress, considering their different levels of proficiency?
- What kind of formative assessments do you conduct to adjust teaching strategies according to student progress?

4.2. **Individualized feedback:**

- Do you offer individualized feedback to your students? How do you ensure that each student understands their areas of improvement and strengths?
- How does your feedback adapt to each student's abilities and levels?

4.3. **Long-term follow-up:**

- Do you follow up on students with greater difficulties in English on a long-term basis? How do you manage the cases of students who require constant support?

5. Perception of students' interest and motivation:

5.1. **Level of interest:**

- How would you describe the overall level of student interest and motivation to learn English? Does it vary significantly between different groups or levels?
- What factors do you think influence student motivation (family environment, access to materials, future expectations, etc.)?

5.2. **Strategies to increase motivation:**

- What strategies do you use to increase student motivation, especially those who struggle with the language?
- Any activities or methods that have been particularly effective in keeping students engaged?

5.3. **Personal experience of the teacher:**

- From your experience, what techniques or methods have been the most successful in capturing and maintaining students' interest in English, especially in contexts of limited resources?
- How have you adjusted your teaching style over the years to meet the challenges of today's school context?

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Área de Conocimiento de Educación, Artes y Humanidades

Department of Foreign Languages

English Major

The Influence of Differentiated Instruction on Meaningful Learning for decoding Skills in Reading Comprehension Among 10th Grade EFL Students at Ulises Tapia Roa Public High School during the Second Semester of 2024.

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M.A. Roberto Carlos Villarreal Martínez

September 2024

Extended Student Focus Group Guide

Objective: To know the students' perceptions about their English learning, their experiences in the classroom, family support, and the difficulties they face.

1. Perception of learning English:

1.1. **Importance of English:**

- How important do you think learning English is in your daily life? Do you see it as a useful tool for your future?

- How do you think English could help you in your studies, jobs, or travels?

1.2. **Motivation and demotivation:**

- What motivates them most to learn English (classes, songs, movies, games, etc.)?

- What demotivates them in the learning process (difficulty of lessons, lack of time, etc.)?

1.3. **Class preferences:**

- What parts of the English class do you like best (games, group exercises, videos, etc.)?

- Which activities do you find most fun or interesting?

1.4. **Feelings in class:**

- How do you feel in English classes? Do you like to participate, or do you prefer to remain silent? Why?

- Do you feel comfortable asking the teacher for help when you do not understand something?

2. Learning difficulties:

2.1. **Areas of difficulty:**

- What aspects of English do they find most difficult (vocabulary, grammar, pronunciation, comprehension, etc.)?

- What strategies do they use to overcome these difficulties (taking notes, asking for help, searching for online resources, etc.)?

2.2. **Access to out-of-school resources:**

- Do they have access to books, the internet, or apps to study English outside the classroom?

- Do they use these tools to practice English at home or in their free time?

3. Support at home:

3.1. **Help from the family:**

- Do they get help from their parents or siblings with English homework? How do you support them?
- Do your parents know English, or would you like them to know more to help you better?

3.2. **Access to materials:**

- Do they have materials such as English books, dictionaries, or internet access at home to do their homework?
- If you do not have access, how do you manage to complete their homework or study?

4. Experience with differentiated instruction:

4.1. **Adaptation of the lessons:**

- Do you feel that the teacher adapts the lessons according to your levels of English comprehension? How does it do it?
- Does each student feel supported individually when something is difficult to understand?

4.2. **Usefulness of the activities:**

- Do you find the activities carried out in class useful and entertaining? What activities do you enjoy the most and why?
- Do you think the activities are helping to improve your understanding of English?

5. Proposals for improvement:

5.1. **Improvements in teaching:**

- If you could change something in the English class, what would you change (teaching methods, type of activities, class length, etc.)?
- What do you think would help them learn better and have more fun in English classes?

5.2. **Preferred materials and methods:**

- Do you prefer to learn English using videos, games, group activities, written exercises, or technology?
- What tools or resources would you like to see used more in class (computers, songs, movies, interactive books, etc.)?

Evaluation of Decoding Skills: Pre-Test and Post-Test Assessment

DIFFERENTIATED INSTRUCTION TO FOSTER MEANINGFUL LEARNING

UNIVERSIDAD NACIONAL AUTONOMA DE NICARAGUA

UNAN-MANAGUA

UNIVERSIDAD NACIONAL AUTÓNOMA DE NICARAGUA, MANAGUA

UNAN-MANAGUA

Instrument's Validation

The expert jury for the validation of the following instrument, the Pre-test and post-test of Decoding Skills in Reading Comprehension, is Xiomara Ruiz, a licensed English teacher at the Instituto Nacional de Nindiri Ulises Tapia Roa.

Date: October 24th, 2024

Lic. Xiomara Rivera Ruiz.

TEST SPECIFICATION

1.Type of Test: Pre-test and post-test designed to assess students' decoding skills within reading comprehension.

2. Purpose:

The purpose of these pre-test and post-test is to evaluate students' **decoding skills** in reading comprehension at the A2 level. These tests focus on assessing students' ability to recognize words, understand basic sentence structures, and match words and pictures based on literal meaning.

3. Objectives:

- The student will decode sentences by matching them with the correct corresponding descriptions to demonstrate their understanding of word meaning and sentence structure.

- The student will identify sentences that match pictures based on sentence structure and meaning.

- The student will complete sentences with missing words to show their understanding of phonics and decoding.

- The student will decode visual information from a picture using True and False.

4. Target Learners:

These tests are designed for 10th-grade students at A2-level proficiency. The tests focus on decoding skills required for early stages of reading comprehension. The students' ages range from 15 to 17 years.

5. Background Information:

Students have been exposed to English language learning through the curriculum provided by the National Institute Ulises Tapia Roa. They have completed relevant units and lessons focusing on relevant topics, providing them with the necessary background knowledge to comprehend the test.

6. Sections of Test:

Section 1: Focuses on decoding skills by matching sentences with their meanings, allowing students to demonstrate their ability to understand word meanings in context.

Section 2: Tests students' ability to decode meaning from sentences and select the picture that accurately represents the sentence.

Section 3: Focuses on recognizing and understanding vocabulary related to natural disasters, where students choose the correct word to complete each sentence.

Section 4: Challenges students to decode visual information by analyzing a picture and determining whether sentences describing the picture are true or false.

Content of the Test

Pre-Test Post-Test	Sections		Item Description	Time Per item	N° of Sub-item	Points per Sub-item	Points Per Item
Reading Comprehension Decoding skills	I.	**Matching**	Match sentences in **Column A** with their corresponding meanings in **Column B.**	10 min	5	5	25
	II.	**Multiple choice Question** Decoding and visual comprehension	Read the sentences and select the picture that best represents each sentence.	10 min	4	5	20
	III.	**Fill in the blank.** Decoding specific words	Complete the sentence by choosing the correct word from the box.	12 min	5	5	25
	IV.	**True / False** Decoding meaning through Picture cued	Analyze a picture and write T for true or F for false based on the sentences provided.	13 min	6	5	30
Total							**100**
Total Time: 45 minutes	**Passing Score**: 60+ points			**Failing Score**: Below 60 points			

Pre-Test: Decoding Skills - A2 Level

Instituto Nacional de Nindiri Ulises Tapia Roa

10th grade, afternoon shift

Name: _____ **Date:** _____ **Score:** _____/100

Section 1: Matching (Decoding and Word Recognition) – 30 points

Instruction: *Read the sentences in **Column A** and match each one to the correct corresponding sentence in **Column B** by writing the letter next to the number.*

Column A	**Column B**
_____ 1. The cat is sleeping on the couch.	a) The weather is nice and warm.
_____ 2. Maria likes to play soccer after school.	b) The students are listening carefully.
_____ 3. The sun is shining brightly today.	c) It is a fun game to play with friends.
_____ 4. They are having a picnic in the park.	d) The picnic has sandwiches and juice.
_____ 5. The teacher is reading a book to the class.	e) The cat is comfortable and relaxed.

Correct Answers:

1. The cat is sleeping on the couch. → e) The cat is comfortable and relaxed.

2. Maria likes to play soccer after school. → c) It is a fun game to play with friends.

3. The sun is shining brightly today. → a) The weather is nice and warm.

4. They are having a picnic in the park. → d) The picnic has sandwiches and juice.

5. The teacher is reading a book to the class. → b) The students are listening carefully.

Section 2: Sentence-Picture (Multiple Choice Question) – 24 points

Instruction: *Read the sentences and choose the picture that best represents the sentence. Circle the correct letter.*

1. The children are playing soccer in the park.

Correct Answer: B

2. The man is cooking rice and beans in the kitchen.

 Correct Answer: A

3. The family is walking on the beach.

Correct Answer: D

4. The girl is reading a book at the library.

Correct Answer: C

Section 3: Fill in the Blank (Decoding Words) - 25 points.

Instruction: *Complete the sentence by choosing the correct word from the box.*

Earthquake   Hurricane   eruption   tsunami   drought

1. The region experienced a long _____, causing crops to dry out and water levels to drop.
2. The _____ brought strong winds and heavy rain, leaving the city without power for days.
3. The volcanic _____ spread ash and lava across the land, forcing people to evacuate.
4. After the underwater earthquake, a massive _____ flooded the coastal villages.
5. The _____ caused the ground to shake, and many buildings were damaged.

Correct Answer: 1. Drought   2. Hurricane   3. Eruption   4. Tsunami   5. Earthquake

Section 4: Picture cued (Decoding) - 21 points.

Instruction: *Look at the picture carefully, then read the sentences below and write **T** for true or **F** for false based on what you see in the picture.*

1. There are two cats in the window. _____

2. The lamp is behind the man. _____

3. The man is eating the pizza right now. _____

4. The coffee is under the table. _____

5. A cat is sleeping next to the man. _____

6. The person wears glasses to read the book. _____

Correct Answer:

1. F

2. T

3. F

4. F

5. T

6. T

Post-Test: Decoding Skills - A2 Level

Instituto Nacional de Nindiri Ulises Tapia Roa

10th grade, afternoon shift

Name: _____ **Date:** _____ **Score:** ____/100

Section 1: Matching (Decoding and Word Recognition) – 30 points

Instruction: *Read the sentences in **Column A** and match each one to the correct corresponding sentence in **Column B** by writing the letter next to the number.*

Column A	**Column B**
____ 6. The meeting is on 15th October.	a) The bus comes at eight in the morning.
____ 7. The clock is ticking on the wall.	b) The meeting is on the fifteenth of October.
____ 8. The pizza is in the oven.	c) The baby is upset.
____ 9. The baby is crying loudly.	d) You can hear the sound of the clock.
____ 10. The bus arrives at 8 o'clock.	e) It is getting hot and ready to eat.

Correct Answers:

1. The meeting is on 15th October → b) The meeting is on the fifteenth of October.

2. The clock is ticking on the wall. → d) You can hear the sound of the clock.

3. The pizza is in the oven. → e) It is getting hot and ready to eat.

4. The baby is crying loudly. → c) The picnic baby is upset.

5. The bus arrives at 8 o'clock. → a) The bus comes at eight in the morning.

Section 2: Sentence-Picture (Multiple Choice Question) – 24 points

Instruction: *Read the sentences and choose the picture that best represents the sentence. Circle the correct letter.*

1. The girl is reading a book under a tree.

Correct Answer: B

2. The man is fixing the car in the garage.

Correct Answer: A

3. The children are swimming in the pool.

Correct Answer: D

4. The dog is sleeping on the sofa.

Correct Answer: C

Section 3: Fill in the Blank (Decoding Words) - 25 points.

Instruction: *Complete the sentence by choosing the correct word from the box.*

Earthquake   Hurricane   eruption   tsunami   drought

1. The region experienced a long _____, causing crops to dry out and water levels to drop.
2. The _____ brought strong winds and heavy rain, leaving the city without power for days.
3. The volcanic _____ spread ash and lava across the land, forcing people to evacuate.
4. After the underwater earthquake, a massive _____ flooded the coastal villages.
5. The _____ caused the ground to shake, and many buildings were damaged.

Correct Answer: 1. Drought   2. Hurricane   3. Eruption   4. Tsunami   5. Earthquake

Section 4: Picture cued (Decoding) - 21 points.

Instruction: *Look at the picture carefully, then read the sentences below and write **T** for true or **F** for false based on what you see in the picture.*

1. The girl is sitting on a bed. _____

2. There are two birds outside the window. _____

3. The cat is sleeping on the floor. _____

4. There is a painting of a cat on the wall. _____

5. The season is not autumn. _____

6. There is a plant on a table next to the bed. _____

Correct Answer:

1. T

2. F

3. F

4. T

5. F

6. T

Authorization Letter for the Application of Research Instruments

Universidad Nacional Autónoma de Nicaragua
Recinto Universitario Rubén Darío
Departamento de Inglés
Solicitud de Permiso para Observación de Clases de Inglés

Managua, 1 octubre 2024.

Lic.: María Lourdes Sánchez.
Delegada MINED Nindiri.

Su Despacho.

Por medio de la presente, nos dirigimos a usted con el objetivo de solicitar su permiso para que los estudiantes **Joseph Anthony García Blass**, cédula N.° 401-080902-1004F, **Julia Susana Ortiz Avilés**, cédula N.° 001-241103-1000M y **Eveling María Correa Rodríguez**, cédula N.° 201300602100B pertenecientes al V año de la carrera de Inglés en turno matutino de la UNAN Managua, con el propósito de realizar observaciones en las clases de inglés que se imparten en el instituto publico Ulises Tapia Roa.

Estos estudiantes se encuentran en la fase de modalidad de graduación, para lo cual necesitan desarrollar una propuesta de aplicación metodológica. Con el fin de ajustar dicha propuesta a las particularidades de los estudiantes, es fundamental que puedan observar el entorno académico y pedagógico de su institución. Como parte del proceso, se requiere que visiten escuelas secundarias públicas para realizar estas observaciones, las cuales les permitirán orientar sus esfuerzos en función del contexto educativo y así aplicar el método de enseñanza diferenciada en el aprendizaje del inglés como lengua extranjera.

Los estudiantes se presentarán con una guía de trabajo e identificación universitaria (carné) una vez que usted autorice el permiso. Las visitas a su centro estarán enfocadas en la recolección de información mediante la aplicación de instrumentos específicos.

Agradecemos de antemano su apoyo en esta gestión, ya que la observación y las entrevistas con los docentes de inglés serán de gran ayuda para la preparación de los estudiantes en sus prácticas de profesionalización.

Quedamos a su disposición para cualquier consulta adicional. Puede contactarnos para obtener más información relacionada con este proceso.

Sin más por el momento, le reiteramos nuestro agradecimiento por su colaboración.

Atentamente,

MSc. Sandra del Carmen Ríos Sotelo
Jefa de Departamento De Inglés
Dirección De Educación, Arte y Humanidades.
UNAN-MANAGUA
22786769 ext.5154

MSc. Roberto Carlo Villareal
Docente de Semanario, Departamento De Inglés
Dirección De Educación, Arte Y Humanidades.
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Cc.: Lic.: Javier Alexander Ramirez Ceda /Director del instituto publico Ulises Tapia Roa.
Archivo.

Images of the Ulises Tapia Roa National High School

10th grade students – Pre-test application

Lesson planning logs

Formative assessment:
Values active participation, inputs
for the class and association.

Development activities
As a class, creates an itinerary under the
assumption that s/he is traveling to Montelimar
beach.
Ends up listing some other activities to
do (as part of the itinerary) until coming back
to Nindiri.

Formative assessment:
Checks coherency, fluency and grammar.

Differentiated activities:
Organizes the ideas in the correct order:
* We will eat rosquillas * We will leave at 6 am
on Sat morning. * We will go kayaking. We will arrive
to Nindiri at 6pm * We will travel to Somoto Canyon,
* We will eat lunch at 12:30pm * We will go by a car.

Closing activities
Hands the task in his/her notebook
Volunteers to share his/her task orally.

Formative assessment.
Verifies assertiveness, pronunciation
and grammar as well.

Homework: —

My reflections on the lesson:

① Development activities:
In pairs, priorly organized:
Presents the conversation about Making
a reservation, he/she created.
Formative assessment.
Verifies fulfillment, appropriate
grammar and language usage and
originality.

② Differentiated activities:
Matches each question to the correct
answer:

① Would you like to reserve a table   ⓐ would like to
② How many people would you like to   reserve a table for
reserve it? ③ When would you like the   2 people.
reservation for.   ⓑ I would like
                                         it for next Sat.
                                         7pm. ⓒ. Yes,
                                         I would. ~~like to~~

Closing activities
Hands the task in his/her notebook
Formative assessment.
Values assertiveness and fulfillment

Homework.

My reflections on the lesson:
10/4 I will finish it on next day. Sept. 23rd.

for the environment? How?

Formative assessment

Values spelling, vocabulary range.

Development activities:
- Completes the schemme about Environment.
- Classifies each practice into beneficial or destructive.
- Reads and analyze a sample dialogue then identifies cause + effect idea.

Differentiated activities:
Completes the ideas

1. if you burn your trash, —————————— .
2. if you plant trees, —————————— .

Closing activities:
Looks at the picture and says if the practices on them are beneficial or destructive.

Formative assessment.
Checks coherency, grammar, spelling

Homework:

My reflections on the lesson:

on.

Formative assessment:
Values participation and quality of inputs.

Development activities:
Based on Mundo Mundo game, joins into teams of 4/5 integrants.
Reads the information provided by the teacher.
Identifies and describes in a graphic different strategies to preserve the common good of Earth and humanity.

Formative assessment:
Checks team work, collaborative work, clearness and coherency.

Differentiated activities:
Thinks of at least 3 strategies to preserve the common good of Earth and humanity and illustrates them.

Closing activities:
Shares his/her team's task with the class.

Homework:

My reflection on the lesson:
10th didn't take bc. of a meeting

the environment.
○ Formative assessment:
Values grammar accuracy and vocabulary range.

② Development activities
Based on geometrical figures, join into teams of four: 2 miners, 1 artist, 1 secretary.
Plays the secretary activity.

Formative assessment.
Checks teamwork, fulfillment spelling and aesthetics.
② Differentiated activities
Illustrates the environment in your community (neighborhood.).
Closing activities
Hands the final task in his/her notebook.

Formative assessment: monitoring,
Verifies creativity, aesthetic.

Homework:

My reflections on the lesson.

① Development activities
Shares what natural disasters are
for him/her: ① extreme sudden events caused
by environmental factors.
②. A natural event that causes great damage or loss of life.
Writes the names of diff. nat. disasters
shown in the video.
Thinks of any nat. disaster she/he has
experienced or known about and describes it.
Formative assessment.
Verifies accuracy, spelling and grammar.
① Differentiated activities:
Matches each nat. disaster to the correct
definition.
1. A storm with a violent   — a) hurricane.
wind, in particular a tropical   — b) mudslide.
cyclone in the Caribbean.   — c) tornado.
2. A mass of mud and other
earthy material that is floating
or has fallen down a hillside or other slope.
Closing activities:
Volunteers and shares his/her description of
a natural disaster orally and loudly.
Formative assessment:
Values right guesses
Homework:
My reflections on the lesson:

Development activities:
Writes down the information provided by the teacher.
Through the "mando mando" game, joins into threes.
Writes the correct name for each disaster described.
Labels the pictures.
Completes the ideas.
Formative assessment
Verifies spelling accuracy and reading comprehension skill.
Differentiated activities:
Forms as many nouns of nat. disasters as possible by combining letters from the grids.

B	K	E	D	I
N	6	L	W	R
T	O	C	A	M
U	Q	H	F	S

hailstorm,

Closing activities
Randomly, reads his/her answers aloud.
Formative assessment:
Checks pronunciation, spelling

Homework:
My reflections on the lesson:

Formative assessment: Verifies accuracy.
   (2) Development activities:
    In groups, priorly organized, presents
his/her task.
   What to do before, during and after
a natural disaster of his/her choice.
   Formative assessment:
   Values mutual respect and empathy.
   Differentiated activities:
   Put each action in the correct place.
   Before.   During   After.

Closing activities
   Shares what to do before and earthquake
orally by volunteering.
   Formative assessment:
   Checks accuracy and vocabulary range.

Homework:

My reflections on the lesson:

Formative assessment:
Values inputs and accuracy and pronunciation.

① Development activities
Creates a mindmap about what an emergency is, characteristics, types, phases and key elements in response.
Formative assessment:
Checks creativity, range of vocabulary and relevant information.

② Differentiated activities
Organizes the info provided by the teacher.

Closing activities
Hands the task in a separate sheet of paper.
Formative assessment
Checks spelling and accuracy

Homework:

My reflection on the lesson:

1 Development activities:
- Writes down the activities proposed on the worksheet.
- Solves each activity in his/her note-book.

Formative assessment.
Verifies accuracy, spelling
2. Differentiated activities:
Writes at least 6 types of natural disasters -
Closing activities:
Shares his/her task orally first in a random way. Then presents the task in h/her notebook.
Formative assessment.
Checks spelling, fulfillment and pronunciation.

Homework:

My reflections on the lesson:

Development activities:
Joins into teams of 5 integrants
Prepares an oral presentation about
a Natural disaster of his/her choice, focused
on what to do before, during and
after it.
Formative assessment
Applies team more - relevant info
and vocabulary range.

✿. Differentiated activities
Illustrates him/herself during a
natural disaster s/he has experienced
Closing activities:
Hands the draft of his/her team
in his/her notebook.
Formative assessment
Checks spelling, grammar and
coherence.

Homework:

My reflections on the lesson:

Formative assessment
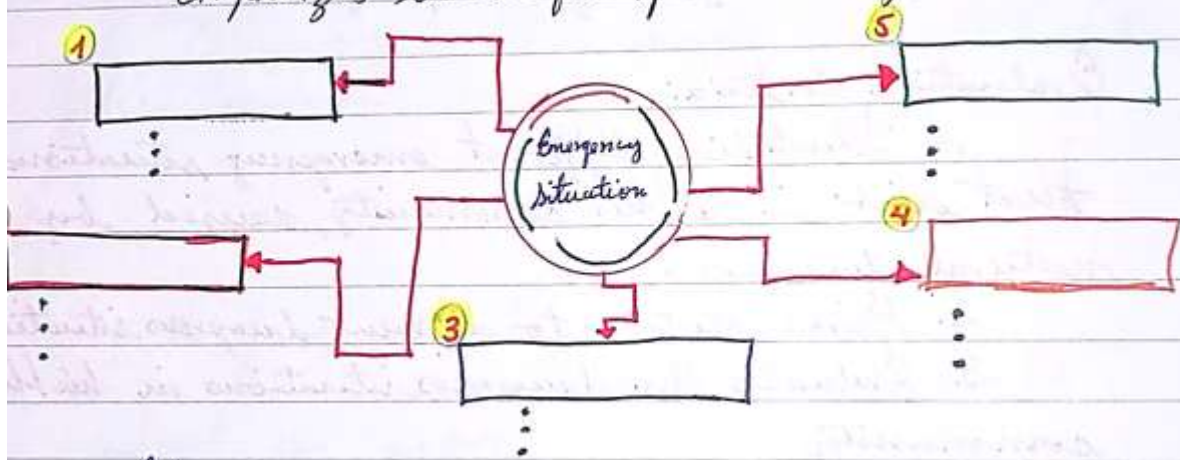Values inputs, accuracy and pronunciation.
   Development activities:
. Creates a mind map about what emer-
genup is, types, characteristics, types, phases and
key elements in response.
   Formative assessment:
Checks creativity, range of vocabulary
relevant information.
   Differentiated activities:
Organizes the info provided by the teacher.

Closing activities
   Presents the task in ~~his~~ a separate
sheet of paper.
   Formative assessment:
Verifies spelling, relevant info and
range of vocabulary.
   Homework:
My reflections on the lesson.

10th grade students – Post-test application

10th grade students from the Ulises Tapia Roa High School