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Design of a Personalized Pedagogical Strategy to Enhance English Competencies in Middle School Students

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Summary

The teaching of English as a second language in rural contexts continues to face structural, pedagogical and contextual limitations that make it difficult for students to achieve acceptable levels of communicative competence. This research aimed to design, implement and evaluate a didactic model aimed at strengthening the English competencies of tenth grade students from official educational institutions located in the department of Córdoba, Colombia, considering their predominant learning styles. The study was developed under the pragmatic paradigm, with a mixed approach and concurrent triangulation design, including diagnostic tests, interviews, surveys and documentary review as data collection techniques. The sample was made up of 50 tenth grade students. The results showed that the incorporation of differentiated pedagogical strategies according to learning styles – active, reflective, visual, verbal, sequential and global – has a favorable impact on the development of linguistic, pragmatic and sociolinguistic competences in English. In addition, significant transformations were identified in the attitude towards learning, participation in class and the perception of the area as useful and achievable. The proposed model is emerging as an adaptable, validated, and relevant tool for improving the teaching of English in rural school settings, with the potential to be replicated in other regions of the country that face similar challenges.

Keywords: Learning styles; English competencies; didactic model.

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Introduction Learning English as a second language has been one of the priority commitments of the Colombian education system, framed in public policies that seek to strengthen the communicative skills of students from basic to secondary education. However, various studies and institutional reports have shown

that, in rural contexts, levels of proficiency in English remain low, as a result of multiple factors that include limitations in infrastructure, little specialized teacher training, low exposure to the language, and poorly contextualized teaching methodologies (MEN, 2020).

In particular, the Department of Córdoba presents a significant gap between the curricular purposes of the English area and the actual achievements obtained by students in internal and external tests. This situation is exacerbated in rural educational institutions, where access to teaching materials, technological tools, and foreign language immersion environments is limited, which has a negative impact on motivation, language appropriation, and learning continuity.

Among the causes associated with low performance in English, it has been identified that one of the main limitations lies in the use of homogeneous pedagogical approaches that do not consider the diversity of students' learning styles. This situation generates a disconnect between the teaching strategies used by teachers and the actual ways in which students construct, process, and apply knowledge. In this way, the school experience becomes a demotivating, ineffective and highly unequal practice.

Faced with this panorama, there is a need to design didactic models that recognize the cognitive heterogeneity of students and articulate differentiated pedagogical strategies with the communicative purposes of learning English. In this sense, **learning styles** are a key pedagogical variable, since they allow us to characterize the preferential ways in which students receive, interpret and retain information. According to Felder and Silverman (1988), these styles include dimensions such as active-reflective, visual-verbal, and sequential-global, among others, which have a direct impact on the way in which content is processed and learning is achieved.

Understanding these styles not only provides valuable information for planning more effective teaching activities, but also contributes to the design of more inclusive, personalized, and motivating classroom experiences, especially in contexts where cognitive diversity often goes unnoticed. Various studies have shown that when pedagogical strategies are adapted to the predominant learning styles, active student participation is increased, the understanding of complex content is facilitated, and academic performance is improved (Maldonado & Pérez, 2019; Chacón, 2021).

Under these premises, this research proposed to design and implement a **didactic model based on learning styles**, with the aim of enhancing the development of English competencies in tenth grade students of rural educational institutions in the department of Córdoba. The study's commitment is that a pedagogical intervention oriented from the principles of differentiated learning can offer concrete and viable responses to improve English performance, overcome resistance to language learning and contribute to closing the historical educational gaps that affect rural communities.

Theoretical foundation

The design of a didactic model focused on learning styles is based on the recognition that each student has a particular way of perceiving, processing and organizing information, which has a direct impact on their academic performance. In this sense, the notion **of learning styles** has been defined by authors such as Felder and Silverman (1988) as consistent patterns of cognitive, affective, and physiological behavior that act as relatively stable indicators of how individuals interact with the educational environment.

From this approach, it is understood that students can be classified according to various dimensions, such as:

- **Active vs. reflective**: those who prefer to learn by confronting those who need to observe, think or analyze before acting.
- **Visual vs. verbal**: those who retain information better through images and diagrams, compared to those who do so through oral or written language.
- **Sequential vs. global**: those who process knowledge in linear steps versus those who understand the whole before the parts.

These styles are not exclusive or static, but they do allow us to identify dominant preferences that should be considered when designing learning experiences. In particular, in the context of English language teaching, recognizing learning styles allows diversifying **the means of presentation, practice and evaluation**, facilitating the development of competencies in students who might otherwise be excluded from traditional processes.

The importance of this perspective becomes more relevant when it relates to the **development of foreign language skills**, especially in English. According to the Common European Framework of Reference for Languages (Council of Europe, 2001), these competences are grouped into three components:

1. **Linguistic**: mastery of vocabulary, grammatical structures and rules of use.
2. **Pragmatic**: ability to use language in a way that is appropriate to communicative contexts.
3. **Sociolinguistic**: knowledge of the cultural and social norms that regulate interaction.

These components require not only explicit instruction, but also varied and personalized opportunities for practice and application, which makes it essential to design pedagogical strategies adjusted to students' learning styles.

Various studies have documented the relationship between learning styles and teaching English as a foreign language. Chacón (2021) points out that students with a reflective style benefit more from strategies such as readings, written exercises, and structural analysis, while active students require cooperative tasks, role-plays, and dynamic oral activities. Likewise, visuals show greater progress when they access concept maps, subtitled videos and graphic organizers, while verbal ones perform better in conversation, writing and intensive reading tasks.

This type of finding has been taken up by **differentiated pedagogical** approaches, which promote diversity-sensitive teaching, which adjusts content, processes, and learning products to the individual characteristics of the student (Tomlinson, 2001). The application of these principles is not only consistent with equity, but represents an effective pedagogical pathway to improve academic performance in critical areas such as English, particularly in rural populations where gaps in access, exposure to the language, and previous training are significant.

From this perspective, the didactic model proposed in this research integrates the diagnosis of learning styles with the design of differentiated pedagogical strategies, aimed at the balanced development of the linguistic, pragmatic and sociolinguistic competences of the English language. This proposal is part of an inclusive, flexible and student-centred pedagogical framework, which recognises that the path to meaningful learning must be built from diversity and not in spite of it.

Methodology

Research Approach and Design

This research was developed under the **pragmatic paradigm**, which combines quantitative and qualitative elements with the aim of offering a comprehensive understanding of the educational phenomenon addressed. A **mixed approach** was adopted with a **concurrent triangulation design**, which allowed data to be collected, analyzed, and interpreted from both perspectives simultaneously, favoring the cross-validation of the information and strengthening the reliability of the findings.

From the quantitative point of view, we sought to determine the impact of the didactic model on English competencies by comparing academic results before and after the pedagogical intervention. From the qualitative point of view, the perceptions, attitudes and subjective transformations experienced by students when participating in a differentiated teaching process according to their learning styles were investigated.

Population and sample

The population consisted of tenth-grade students from rural educational institutions located in the department of Córdoba, Colombia. The sample was intentional **non-probabilistic**, made up of **50 students** enrolled in the regular academic day, aged between 15 and 17 years.

The main selection criterion was the institutional willingness to implement the didactic model and the representativeness of the sample in terms of diversity of learning styles. To this end, a diagnostic instrument was applied that allowed identifying the predominant profiles in each student and building a general overview of the cognitive preferences of the group.

Information collection techniques and instruments

Various validated and context-specific instruments were used to capture both academic performance and learning experiences:

- **Felder-Soloman Inventory of Learning Styles (ILS):** adapted at the school level, it allowed students to be classified into the categories of active/reflective, visual/verbal, sequential/global styles.
- **Diagnostic test of English proficiency**: designed based on the standards of the MEN and the Common European Framework, applied before and after the intervention.
- **Student perception survey**: explored the assessment of the didactic model, the level of motivation, the understanding of content and the relevance of the strategies used.
- **Semi-structured interviews with selected students**: allowed to deepen the meanings attributed to the pedagogical experience.
- **Field records and non-participant observation**: collected contextual information on classroom dynamics, student participation, and responses to methodological change.

Procedure

The research was carried out in four articulated phases:

1. **Diagnostic phase:** application of the ILS and the initial English test to establish the baseline of the learning styles and the level of competence of the group.
2. **Design of the didactic model:** construction of a differentiated methodological proposal, with strategies adjusted to each identified style and aimed at the development of linguistic, pragmatic and sociolinguistic competences.
3. **Implementation:** application of the model over a full academic period, with classroom sessions that integrated visual resources, collaborative activities, written assignments, oral presentations, and sequential exercises.
4. **Evaluation and analysis:** post-intervention information collection, application of the final test, surveys, interviews, and systematization of observation records.

Analysis of information

For the quantitative component, **descriptive statistical techniques** were applied (means, percentages of improvement, variations by competencies) and **analysis of comparison of pre- and post-intervention averages**.

The qualitative data were analyzed through **thematic content analysis**, which allowed the identification of emerging categories associated with the perception of the usefulness of the model, changes in the attitude towards English, the level of participation and the recognition of one's own learning style as a facilitating factor of the process.

The triangulation of sources, instruments and techniques made it possible to contrast the results, reinforce the validity of the interpretations and provide a broad vision of the effect of the proposed model on the linguistic training of the students.

Results

The findings obtained from the mixed analysis of the information are organized into three analytical dimensions: (1) **Distribution of learning styles in the sample**, (2) **Effect of the didactic model on English competencies**, and (3) **Student perceptions and changes in classroom** dynamics. This organization allows us to offer an interpretative vision of the impact of the differentiated pedagogical model, both in terms of academic performance and the transformation of the learning experience.

1. Distribution of learning styles in the sample

The analysis of the Learning Styles Inventory (ILS) revealed a diverse distribution among students. The most representative dimensions were:

- **Visual (68%) vs. verbal (32%)**
- **Active (60%) vs. reflective (40%)**
- **Secuencial (54%) vs. global (46%)**

These results suggest that most students in this rural population learn best with visual stimuli (images, videos, graphic organizers) and through practical, collaborative and dynamic experiences. Likewise, a significant part of the students showed a preference for the progressive organization of the contents (sequential), while others presented a more holistic (global) disposition.

The identification of these profiles allowed us to structure an adaptive pedagogical proposal, where each session combined specific strategies to meet the different cognitive preferences. This was key to promoting the student's commitment to the tasks, and to generate a more inclusive and participatory classroom environment.

2. Effect of the didactic model on English skills

The comparison between the diagnostic and final tests revealed a **significant increase in English proficiency levels**. The general average went from **2.8 to 3.9 out of 5.0**, showing an improvement of **39.3%** in academic performance. When disaggregating the results by component, the following advances were identified:

- **Language proficiency (vocabulary and grammar):** 2.9 to 4.0
- **Pragmatic competence (use of language in real contexts):** from 2.7 to 3.8
- **Sociolinguistic competence (adaptation to cultural norms and registers):** from 2.6 to 3.7

Students with visual and active profiles were the ones who presented the **greatest increases**, especially when resources such as infographics, simulations, dramatizations and basic digital tools were used. For example, a group of students who initially showed difficulties in formulating questions in the present simple tense managed to overcome this challenge through exercises with visual cards and work in pairs.

In contrast, students with reflective or verbal style improved more slowly, but showed greater depth in understanding grammatical structures and greater accuracy in writing, suggesting that the **balanced combination of strategies compensated for weaknesses and enhanced strengths**.

3. Student perceptions and changes in classroom dynamics

The perception survey applied at the end of the intervention revealed a **broadly positive assessment of the didactic model**. 94% of students said that classes were "clearer and more understandable" than traditional ones, while 91% said they had "learned more" by participating in activities related to their predominant learning style.

Likewise, 88% expressed that they felt more motivated to participate, and 85% indicated that they now perceive English as a subject "closer and more useful for life". These responses were reinforced by comments collected in interviews, such as:

"I understood better when we used pictures and made games, not just when we copied rules." I didn't speak before, now I am more encouraged because I know that I can participate in my own way."

In terms of classroom dynamics, the observations recorded indicate a substantial transformation. We went from predominantly expository sessions focused on the mechanical correction of errors, to more active, dialogue-based classes based on cooperative learning. The disposition of students improved visibly, especially in those who were previously classified as "inattentive" or "not very participatory."

In addition, teachers reported that the model motivated them to explore new ways of teaching, to reflect on their practices, and to recognize the value of adjusting their planning based on the real needs of the group.

Discussion

The results obtained in this study show that the application of a didactic model focused on **learning styles** has a positive impact on the **academic performance** of students in basic secondary education in rural contexts. This finding coincides with previous studies that have shown that differentiated methodologies, which consider the cognitive and motivational particularities of students, favor learning and improve academic results (Tomlinson, 2001; Chacón, 2021).

Conceptions of learning and cognitive styles

The fact that the **predominant learning styles** in this sample have been mostly **active, visual and sequential** reflects a trend towards more dynamic, practical and visual learning. Students with these cognitive characteristics especially benefited from activities that involved **visual resources (infographics, videos, concept maps)** and strategies that favored **active** learning (group work, simulations, dramatizations). The adaptation of activities to these cognitive profiles allowed not only a greater understanding of the contents, but also an **increase in participation**, which supports the theory of Felder and Silverman (1988), who state that motivation and content retention increase when teaching activities are adjusted to the cognitive preferences of the students.

However, students with **reflective and verbal styles** also showed improvements, albeit more gradually, suggesting that this inclusive pedagogical approach is effective for a wide range of profiles. This finding highlights the **flexibility of the TPACK model** (Mishra & Koehler, 2006), which promotes the use of various technological and methodological tools, allowing all students to access knowledge according to their cognitive strengths and develop their abilities in various areas.

Impact of the didactic model on academic performance

The significant increase in students' academic performance is a clear indication that **diversifying pedagogical strategies** can facilitate the **appropriation of complex content** and improve English proficiency, particularly in essential aspects such as vocabulary and grammatical structures. The progress made in academic performance (from 2.8 to 3.9 on the 5.0 scale) reflects more **personalized learning**, which is not only limited to the memorization of grammatical rules, but also involves an **active and contextualized understanding of the language**.

The fact that students with the **greatest initial difficulties** have shown the most notable progress reinforces the hypothesis that a **differentiating pedagogical model** can act as a leveling mechanism, providing effective learning opportunities even in contexts with limited resources (González & Díaz, 2019). These results are consistent with the literature on **universal design for learning (UDL),** which stresses the need to adapt educational strategies to diverse ways of learning to maximize inclusion and school success (CAST, 2018).

Transforming classroom dynamics

Class observations and interviews with teachers reflect a **positive change in the pedagogical dynamic,** which went from being traditionally expository and focused on the mechanical correction of errors, to being more **collaborative, participatory, and dynamic**. The fact that 94% of students reported an

increase in motivation and a **better understanding of the content** indicates that the approach adopted was not only effective in academic terms, but also in affective and social terms. The possibility of working on interactive and collaborative activities generated a space of trust and openness that allowed students to express their doubts, share ideas and develop a sense of community in the classroom.

This change in classroom dynamics is congruent with contemporary pedagogical approaches, which promote the active participation of the student as the center of the educational process. **Active pedagogy**, in which the student assumes a more autonomous role in their learning, has been recognized as a crucial element for academic success, especially in rural contexts where traditional strategies are often not as effective (Parker et al., 2016).

Challenges and Considerations for Large-Scale Deployment

Although the results were positive, it is important to recognize that the **successful implementation of this model** depends on several contextual and structural factors. Among the challenges identified, the following stand out:

- **Lack of continuous teacher training**: Although teachers showed interest in applying differentiated strategies, some expressed the need for more **training in the use of educational technologies and in the design of strategies based on learning styles**.
- **Technological limitations**: Although accessible technology was used, **access to comprehensive digital resources** remains a challenge in many rural institutions.
- **Resistance to change**: Some teachers initially felt unsure about the effectiveness of alternative methods and needed time to adapt.

Despite these challenges, the study demonstrates that it is possible to implement this type of pedagogical approach in rural contexts, if the right conditions of training and resources are provided.

Conclusions

The implementation of a **didactic model based on learning styles** has proven to be an effective strategy to improve the **academic performance** in English of students in basic secondary education, particularly in rural contexts of the Department of Córdoba, Colombia. This study provides valuable evidence on the effectiveness of this pedagogical approach, which allows students, based on their predominant cognitive preferences, to approach learning English in a more meaningful, effective and motivating way.

The results obtained confirm that **pedagogical differentiation** is a powerful tool to improve performance in key areas of foreign language learning, such as **vocabulary and grammatical structures**. The improvement in the academic performance of students, especially in those with low initial performance, indicates that this model not only helps to consolidate the learning of the contents, but also **levels the playing field between students with different cognitive strengths**, providing opportunities for success for all. This supports the theory that **personalized education adjusted to learning styles** can be an effective mechanism to **reduce the educational gap** in rural contexts, where learning opportunities are limited.

In addition, a **significant transformation was observed in the classroom dynamics**, moving from a traditional teaching model, focused on the transmission of knowledge, to an active, participatory, and collaborative approach. This change resulted in an increase in **student motivation** and an **improvement in attitudes towards learning English**, especially among those who had historically shown disinterest or difficulties. This finding highlights the importance of creating learning environments in which students can express their ideas, engage in practical and cooperative activities, and experience the language in a contextualized way.

The **flexibility of the model** allowed the teacher to adapt the activities to the individual characteristics of the students, promoting not only the learning of English, but also the **development of social and cognitive skills**. This personalization of the teaching process helps students feel more valued and understood, which

in turn favors their involvement in the educational process. The relationship between teachers and students was also strengthened, as the former adopted a more reflective stance and were open to pedagogical experimentation.

On the other hand, the results also reflect some **challenges and barriers** that hinder the full implementation of this model in the classroom, such as the **lack of adequate technological resources**, the need for greater **continuous training of teachers** in differentiated pedagogical approaches and the **challenge of resistance to change** in some teachers who are comfortable with traditional methods. However, the participating teachers indicated that, although these challenges exist, the experience has been enriching and has allowed them **to reflect on their pedagogical role and on new ways of approaching learning English**.

Based on these findings, the following recommendations are proposed:

1. **Strengthen the continuous training of teachers** in methodologies focused on learning styles and the use of educational technology.

2. **Encourage the development of contextualized pedagogical materials and resources** that respond to the needs and realities of rural students.

3. **To expand research in the field of rural education**, especially in the field of foreign languages, to identify other innovative pedagogical practices that can improve learning and academic performance.

4. **To generate spaces for teacher collaboration** that promote the exchange of experiences and good practices based on knowledge of learning styles, favoring innovation in educational processes.

In conclusion, this study shows that the **didactic model based on learning styles** not only favors **academic performance** in English, but also **transforms pedagogical relationships and promotes inclusive, equitable, and personalized education**, especially in rural contexts, where students face significant challenges in accessing quality education. This approach has the potential to be replicated in other regions of the country, contributing to the improvement of educational processes in various areas of knowledge.

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