

Learning styles of EFL students in a southeast Mexican University

Estilos de aprendizaje de estudiantes de inglés como lengua extranjera en una universidad al sureste de México

Carlos Núñez Mercado ^a, Esteban J. Bautista Zárate Mejía ^b

Abstract:

Researching students' learning styles has shed light on how teachers approach pedagogical methods in language teaching. Scholars have identified that students can enhance their second language acquisition by acknowledging the learning style they are more inclined towards. However, this can vary by context and generation. For this reason, the aim of this study was to explore the learning styles of incoming ELF students at a public university in southeast Mexico. A survey research framework based on Kolb's questionnaire was used as a method. Its internal consistency was validated using KR-20, which yielded 0.72. Results showed that students are more likely to use diverging learning styles. The pedagogical implications that arose are that students can perceive situations from different points of view; they prefer problem-solving tasks and direct engagement with real-world situations.

Keywords:

Learning styles, English language, teaching, students, approaches.

Resumen:

Las investigaciones sobre los estilos de aprendizaje de los estudiantes han ayudado a los docentes a esclarecer los métodos pedagógicos que emplean en la enseñanza de una lengua. Los expertos han identificado que los estudiantes pueden mejorar la adquisición de una segunda lengua al reconocer con mayor afinidad el estilo de aprendizaje. Sin embargo, este hecho puede variar según el contexto y las generaciones de los estudiantes. Por esta razón, el objetivo de este estudio fue explorar los estilos de aprendizaje de estudiantes de nuevo ingreso en una universidad pública del sureste de México. Para dicho fin, se empleó un enfoque metodológico basado en la encuesta. El instrumento de recolección de datos consistió en el cuestionario de Kolb sobre los estilos de aprendizaje, cuya consistencia interna fue validada mediante la prueba KR-20, con un valor de 0.72. Los resultados indican que los estudiantes son más propensos a un estilo de aprendizaje divergente. Las implicaciones pedagógicas que emergen de ello son que los estudiantes pueden comprender una situación desde diferentes puntos de vista; también prefieren actividades relacionadas con el proceso de identificar un problema, analizarlo y encontrar una solución, así como con la interacción directa con situaciones de la vida real.

Palabras Clave:

Estilos de aprendizaje, lengua inglesa, enseñanza, estudiantes, enfoques.

^a Carlos Núñez Mercado | Universidad Veracruzana | Facultad de Idiomas | Xalapa, Veracruz | México, <https://orcid.org/0009-0004-1375-1361>, Email: carnunez@uv.mx

^b Esteban Juan Bautista Zárate Mejía, Universidad Veracruzana | Facultad de Idiomas | Xalapa, Veracruz | México, <https://orcid.org/0000-0001-6506-0811>, Email: email@uaeh.edu.mx

Introduction

Recognising learning styles can significantly enhance teaching methods. In this regard, research in this field has shown that aligning teaching methods with students' learning styles helps to reach language learning outcomes. For instance, studies have demonstrated that incorporating visual aids, such as videos and images, can improve vocabulary retention for visual learners (Chung, 2023). Similarly, implementing classroom activities that provide opportunities for active learning, such as group discussions and role-playing, can be particularly beneficial for kinesthetic learners (Lee & Tsai, 2016).

On the other hand, there is a challenge in balancing individualisation with practicality. While tailoring instruction to individual learning styles can enhance engagement, it may be impractical in large classrooms (Pashler et al., 2009). These realities are also faced by English teachers at the BA in English Language and Teaching (ELT) at a public University in the southeast of Mexico. This BA updated its curriculum in 2023, in which identifying learning styles plays an essential role in first-year students, as they can vary depending on time and context. To achieve this aim, this study examined how first-year students process information during language classroom activities, drawing on Kolb's four categories of learning styles: Accommodating, Diverging, Assimilating, and Converging.

Theoretical Background

It is said that effective Foreign Language (FL) learning requires teachers to consciously identify how students manage their inner processes for comprehending linguistic and cultural information. Such a process is influenced by individuals' preferred ways of absorbing, processing, and retaining new information. Individual preferences are informed by cognitive, affective, and physiological indicators "that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (Keefe, 1979, in Zapalska & Dabb, 2002, p. 79). In this regard, the study of how students are more prone to certain forms of gaining knowledge is known as Learning Style.

Furthermore, the relationship between learning styles and foreign language (FL) learning outcomes has been investigated. For instance, it is suggested that aligning teaching strategies with students' learning styles can lead to better language learning outcomes (Lin, 2024). Furthermore, it is claimed that tailored teaching

approaches that align with students' learning styles can significantly enhance learners' engagement and achievement (Ganesh, 2014; Oxford, 2012). Additionally, it has been reported that students with different learning styles exhibit varying degrees of success across language-learning tasks (Chen, 2023).

Research has been conducted in the learning styles field. The first one explored the learning styles of undergraduate students of different majors from a private university in southern Mexico City. This research adopted Alonso, Gallego and Honey's (2005) learning styles theory. It was revealed that learning style strategies improved the students' concentration, resulting in better academic performance in learning English as a Foreign Language (Recke et al., 2016). Another research was developed with students of the Degree in Languages at the Universidad Juárez Autónoma de Tabasco. Its objective was to determine the effectiveness of the VAK model in improving student motivation and, as a result, advancing learning of English as an L2. Findings suggested that students achieved higher academic performance when their learning styles were considered in the teaching procedures (Sánchez et al., 2023).

In this field, particular attention is devoted to Kolb's learning styles theory applied to language education. Research in this area has emphasised its potential to enhance student engagement and learning outcomes. For instance, Roswati and Novitasari (2018) investigated the correlation between learning styles and language proficiency. They found that students whose instruction aligned with their learning preferences demonstrated higher achievement levels. Another study of Iranian EFL students found a significant positive correlation between Kolb's learning styles and slang learning. Results showed that concrete experience was the most effective style for developing this learning task (Biabani & Izadpanah, 2019). On the American continent, research has been conducted in this field. This is the case of Carranza-Marchena (2019), who, in a private institution located in Heredia, downtown Costa Rica, worked with beginner EFL students focused on learning the language for business purposes. This author found that teaching strategies should match students' learning styles to enhance their communicative competence in speaking.

There exist different models that categorise learning styles. Some of them include Kolb's Experiential Learning Theory (Kolb, 2014), Fleming's VARK model (visual, auditory, reading/writing, and kinaesthetic preferences; Fleming & Mills, 1992), and Gardner's

Multiple Intelligences Theory (Gardner, 2011). Another peculiar learning model is known as the meshing hypothesis (Pashler et al., 2009). This hypothesis asserts that there is no relationship between the belief that people learn more effectively when given educational resources suited to their personal learning style and learning outcomes. Nevertheless, research has shown that there was essentially no evidence to support that claim (Knoll et al., 2017; Rogowsky et al., 2020). In sum, these frameworks have been applied to FL education to help teachers, school

authorities, and policymakers better understand how students' preferences influence their language acquisition processes.

Although various theories discuss this topic, David Kolb's Experiential Learning Theory (ELT) offers a valuable framework for examining individual learning styles. This theory posits that learning occurs through a cyclical process involving four distinct stages: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualisation (AC), and Active Experimentation (AE) (Kolb, 2014). Learning arises from the active interaction between those stages. Therefore, a person's learning style is shaped by their unique combination of preferences regarding the four learning modes (Kolb & Kolb, 2013).

ELT states that learning style is not a fixed psychological trait. Rather, it is conceived as a dynamic state resulting from synergistic interactions between students and the environment (in or out of school). In this sense, Kolb's learning styles are rooted in the interplay between the two dimensions of ELT: perception (CE vs AC) and processing (RO vs AE) (Kolb & Kolb, 2013). In this regard, language students who favour CE may excel in communicative activities such as role-plays and simulations. In contrast, those who are more inclined towards RO may benefit from reflective activities such as journal writing and peer feedback. Similarly, students who excel at AC may perform well on grammar and vocabulary exercises, while those who favour AE may perform better on communicative tasks that require problem-solving and decision-making (Reid, 1995, in Castro & Peck, 2008).

Furthermore, Kolb's learning styles correspond to different approaches to learning: Diverging, Assimilating, Converging, and Accommodating. Those approaches to learning are, at the same time, influenced by culture, personality type, educational specialisation, career choice, current job, and competencies for adapting to life (Kolb & Kolb, 2013; Kolb, 1984). The following table illustrates these relationships more clearly.

Figure 1. Relationship Between Learning Styles and

Five Levels of Behavior.

Behavior level	Diverging	Assimilating	Converging	Accommodating
Personality types	Introverted Feeling	Introverted Intuition	Extraverted Thinking	Extraverted Sensation
Educational specialization	Arts, English History Psychology	Mathematics Physical Science Sciences	Engineering Medicine	Communication Nursing Sales
Professional career	Social service Arts	Research Information	Engineering Medicine Technology	Social service Education
Current jobs	Personal jobs	Information jobs	Technical jobs	Executive jobs
Adaptive competencies	Valuing skills	Thinking skills	Decision skills	Action skills

From this perspective, students can be classified as diverging, assimilating, converging, and accommodating. Diverging learners excel in generating ideas. They view situations from multiple perspectives, relying heavily on CE and RO. Assimilating learners prioritise logical reasoning and theoretical models; they emphasise AC and RO. Converging learners prefer practical applications and problem-solving, combining AC and AE. Finally,

accommodating learners thrive on hands-on experiences and adaptability; they focus on CE and AE (Evans et al., 2010).

In the context of foreign language acquisition, these styles present distinct strengths and challenges for language students. Diverging learners, with their emphasis on creativity and reflection, may excel at activities such as group discussions, storytelling, role-playing, and problem-solving. Role-playing can help divergers engage with real-world scenarios and, at the same time, foster emotional connection with the learning material, encouraging students to actively participate in the classroom (Kurt, 2020). Additionally, problem-solving tasks allow this type of learner to brainstorm and analyse multiple perspectives, requiring critical thinking and collaboration (Kurt, 2020; McLeod, 2025).

Conversely, converging learners might perform well in tasks requiring problem-solving, such as grammar exercises or language-based simulations. Recognising these differences can help educators to adapt their teaching strategies and methodologies, as well as to design more inclusive and effective learning environments.

Additionally, assimilating learners participate with ease in tasks where theoretical information is systematically organised. Examples of those activities include transferring information from reading passages to mind maps and flowcharts, and creating infographics that synthesise information (Du Plessis, 2023; Olwan, 2025). In contrast, accommodating learners benefit from participating in activities that require social interaction and hands-on experience. Consequently, role-plays, simulations, and group projects allow these types of students to develop interpersonal skills, engage in discussion to reach agreement, and solve problems intuitively (Du Plessis, 2023; Olwan, 2025).

Method

The study employed a survey research framework. “Researchers have used survey research to investigate the characteristics, attitudes and opinions of language learners (Wagner, 2015, p.83)”. In applied linguistics, survey research has measured and provided valuable insights into unobservable phenomena such as learner beliefs, learning strategies, learning motivation, and language learning anxiety (Wagner, 2015). Therefore, “the goal of survey research is to get information about learners’ characteristics, beliefs or attitudes, information that is usually not available from production data, such as performance or observational data (Mackey & Gass 2005, in Wagner, 2015, p. 83-84)”. This study was based on the survey research framework by Wagner (2015), which consists of four steps: planning the project, designing the survey, administering the survey, and analysing the data.

The participants of this study were 35 students from an undergraduate program in English Language and English Didactics from the University of Veracruz. The students were aged between 18 to 25 years old. The survey was validated using the Kuder-Richardson (KR-20) coefficient because it has dichotomous items. The Kuder-Richardson coefficient was used to estimate the internal consistency of the items. The coefficient results are shown in the following table (Nugroho et al., 2020).

Figure 2. Interpretation of the Kuder-Richardson coefficient

Range Correlation Coefficient	Interpretation
0.00 – 0.10	Negligible correlation
0.10 – 0.39	Weak correlation
0.40 – 0.69	Moderate correlation
0.70 – 0.89	Strong correlation
0.90 – 1.00	Very strong correlation
0.90 – 1.00	Very strong correlation

Source. Nugroho et al. (2020)

In this regard, a reliable correlation coefficient must be between 0.70 and 1. For the present research, the KR-20 validity coefficient was 0.72. As can be seen, this value lies within the range 0.70-0.89, indicating a strong correlation in the test of validity (Schober et al., 2018).

Procedure

To gather data, four stages were followed. The first one, planning the project, consisted of answering four main questions, that is to say, *what* (incoming students’ learning styles), *why* (gap in the literature due to new curriculum), *who* (first-year students) and *how* (Kolb’s survey on learning styles in order to generate a model

of BA students’ learning styles); as well as choosing a sampling frame (Wagner, 2015). After analysing a variety of sampling techniques, i.e. random, stratified random, systematic, cluster and convenience, the cluster sampling technique was chosen for this study.

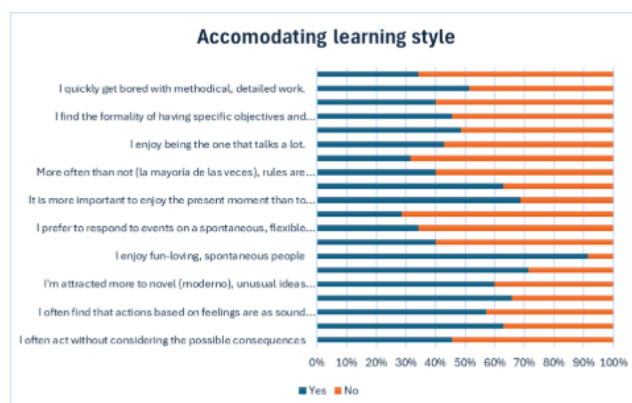
Consequently, the next step was to design the survey. Wagner (2015) presents several options, including selecting, creating, or adapting instruments to obtain data. For this research, Kolb’s learning style questionnaire was adapted to first-year students’ language proficiency levels. One of the main hallmarks of this questionnaire is its closed-ended dichotomous items (i.e. yes/no). The instrument was piloted to see its performance with students from the target community.

The third step, administering the survey, considered the cluster sampling technique. There were seven classrooms for first-year students. The average number of students per class is 25. Therefore, five students were selected randomly, and the questionnaire was sent via Google Forms. There are several advantages of using the internet, such as lower cost, greater convenience regarding time constraints, and, most significantly, the data and results are analysed automatically (Wagner, 2015). The final step, analysing the data, involved entering the data into a spreadsheet (e.g., Excel) to conduct descriptive statistics and assess the questionnaire’s internal consistency reliability.

Results

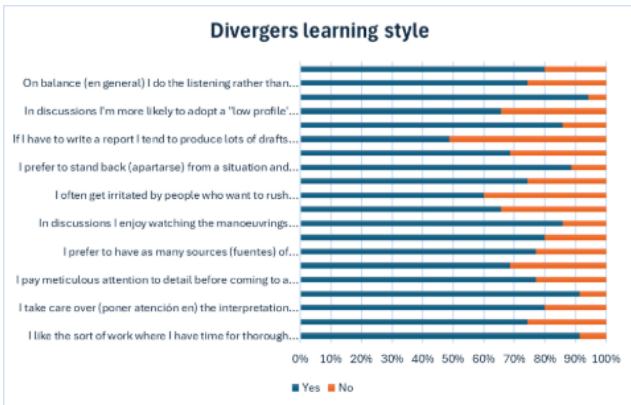
The following graphs and charts show the results obtained from the survey. The results are classified into four categories: Accommodating, Divergers, Assimilators, and Convergers.

Figure 3. Students’ positive responses average 50.71 %



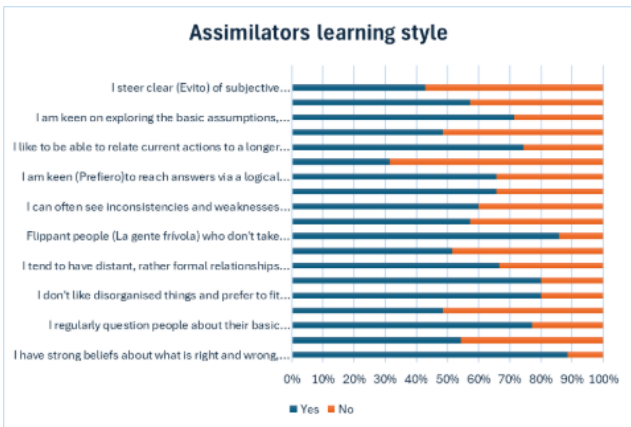
The graphic shows that almost half of the students did not rely on an accommodating learning style. Therefore, it was not possible to generalise its use in the context.

Figure 4. Students' positive responses average 76.14 %



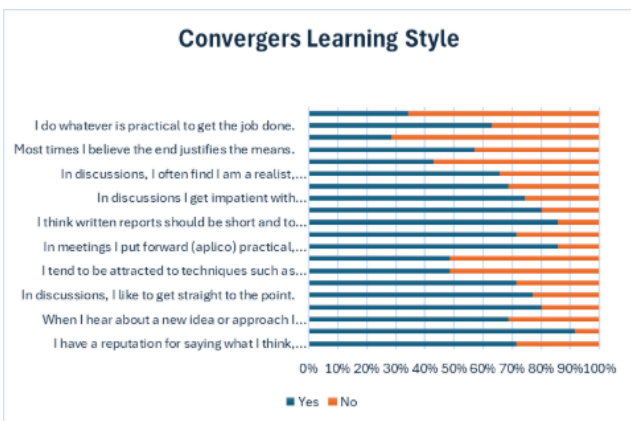
The graphic shows that more than 70 per cent of the students identified with the Divergers learning style. These results can be generalised throughout the students' population of this study.

Figure 5. Students' positive responses average 61.14



Regarding Assimilators, the graphic shows that approximately 60 per cent of students are aligned with this learning style. Although a couple of responses scored more than 80 per cent, the positive responses cannot be generalised.

Figure 6. Students' positive responses average 64.57



Although these results are the second-highest for positive responses, it cannot be concluded that most students preferred the *Converger's* learning style.

The results of the instrument were also validated in the mean score of all items; that is, Accommodating (1-20), Divergers (21-40), Assimilators (41-60), and Convergers (61-80), as it is shown in the next table:

Figure 7. Mean results <0.50 based on Absolute Frequencies (AF)

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
σ	0.50	0.48	0.49	0.47	0.49	0.45	0.28	0.48	0.47	0.45	0.46	0.48	0.49	0.45	0.49	0.50	0.50	0.49	0.50	0.47
Item	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
σ	0.28	0.44	0.40	0.28	0.42	0.47	0.42	0.40	0.35	0.47	0.49	0.44	0.32	0.46	0.50	0.38	0.48	0.23	0.44	0.40
Item	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
σ	0.32	0.50	0.44	0.50	0.45	0.40	0.40	0.47	0.50	0.35	0.49	0.49	0.47	0.47	0.44	0.44	0.50	0.45	0.49	0.32
Item	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
σ	0.46	0.28	0.46	0.40	0.42	0.45	0.50	0.50	0.35	0.46	0.35	0.42	0.44	0.47	0.48	0.49	0.50	0.45	0.49	0.47

Discussion

Kolb's (2005) learning styles refer to a model comprising four types that differentiate individuals in how they process, organise, and manage information. In exploring the relationship between the BA language students and Kolb's learning styles questionnaire, different insights arose from the results above.

Results showed that most students preferred the diverger learning style. This result implies that students from cohort 2024 are willing to generate ideas so that they can perceive situations from different points of view (Evans et al., 2010). Furthermore, diverger students are characterised by learning through watching and gathering information, which favours a preference for reflective observation and concrete experience (Kolb, 1984). In this sense, communicative activities that best suit their learning should emphasise observation, imagination, exploration, and discussion-based interaction. These students seem to be engaged when participating in storytelling, brainstorming, and guided group discussions, as these activities allow them to examine language in context, draw parallels with their personal experiences, and consider various interpretations and points of view (Oxford, 2003).

Other communicative activities that may benefit these students are role-plays and problem-solving tasks. Role plays can assist divergent learners in synthesising different knowledge and developing empathy, as they can assume different roles and negotiate meaning through the language used in real-world situations. Through role-playing exercises, divergers can build knowledge by engaging with peers, reflecting on past

experiences, and modifying their language in relevant contexts, thanks to emotional engagement and cultural understanding of others (Jimenez & Cabanilla, 2023; Senda, 2023; Sanako, 2024).

Furthermore, problem-solving activities promote among divergers brainstorming and analysing multiple perspectives of a given communicative situation. These tasks require students to develop social skills, such as working together, negotiating meaning, and finding creative solutions to specific situations (Banjarnahor et al., 2017; García & Martínez, 2017; McLeod, 2025). In conclusion, problem-solving and role-plays should be prioritised as the main communicative activities in English lessons.

The present study was developed as part of a Mexican BA in English Language and English Didactics. Courses offered in this BA emphasise the development of communicative competencies, which implies the development of linguistic and communication knowledge. Results obtained in the present inquiry revealed that students in this BA seemed to prefer learning through direct engagement with real-world situations, emphasising the analysis and interpretation of their learning experiences (Kolb, 1984). In other words, diverging learning style seems to be the most predominant among the Mexican University BA in English Language and English Didactics students who participated in this inquiry. On the other hand, there is a possible contrast with Indonesian university EFL students, who reported a preference for an assimilator learning style. These findings may manifest that Indonesian university students prefer to think rather than to act -Reflective Observation-. What is more, this preference is manifested by students' preference to work in detail, which is a characteristic of Abstract Conceptualisation. In sum, it can be argued that Indonesian students favour a cognitive approach for language learning (Syatriana et al., 2022).

Another relevant aspect is that Mexican BA in English Language students seem not to be the only ones who favour a divergent learning style. Consequently, Spanish students in an English Philology degree program were found to be more skill-oriented, meaning they preferred learning through problem-solving and decision-making activities (Salazar & Wageman, 2011). Furthermore, it implied that those students seemed more interested in aspects of people and the culture of the target language (García & Martínez, 2017; McLeod, 2025). In general terms, based on the results obtained in both studies, it can be argued that language students from the Mexican BA in English Language and English Didactics, as well as those in Spanish, have Concrete Experience (CE) and Reflective Observation (RO) as their dominant learning skills (Kolb, 2014).

Conclusion

In the present study, the aim was to shed light on the learning style preferences of first-year students in English Language and English Didactics. The objective of the research was to identify the most prevalent way of processing information on students from cohort 2024. That information may enable teachers to anticipate which classroom activities and teaching techniques best suit students' learning preferences. Despite the fact that there are ample studies on the subject matter worldwide, in the context of the study (Southeastern Mexican BA in English Language and English Didactics), it could be considered the first exploratory study to reveal students' learning styles.

Although research in neuromyth has largely challenged the notion that matching instructional methods to individual learning styles improves performance in language testing and assessment (Melzner & Kalpper, 2025) or learning more successfully (Barraza & Leiva, 2018), the objective of this article is not to predict or determine learning outcomes based on learning styles. Rather, it seeks to examine the predominant learning styles among students in order to inform and support the development of effective learning strategies. In this sense, results showed that the participants in this inquiry preferred a diverger learning style. Pedagogical implications of these results can be seen in the teaching techniques and strategies that English language teachers should implement, such as communicative activities such as storytelling, brainstorming, discussion-based interactions, role-plays, and problem-solving tasks. The purpose of shedding light on learning strategies is to make students aware of the development of their language learning process, as Cruz-Martinez and Guerrero-Hernandez (2018) support.

Another point of contrast is how language students have undergone a learning process mediated by digital tools. Thirty years ago, students commonly engaged with face-to-face instruction, which implied the use of printed instructional materials such as textbooks. Furthermore, teaching strategies over-relied on lectures and structured classroom activities (Howe & Strauss, 2000). Incredibly, at the start of the 21st century, students tend to participate in activities mediated by interactive digital tools, in which they develop a project and are asked to express their thoughts orally or in writing (Yamazaki et al., 2024).

Finally, future lines of inquiry emerge. First, to explore students' perceptions of their learning styles. Then, to explore the differences between cohort 2025 and cohort 2022 students. This comparative study may shed light on the learning preferences of students who are taking their BA studies under two different syllabi (2023 and 2008, respectively). This last study may be foundational and serve as a departure point for teachers to adopt

teaching strategies and procedures.

Referencias

- [1] Alonso, C., Gallego, D. & Honey, P. (2005). *Los Estilos de Aprendizaje. Procedimientos de diagnóstico y mejora* (8ª ed.). Ediciones Mensajero.
- [2] Barraza, P. & Leiva, I. (2018). Neuromitos en Educación: Prevalencia en Docentes Chilenos y el Rol de los Medios de Difusión. *Paideia* 63 (17-40)
- [3] Biabani, M. & Izadpanah, S. (2019). The Study of Relationship between Kolb's Learning Styles, Gender and Learning American Slang by Iranian EFL Students. *International Journal of Instruction*, 12(2), 517-538. <https://files.eric.ed.gov/fulltext/EJ1211056.pdf>
- [4] Carranza-Marchena, P. (2019). Teaching Strategies Based on Learning Styles: Promoting Communicative Competence in Speaking Skills. *Innovaciones Educativas*, 21(31), 36-48. <https://doi.org/10.22458/ie.v21i31.2692>
- [5] Castro, O. & Peck, V. (2008). Learning Styles and Foreign Language Learning Difficulties. *Foreign Language Annals*, 38, 401-409. <https://doi.org/10.1111/j.1944-9720.2005.tb02226.x>
- [6] Chen, K. (2023). The Relationship between Learning Styles and Foreign Language Learning. *Journal of Education, Humanities and Social Sciences*, 8, 801-806. <https://doi.org/10.54097/ehss.v8i.4362>
- [7] Chung, D.T.K. (2023). The Efficacy of Visual Aids in Enhancing Vocabulary Acquisition in EFL Classes. *International Journal of Social Science and Human Research*, 6(10), 6397-6403. <https://doi.org/10.47191/ijsshr/v6-i10-80>
- [8] Cruz-Martínez, C.A. & Guerrero-Hernández, J.G. (2018). Language learning strategies employed by university students to learn English: a case study. In M.D. Perales-Escudero & F. Dzay (Coords.) *Estudios en Lenguas Modernas: Docencia, Investigación, Traducción* (pp.50-69). Universidad de Quintana Roo.
- [9] Du Plessis, L. (2023, May 8). 23 diverse learning style activity ideas. *Teaching Expertise*. <https://www.teachingexpertise.com/classroom-ideas/learning-style-activity-ideas/>
- [10] Evans, C., Cools, E., & Charlesworth, Z. M. (2010). Learning in higher education—How cognitive and learning styles matter. *Teaching in Higher Education*, 15(4), 467-478. <https://doi.org/10.1080/13562517.2010.493353>
- [11] Fleming, N. D., & Mills, C. (1992). Not another inventory, rather a catalyst for reflection. *To Improve the Academy*, 11(1), 137-155. <https://doi.org/10.1002/j.2334-4822.1992.tb00213.x>
- [12] Ganesh, A. (2014). Alignment of teaching style to learning preferences; impact on student learning. *Training and Development Journal*, 5(2), 119-131. <https://www.indianjournals.com/ijor.aspx?target=ijor:tdj&volume=5&issue=2&article=005>
- [13] García, M. A., & Martínez, E. L. (2017). Enhancing student motivation and engagement through role-play activities. *Journal of Language Teaching and Learning*, 40(3), 112-128.
- [14] Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences*. Basic Books.
- [15] Howe, N. & Strauss, W. (2000). *Millennials rising. The next great generation*. Vintage.
- [16] Jiménez, L.V. & Cabanilla, C.C. (2023). The use of Role-play to improve speaking skills in children of 7th grade from a public school of Loja city. *FIPCAEC*, 8(4), 301-318.
- [17] Knoll, A. R., Otani, H., Skeel, R. L., & Van Hom, K. R. (2017). Learning style, judgements of learning, and learning of verbal and visual information. *British Journal of Psychology*, 108(3), 544-563. <https://doi.org/10.1111/bjop.12214>
- [18] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
- [19] Kolb, A.Y. & Kolb, D.A. (2013). *The Kolb Learning Style Inventory- Version 4.0. A Comprehensive Guide to the Theory, Psychometrics, Research on Validity and Educational Applications*. Experience Based Learning Systems.
- [20] Kolb, D. A. (2014). *Experiential learning. Experience as the source of learning and development* (2nd ed.). Prentice Hall.
- [21] Kurt, S. (2020, December 28). Kolb's experiential learning theory & learning styles. *Educational Technology*. Retrieved [May 29, 2025] from <https://educationaltechnology.net/kolbs-experiential-learning-theory-learning-styles/>
- [22] Lee, S.H. & Tsai, S.F. (2016). Experimental intervention research on students with specific poor comprehension: a systematic review of treatment outcomes. *Reading and writing*, 30(4), 917-943. <https://link.springer.com/content/pdf/10.1007/s11145-016-9697-x.pdf>
- [23] Lin, X. (2024). Learning styles and second language acquisition: A review of influences, factors, and educational implications. *Journal of Education, Humanities and Social Sciences*, 26, 891-896. <https://drpress.org/ojs/index.php/EHSS/article/download/17972/17492>
- [24] Melzner, L. & Kappes, C. (2025) Testing the meshing hypothesis in prospective teachers: Are there effects of matching learning style and presentation mode on learning performance and on metacognitive aspects of learning? *Instr Sci* 53, 365-389 <https://doi.org/10.1007/s11251-024-09689-1>
- [25] McLeod, S. (2025, March 19). Kolb's Learning Styles and Experiential Learning Cycle. *SimplyPsychology*. <https://www.simplypsychology.org/learning-kolb.html>
- [26] Nugroho, A., Warnars, H.L.H.S., Heriyadi, Y. & Tanutama, L. (2020). Measure the level of success in using Google Drive with the Kuder Richardson (KR) reliability method. *2019 International Congress on Applied Information Technology (AIT)*, 1-7. <https://ieeexplore.ieee.org/document/9144915>
- [27] Olwan, S. (2025, August 6). Games and activities to suit various learning styles: Engaging diverse minds. *LearningMole*. <https://learningmole.com/games-and-activities-suit-various-learning-styles/>
- [28] Oxford, R. L. (2012). Language learning styles and strategies: An overview. *Learning Styles & Strategies*, 1-25. <http://web.ntpu.edu.tw/~language/workshop/read2.pdf>
- [29] Oxford, R. L. (2003). Language learning styles and strategies: An overview. *Learning Styles & Strategies*. Oxford, GALA.
- [30] Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105-119. <https://doi.org/10.1111/j.1539-6053.2009.01038.x>
- [31] Recke, A., Zárate, J.F. & Rodríguez, A.L. (2016). Learning Styles and their relationship with academic performance in English as a Second Language of students in a Mexican university. *Revista de Estilos de Aprendizaje*, 9(17), 108-143. https://revistaestilosdeaprendizaje.com/article/view/1049/1762?utm_source=chatgpt.com
- [32] Rogowsky, B. A., Calhoun, B. M., & Tallal, P. (2020). Providing instruction based on students' learning style preferences does not improve learning. *Frontiers in Psychology*, 11, 164. <https://doi.org/10.3389/fpsyg.2020.00164>
- [33] Roswati, R. & Novitasari, D.A. (2018). The correlation between learning styles and English learning achievement. *Indonesian Journal of Integrated English Language Teaching*, 4(1), 77-84. <https://ejournal.uin-suska.ac.id/index.php/IJIELT/article/view/5144>
- [34] Salazar, J., & Wageman, J. (2011). Spanish EFL undergraduate students' perceptions of learning styles. *Nordic Journal of English Studies*, 10(1), 77-101. <https://publicera.kb.se/njes/article/view/29437>
- [35] Sanako, (2024, February 16). The power of role play activities in language teaching. *Sanako Blog*. <https://sanako.com/the-power-of-role-play-activities-in-language-teaching>
- [36] Sánchez, C.F., Morales, E. & Córdova, N.C. (2023). Language learners' motivation towards English learning through the VAK model. *Ciencia Latina Revista Científica Multidisciplinar*, 7(3), 5764-5777. https://doi.org/10.37811/cl_rcm.v7i3.6584
- [37] Schober, P., Boer, C. & Schwarte, L.A. (2018). Correlation Coefficients: Appropriate Use and Interpretation. *Anesthesia & Analgesia*, 126(5), 1763-1768. https://journals.lww.com/anesthesia-analgesia/fulltext/2018/05000/correlation_coefficients_appropriate_use_and.50.aspx
- [38] Senda, M.O. (2023). Role Play in Language Learning: An Innovative Path to Lifelong Linguistic Mastery. *The LLL SIG Newsletter*, 19(1), 27-39. https://hosted.jalt.org/lifelong/journal/2023a/Senda_Role%20Play%20in%20Language%20Learning.pdf

- [39] Sugianto, A. (2018). An analysis of English national final examination for junior high school in terms of validity and reliability. *Journal of English as a Foreign Language*, 6(1), 29-40.
- [40] Syatriana, E., Akib, E. & Saiful, (2022). Kolb's Learning Style Affect EFL Creativity of Indonesian Students. *Al-Ishlah: Jurnal Pendidikan*, 14(3), 3425-3436. <https://doi.org/10.35445/alishlah.v14i3.1209>
- [41] Universidad Veracruzana, (2025). Objetivo. *Licenciatura en Lengua Inglesa y Didáctica del inglés*. <https://www.uv.mx/lenguainglesa/objetivo/>
- [42] Uyanah, D.A. & Nsikhe, U.I. (2023). The Theoretical and Empirical Equivalence of Cronbach Alpha and Kuder-Richardson Formular-20 Reliability Coefficients. *International Research Journal of Innovations in Engineering and Technology (IRJIET)*, 7(5), 17-23. <https://doi.org/10.47001/IRJIET/2023.705003>
- [43] Yamazaki, Y., Toyama, M. & Wijayanti, M.D. (2024). Exploring what learning styles generation Z students prefer: a case of Indonesian undergraduates. In C. Pracana & M. Wang (Eds.), *Psychological Applications and Trend* (pp.537-541). <https://doi.org/10.36315/2024inpact125>
- [44] Wagner, E. (2015). Survey Research. In B. Paltridge and A. Phakiti (Eds.), *Research Methods in Applied Linguistics A Practical Resource (83-100)*. Bloomsbury
- [45] Zapalska, A.M. & Dabb, H. (2002). Learning Styles. *Journal or teaching in international business*, 13(3-4), 77-97. DOI: 10.1300/J066v13n03_06.

