

## MERITS AND DEMERITS OF INCORPORATING LEARNING STYLE INTO EFL CLASSROOM INSTRUCTION: A LITERATURE REVIEW

<sup>1</sup>Wahyuni Pratiwi, <sup>1\*</sup>Fardini Sabilah, <sup>1</sup>Sri Kurniawati, <sup>1</sup>Khofifah Nurlestari, <sup>1</sup>Bidayatul Mujtahidah H, <sup>1</sup>Riza Merlinda, <sup>1</sup>Taufik Hidayatullah

<sup>1</sup>Master of English Language Education Program, University of Muhammadiyah Malang, Malang City, Indonesia

\*Corresponding Author Email: [fardini@umm.ac.id](mailto:fardini@umm.ac.id)

Article Info	Abstract
<b>Article History</b> Received: Revised: Published:	<i>The concept of learning styles proposing the alignment of teaching methods and individual learning styles to enhance learning outcomes has gained popularity among English language teachers. However, numerous studies have debunked the concept by exposing weaknesses in the instruments used to measure learning styles and the underlying hypothesis. Therefore, there is a need for more research focusing on the merits and demerits of implementing learning styles theory in EFL classroom instruction. This study is presented to provide empirical understanding into the issue by presenting the latest research findings and providing recommendations for EFL teachers. To achieve this aim, the researchers conduct a literature review by collecting data from various document references and theories supporting the research. The literature was collected from journal articles published in the last five years, from 2018 to 2023. Based on the review, some studies confirmed that tailoring teaching methods to individual learning styles contributed to improved learning outcomes for EFL students. Conversely, other research has shown no significant or consistent correlation between teaching-specific learning styles and students' achievement. To address this disparity, the present study suggested that foreign language teachers maximize teaching-learning by considering several factors rather than one, such as teaching strategy, students' interpersonal orientations, knowledge, students' background, and interests. Teachers can balance instructional approaches, methods, and activities and apply various teaching strategies to reach all learners.</i>
<b>Keywords</b> Learning styles; Tertiary education; Teaching English; Teaching methods;	
<b>How to cite:</b> Pratiwi, W., Sabilah, F., Kurniawati, S., Nurlestari, K., Mujtahidah, B., Merlinda, R., & Hidayatullah, T. (2024). Merits and Demerits of Incorporating Learning Style into EFL Classroom Instruction: A Literature Review. <i>JOLLT Journal of Languages and Language Teaching</i> , 12(3), 1418-1430. DOI: <a href="https://dx.doi.org/10.33394/joltt.v12i3.11222">https://dx.doi.org/10.33394/joltt.v12i3.11222</a>	

### INTRODUCTION

What determines the quality of English as a Foreign Language (EFL) teachers can be seen in how they properly manage the classroom with appropriate strategies (Wangdi & Shimray, 2022). Several empirical types of research suggest matching the teaching instruction and students' learning styles. However, the idea of incorporating students' learning styles in an EFL setting has not been fully implemented yet by EFL teachers. Huang et al. (2018) reported that teachers are giving limited consideration to learning style preferences favored by the students, the large gap in student-teacher ratios would make it impossible for them to focus solely on each learner's learning style or needs either. However, a contrasting report by Maryono & Lengkanawati (2022) argued that some EFL teachers have devoted their time to categorize learners' learning styles to enhance their language achievement. Derakhshan & Shakki (2018) affirmed that teachers mindful of their students' diverse learning styles can gain insights how students absorb information and acquire knowledge. They further urged teachers to use a self-reported preferred learning style instrument to recognize the student's learning

styles and adapt their teaching methods accordingly. Nevertheless, the idea was confronted by Kirschner (2017). He declared that the instrument is frequently an unreliable indicator of how people learn most efficiently, as what someone likes is not necessarily what works best for them. The question arises, "Does the learning style adjustment emerge different outcome?"

Over the past 50 years, education practitioners believed that students perform better in academic settings when confronted with teaching strategies that respond to their learning preferences. Teachers, in consequence, are required to be knowledgeable about the various learning style theories developed by experts. Presented the frameworks in different ways, all the theories agreed that every learner tends to a certain type of learning style. For example, Dunn (1990) classified the types of learning styles according to their stimuli, i.e., environmental, emotional, sociological, physiological, and psychological. Meanwhile, The Myers-Briggs Type Indicator (MBTI) initiated by Myers & Myers (1995) categorized learning styles based on the derivation of psychological theories, namely: extroverts, introverts, sensors, intuitors, thinkers, feelers, judgers, and perceivers. In addition, Fleming's learning style models (2016) were divided into four simpler outlines based on the human sense: visual, auditory, reading/writing, and kinesthetic. Dozens of theories are available with different perspectives and terms. All these coherent theories claim that every learner tends to a certain type of learning style.

Learning style has been shown to play a crucial role in shaping students' academic success, particularly in language learning contexts. A study by Faisal (2019) highlighted the substantial impact of learning style preferences on students' language achievement. This finding underscored the importance of understanding how students prefer to learn and process information, as it can significantly influence their ability to acquire language skills effectively. In response to these insights, teachers have made efforts to categorize students based on their learning styles to better tailor instructional approaches. This ongoing endeavor aims to identify the predominant learning styles among EFL students. Afshar & Bayat (2018) research further emphasized the significance of learning styles by indicating that they are a stronger predictor of second language (L2) achievement compared to language learning strategies. These studies collectively highlight the positive relationship between learning styles and language learning outcomes. Thus, teachers, who are proponents of the idea of accommodating diverse learning styles, create more engaging and effective learning experiences that cater to students' learning styles.

Nevertheless, extensive research debunked this claim with the term "neuromyth of learning style". Neuromyths are defined as misunderstandings of educational issues that cause confusion and misinformation to learners, teachers, and parents (Yfanti & Doukakis, 2021). Lawrence et al. (2020) explained the reason by referring to the neuroscience point of view, a scientific study concerning the structure and function of the brain and nervous system. They argued that a learning styles theory could be misleading since it reduces the complexity of the teaching and learning process to an overly simplistic category and denominates students in ways that constrain their potential. Moreover, Papadatou-Pastou et al. (2018) proved that there was no correlation between students' self-assessments and teachers' assessments, indicating the demerit of facilitating learners' learning styles. Tazik & Aliakbari (2019) conducted a study to investigate whether aligning writing assignments with students' preferred learning styles leads to an enhancement in their writing proficiency. Meanwhile, Huang et al. (2018) examined the influence of learning style on English learning achievement. The results of both studies were contradicted. Tazik & Aliakbari concluded that administering writing assignments to visual learners based on their style led to high achievement in their writing skills. Otherwise, Huang and colleagues indicated that although most Chinese EFL learners preferred a visual learning style, it was found to have zero influence on the student's English proficiency. This situation certainly gets the teachers confused.

To give clarity to EFL teachers, a considerable amount of research has rigorously investigated the pros and cons of adjusting the teaching instruction and learning style. At the global scheme, Toyama & Yamazaki (2020) examined a similar issue entitled "Are there effects of a match between learning style and teaching style in an EFL classroom?" by comparing two EFL groups, one with a congruent student-teacher pairing and another with a non-congruent student-teacher pairing. Though the quantitative data indicated that the impact of alignment between learning style and teaching style was restricted, the authors assumed that several factors background the effect of match/mismatch, including students' proficiency, performance, motivation, and attitudes in EFL learning scenarios, irrespective of the exact correlation between learning style and teaching style. In the Indonesian context, Fauziah & Cahyono (2022) explored common beliefs in the learning style myth. Taking advantage of a systematic literature review, the authors unveiled that the vast majority of literature consists of articles that do not test the matching hypothesis. Much is known today about the controversial issue of matching learning match learning style theory. However, there is a lack of research that pays attention to the issues of the merits and demerits of incorporating learning styles theory in EFL classroom instruction. Hence, it is urgently required to conduct research by exposing support for and criticism of the theory.

The objective of the present study is to provide empirical insight into the issue regarding the merits and demerits of incorporating learning styles in EFL classroom instruction by presenting the current research findings and providing recommendations for EFL teachers. Gaining insight into the learning style issues in the EFL classroom is essential for teachers seeking to optimize their teaching instruction. The present study allows the teachers to focus on aspects with a stronger basis in scientific research, improving the overall quality of teaching in the classroom. Thus, the overarching research question is formulated as follows: What are the merits and demerits of incorporating learning styles in EFL classroom instruction?

## **RESEARCH METHOD**

### **Research Design**

A literature review was carried out to reach the research objective. As ascertained by Hati & Bhattacharyya (2024), a literature review allows researchers to pinpoint areas lacking coverage in existing research, aiding in understanding the breadth of knowledge within a particular field. Moreover, it offers an opportunity to assess research literature critically, discerning both its strengths and weaknesses from past studies. Hence, this method was selected to address the objective of the research. It is to narrate the existing knowledge on the learning style topic, identify its merits and demerits, and shed light on areas lacking of understanding to give clarities to EFL teachers.

### **Data Collection**

The researchers applied purposive sampling to attain the most relevant and plentiful information on the proposed topic and problem by collecting data from various document references and theories supporting the research. The inclusion criteria were as follows: (a) published in reputable journals; (b) published in the last five years, spanning from 2018 to 2023; (c) discussing the learning style theory, the critics toward the theory, and the effectiveness of teaching-learning adaptation hypothesis in EFL classroom instruction; (d) open-access. The steps to compose a literature review followed the guidelines proposed by Winchester & Salji (2016): determining the topic to review, recognizing relevant keywords and searching terms, pinpointing information sources, creating a reading list and gathering articles, summarizing content in our own words, and writing the literature review. Having selected the topic to review, the researchers started to search terms using the keywords: 'learning style'; 'learning style myth'; 'merits and demerits of learning style'; and 'pros and cons of learning style'. The references were searched using several search engines, namely Scopus, ERIC, Taylor & Francis Online,

and Google Scholar. The process of selecting the final set of primary sources was begun by reading the abstract to focus on the references presenting the merits and demerits of incorporating learning style into EFL teaching classroom. A number of 30 research articles were finally selected.

### **Data Analysis**

Following the completion of the literature review and the selection of a final sample, the relevant information from each article was extracted. This extracted data included descriptive details like authors' names, publication years, study types, and findings. In general, the data analysis followed the procedures adopted by Miles et al. (2014). The analysis procedure was guided by a three-step approach aimed at delving deeper into data analysis, namely: data condensation, data display, and data conclusion. In the first stage, the data from the findings of the selected articles was simplified in order to focus on the most relevant and significant data points. All the interesting information, like the effect of aligning learning style and teaching instruction, was highlighted. Once the data was reduced, the researchers accompanied the data display with an interpretation that explained the implications of the findings and how they relate to the research questions. In the last stage, conclusions and interpretations were drawn based on the condensed data, leading to the formation of primary themes, namely: the merits of incorporating learning style into EFL classroom instruction and the demerits of incorporating learning style into EFL classroom instruction. In the final phase, each theme was expanded upon by presenting sufficient evidence and specific examples from prior articles.

## **RESEARCH FINDINGS AND DISCUSSION**

### **Research Findings**

#### *Merits of Incorporating Learning Style into EFL Classroom Instruction*

Several studies have investigated learning styles' relationships and influences to optimize the teaching-learning process effectively. All of them focused on investigating EFL students' learning style preferences. The research found that learning style positively influenced learners' achievement and posed as a predictor (Afshar & Bayat, 2018). One of the most robust learning styles as a predictor is the visual (Afshar & Bayat, 2018, p. 1045). This finding was echoed by Girón-García & Gargallo-Camarillas (2023, p.120-122) and Liu (2023, p. 10), emphasizing that visual learning style influenced learners' achievement. They also found that aside from visuals, other perceptual learning styles also hold significant influence. Another investigation conducted by Derakhshan & Shakki (2018, p. 9) revealed that among learners with high levels of proficiency, there was a stronger inclination toward kinesthetic and tactile learning styles as compared to other preferences, including auditory, visual, group, and individual learning style preferences. To be more explicit, advanced learners prefer studying doing "hands-on" creativity, note-taking, model building, and experimentation. In contrast, students with lower proficiency levels showed a greater tendency towards visual and group learning styles, indicating the need for help from others. It can be inferred that various teaching strategies need to be applied to accommodate students' learning styles.

Some studies also proved the significance of learning styles in teaching English in specific areas of language skills. The first one is regarding reading achievement. Banaruee et al. (2022) revealed that the projected learning styles derived from the multiple regression model indicated that EFL learners should exhibit a hierarchical blend of traits, including sensitivity, impulsiveness, concreteness, leveling, randomness, analogical thinking, synthetic thinking, and deductive reasoning, to attain the highest reading score and proficiency. Integrating learning styles into the classroom introduces diversity and creates opportunities for enhancing language production effectively. Following Banaruee and colleagues, Foroozandehfar & Khalili (2019) found the same results. The findings of this research demonstrated a significant connection between considering the personality type and preferred learning style of language learners and

their reading fluency rate. Particularly, it was mentioned that visual, auditory, and kinesthetic learning styles are significantly related to reading fluency. Furthermore, Ajideh et al. (2018, p. 159) examined the relationship between the learning preferences of students majoring in Art and Science and their employment of English for Specific Purposes (ESP) reading strategies in academic environments. Based on the findings, Art students tend to possess tactile, kinesthetic, auditory, and group learning. Meanwhile, Science students' learning styles are favored mainly by kinesthetic ones. The study claimed that understanding Art and Science students' learning style preferences can enhance their ESP reading skills. Art learners must be engaged in practical tasks, listening exercises, and collaborative work to improve learning experiences. Meanwhile, Science learners must be exposed to practical tasks, experiential activities, and contemplative exercises. These studies suggest that teachers conduct thorough analyses within their classes to identify their students' learning styles and strengths to enhance their language proficiency, particularly reading skills.

The second is the learning style's influence on speaking skills. Cai et al. (2021) conducted experimental research on how learners' cognitive style influences English-speaking learning achievement regarding virtual reality. Participants were segregated into two categories based on their cognitive learning styles: field-dependent and field-independent. The study revealed that field-dependent learners performed better in real testing environments, whereas field-independent learners excelled in virtual testing environments (Cai et al., 2021, p. 10-13). It was also found that field-dependent learners relied on social interactions and reproduction of acquired knowledge. In contrast, field-independent learners preferred cognitive analysis and knowledge-building skills. The different results from both groups indicated how individuals approach learning and process information directly influences their language learning achievements. In addition, Evers & Chen (2021) investigated the specific aspect of speaking, namely pronunciation, by examining the impact of learning styles (visual/verbal) and the utilization of Automatic Speech Recognition (ASR) software in the context of adult English pronunciation. The results indicated a significant influence of learning styles on pronunciation performance during reading tasks across all participant groups (Evers & Chen, 2021, p. 11-13). Moreover, focusing on slang in pronunciation, a study by Biabani & Izadpanah (2019, p. 525) explored the relationship between Kolb's learning styles, gender, and learning slang among Iranian EFL students. The investigation focused on exploring Kolb's Learning style dimensions, namely, Cognitive Experience (CE), Reflective Observation (RO), Active Experimentation (AE), and Abstract Conceptualization (AC). The result revealed a positive correlation between learning style and proficiency in American slang, with the Active Experimentation (AE) learning style displaying the most pronounced correlation. This study also implies that gender did not play a significant role in the relationship between learning styles and slang.

The third is the significance of learning style to writing achievement. Tazik & Aliakbari (2019, p. 7) investigated the relation of EFL undergraduate students' visual learning styles to their writing tasks. They discovered that accommodating writing tasks to students' visual learning style improved their writing achievement. The study also implied that to improve students' writing achievement, implementing a suitable teaching style to students' learning styles is compulsory. In this regard, visually oriented-students' writing achievements are better when given tasks such as explaining images and documenting what they watch in movies. Additionally, a quasi-experimental study involving 58 universities was conducted by Widiati et al. (2023, p. 194). It aimed to investigate the impact of learners' preferred VAK learning style on their ability to write argumentative essays while employing two distinct writing strategies. The result confirmed a statistically significant difference in argumentative writing performance among the three groups. On average, visual and auditory learners outperformed kinesthetic learners regarding writing performance. As a recommendation, these studies suggested that

language instructors should consider both students' learning styles and teachers' teaching styles, and these two aspects should complement each other.

In addition to language skills, certain studies have centered their attention on investigating the correlation between one's learning style and the enhancement of one's vocabulary. One of them is research by Dehghani (2021) studying the favored learning style of Iranian undergraduate EFL learners and its impact on vocabulary test performance were examined. The results showed that most participants preferred the auditory learning style. Interestingly, those who identified as visual learners or used a combination of multimodal learning styles achieved the highest scores on the vocabulary test (p. 182). Conversely, most auditory learners, although the largest group, had the lowest test scores. In another study, Gholam-Shahbazi (2019) undertook an experimental study to confirm the connection between spatial and musical intelligences and the learning preferences of Iranian EFL learners majoring in TEFL and their vocabulary proficiency level. The study's findings indicate that individuals with higher spatial and musical intelligence levels tend to possess a more extensive vocabulary. The research also demonstrated that those with enhanced visual and auditory learning preferences tend to acquire a superior vocabulary when learning a foreign language. Furthermore, a literature review by Alduais (2018, p. 3-4) summarized that learning styles can serve as helpful indicators for teachers to determine the most appropriate aids to use when teaching vocabulary. By considering students' learning preferences, teachers can aim to incorporate a variety of aids, such as visual, audio, audio-visual, action-based, and multimedia aids, in their teaching methods. For example, Visual, Auditory and Kinesthetic (VAK) learning style theory would match visual, audio, and action-based aids. These studies ensured that instruction caters to students' diverse learning styles, making the vocabulary learning process more effective and engaging.

To sum up, numerous studies have explored the relationships between learning styles and their influence on effective teaching and learning in EFL classroom. In general, these studies have found that the merits of incorporating learning styles positively impact student achievement and can serve as predictors. The influence of learning styles extends to specific areas of language learning, such as reading, speaking, writing skills, and vocabulary enhancement.

#### *Demerits of Incorporating Learning Style into EFL Classroom Instruction*

The idea of learning styles, which suggests that individuals have distinct and consistent preferences for how they prefer to learn, has been widely popularized and even incorporated into educational practices. However, it is important to note that various researchers and experts in education and psychology have critiqued and debunked this theory. The criticism is motivated by three main reasons: the lack of a scientific rationale for developing learning style theories, the insufficiency of concrete proof to substantiate their efficiency, and the dearth of measurement instruments that are both valid and reliable (Newton & Salvi, 2020). The rationales supported by Papadatou-Pastou et al. (2021) assessed how teachers conceptualized the term learning style and infused the conceptualization into their teaching practice. The qualitative findings indicated that most teachers confounded the theories of learning (e.g., cognitive or behavioral theories) and learning style. The conceptualization, consequently, took effect on the teaching practice in the classroom. Hence, the study proposed that the extended use of the 'learning style' term gives a false impression of agreement among teachers since the term is conceptual, defined, and implemented by each individual in an idiosyncratic way.

Another research by Papadatou-Pastou et al. (2018) highlighted the empirical evidence of matching teaching and learning styles. They argued that there is no empirical evidence that superior academic achievement results from adjusting a student's preferred learning preference to instruction. Following Papadatou-Pastou et al., Whitman (2023) discovered that learning style assessment tools are unreliable. The self-report measure was inconsistent and often failed

to measure what they were supposed to assess. For instance, a study by Evers & Chen (2021) classified the participants into only two categories, namely visual and verbal learning styles, to find the effects of a certain pronunciation software with different learning styles. Learners are conditioned to choose whether they are either visual or verbal. Due to these rationales, the criticism argued that there is no connection between learning preferences and academic success.

Moreover, experimental research by Nancekivell et al. (2020) categorized the participants into a group holding the essentialist learning style interpretation and another group holding the nonessentialist learning style interpretation. The essentialist group believed that learning style is easy to diagnose as it is innate, heritable, and impactful to future achievement. In contrast, the nonessentialist believer group argued that learning style is adjustable and influenced by environmental factors. The result emphasized that learning styles are way more complex than previously understood. Consequently, the study suggested conducting neuroscience-based research.

Supported by neuromyth research initiated by Brown (2023), a systematic literature review proved that incorporating learning styles in teaching has no reliable empirical evidence. The paper pointed out that the result does not assert that delivering educational content through various sensory has no value. However, no reliable empirical evidence suggests that matching teaching styles with learning styles affects educational outcomes. Though it is a firmly established fact in neuroscience and education that individuals prefer to receive information from various sensory modalities, this does not necessarily mean they have various educational styles. For simplicity, here is an illustration of the demerits of adjusting learning style concepts in the classroom. Lawrence et al. (2020) pictured a situation in a real context (p. 3):

*In French class, you are working on developing your conversational skills and accent. You read and see many written examples of conversations; even phonetic spellings are presented (the words are written out the way they sound). However, your preference for visual information is not helping you speak better French. You struggle to pronounce many words and to understand what a French speaker is saying. Your "visual learner" learning style does not seem to help you learn better in this situation!*

Many studies have also presented the ineffectiveness of incorporating learning preference in EFL settings toward language skills. Rogowsky et al. (2020, p.6) verified that matching instruction to align with a student's auditory or visual learning preference had no impact on student performance, especially in listening and reading skills. Employing an experimental research design, the researchers highlighted three aspects. First, there was no significant positive correlation between auditory learning style and listening comprehension. Second, there was no substantial positive correlation between the inclination for visual learning and reading comprehension. Third, there was no distinctive impact of learning style on performance in a listening comprehension test compared to a reading comprehension test. In a separate investigation, Nikoopour & Khoshroudi (2021, p. 619) endeavored to discover the mutual influence of self-controlled learning and language learning styles among three levels of language learners majoring in TEFL, Literature, and Translation Studies. As reiterated in the result section of the correlational study, EFL learners' proficiency significantly impacted their self-control, yet it did not affect their learning styles. These findings correspond to Malsawmkimi & Fanai's (2019) study. The Pearson Product Moment Correlation analysis showed that there was no statistically significant connection between different Perceptual Learning Styles and academic performance. Overall, the study summarized that incorporating learning style into EFL classroom instruction did not affect students' achievement.

In addition to the connection between learning style and language proficiency, another study by Tasdemir & Arslan (2018) examined the concept of learning styles concerning preferences for oral corrective feedback. The study used a Chi-square test involving 348 students attending a preparatory English program at a university in Turkey. Thus, Kolb's

learning styles theory may not offer valuable insights into certain learning features, particularly feedback preferences. It has been observed that learning styles do not provide a clear understanding of why learners exhibit distinct feedback preferences. Therefore, the study proposed that teachers should be adept at employing various teaching methods and techniques.

Overall, despite the widespread notion of tailoring instruction to match individual learning styles, numerous critics have emerged to the efficacy and scientific foundation of learning styles theory. Researchers such as Newton & Salvi (2020) have highlighted three primary reasons for skepticism: the lack of a sound scientific rationale for developing these theories, the dearth of empirical evidence supporting their efficacy, and unreliable measurement tools. Additionally, studies by Papadatou-Pastou et al. (2018) and Whitman (2023) revealed that the term "learning style" is often misconstrued and implemented inconsistently by educators, leading to a lack of agreement in its application. Moreover, empirical evidence presented by researchers such as Nancekivell et al. (2020) and Brown (2023) has demonstrated that learning styles are complex and that no substantial evidence supports the idea of matching teaching styles to individual learning preferences. Furthermore, Rogowsky et al. (2020) experimental research in EFL settings indicated that accommodating auditory or visual learning styles did not significantly impact student achievement, particularly in listening and reading skills. Neuroscientists claimed that the concept of learning styles has been criticized for being oversimplified and not accounting for the complexity of individual learning processes (Lawrence et al., 2020). These critiques collectively suggest that while considering diverse learning needs is important, an exclusive reliance on matching learning styles with instructional methods did not yield the expected improvements in learning outcomes as previously presumed.

## Discussion

The debate over matching learning styles with instructional methods is indeed a longstanding and complex issue in education. On one side, the proponent studies claimed that identifying students' learning preferences is crucial because it allows teachers to tailor their teaching styles to better align with how students prefer to learn (Afshar & Bayat, 2018). In the context of EFL, several studies have demonstrated the influence of learning styles extends to specific areas of language skills, such as: reading (Banaruee et al., 2022), speaking (Cai et al., 2021), writing skills (Sabarun et al., 2023), and vocabulary enhancement (Gholam-Shahbazi, 2019). On the contrary, the opponent studies argue that the validity and reliability of learning style assessment tools are vulnerable and that there is a lack of empirical research or evidence supporting the learning style theory (Papadatou-Pastou et al., 2018; Whitman, 2023). Specifically, Rogowsky et al. (2020) confirmed that adjusting instruction to suit a student's auditory or visual learning preference did not influence the students' language skills. The studies underscored the importance of critically evaluating the role of learning styles in instructional design, considering both the potential benefits and limitations of incorporating learning style preferences into teaching practices.

The controversy over learning styles stems from conflicting research findings, leaving teachers unsure about the best approach to take in their classrooms. However, there are limited studies comparing both conflicting theories over the claim that alignment of learning style and teaching instruction leads to better students' achievement. Fauziah & Cahyono's (2022) investigation into Indonesian research trends related to learning styles emphasized this by reviewing 30 Indonesian research articles. It was found that most of these studies did not test the hypothesis that aligning teaching methods with students' learning styles would lead to better outcomes. Instead, they primarily described students' learning styles without exploring the potential implications. This study presents a contribution to educational theory and practice, specifically related to how teachers design instruction and how students engage with learning materials. By understanding the merits and demerits of incorporating learning style into EFL

classroom instruction, teachers are able to consider other factors contributing to students' better achievement.

While acknowledging that individual differences exist among students, teachers should refrain from relying solely on learning styles as the primary determinant for instructional planning. A study by Westby (2019) showed the importance of considering the modality that best suits the content being taught rather than focusing on individual students' learning styles or preferences. Modality refers to how information is delivered to students or the channels through which students engage with and process information. This is due to the fact that the human mind uses distinct representations for storing various types of information, and these representations are not interchangeable. If the objective is to learn and remember the visual aspects of something, the presentation should be visual. Considering all this, EFL teachers are encouraged to consider the nature of the content and select instructional methods that are most conducive to effective learning.

Many factors are taken into account to optimize learning achievement. Rather than rigidly adhering to specific learning styles, teachers can consider complex factors that ultimately can contribute. Lawrence et al. (2020) explicitly mentioned the students' prior knowledge, background, and interest as some of these factors. Meanwhile, Cai et al. (2021) suggested that education practitioners consider students' social interaction preferences. For example, field-dependent students are likely to separate themselves from social interaction, while field-independent ones tend to do otherwise. In addition, adjusting and integrating multimodal teaching styles and strategies are the most suggested solutions. Multimodal teaching allows the presentation of information in various ways, making the learning experience more accessible and engaging for a broader range of students, for example, written explanations, audio recordings, visual aids, and interactive exercises (Sakulprasertsri, 2020). It is supported by a previous study in neuroscience education that suggested individuals' preference to receive information from various sensory modalities (Brown, 2023). Teachers can provide students with different entry points to the content, ensuring that each learner can access and comprehend the material effectively.

To sum up, this research supports the idea that EFL teachers must expose students to varied teaching strategies. A recent study by Yotta (2023) recommended that foreign language teachers should motivate learners, manage the instructional approach, and use various methods and classroom activities. The following instructional strategies can be applied: role-plays, direct experience, practical cases, multi-sensory learning, music, art, comics, cinema, etc. (Estrada et al., 2019). EFL teachers can navigate the debate on learning styles by embracing a balanced and individualized approach to instruction. By considering a diverse range of factors that influence student achievement and adopting multimodal teaching strategies, educators can create an inclusive learning atmosphere that give space to the diverse needs of their students, ultimately optimizing the teaching-learning process in the classroom.

## CONCLUSION

In the last decade, learning style has been a debatable research topic. In this paper, the researchers addressed the merits and demerits of learning styles and focused solely on presenting insights regarding the issue of learning style in the EFL context. Based on the review, numerous studies have delved into the relationship between learning styles and the teaching-learning process in EFL classrooms. The reviewed studies have found that the merits of incorporating learning styles positively impact student achievement and can serve as predictors of students' success. The influence of tailoring teaching instruction and learning styles in EFL classroom instruction extends to specific areas of language learning, such as reading, speaking, writing skills, and vocabulary enhancement. Meanwhile, other studies indicated several demerits of matching teaching instruction with learning styles. These demerits mentioned in the

studies include the absence of substantial evidence supporting the idea of matching teaching styles to individual learning preferences, the self-report measure was inconsistent and often failed to measure what they were supposed to assess, and researchers have not consistently demonstrated that teaching in alignment with these styles leads to improve language proficiency. The study's findings have several pedagogical implications for EFL teachers. The researchers suggested that foreign language teachers maximize teaching-learning by considering several factors rather than one. Other factors, such as teaching strategy, students' interpersonal orientations, knowledge, background, and interest, become essential to consider. Additionally, teachers are expected to balance instructional approaches, methods, and activities and apply multimodal teaching strategies to reach all learners. Therefore, while identifying students' learning styles can enhance learning and engagement, it is essential to be aware of potential complexities and limitations to strike a balance and effectively meet the needs of EFL learners.

This study, however, collected only open-access articles from a few corpus (e.g., Scopus, ERIC, Taylor & Francis Online, and Google Scholar). This limitation hindered the researchers' ability to gather a more comprehensive dataset regarding the issue. Additionally, the study specifically focused on EFL classroom instruction, leaving room for further exploration into the hypothesis of incorporating learning styles into teaching methods across other fields. As Fauziah & Cahyono (2022) claimed that there remains a gap in research regarding whether teachers universally believe in the learning style-matching hypothesis and how they deal with the controversy. Nevertheless, the results of the present study could serve as comparative data on the effects of integrating learning styles into EFL classroom instruction. Understanding the merits and demerits of using learning styles in EFL classrooms helps teachers consider additional factors that contribute to students' academic success.

## REFERENCES

- Afshar, H. S., & Bayat, M. (2018). Strategy use, learning styles and L2 achievement of Iranian students of English for academic purposes. *Issues in Educational Research*, 28(4), 1039-1059. <http://www.iier.org.au/iier28/soodmand-afshar.pdf>
- Ajideh, P., Zohrabi, M., & Pouralvar, K. (2018). Investigating the relationship between learning styles and ESP reading strategies in academic setting. *International Journal of Applied Linguistics and English Literature*, 7(3), 156–164. <https://doi.org/10.7575/aiac.ijalel.v.7n.3p.156>
- Alduais, A. M. S. (2018). Teaching and learning vocabulary: Insights from learning styles and learning theories. *Journal of Child and Adolescent Behavior*, 6(1), 1–4. <https://doi.org/10.4172/2375-4494.1000370>
- Banaruee, H., Farsani, D., & Khatin-Zadeh, O. (2022). EFL learners' learning styles and their reading performance. *Discover Psychology*, 2(45), 1–16. <https://doi.org/10.1007/s44202-022-00059-x>
- 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://doi.org/10.29333/iji.2019.12233a>
- Brown, S. B. R. E. (2023). The persistence of matching teaching and learning styles: A review of the ubiquity of this neuromyth, predictors of its endorsement, and recommendations to end it. *Frontiers in Education*, 8, 1–11. <https://doi.org/10.3389/feduc.2023.1147498>
- Cai, J. Y., Wang, R. F., Wang, C. Y., Ye, X. D., & Li, X. Z. (2021). The influence of learners' cognitive style and testing environment supported by virtual reality on English-speaking learning achievement. *Sustainability*, 13(21), 1–14. <https://doi.org/10.3390/su132111751>

- Dehghani, A. P. (2021). Learning styles and vocabulary learning by Iranian undergraduate EFL learners. *Contemporary Educational Researches Journal*, 11(4), 176–185. <https://doi.org/10.18844/cerj.v11i4.5723>
- Derakhshan, A., & Shakki, F. (2018). An investigation into the relationship between Iranian EFL high- and low-proficient learners and their learning styles. *SAGE Open*, 8(4), 1–10. <https://doi.org/10.1177/2158244018809408>
- Dunn, R. (1990). Understanding the Dunn and Dunn learning styles model and the need for individual diagnosis and prescription. *Journal of Reading, Writing, and Learning Disabilities International*, 6(3), 223–247. <https://doi.org/10.1080/0748763900060303>
- Estrada, M., Moliner, M. Á., & Monferrer, D. (2019). The relation between learning styles according to the whole brain model and emotional intelligence: A study of university students. *Estudios Sobre Educacion*, 36, 85–111. <https://doi.org/10.15581/004.36.85-111>
- Evers, K., & Chen, S. (2021). Effects of automatic speech recognition software on pronunciation for adults with different learning styles. *Journal of Educational Computing Research*, 59(4), 669–685. <https://doi.org/10.1177/0735633120972011>
- Faisal, R. A. (2019). Influence of personality and learning styles in English language achievement. *Open Journal of Social Sciences*, 07(08), 304–324. <https://doi.org/10.4236/jss.2019.78022>
- Fauziah, H., & Cahyono, B. Y. (2022). *Prevalent beliefs in learning styles myths: Indonesian research trends on learning styles*. <http://www.iier.org.au/iier32/fauziah.pdf>
- Foroozandehfar, L., & Khalili, G. F. (2019). On the relationship between Iranian EFL learners' reading fluency, their personality types and learning styles. *Cogent Arts and Humanities*, 6(1), 1–19. <https://doi.org/10.1080/23311983.2019.1681347>
- Gholam-Shahbazi, H. (2019). The relationship between spatial and musical intelligences and EFL learners' learning styles and vocabulary knowledge. *Journal of Language Teaching and Research*, 10(4), 747–765. <https://doi.org/10.17507/jltr.1004.09>
- Girón-García, C., & Gargallo-Camarillas, N. (2023). The effects of an online task on legal English students' perceptual learning styles and academic achievement. *Cultura, Lenguaje y Representacion*, 30, 107–130. <https://doi.org/10.6035/clr.6537>
- Hati, S., & Bhattacharyya, S. (2024). Writing a literature review as a class project in an upper-level undergraduate biochemistry course. *Biochemistry and Molecular Biology Education*. <https://doi.org/10.1002/bmb.21814>
- Huang, F., Hoi, C. K. W., & Teo, T. (2018). The Influence of learning style on English learning achievement among undergraduates in mainland China. *Journal of Psycholinguistic Research*, 47(5), 1069–1084. <https://doi.org/10.1007/s10936-018-9578-3>
- Kirschner, P. A. (2017). Stop propagating the learning styles myth. *Computers and Education*, 106, 166–171. <https://doi.org/10.1016/j.compedu.2016.12.006>
- Lawrence, B. C., Yaman Ntelioglou, B., & Milford, T. (2020). It is complicated: Learning and teaching is not about “learning styles.” *Frontier for Young Minds*, 8, 1–6. <https://doi.org/10.3389/frym.2020.00110>
- Liu, M. (2023). English classroom anxiety, learning style and English achievement in Chinese university EFL students. *Sustainability*, 15(18), 1–14. <https://doi.org/10.3390/su151813697>
- Malsawmkimi, M., & Fanai, L. (2019). A Study of perceptual learning styles with academic achievement in private higher secondary schools in Aizawl City. *Educational Quest- An International Journal of Education and Applied Social Sciences*, 10(1), 21–25. <https://doi.org/10.30954/2230-7311.1.2019.4>
- Maryono, G. D., & Lengkanawati, N. S. (2022). EFL teachers' strategies to accommodate students' learning styles in distance learning and their challenges. *Journal on English as a Foreign Language*, 12(1), 159–178. <https://doi.org/10.23971/jeft.v12i1.3130>

- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook. *Sage Publication: London*.
- Myers, I. B., & Myers, P. B. (1995). *Gifts Differing: Understanding Personality Type*. California: Davies-Black Publishing.
- Nancekivell, S. E., Shah, P., & Gelman, S. A. (2020). Maybe they're born with it, or maybe it's experience: Toward a deeper understanding of the learning style myth. *Journal of Educational Psychology*, 112(2), 221–235. <https://doi.org/10.1037/edu0000366>
- Newton, P. M., & Salvi, A. (2020). How common is belief in the learning styles neuromyth, and does it matter? A pragmatic systematic review. *Frontiers in Education*, 5, 1–14. <https://doi.org/10.3389/feduc.2020.602451>
- Nikoopour, J., & Khoshroudi, M. S. (2021). EFL learners' learning styles and self-regulated learning: Do gender and proficiency level matter? *Journal of Language Teaching and Research*, 12(4), 616–623. <https://doi.org/10.17507/jltr.1204.13>
- Papadatou-Pastou, M., Gritzali, M., & Barrable, A. (2018). The learning styles educational neuromyth: Lack of agreement between teachers' judgments, self-assessment, and students' intelligence. *Frontiers in Education*, 3, 1–5. <https://doi.org/10.3389/feduc.2018.00105>
- Papadatou-Pastou, M., Touloumakos, A. K., Koutouveli, C., & Barrable, A. (2021). The learning styles neuromyth: when the same term means different things to different teachers. *European Journal of Psychology of Education*, 36(2), 511–531. <https://doi.org/10.1007/s10212-020-00485-2>
- 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, 1–7. <https://doi.org/10.3389/fpsyg.2020.00164>
- Sabarun, Widiati, U., Suryati, N., & Azman, M. N. A. (2023). Measuring the effect of learning style preference on learners' argumentative essay writing across different writing strategies. *Journal of Higher Education Theory and Practice*, 23(5), 186–200. <https://doi.org/https://doi.org/10.33423/jhetp.v23i5.5935>
- Sakulprasertsri, K. (2020). Teachers' integration of multimodality into 21st century EFL classrooms in Thailand: Practice and perception. *LEARN Journal: Language Education and Acquisition Research Network Journal*, 13(2), 225–242. <https://so04.tci-thaijo.org/index.php/LEARN/article/view/243710>
- Tasdemir, M. S., & Arslan, F. Y. (2018). Feedback preferences of EFL learners with respect to their learning styles. *Cogent Education*, 5(1), 1–17. <https://doi.org/10.1080/2331186X.2018.1481560>
- Tazik, K., & Aliakbari, M. (2019). Match or mismatch of EFL students' learning styles and writing assignments: The case of Iranian EFL learners. *Applied Linguistics Research Journal*, 3(2), 35–47. <https://doi.org/10.14744/alrj.2019.95967>
- Toyama, M., & Yamazaki, Y. (2020). Are there effects of a match between learning style and teaching style in an EFL classroom? *Innovation in Language Learning and Teaching*, 14(3), 243–258. <https://doi.org/10.1080/17501229.2019.1575386>
- Wangdi, T., & Shimray, R. (2022). Qualities of effective EFL English teachers as perceived by Thai university students: A photovoice study. *Issues in Educational Research*, 32(2), 805–824. <http://www.iier.org.au/iier32/wangdi.pdf>
- Westby, C. (2019). The myth of learning style. *Word of Mouth*, 31(2), 4–7. <https://doi.org/10.1177/1048395019879966a>
- Whitman, G. M. (2023). Learning styles: Lack of research-based Evidence. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 96(4), 111–115. <https://doi.org/10.1080/00098655.2023.2203891>

- Winchester, C. L., & Salji, M. (2016). Writing a literature review. *Journal of Clinical Urology*, 9(5), 308–312. <https://doi.org/10.1177/2051415816650133>
- Yfanti, A., & Doukakis, S. (2021). Debunking the neuromyth of learning style. *Advances in Experimental Medicine and Biology*, 1338, 145–153. [https://doi.org/10.1007/978-3-030-78775-2\\_17](https://doi.org/10.1007/978-3-030-78775-2_17)
- Yotta, E. G. (2023). Accommodating students' learning styles differences in English language classroom. *Heliyon*, 9(6), 1–7. <https://doi.org/10.1016/j.heliyon.2023.e17497>