

The Influence of Cultural Differences on Students' Learning Styles

Nursyahida Suci Ramadhani^{*1}, Annisa Melfida Chairiah², Dhiya Veeza Aqilla Asmoro³

Universitas Riau Kepulauan, Riau, Indonesia^{1,2,3}

*Corresponding Email: sucirdhni63@gmail.com

Abstract

This study uses a Systematic Literature Review (SLR) technique to investigate how cultural diversity affects students' learning styles in a multicultural university setting. This study highlights how cultural backgrounds, including early school experiences, norms, beliefs, and traditions, influence children's preferences for various learning modes. This study aims to identify trends across cultural contexts and provide insights into culturally sensitive teaching methods. According to PRISMA standards, 20 peer-reviewed articles published from 2015 to 2024 were chosen. The publications used a range of methodologies, including mixed methods and qualitative, quantitative, and theoretical approaches, and covered several nations, including the US, China, Turkey, Mongolia, and Indonesia. According to the review, students from individualist cultures, such as the US, tend to favor independent and exploratory learning styles, whereas students from collectivist cultures, such as China and Indonesia, tend to choose collaborative and structured learning environments. Additionally, the survey found that different ethnic groups, including Papuan and Flores students, had different preferences for learning styles in Indonesia. These results highlight the value of culturally sensitive teaching strategies across a range of student demographics. By proposing suggestions for future inclusive teaching methods and a thorough map of cultural influences on learning, this study advances the disciplines of educational psychology and multicultural pedagogy.

Keywords: cultural diversity, higher education, learning styles, multicultural education, systematic literature review

Introduction

Cultural diversity is an important aspect of education, especially in a multicultural university environment. Students' learning styles can be greatly influenced by their cultural background, including values, norms, and learning habits brought about by their home environments. The influence and diversity of culture are of the things that should be very important to discuss amid the many cultural diversities in Indonesia. Culture is a way of life for a group that will continue to be passed down from one generation to the next (Nuraeni et al., 2022). In the era of globalization, cultural diversity has become an integral aspect of the college environment. Students' learning styles are heavily influenced by the cultural background they have been exposed to since childhood, including the values, norms, and learning habits acquired from their home environment. Understanding these influences is critical, especially in a multicultural university environment,

where diverse cultural interactions occur daily. A person's culture, family circumstances, and socioeconomic status shape how they learn. The environment in which a person is raised plays a crucial role in the learning process (Widharyanto & Binawan, 2020). Education plays an important role in determining the progress of a nation. In the education process, learning activities are the main element because through learning, someone can gain knowledge, skills, and form the attitudes needed to face various challenges (Lafever, 2010). The diversity of higher education students has increased over time. Students now come from a variety of cultural and ethnic backgrounds and have a variety of learning experiences from previous educational institutions or programs. This diversity is also reflected in the differences in their learning styles, which are influenced by cultural factors, life experiences, and educational approaches. The diversity of students in higher education environments has increased over time. Students now come from a variety of cultural and ethnic backgrounds, and have a variety of learning experiences from previous educational institutions or programs. According to Romanelli et al. (2009), this diversity is also reflected in the differences in learning styles, which are influenced by cultural factors, life experiences, and educational approaches. Education has an important role in determining the progress of a nation. In the education process, learning activities are the main element because through learning, someone can gain knowledge, skills, and form the attitudes needed to face various challenges (Kristianti et al., 2022).

Previous research has shown that cultural factors, such as communication styles, student-teacher relationships, and parental involvement, play a significant role in shaping students' learning preferences and behaviors. For example, a study conducted at Ondokuz Mayıs University in Turkey showed significant differences in learning styles among students from different cultural backgrounds, highlighting the need for culturally responsive teaching strategies (Diken & Ozdemir, 2021). Likewise, comparative research between Chinese and American students has revealed different problem-solving approaches rooted in the respective cultural and educational systems of each culture and country of origin (Zhang, 2023). Research shows that cultural factors such as communication style, student-teacher relationships, and parental involvement play a significant role in shaping students' learning preferences and behaviors. For example, Manipuspika (2020), a study at Brawijaya University, revealed that Indonesian EFL students preferred a visual learning style, a preference associated with cultural habits of reading and listening, rather than practical application. Furthermore, research has shown that students from different ethnic backgrounds in Indonesia exhibit varying learning-style preferences. For example, Papuan students tend to prefer a bimodal learning style that combines aural and kinesthetic modalities, whereas Flores students often prefer a kinesthetic aural style (Widharyanto & Binawan, 2020). This variation underscores the need for culturally responsive teaching strategies that can accommodate diverse learning preferences.

In Indonesia, a country characterized by extensive cultural diversity, the multitude of ethnic groups and cultural practices contributes to diverse learning styles among students. A country's culture influences its citizens' preferred learning styles through the socialization process that takes place in society (Khaskhuu & Chimed-Ochir, 2023). The diverse cultural norms and values found in Indonesia may influence individual learning preferences in higher education (Ho & Lim, 2020).

However, there is a marked gap in systematic research exploring how these cultural differences specifically influence students' learning styles in the context of higher education in Indonesia. Recent research has amply demonstrated the need for culturally responsive pedagogy, but there is limited empirical research that systematically maps how cultural diversity impacts students' cognitive and behavioral engagement in the classroom (Kunwar, 2021). While several studies have addressed multicultural education in general, few have investigated the nuanced ways in which cultural backgrounds influence individual learning preferences and outcomes.

The differences that exist are not only differences in socioeconomic status, gender, and race, but also in the field of education. In this case, how cultural differences can affect students' learning styles will be explored in more depth. Learning style refers to the way an individual absorbs and understands new information (Terry & Irving, 2010). Indonesia is a vast archipelago known not only for its natural wealth but also for its abundant human resources. However, with the vastness of this country, the wealth that exists, and the diversity of cultures that are found in Indonesia, it makes the mindset of a person or individual have different points of view, especially in the field of education, but behind this cultural diversity also affects the learning style between individuals who have different cultures. In the university environment, which has many students with various tribes, races, and cultures that are different from their family backgrounds and are accustomed to their respective cultures that have been taught since childhood, this can greatly affect their learning style on campus. Every student certainly had a different learning style. Student learning style is key to developing learning performance (Djara et al., 2023). Learning style is how students absorb, organize, and process information received from the teacher (Nuraeni et al., 2022). A person's learning style is the key to developing performance and increasing insight. According to Nuraeni et al. (2022), over the past 25 years, it has been shown that humans can learn any material successfully if the learning methods and styles used are in accordance with the individual's learning. This means that when cultural and human diversity is considered in the existing learning process, the results are always positive; students feel happy, achieve something without stress, experience increased motivation, and can always control the learning process with a learning style that suits the individual.

Cultural differences, such as invisible painters in the world of education, subtly shape teaching methods, learning content, and students' learning styles (Qi, 2024). Each student has a unique way of understanding learning materials, which is influenced by differences in their ability to absorb information. Learning styles reflect the typical approach that students use in the learning process; therefore, it is important to understand their diversity in the context of multicultural education (Wahyuddin, 2016). Although a number of studies have discussed the influence of culture on learning, most of them are still descriptive and have not fully identified how students' learning styles are influenced by their cultural background, especially in Indonesia. This study addresses this gap by adopting a systematic approach in the existing literature. However, few studies have systematically summarized how cultural differences affect students' learning styles in multicultural environments. This study aims to regularly identify and analyze how cultural differences influence students' learning styles in multicultural university settings using the Systematic Literature Review (SLR) method. The main research questions addressed in this review

are as follows: (1) How do cultural differences influence students' learning styles in a multicultural university environment?. Sub-questions included: (1) What aspects of cultural background (values, norms, habits) are commonly associated with learning styles? (2) How have previous studies described or categorized learning styles in culturally diverse student populations? (3) What culturally responsive strategies have been recommended to accommodate learning style differences?

Method

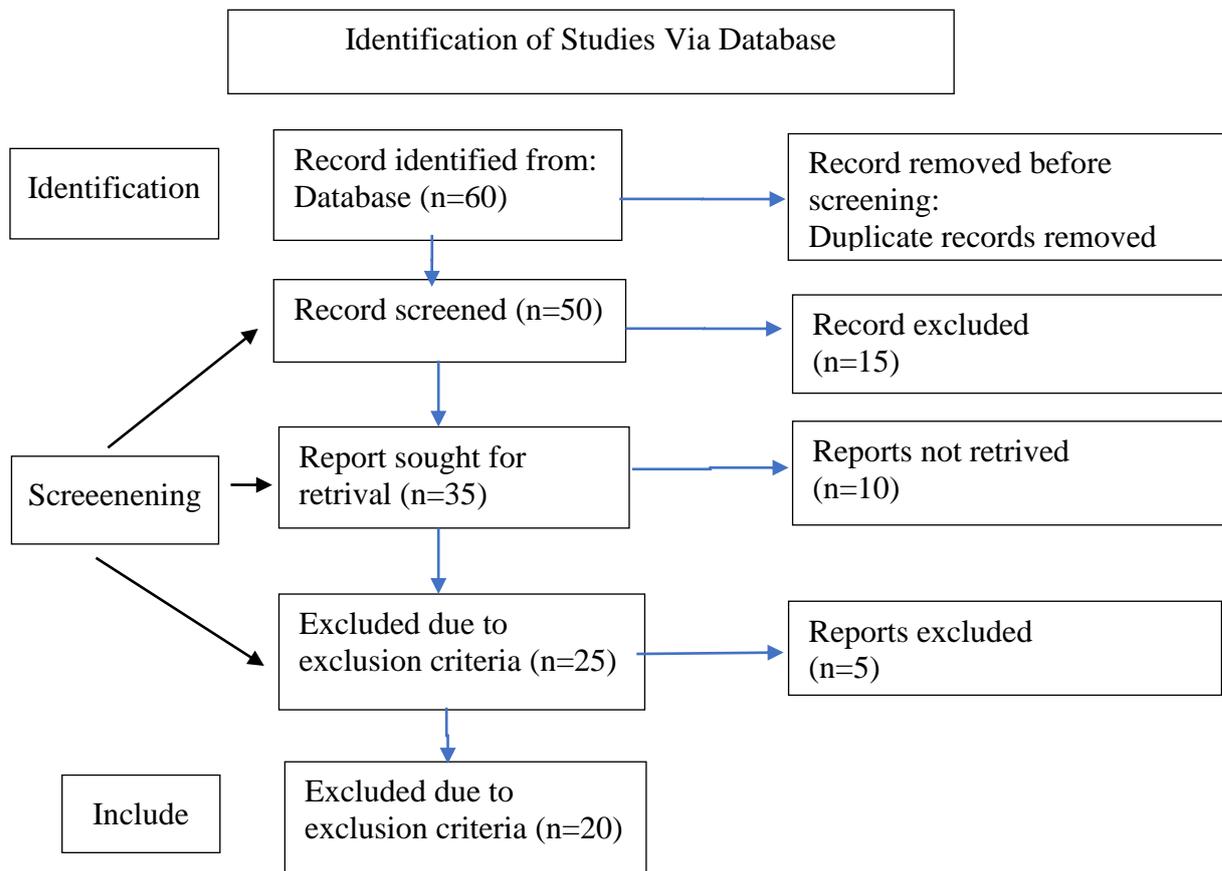
As stated in the title, this study identified, assessed, and synthesized previous research on how cultural diversity affects students' learning styles in a multicultural university setting using a Systematic Literature Review (SLR) (Wah & Nasri, 2019). The SLR methodology was selected because of its systematic and open approach to literature evaluation, thorough coverage of the subject, reduced bias in article selection, and sound study interpretation (Snyder, 2019; Xiao & Watson, 2019).

To guarantee the accuracy of the methodology, this study adhered to a systematic review approach based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria (Page et al., 2021). Clear research question development, predetermined inclusion and exclusion criteria, systematic data collection, quality evaluation, and theme analysis of the selected literature were all features of this study.

The review included any quantitative, qualitative, or mixed-methods studies that focused on cultural diversity and student learning styles. Included studies had to be (1) peer-reviewed primary research journal articles (quantitative, qualitative, or mixed methods); (2) published in the social sciences (education); (3) written in English, Indonesian; (4) published in an open access journal, in the final publication stage; (5) published between 2015 and 2025, to reflect the last decade of research in this area; (7) methodology and sample characteristics; (8) key findings related to the influence of culture on learning styles involving students currently studying at university; and (9) focused on cultural diversity, including race, class, ethnicity, religion, nationality, and language.

First, the team conducted a search using the terms "systematic review" AND "culture" OR "diversity" in the same databases (SciSpace and Google Scholar) to map the research that has been done on this topic. It was concluded that cultural diversity has a significant impact on students' learning styles. Thus, studies that focused on other dimensions of diversity, such as culture, diversity, multiculturalism, universities, education, and research conducted in campus environments were excluded. Studies that did not explicitly relate to teachers' views (perceptions, attitudes, and beliefs) and practices regarding students' cultural diversity and/or inclusion in the classroom were also excluded. Second, we conducted a random reading of existing research (reports, journal articles, books, and grey literature) on the topic of students' cultural diversity and how it affects an individual's learning style (Gkrimpizi et al., 2023). All searches were performed to include full text and abstracts, not just abstracts. Comprehensive searches were conducted over several days, and the final searches were recorded in their respective databases for further consultation and confirmation.

The search strategy yielded 60 studies for inclusion. After removing duplicates (n = 10), 15 records were screened at the title and abstract levels. At this level, 10 articles were excluded due to the exclusion criteria. In the second stage of the screening process, five abstracts were analyzed. Twenty articles met the inclusion criteria and were considered eligible for the systematic review.



The studies analyzed answered our research questions, providing insights into the influence of cultural diversity on students' learning styles. These results should be viewed as a cautious recommendation for further investigations of students who are considered culturally diverse.

Results and Discussion

A total of 10 articles that met the inclusion criteria were reviewed and analyzed. These studies varied in methodological approach—5 were qualitative, 2 were quantitative, and 1 applied mixed-methods. The studies came from diverse contexts, including Indonesia, Turkey, the United States, China, and other multicultural education settings.

Table 1
Summarizes the Core Characteristics of the Reviewed Articles

No	Author(s) & Year	Country	Methodology	Cultural Focus	Learning Style Findings
1	Nuraeni et al. (2022)	Indonesia	Quantitative	Ethnic groups in Indonesia (e.g., Papuan, Flores)	Papuan students preferred bimodal (aural-kinesthetic); Flores preferred kinesthetic-aural.
2	Widharyanto and Binawan (2020)	Indonesia	Qualitative	Ethnic and family background	Socio-cultural factors strongly influence preferred modalities.
3	Manipuspika (2020)	Indonesia	Qualitative	Indonesian EFL students	Preference for visual style tied to cultural habits of reading/listening.
4	Zhang (2023)	China & USA	Comparative	National culture (East vs. West)	Chinese students preferred collective, structured learning; Americans more individual and exploratory.
5	Diken and Ozdemir (2021)	Turkey	Mixed-method	Diverse student backgrounds	VARK learning style differences found among cultural groups.
6	Romanelli et al. (2009)	USA	Literature Review	Cultural values	Learning preferences shaped by early cultural exposure.
7	Khaskhuu and Chimed-Ochir (2023)	Mongolia	Qualitative	Mongolian cultural norms	Learning preferences linked to societal learning practices.
8	Ho & Lim (2020)	Singapore	Mixed-method	Multicultural student body	Cultural values impacted engagement and preferred learning techniques.
9	Lafever (2010)	Global	Theoretical	General multicultural	Matching teaching methods to cultural

				context	learning styles improves outcomes.
10	Qi (2024)	China	Conceptual	Subtle cultural impact	Cultural background unconsciously shapes how learning is approached.
11	Kristianti et al. (2022)	Indonesia	Quantitative	Teacher education students	Cultural upbringing affects how information is processed.
12	Kunwar (2021)	Nepal	Literature Review	Multicultural higher education	Need for inclusive strategies based on diverse learning preferences.
13	Djara et al. (2023)	Indonesia	Quantitative	University students	Learning performance improves when style matches culture.
14	Gkrimpizi et al. (2023)	Greece	Mixed-method	Ethnocultural diversity in HEIs	Cultural awareness is critical to addressing diverse styles.
15	Wah and Nasri (2019)	Malaysia	SLR	Cultural variables in education	Calls for systematic mapping of learning styles in cultural contexts.
16	Snyder (2019)	USA	Methodological	Research approach in social sciences	Advocates SLR for objective insights in cultural studies.
17	Xiao and Watson (2019)	USA	Methodological	Literature analysis methods	Stresses minimizing bias in cultural learning research.
18	Terry and Irving (2010)	Australia	Theoretical	Psychological & educational context	Defines learning style as method of processing information.
19	Page et al. (2021)	International	PRISMA Protocol	Review guidelines	PRISMA improves rigor in reviews on learning diversity.
20	Wahyuddin (2016)	Indonesia	Theoretical	Indonesian multicultural setting	Emphasizes need for cultural sensitivity in class design.

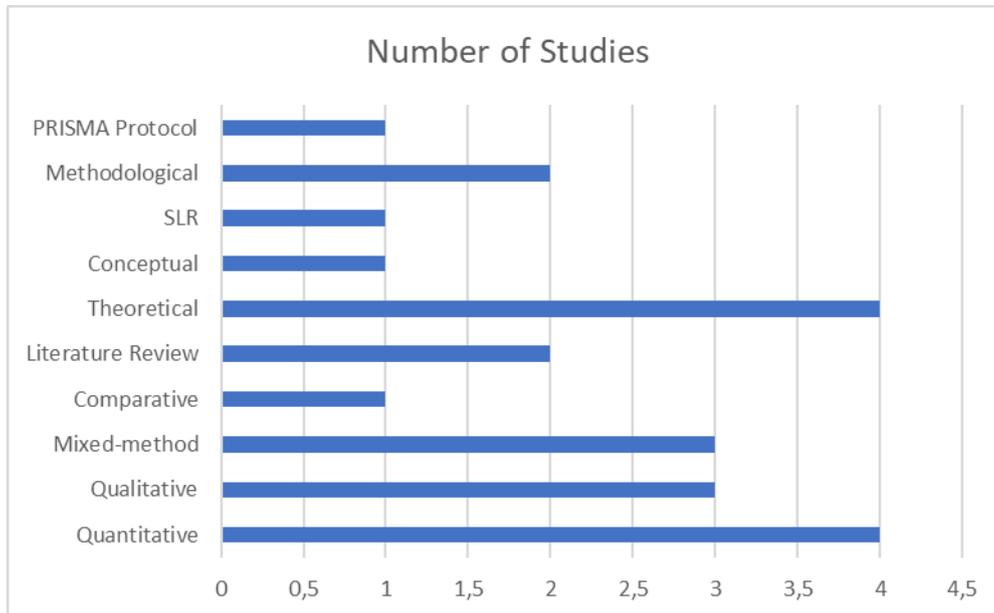


Figure 1. Distribution of Methodologies

This section discusses the key findings of the study by interpreting how cultural background influences students' learning styles and how culturally responsive teaching can improve learning outcomes. The discussion also relates the results to previous research to identify patterns, similarities, and differences. By doing so, this section provides a clearer understanding of the educational implications of culture in shaping teaching and learning processes.

Cultural Background and Students' Learning Styles

The findings of this study indicate a strong relationship between cultural background and students' learning styles. Most of the reviewed studies highlight that cultural values and social norms significantly influence students' preferences for certain learning modalities. Learners from collectivist cultures such as Indonesia and China tend to prefer group-based learning, oral discussions, and visual learning approaches. These preferences are shaped by communal traditions such as storytelling, observation, and shared meaning-making (Nuraeni et al., 2022). In contrast, students from individualist cultures demonstrate a stronger inclination toward independent, analytical, and self-directed learning tasks.

In addition, cultural influence is not only visible across countries but also within nations. Widharyanto and Binawan (2020) found significant differences in learning styles among students from different ethnic regions in Indonesia, suggesting that local cultural practices influence cognition and information processing.

Culturally Responsive Teaching Strategies

The reviewed studies emphasize the importance of adopting culturally responsive pedagogy to address diversity in learning. Teachers are encouraged to use multimodal instruction to accommodate various learning preferences (Diken & Ozdemir, 2021). Recognizing students' home cultures as legitimate sources of knowledge enables learners to connect academic content with their

lived experiences (Kunwar, 2021). Flexible assessment practices are also recommended to allow students to demonstrate learning in different ways. In collectivist learning contexts, storytelling and collaborative learning have been shown to improve comprehension and classroom participation (Manipuspika, 2020).

Impact of Culturally Inclusive Practices on Student Engagement and Achievement

Empirical evidence shows that culturally inclusive practices positively affect student engagement and achievement. Ho and Lim (2020) reported that when lecturers included students' cultural narratives in classroom discussions, student engagement increased significantly. Similarly, Gkrimpizi et al. (2023) found that culturally inclusive practices improved academic performance and fostered a stronger sense of belonging and motivation.

Interpretation of Findings in Relation to Previous Studies

The results of this study are consistent with international research emphasizing the importance of aligning teaching methods with cultural learning patterns. Lafever (2010) and Zhang (2023) argue that culturally aligned instruction enhances comprehension, participation, and long-term learning outcomes by reducing the mismatch between teaching practices and students' cultural expectations.

Educational Implications for Teaching and Curriculum Design

The findings suggest that understanding cultural learning styles is essential for creating inclusive and effective learning environments, especially in multicultural and international educational contexts. Therefore, educators and policymakers should integrate cultural awareness into curriculum development and teacher training programs to promote equity, engagement, and academic success.

Conclusion

This systematic literature review explores how cultural diversity influences students' learning styles in multicultural academic environments. Based on 20 studies published in the past 10 years, between 2015 and 2024, from countries such as Indonesia, China, the US, Turkey, and Mongolia, the review found that cultural background significantly shapes learning preferences. Students from collectivist cultures (e.g., Indonesia, China) tend to prefer structured, group-based learning, while those from individualist cultures (e.g., the US) lean toward independent and explorative approaches. The review also highlights the importance of considering intra-national cultural diversity, as seen in the varying learning styles within Indonesian ethnic groups. Culturally responsive teaching methods, such as multimodal instruction and collaborative tasks, enhance student engagement and outcomes.

However, the current literature lacks a comprehensive and systematic mapping, which calls for more longitudinal and cross-cultural studies. The review therefore emphasizes the need for differentiated instruction, culturally inclusive curricula, teacher training in cultural competency, and student support systems tailored to cultural differences. This study contributes to educational psychology and intercultural studies by providing insights for designing culturally adaptive teaching models and guiding future research methodologies. The content of the conclusion is the answer to

the research objectives, not a summary of the research results. Conclusions and suggestions are made in a concise, clear, and concise manner based on the results and discussion.

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