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## THE ROLE OF CULTURAL DIVERSITY IN ENHANCING CREATIVITY AND CRITICAL THINKING IN CLASSROOMS AT SECONDARY LEVEL

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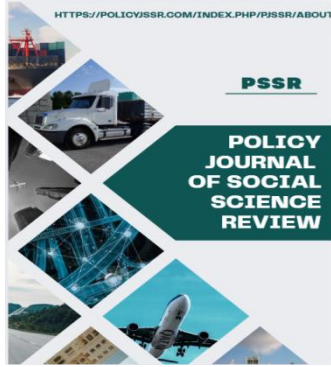
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### ABSTRACT

*This study examines the role of cultural diversity in enhancing creativity and critical thinking in classrooms at the secondary level. In contemporary educational settings, increasing cultural diversity presents both opportunities and challenges for fostering higher-order cognitive skills among students. The objectives of the study were to examine the effect of cultural diversity on students' creativity, to analyze its relationship with critical thinking, and to explore its combined influence on both constructs. A quantitative research design based on a descriptive-correlational approach was employed to investigate these relationships systematically. The population of the study comprised approximately 420 secondary schools and an estimated 52,000 students enrolled at the secondary level in District Rawalpindi. From this population, a sample of 400 students was selected using a stratified random sampling technique, including 20 schools (10 public and 10 private), with 20 students from each school. Data were collected through a structured questionnaire consisting of Likert-scale items measuring cultural diversity, creativity, and critical thinking. The validity of the instrument was ensured through expert review, while reliability was established through a pilot study yielding a Cronbach's alpha value of 0.87, indicating high internal consistency. Data were analyzed using descriptive and inferential*

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*statistics, including mean, standard deviation, correlation, and regression analysis through SPSS. The findings of the first objective revealed that cultural diversity has a significant positive effect on students' creativity, indicating that exposure to diverse cultural perspectives enhances innovative thinking and idea generation. Based on this finding, it is recommended that teachers incorporate culturally inclusive teaching strategies and collaborative activities to further promote creativity in classrooms. The study is significant as it provides empirical evidence on the importance of cultural diversity in developing essential 21st-century skills. It offers valuable insights for educators and policymakers to design inclusive educational practices that enhance creativity and critical thinking, ultimately contributing to improved learning outcomes at the secondary level.*

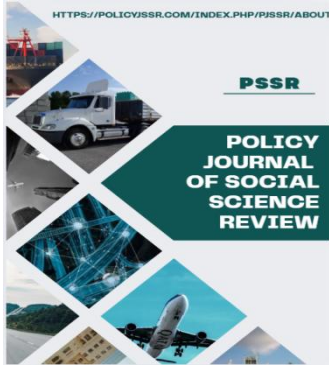
**Keywords:** *Cultural Diversity; Creativity; Critical Thinking; Secondary Education; Multicultural Classrooms; Higher-Order Thinking Skills; Inclusive Education; Student Learning Outcomes*

## INTRODUCTION:

Cultural diversity has emerged as a defining characteristic of contemporary classrooms, particularly at the secondary level where students from varied linguistic, ethnic, and socio-cultural backgrounds interact within shared learning environments. The increasing globalization of education systems has necessitated a shift from homogeneous instructional models toward inclusive pedagogies that acknowledge and leverage diversity as a pedagogical resource. In this context, creativity and critical thinking have been identified as essential competencies required for learners to navigate complex and dynamic global realities. These

competencies are not only central to academic success but also to lifelong learning and innovation (Stanikzai, 2023; OECD, 2015; Park et al., 2021). Consequently, examining how cultural diversity contributes to the development of these higher-order thinking skills is of significant academic and practical importance (Abbasi et al., 2025).

Creativity and critical thinking are widely regarded as interconnected yet distinct constructs that play a pivotal role in 21st-century education. Creativity involves the generation of novel and useful ideas, while critical thinking refers to the ability to analyze, evaluate, and make reasoned judgments. Educational research emphasizes that both skills are necessary



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for problem-solving, innovation, and effective decision-making in diverse contexts (Park et al., 2021; Jauhariyah et al., 2026; Stanikzai, 2023) . Importantly, these skills are not developed in isolation; rather, they are shaped by environmental, cultural, and pedagogical factors. Classrooms that embrace diversity provide students with opportunities to encounter multiple perspectives, thereby fostering deeper cognitive engagement and reflective thinking processes (Bibi et al., 2023a).

Cultural diversity in classrooms encompasses differences in language, traditions, values, beliefs, and worldviews. Such diversity creates a rich learning environment where students are exposed to alternative viewpoints, encouraging them to question assumptions and expand their cognitive frameworks. Empirical evidence suggests that interaction with culturally diverse peers enhances students' ability to think creatively by promoting divergent thinking and idea generation (Gołowska et al., 2016; Smare, 2025; Belda-Medina, 2022) . Furthermore, culturally diverse settings challenge students to engage in critical analysis as they compare and contrast different cultural norms and perspectives, thereby strengthening their evaluative and reasoning abilities (Bibi et al., 2023b; Ibrahim et al., 2025).

The relationship between cultural diversity and creativity has been explored extensively in educational research. Studies indicate that collaborative engagement among students from

different cultural backgrounds leads to higher levels of creativity, particularly when cooperative learning environments are established. For instance, research demonstrates that students working in culturally diverse groups exhibit enhanced creative performance due to exposure to varied ideas and problem-solving approaches (Gołowska et al., 2016; Park et al., 2021; Stanikzai, 2023) . This suggests that diversity acts as a catalyst for creativity by enabling the synthesis of diverse perspectives into innovative solutions (Kiran et al., 2025).

Similarly, cultural diversity plays a critical role in the development of critical thinking skills. In multicultural classrooms, students are often required to evaluate differing viewpoints, justify their opinions, and engage in reasoned debate. Such interactions promote analytical thinking and the ability to assess information critically. Research on multicultural education highlights that pedagogical approaches such as problem-based learning and collaborative inquiry are particularly effective in enhancing critical thinking in diverse classroom settings (Suyono et al., 2025; Hu & Shu, 2025; Jauhariyah et al., 2026). These approaches encourage students to actively participate in knowledge construction rather than passively receiving information (Mahnaz, 2024).

At the secondary level, the role of cultural diversity becomes even more significant due to the developmental stage of learners. Adolescents are in a critical phase of cognitive and social



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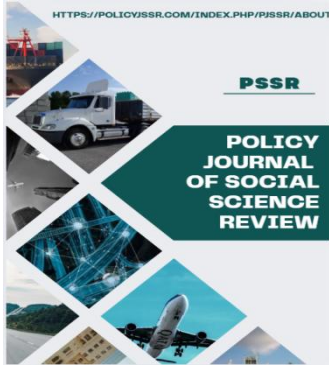
development, during which they begin to form independent opinions and engage in abstract reasoning. Exposure to diverse cultural perspectives during this stage can significantly influence their cognitive development by promoting open-mindedness and intellectual curiosity (Mahnaz & Kiran, 2024a). Research indicates that culturally inclusive teaching practices at the secondary level enhance students' engagement and foster higher-order thinking skills (Belda-Medina, 2022; Smare, 2025; Stanikzai, 2023).

Despite the recognized benefits of cultural diversity, its effective integration into classroom practices remains a challenge. Teachers often face difficulties in managing diverse classrooms due to differences in language proficiency, learning styles, and cultural expectations. Moreover, traditional teaching methods may not adequately address the needs of culturally diverse learners, thereby limiting opportunities for the development of creativity and critical thinking (Mahnaz & Kiran, 2024b). Research suggests that teacher perceptions and instructional strategies play a crucial role in determining how cultural diversity influences student learning outcomes (Smare, 2025; Suyono et al., 2025; Park et al., 2021). Therefore, there is a need to explore how teachers can effectively utilize cultural diversity as a resource for enhancing cognitive skills (Mahnaz & Kiran, 2024c).

Another important aspect is the role of collaborative learning in culturally

diverse classrooms. Collaborative learning environments encourage interaction among students from different backgrounds, facilitating the exchange of ideas and perspectives. Such interactions not only enhance creativity but also promote critical thinking by requiring students to justify their viewpoints and consider alternative perspectives (Mahnaz et al., 2023). Studies have shown that collaborative and communicative activities, such as group discussions and project-based learning, significantly contribute to the development of 21st-century skills in diverse classrooms (Hu & Shu, 2025; Stanikzai, 2023; Jauhariyah et al., 2026). Furthermore, cultural diversity influences the way creativity and critical thinking are perceived and expressed. Different cultures may emphasize different cognitive styles, such as analytical versus holistic thinking, which can affect students' performance in tasks requiring creativity and critical reasoning. Cross-cultural studies indicate that cultural background significantly shapes students' cognitive processes and learning preferences (Park et al., 2021; Smare, 2025; Belda-Medina, 2022). Understanding these differences is essential for designing instructional strategies that accommodate diverse learners and promote equitable learning outcomes (Mahnaz et al., 2025a).

In addition, the integration of technology and innovative pedagogical approaches has further expanded opportunities for leveraging cultural diversity in education



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(Mahnaz et al., 2025b). Digital tools such as storytelling platforms and collaborative online environments enable students to share their cultural experiences and perspectives, thereby enhancing creativity and critical thinking. Research highlights that inclusive and technology-supported learning environments can effectively promote higher-order thinking skills by facilitating interaction and engagement among diverse learners (Belda-Medina, 2022; OECD, 2015; Jauhariyah et al., 2026).

In conclusion, cultural diversity represents a valuable asset in secondary classrooms, with the potential to significantly enhance students' creativity and critical thinking skills. By providing opportunities for exposure to diverse perspectives, promoting collaborative learning, and encouraging reflective thinking, culturally diverse classrooms can foster the development of essential cognitive competencies (Mahnaz et al., 2025c). However, realizing these benefits requires effective pedagogical strategies, teacher preparedness, and supportive educational policies. Therefore, this study aims to investigate the role of cultural diversity in enhancing creativity and critical thinking among secondary school students, with a focus on identifying effective practices and addressing existing challenges.

## Objectives of the Study

1. To examine the effect of cultural diversity on students' creativity at the secondary level.

2. To analyze the relationship between cultural diversity and students' critical thinking skills.

3. To explore the combined influence of cultural diversity on creativity and critical thinking in classroom settings.

## Hypotheses of the Study

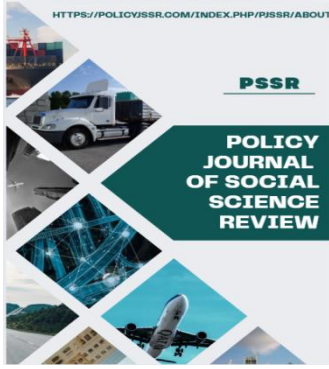
H<sub>1</sub>: Cultural diversity has a significant positive effect on students' creativity at the secondary level.

H<sub>2</sub>: Cultural diversity has a significant positive effect on students' critical thinking skills.

H<sub>3</sub>: Cultural diversity significantly enhances both creativity and critical thinking simultaneously among secondary school students.

## Statement of the Problem

In contemporary secondary education, classrooms are increasingly characterized by cultural diversity; however, this diversity is often underutilized as a pedagogical resource. Traditional teaching practices frequently fail to incorporate culturally responsive strategies that could enhance students' higher-order thinking skills. As a result, opportunities to develop creativity and critical thinking through exposure to diverse perspectives remain limited. There is a need to investigate how cultural diversity can be effectively integrated into classroom practices to foster these essential competencies. This study addresses this gap by examining the role of cultural diversity in enhancing creativity and critical thinking among secondary school students.



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## Significance of the Study

This study holds significant value for educators, policymakers, and researchers. For educators, it provides insights into how culturally diverse classrooms can be utilized to promote creativity and critical thinking through effective instructional strategies. For policymakers, the findings can inform the development of inclusive educational policies that emphasize the importance of diversity in enhancing learning outcomes. For researchers, the study contributes to the existing body of knowledge by providing empirical evidence on the relationship between cultural diversity and cognitive skill development at the secondary level. Additionally, it highlights the need for culturally responsive teaching practices that support the development of 21st-century skills in diverse educational contexts.

## LITERATURE REVIEW:

### Conceptualizing Cultural Diversity in Education

Cultural diversity in education refers to the coexistence of students from different cultural, linguistic, ethnic, and socio-economic backgrounds within a shared learning environment. In contemporary educational discourse, cultural diversity is not merely viewed as demographic variation but as a pedagogical resource that can enhance learning outcomes. Scholars argue that culturally diverse classrooms provide opportunities for exposure to multiple perspectives, thereby enriching the learning experience and promoting intellectual growth

(Smare, 2025; Stanikzai, 2023; OECD, 2015). Furthermore, globalization and increased mobility have intensified the need for educational systems to adopt inclusive practices that recognize and utilize diversity as an asset rather than a challenge. Research indicates that culturally responsive teaching fosters engagement and participation among students by validating their cultural identities within the learning process (Belda-Medina, 2022; Park et al., 2021; Suyono et al., 2025).

The theoretical foundation of cultural diversity in education is grounded in constructivist and socio-cultural learning theories, which emphasize the role of social interaction and cultural context in knowledge construction (Mahnaz et al., 2023). According to these perspectives, learning occurs through interaction with others and is influenced by cultural tools and practices. Studies suggest that culturally diverse classrooms facilitate collaborative learning, where students co-construct knowledge through dialogue and shared experiences (Hu & Shu, 2025; Jauhariyah et al., 2026; Stanikzai, 2023). Such environments encourage learners to engage with different viewpoints, thereby fostering deeper understanding and cognitive flexibility. Consequently, cultural diversity is increasingly recognized as a critical factor in promoting higher-order thinking skills in educational settings (Mahnaz et al., 2022).

### Creativity as a 21st-Century Skill in Diverse Classrooms



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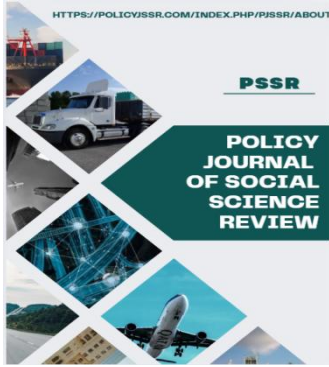
Creativity has been widely acknowledged as a fundamental competency in 21st-century education, essential for innovation, problem-solving, and adaptability. It is commonly defined as the ability to generate novel and useful ideas, which are contextually appropriate and socially relevant. In culturally diverse classrooms, creativity is often enhanced through exposure to varied perspectives and experiences that stimulate divergent thinking (Park et al., 2021; Gocłowska et al., 2016; Smare, 2025). Research demonstrates that students who interact with peers from different cultural backgrounds are more likely to develop creative problem-solving skills due to the exchange of diverse ideas and viewpoints (Mahnaz et al., 2021).

Empirical studies further highlight the role of instructional strategies in fostering creativity within diverse classrooms. Approaches such as project-based learning, inquiry-based learning, and arts-integrated pedagogy have been found to significantly enhance creative thinking among students (Fazal et al., 2024; Kurniawan & Setyaningtyas, 2024; Stanikzai, 2023). These pedagogical methods encourage active participation, collaboration, and exploration, which are essential for creative development. Additionally, research indicates that culturally inclusive teaching practices can enhance students' motivation and engagement, thereby contributing to the development of creativity (Belda-Medina, 2022; Smare, 2025; Park et al., 2021).

## Critical Thinking in Multicultural Learning Environments

Critical thinking is defined as the ability to analyze, evaluate, and synthesize information to make informed decisions (Mehmood et al., 2022). It is a key component of higher-order thinking and is essential for academic success and lifelong learning. In culturally diverse classrooms, critical thinking is often promoted through exposure to differing perspectives, which encourages students to question assumptions and engage in reflective reasoning (Park et al., 2021; Stanikzai, 2023; Hu & Shu, 2025). Research suggests that multicultural education fosters critical thinking by challenging students to consider alternative viewpoints and engage in reasoned debate (Mehrukh et al., 2022).

The development of critical thinking in diverse classrooms is closely linked to instructional practices that promote active learning and student engagement. Problem-based learning, collaborative inquiry, and discussion-based teaching have been identified as effective strategies for enhancing critical thinking skills (Suyono et al., 2025; Hu & Shu, 2025; Jauhariyah et al., 2026). These approaches encourage students to analyze complex problems, evaluate evidence, and develop reasoned arguments. Moreover, studies indicate that culturally responsive teaching practices can further enhance critical thinking by creating an inclusive environment that values diverse perspectives and experiences (Belda-



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Medina, 2022; Smare, 2025; Park et al., 2021).

## Interrelationship Between Creativity and Critical Thinking

Creativity and critical thinking are often considered complementary skills that together contribute to effective problem-solving and decision-making. While creativity involves generating new ideas, critical thinking involves evaluating and refining those ideas. Research indicates a strong positive correlation between these two constructs, suggesting that they are mutually reinforcing (Park et al., 2021; Stanikzai, 2023; Jauhariyah et al., 2026). In culturally diverse classrooms, the interaction between creativity and critical thinking is particularly evident, as students are exposed to a variety of perspectives that stimulate both idea generation and analytical reasoning (Nazir et al., 2025).

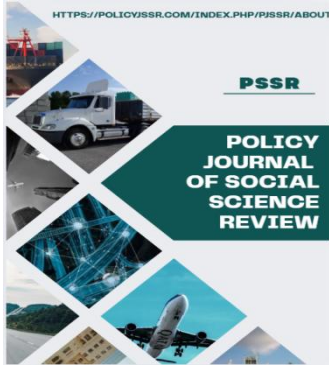
Recent studies emphasize the importance of integrating creativity and critical thinking within educational curricula to promote holistic cognitive development. Instructional strategies that encourage both divergent and convergent thinking have been found to be particularly effective in diverse learning environments (Kurniawan & Setyaningtyas, 2024; Fazal et al., 2024; Suyono et al., 2025). These strategies enable students to explore multiple solutions to a problem while critically evaluating their feasibility and effectiveness. Consequently, fostering both creativity and critical thinking is essential for preparing students to

navigate complex and dynamic real-world challenges (Noreen et al., 2025).

## Role of Cultural Diversity in Enhancing Creativity

Cultural diversity plays a significant role in enhancing creativity by providing a rich pool of ideas, perspectives, and experiences. Studies suggest that exposure to diverse cultural contexts promotes cognitive flexibility, which is a key component of creative thinking (Gočowska et al., 2016; Smare, 2025; Park et al., 2021). Students in culturally diverse classrooms are more likely to engage in divergent thinking, as they are exposed to multiple ways of understanding and interpreting the world (Sarfraz et al., 2025).

Furthermore, research indicates that collaborative learning in diverse classrooms enhances creativity by facilitating the exchange of ideas and perspectives. Group activities that involve students from different cultural backgrounds have been shown to produce more innovative solutions compared to homogeneous groups (Stanikzai, 2023; Suyono et al., 2025; Fazal et al., 2024). This highlights the importance of designing instructional strategies that promote interaction and collaboration among diverse learners. Additionally, culturally responsive teaching practices that recognize and value students' cultural backgrounds can further enhance creativity by creating an inclusive and supportive learning environment (Belda-Medina, 2022; Smare, 2025; Park et al., 2021).



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## Role of Cultural Diversity in Enhancing Critical Thinking

Cultural diversity also contributes significantly to the development of critical thinking skills. In multicultural classrooms, students are exposed to diverse perspectives that challenge their assumptions and encourage analytical reasoning. This exposure promotes cognitive conflict, which is essential for the development of critical thinking (Park et al., 2021; Hu & Shu, 2025; Jauhariyah et al., 2026). Research indicates that students who engage with diverse viewpoints are more likely to develop the ability to evaluate information critically and make informed decisions (Shaheen et al., 2022).

Instructional strategies that leverage cultural diversity can further enhance critical thinking. For example, culturally relevant pedagogy and inquiry-based learning encourage students to explore complex issues from multiple perspectives, thereby promoting analytical and evaluative thinking (Suyono et al., 2025; Belda-Medina, 2022; Smare, 2025). Additionally, studies suggest that integrating cultural content into the curriculum can enhance students' engagement and motivation, which are critical for the development of higher-order thinking skills (Fazal et al., 2024; Kurniawan & Setyaningtyas, 2024; Stanikzai, 2023).

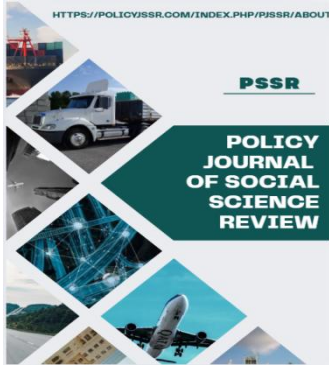
## Pedagogical Approaches Supporting Diversity, Creativity, and Critical Thinking

Effective pedagogical approaches play a crucial role in leveraging cultural diversity to enhance creativity and critical thinking. Constructivist and student-centered approaches, such as project-based learning, collaborative learning, and inquiry-based learning, have been identified as particularly effective in diverse classrooms (Hu & Shu, 2025; Suyono et al., 2025; Jauhariyah et al., 2026). These approaches encourage active participation, collaboration, and critical reflection, which are essential for the development of higher-order thinking skills.

The integration of technology in education has also created new opportunities for promoting creativity and critical thinking in culturally diverse classrooms. Digital tools such as storytelling platforms and collaborative online environments enable students to share their cultural experiences and perspectives, thereby enhancing engagement and interaction (Belda-Medina, 2022; Fazal et al., 2024; Stanikzai, 2023). Research suggests that technology-supported learning environments can facilitate the development of creativity and critical thinking by providing opportunities for exploration, collaboration, and innovation (Waheed et al., 2025).

## Challenges in Utilizing Cultural Diversity in Classrooms

Despite the potential benefits of cultural diversity, several challenges hinder its effective utilization in classrooms. One of the major challenges is the lack of teacher



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preparedness in managing diverse classrooms and implementing culturally responsive teaching practices. Studies indicate that teachers often face difficulties in addressing the diverse needs of students, particularly in terms of language barriers and cultural differences (Smare, 2025; Suyono et al., 2025; Park et al., 2021). This can limit the effectiveness of instructional strategies aimed at promoting creativity and critical thinking.

Another challenge is the persistence of traditional teaching methods that do not adequately address the needs of diverse learners. Teacher-centered approaches often limit opportunities for interaction and collaboration, thereby restricting the development of higher-order thinking skills (Stanikzai, 2023; Jauhariyah et al., 2026; Fazal et al., 2024). Additionally, cultural biases and stereotypes can negatively impact students' participation and engagement, further hindering the development of creativity and critical thinking (Smare, 2025; Belda-Medina, 2022; Park et al., 2021).

## **Empirical Evidence from Secondary Education Contexts**

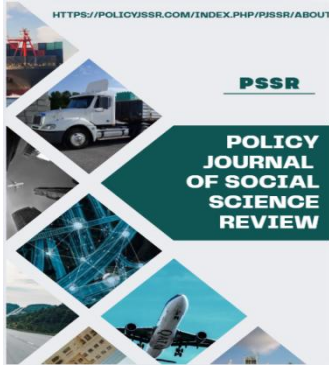
Empirical studies conducted in secondary education contexts provide evidence of the positive impact of cultural diversity on creativity and critical thinking. Research conducted in Pakistani schools demonstrates that innovative teaching approaches significantly enhance students' creative thinking skills (Fazal et al., 2024; Stanikzai, 2023; Kurniawan & Setyaningtyas, 2024). Similarly, studies

in multicultural classrooms indicate that culturally responsive teaching practices improve students' critical thinking and problem-solving abilities (Suyono et al., 2025; Hu & Shu, 2025; Jauhariyah et al., 2026).

Furthermore, cross-cultural studies highlight the importance of considering cultural differences in the development of creativity and critical thinking. Research indicates that students from different cultural backgrounds may exhibit different cognitive styles, which can influence their performance in tasks requiring creativity and critical reasoning (Park et al., 2021; Smare, 2025; Belda-Medina, 2022). These findings underscore the need for educational practices that accommodate cultural diversity and promote equitable learning outcomes.

## **Synthesis of Literature and Research Gap**

The reviewed literature demonstrates that cultural diversity plays a crucial role in enhancing creativity and critical thinking in educational settings. However, there is a need for more empirical studies that specifically examine the combined influence of cultural diversity on these two constructs at the secondary level. While existing research provides valuable insights into the individual effects of cultural diversity on creativity and critical thinking, limited attention has been given to their interrelationship within diverse classroom contexts (Park et al., 2021; Stanikzai, 2023; Jauhariyah et al., 2026).



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Additionally, there is a lack of context-specific studies that explore how cultural diversity influences learning outcomes in developing countries, particularly in secondary education. This gap highlights the need for further research that investigates the role of cultural diversity in enhancing creativity and critical thinking among secondary school students, with a focus on identifying effective pedagogical practices and addressing existing challenges (Fazal et al., 2024; Suyono et al., 2025; Smare, 2025).

## RESEARCH METHODOLOGY:

### Research Design

The present study adopted a quantitative research design to examine the role of cultural diversity in enhancing creativity and critical thinking among secondary school students. A descriptive-correlational approach was utilized to explore relationships among variables without manipulating the study environment. This design was considered appropriate as it allows for the systematic collection and analysis of numerical data to identify patterns and associations. Furthermore, the design facilitated the generalization of findings across a broader population within the selected district. The study also incorporated comparative elements to assess differences based on demographic characteristics such as gender and school type.

### Research Philosophy

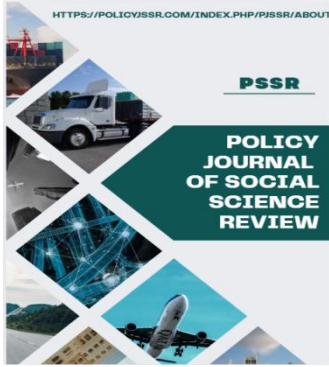
This study was grounded in the positivist research philosophy, which emphasizes objectivity, measurement, and empirical validation of hypotheses. The positivist paradigm supports the use of structured instruments and statistical analysis to test relationships between variables. It assumes that reality is observable and can be quantified through systematic investigation. By adopting this philosophy, the study ensured that findings were based on measurable data rather than subjective interpretation. This approach also enhanced the reliability and replicability of the research outcomes.

### Population (District Rawalpindi)

The population of the study comprised all secondary schools and students enrolled at the secondary level in District Rawalpindi. According to estimated educational statistics, the district includes approximately 420 secondary schools (both public and private). The total number of students at the secondary level is estimated to be around 52,000. Teachers and administrators were not included, as the focus of the study was on students' creativity and critical thinking. The population was considered diverse in terms of cultural, linguistic, and socio-economic backgrounds, making it suitable for investigating the role of cultural diversity.

### Sample and Sampling Technique

A sample of 400 students was selected from the total population to ensure manageability and representativeness. The study employed a stratified random



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sampling technique to ensure proportional representation of gender and school type (public and private). From the 420 schools, 20 schools (10 public and 10 private) were randomly selected. From each selected school, 20 students were chosen using simple random sampling. This approach ensured that the sample adequately reflected the diversity present in the population and minimized sampling bias.

## Research Tool

Data were collected using a structured questionnaire developed by the researcher based on existing literature. The questionnaire consisted of three sections: cultural diversity, creativity, and critical thinking. Each section included Likert-scale items ranging from strongly agree to strongly disagree. The instrument was designed to capture students' perceptions and experiences related to cultural diversity and its impact on their cognitive skills. The questionnaire was administered in English with necessary explanations provided to ensure comprehension among respondents.

## Validity and Reliability of Research Tool

The validity of the research instrument was ensured through expert review and content validation. Three experts in the field of education examined the questionnaire to assess its relevance, clarity, and alignment with research objectives. Necessary modifications were made based on their feedback. Reliability was established through a pilot study conducted on 50 students outside the

main sample. Cronbach's alpha coefficient was calculated, yielding a value of 0.87, which indicates high internal consistency. This confirms that the instrument was both valid and reliable for data collection.

## Data Collection Procedure

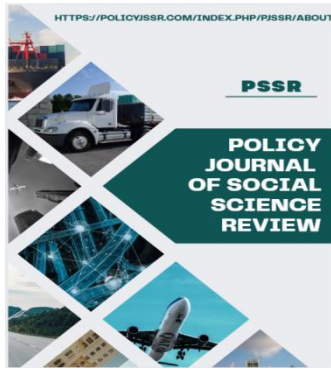
The data collection process was carried out systematically with prior approval from school authorities. The researcher personally visited selected schools and administered the questionnaires to students in classroom settings. Instructions were clearly explained to ensure accurate responses. Students were given sufficient time to complete the questionnaire without any external influence. Completed questionnaires were collected on the spot to ensure a high response rate and data accuracy.

## Ethical Consideration

Ethical standards were strictly maintained throughout the research process. Participation was voluntary, and informed consent was obtained from all respondents. Students were assured that their responses would remain confidential and used solely for academic purposes. No personal identifiers were included in the data analysis to ensure anonymity. Additionally, the researcher ensured that the study did not cause any psychological or academic harm to participants.

## Data Analysis

The collected data were analyzed using statistical techniques through SPSS software. Descriptive statistics such as mean, standard deviation, frequency, and



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percentage were used to summarize the data. Inferential statistics, including correlation and regression analysis, were applied to test the hypotheses. The analysis aimed to determine the relationship between cultural diversity, creativity, and critical thinking. Results were presented in tabular form for clarity and interpretation.

### Ethical Consideration

The study adhered to ethical research principles by ensuring transparency,

### Demographic Tables

**Table 1**

*Distribution of Respondents by Gender*

Gender	Frequency	Percentage
Male	210	52.5%
Female	190	47.5%
Total	400	100%

The table indicates that male students constitute 52.5% of the sample, while female students represent 47.5%. This shows a relatively balanced gender distribution, ensuring representation of both groups. The slight predominance of male respondents does not significantly

honesty, and integrity in data handling and reporting. All participants were informed about the purpose of the study and their right to withdraw at any stage. Data were securely stored and only accessible to the researcher. The findings were reported accurately without any fabrication or manipulation. Ethical guidelines helped maintain the credibility and trustworthiness of the research.

affect the overall findings. The balanced distribution enhances the generalizability of the results across genders. It also allows for meaningful comparison between male and female students regarding creativity and critical thinking.

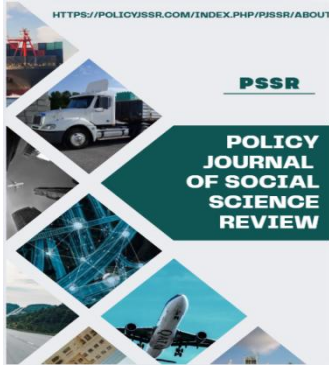
**Table 2**

*Distribution of Respondents by School Type*

School Type	Frequency	Percentage
Public	200	50%
Private	200	50%
Total	400	100%

The table shows an equal distribution of respondents from public and private schools, each contributing 50% to the sample. This balanced representation ensures that the findings are not biased toward a particular type of institution. It

allows for comparative analysis between public and private school environments. The equal proportion strengthens the validity of conclusions related to the role of cultural diversity. It also reflects the



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researcher's effort to maintain fairness and representativeness in sampling.

## DATA ANALYSIS:

### Objective 1

*To examine the effect of cultural diversity on students' creativity*

Variable	N	Mean	Std. Deviation	r-value	Sig. (2-tailed)
Cultural Diversity	400	3.78	0.64		
Creativity	400	3.85	0.59	0.62**	0.000

The table shows that the mean score for cultural diversity is 3.78, indicating that students perceive a moderate to high level of diversity in their classrooms. The mean value of creativity (3.85) suggests that students demonstrate a considerable level of creative thinking skills. The correlation coefficient ( $r = 0.62$ ) indicates

a strong positive relationship between cultural diversity and creativity. The significance value ( $p = 0.000$ ) confirms that the relationship is statistically significant. These results imply that increased exposure to diverse cultural perspectives enhances students' ability to think creatively.

### Objective 2

*To analyze the relationship between cultural diversity and students' critical thinking*

Variable	N	Mean	Std. Deviation	r-value	Sig. (2-tailed)
Cultural Diversity	400	3.78	0.64		
Critical Thinking	400	3.81	0.61	0.58**	0.000

The table indicates that the mean score for critical thinking is 3.81, reflecting a high level of analytical and evaluative skills among students. The correlation coefficient ( $r = 0.58$ ) reveals a moderate to strong positive relationship between cultural diversity and critical thinking. The significance level ( $p = 0.000$ )

demonstrates that the relationship is statistically significant. These findings suggest that culturally diverse classrooms encourage students to engage in deeper analysis and reasoning processes. Exposure to different perspectives appears to strengthen students' ability to evaluate information critically.

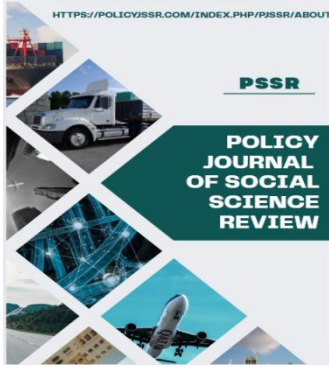
### Objective 3

*To explore the combined influence of cultural diversity on creativity and critical thinking*

Variables	R	R Square	Adjusted R Square	Sig.
Cultural Diversity → Combined Skills	0.66	0.44	0.43	0.000

The table presents the regression analysis results showing that cultural diversity

significantly predicts the combined effect of creativity and critical thinking. The R



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value (0.66) indicates a strong relationship, while R Square (0.44) shows that 44% of the variance in creativity and critical thinking is explained by cultural diversity. The adjusted R Square (0.43) confirms the model's reliability. The significance value ( $p = 0.000$ ) indicates that the model is statistically significant. These findings demonstrate that cultural diversity plays a substantial role in enhancing higher-order thinking skills simultaneously.

## Discussion

The findings of the first objective revealed a significant positive relationship between cultural diversity and creativity. This result aligns with the study by Gocłowska et al. (2016), which found that exposure to diverse cultural perspectives enhances divergent thinking and idea generation. Similarly, Park et al. (2021) reported that multicultural learning environments promote creative problem-solving by encouraging students to integrate multiple viewpoints. Stanikzai (2023) also emphasized that collaborative interaction among culturally diverse students leads to improved creativity. The present findings confirm that diversity fosters cognitive flexibility, enabling students to produce innovative ideas and solutions.

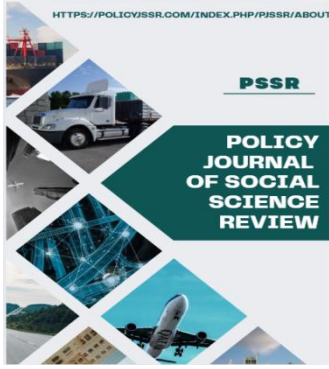
The results of the second objective indicated a significant positive relationship between cultural diversity and critical thinking. This finding is consistent with Suyono et al. (2025), who highlighted that multicultural classrooms enhance analytical thinking through

exposure to diverse perspectives. Hu and Shu (2025) also found that collaborative learning in diverse settings improves students' reasoning and evaluative skills. Furthermore, Jauhariyah et al. (2026) emphasized that interaction with varied viewpoints promotes reflective thinking and problem-solving abilities. The current study supports these findings, suggesting that cultural diversity creates opportunities for critical analysis and informed decision-making.

The third objective demonstrated that cultural diversity significantly influences both creativity and critical thinking simultaneously. This result is supported by Park et al. (2021), who identified a strong interrelationship between creativity and critical thinking in culturally diverse environments. Similarly, Stanikzai (2023) found that 21st-century skills, including creativity and critical thinking, are enhanced through collaborative and diverse learning experiences. Belda-Medina (2022) also reported that inclusive and culturally responsive teaching strategies promote both creative expression and analytical reasoning. The findings of the present study confirm that cultural diversity serves as a comprehensive factor in the development of higher-order cognitive skills.

## Conclusion

The study concludes that cultural diversity plays a significant role in enhancing creativity among secondary school students. Exposure to diverse cultural perspectives encourages students



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to think beyond conventional boundaries and generate innovative ideas. The findings suggest that culturally inclusive classrooms provide an environment conducive to creative expression and intellectual exploration.

Furthermore, the study establishes that cultural diversity positively influences critical thinking skills. Students in diverse classrooms are more likely to engage in analytical reasoning, evaluate different viewpoints, and make informed decisions. This highlights the importance of integrating diversity into educational practices to foster higher-order thinking skills.

Finally, the study concludes that cultural diversity simultaneously enhances both creativity and critical thinking. The combined development of these skills is essential for preparing students to face complex real-world challenges. Therefore, educational institutions should adopt inclusive teaching strategies that leverage cultural diversity as a resource for cognitive development.

## Findings

1. Cultural diversity significantly enhances students' creativity by promoting exposure to multiple perspectives and encouraging innovative thinking.
2. Cultural diversity has a positive impact on students' critical thinking by fostering analytical reasoning and evaluation of diverse viewpoints.
3. Cultural diversity contributes significantly to the simultaneous development of creativity and critical

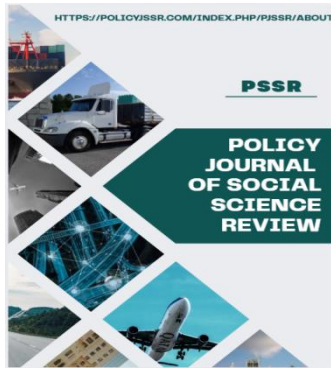
thinking among secondary school students.

## Recommendations

1. Schools should incorporate culturally inclusive teaching practices to promote creativity through exposure to diverse ideas and experiences.
2. Teachers should adopt interactive and discussion-based methods to enhance critical thinking in culturally diverse classrooms.
3. Educational policymakers should design curricula that integrate cultural diversity to support the development of both creativity and critical thinking.

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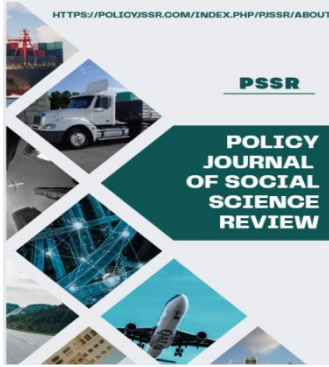


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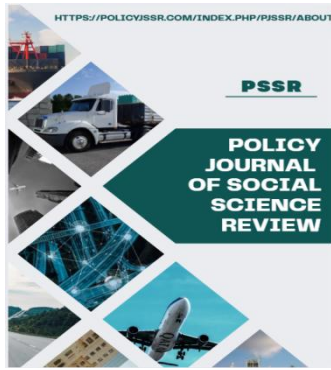


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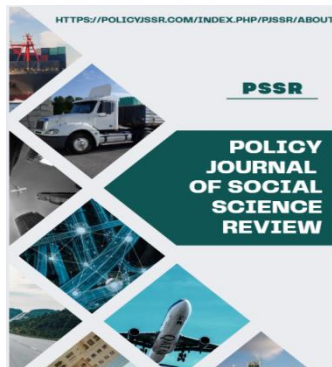


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