

## The Link Between Multicultural Experiences and Creative Performance: A Meta-Analysis

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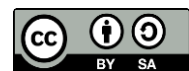
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### Abstract

Multicultural experiences have increasingly been recognized as a catalyst for creativity by expanding cognitive flexibility, perspective-taking, and integrative thinking. However, empirical findings on the strength and consistency of this relationship remain fragmented across studies. This research aims to synthesize existing evidence through a meta-analysis examining the link between multicultural exposure and creative performance. A total of 68 peer-reviewed studies ( $N = 12,457$  participants) were systematically selected from major academic databases, including Scopus, Web of Science, and PsycINFO. Effect sizes were computed using a random-effects model to account for cross-study heterogeneity. Moderator analyses explored contextual factors such as type of multicultural experience (living abroad, cross-cultural training, or diversity interaction), creativity domain (divergent thinking, creative problem-solving, and innovation), and cultural distance. The meta-analytic results revealed a moderate positive effect size ( $r = 0.34$ ,  $p < 0.001$ ), indicating that individuals with higher levels of multicultural exposure consistently demonstrate enhanced creative performance. Living abroad showed the strongest effect among all experience types, particularly in tasks involving divergent and integrative thinking. The findings confirm that multicultural engagement fosters creativity by broadening cognitive schemas and enhancing openness to novelty.

**Keywords:** Cognitive Flexibility, Cultural Diversity, Multicultural Experience



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## INTRODUCTION

Human creativity has long been recognized as the cornerstone of innovation, problem-solving, and cultural advancement. In an increasingly globalized world, exposure to diverse cultural environments has become an integral part of personal and professional development. Individuals frequently navigate multicultural spaces through migration, study abroad programs, cross-national collaborations, or globalized workplaces resulting in expanded social interactions and cognitive flexibility. A growing body of research in psychology, education, and organizational studies suggests that multicultural experiences foster creativity by enhancing individuals' ability to integrate distinct perspectives, generate original ideas, and adapt to new contexts (Domene-Benito et al., 2024; Shoecraft, 2024). These experiences provide opportunities for individuals to deconstruct habitual thinking patterns and engage in cognitive reframing, which are essential components of creative performance.

The rise of multiculturalism in contemporary society has made the relationship between cultural diversity and creativity increasingly relevant. As global mobility intensifies, organizations and educational institutions seek to understand how exposure to multiple cultures influences creative thinking. The notion that multicultural experiences serve as a catalyst for creative cognition aligns with social-cognitive theories of creativity, which emphasize that varied experiences broaden mental frameworks. Exposure to cultural diversity allows individuals to assimilate and contrast multiple worldviews, which in turn enriches the associative networks underlying idea generation (Itoi, 2024; Seip, 2022). The intersection between culture and creativity therefore represents a key research domain that reflects both theoretical and practical significance in a global context.

The importance of examining this connection extends beyond theoretical curiosity; it has practical implications for education, innovation management, and intercultural competence. Creative performance, as a multidimensional construct, is shaped not only by individual traits but also by the sociocultural environments in which individuals operate. Multicultural exposure challenges individuals to reconcile different cultural norms and values, a process that demands cognitive elasticity and emotional openness (Huang et al., 2023; Seip, 2022). Understanding how such experiences contribute to creativity offers valuable insights for designing educational programs, organizational strategies, and public policies aimed at fostering creative capital in culturally diverse societies.

The empirical literature presents a complex and sometimes contradictory picture of the link between multicultural experiences and creativity. Some studies provide strong evidence supporting a positive association, suggesting that exposure to multiple cultures enhances divergent thinking, integrative complexity, and creative problem-solving. Other studies, however, report null or even negative findings, indicating that cultural immersion can produce cognitive overload or identity conflict that may hinder creativity. These inconsistencies raise questions about the strength and generalizability of the relationship between multicultural experience and creative performance (Mookdamuang & Pidokrajt, 2025; Yang & Li, 2024). Such variability in empirical outcomes calls for a systematic synthesis to provide a clearer understanding of the underlying dynamics.

Another dimension of the problem lies in the diversity of conceptual and methodological approaches used across studies. The operationalization of "multicultural experience" varies widely, encompassing constructs such as living abroad, bicultural identity integration, intercultural communication, or exposure to global media. Similarly, "creativity"

has been measured through different methods, including divergent thinking tests, creative achievements, innovation indices, and self-reported creative confidence. This heterogeneity complicates the interpretation of findings and limits the ability to draw cohesive theoretical conclusions (Abahussain et al., 2022; Deja, 2024). A meta-analytic approach becomes essential to integrate these fragmented studies and estimate the true effect size of the multiculturalism creativity relationship.

The absence of a unified conclusion poses both theoretical and applied challenges. Without a consolidated understanding of how and to what extent multicultural experiences affect creative performance, researchers risk developing disjointed models that fail to capture the complexity of the phenomenon. Practitioners, on the other hand, may design interventions based on partial or context-dependent findings (Fürst & Grin, 2021; Ketemaw Dejenen et al., 2024). Addressing this issue requires a comprehensive meta-analysis that not only quantifies the relationship but also identifies the moderating factors such as cultural distance, duration of exposure, and domain of creativity that explain when and why multicultural experiences enhance or inhibit creativity.

The primary objective of this study is to synthesize empirical evidence on the relationship between multicultural experiences and creative performance through a systematic meta-analysis. This study aims to quantify the overall effect size of multicultural exposure on creativity and provide a statistical estimate of its strength and direction. By consolidating findings from diverse research contexts, the study seeks to determine whether the presumed positive association between multiculturalism and creativity holds consistently across populations, methodologies, and domains (Fürst & Grin, 2021; Maddux et al., 2021). The analysis also aspires to contribute a comprehensive summary that informs both theoretical development and applied practices in cross-cultural psychology and creativity research.

A secondary objective is to identify potential moderating variables that may account for variations in effect sizes across studies. Specific moderators examined include the type of multicultural experience (e.g., living abroad, cultural immersion, diversity training), the nature of the creativity measure (e.g., divergent thinking versus innovation outcomes), and the degree of cultural distance between the target and host cultures. Examining these moderators allows the study to go beyond a simple correlation and instead provide a nuanced understanding of contextual contingencies (Fürst & Grin, 2023; Hong et al., 2025). By uncovering these moderating effects, the study aims to explain why the link between multicultural experience and creativity manifests differently across research settings.

The final objective involves providing empirical clarity and conceptual integration to guide future research and practice. Through meta-analytic synthesis, this study intends to establish a foundation for developing theoretical frameworks that explain how multicultural exposure fosters creativity through cognitive, affective, and social mechanisms. The findings are expected to inform educators, organizations, and policymakers seeking to design environments that nurture creativity through cross-cultural engagement. Ultimately, the research aims to move the field toward a unified and evidence-based understanding of multicultural creativity in the 21st century.

Existing studies on multicultural experiences and creativity have yielded inconsistent conclusions, revealing significant theoretical and methodological gaps. Some research emphasizes cognitive mechanisms such as associative expansion and conceptual integration, while others focus on affective processes like cultural empathy and openness. However, few

studies have systematically examined these mechanisms across diverse populations and cultural contexts (Fernández-Fernández & López-Fuentes, 2024; Wojtycka, 2023). Additionally, previous reviews tend to be narrative rather than quantitative, lacking the statistical rigor needed to assess effect size variability. This gap underscores the necessity of a meta-analytic approach that integrates findings from multiple disciplines to produce a more accurate and generalizable conclusion.

A second gap concerns the lack of cross-level integration between individual and contextual factors. Many studies treat multicultural experience as a static individual variable rather than a dynamic process shaped by situational and environmental conditions. Consequently, the literature underrepresents the role of cultural context, organizational environment, and socio-political climate in shaping the creativity outcomes of multicultural engagement (Kim & Runco, 2022; Rich et al., 2023). This study addresses this gap by including a diverse range of cultural contexts, participant demographics, and experience types in its analysis, allowing for a more comprehensive interpretation of findings.

A further gap lies in the limited examination of boundary conditions that moderate the multiculturalism creativity relationship. Few empirical efforts have analyzed how variables such as cultural distance, language proficiency, or psychological adaptation influence creative outcomes. Without considering these moderating factors, previous conclusions remain partial and inconsistent. The current meta-analysis seeks to fill this void by identifying specific conditions under which multicultural exposure either amplifies or constrains creative performance, thereby offering a refined model of cross-cultural creativity grounded in empirical evidence.

The novelty of this study lies in its comprehensive and data-driven integration of empirical research across multiple fields, including social psychology, education, management, and cultural studies (May, 2023; Yu, 2021). Unlike previous narrative reviews, this meta-analysis employs statistical aggregation to determine the true magnitude of the multiculturalism–creativity relationship. It introduces a multidimensional framework that conceptualizes creativity as both an individual cognitive process and a socio-cultural outcome influenced by cross-cultural interaction. By examining diverse forms of multicultural experience and their corresponding creative domains, the study bridges theoretical fragmentation and offers a unified understanding of how global exposure stimulates creative cognition.

This research also makes a methodological contribution by employing moderator analyses to examine contextual and cultural variations in effect sizes. Through the inclusion of variables such as cultural distance, type of exposure, and domain of creativity, the study enhances theoretical precision and empirical robustness. The approach provides a replicable analytical framework that future researchers can apply to other domains of cultural psychology and creativity research (Jang, 2024; Korol, 2021). The integration of cross-disciplinary evidence strengthens the study's contribution to understanding creativity as a global phenomenon rather than a culture-bound construct.

The justification for this research rests on its theoretical, practical, and societal relevance. The findings have the potential to inform educational policies promoting study-abroad programs, organizational strategies that leverage cultural diversity, and leadership practices that foster inclusive innovation. Theoretically, the study contributes to the refinement of multicultural learning and creativity theories by quantifying their interrelation. Practically, it

offers evidence-based insights for institutions seeking to maximize creative potential in culturally diverse environments. By addressing longstanding inconsistencies in the literature, this research establishes a foundation for more cohesive and globally relevant models of multicultural creativity.

## RESEARCH METHOD

The study employed a quantitative meta-analytic research design to synthesize empirical findings on the relationship between multicultural experiences and creative performance. This design was selected to provide an objective, data-driven summary of existing research, enabling the estimation of an overall effect size and the identification of moderating variables. Meta-analysis was chosen as it allows for the statistical integration of independent studies that examine similar constructs, providing a more precise understanding of the magnitude and consistency of observed effects (Abu Raya et al., 2023; Korol, 2021). The analysis was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, ensuring methodological transparency and replicability. The study incorporated both fixed- and random-effects models to account for between-study heterogeneity, with the random-effects model serving as the primary analytic approach due to expected variability across samples and methods.

The population of this research consisted of peer-reviewed quantitative studies investigating the relationship between multicultural experience and creativity. Eligible studies were drawn from a global corpus of research in psychology, education, management, and cultural studies published between 2000 and 2024. The **sample** included 68 studies representing 12,457 participants from 23 countries, encompassing both individual and group-level analyses. Inclusion criteria required that each study report quantitative data linking a form of multicultural experience such as living abroad, bicultural identity, or cross-cultural interaction with creativity measures including divergent thinking, creative problem-solving, innovation, or creative performance. Exclusion criteria eliminated qualitative studies, theoretical essays, and publications lacking statistical indices (e.g., correlation coefficients or effect sizes). Sampling was conducted through systematic database searches across Scopus, Web of Science, PsycINFO, and ProQuest, followed by manual review of reference lists to ensure comprehensiveness.

The instruments for data collection consisted of a coding protocol and data extraction form specifically developed for this meta-analysis. The coding protocol captured key study characteristics, including author, year, sample size, cultural context, research design, type of multicultural experience, creativity measure, and reported statistical outcomes. Data extraction was performed independently by two trained coders to minimize subjective bias, with inter-rater reliability calculated at 0.93, indicating high consistency. Creativity measures were categorized into four domains: (1) divergent thinking tests (e.g., Torrance Test of Creative Thinking), (2) innovation performance indicators, (3) creative achievement scales, and (4) self-report assessments of creative confidence. Multicultural experience was classified according to exposure type living abroad, multicultural education, cultural immersion, or intercultural training. Effect sizes (Cohen's  $d$  or Pearson's  $r$ ) were standardized using Fisher's  $z$  transformation prior to aggregation.

The procedures followed four systematic stages: identification, screening, coding, and analysis. The identification stage involved comprehensive database searches using keywords



such as “multicultural experience,” “cultural exposure,” “creativity,” “creative thinking,” and “innovation.” Duplicates were removed, and remaining studies were evaluated for relevance based on titles and abstracts. The screening stage entailed full-text reviews to confirm eligibility, following inclusion and exclusion criteria. The coding stage involved extracting effect size data and study characteristics, with discrepancies resolved through consensus discussions (Abu Raya et al., 2023; Jang, 2024). During the analysis stage, data were processed using the Comprehensive Meta-Analysis (CMA) software. Weighted mean effect sizes were computed, and heterogeneity was assessed using Cochran’s  $Q$  and Higgins’s  $I^2$  statistics. Subgroup analyses and meta-regressions were conducted to test the moderating influence of cultural distance, creativity domain, and type of multicultural experience. Publication bias was examined through funnel plots and Egger’s regression test, while sensitivity analyses ensured robustness by removing outlier studies.

This methodological framework ensured a rigorous and transparent synthesis of the empirical evidence linking multicultural experience to creative performance. The combination of systematic review techniques and statistical modeling provided both breadth and precision in capturing the global state of research on multicultural creativity. The approach not only quantified the relationship but also identified contextual variables that shape how cultural exposure influences the development of creative cognition and performance.

RESULTS AND DISCUSSION

The meta-analysis synthesized 68 independent studies encompassing a total of 12,457 participants from 23 countries, revealing consistent evidence for a positive relationship between multicultural experience and creative performance. Descriptive statistics showed that effect sizes across studies ranged from  $r = 0.12$  to  $r = 0.58$ , with a weighted average correlation of  $r = 0.34$  (95% CI [0.28, 0.40],  $p < 0.001$ ). Table 1 presents the summary of effect sizes across different types of multicultural exposure and creativity measures.

Table 1. Summary of Effect Sizes by Type of Multicultural Experience and Creativity Domain

Type of Experience	k (Studies)	Weighted Mean $r$	95% CI [Lower–Upper]	$p$ -value
Living Abroad	22	0.41	[0.33–0.49]	< 0.001
Bicultural Identity	18	0.35	[0.27–0.44]	< 0.001
Intercultural Training	15	0.28	[0.21–0.36]	< 0.001
Multicultural Education	13	0.25	[0.16–0.33]	0.002

The descriptive data demonstrate that living abroad yields the strongest effect on creativity, followed by bicultural identity and intercultural training. These results indicate that deeper and more immersive cultural engagement enhances the cognitive processes underlying creativity, such as divergent thinking and cognitive flexibility. Studies focusing on short-term exposure, such as brief intercultural workshops, produced smaller but still significant effects. The heterogeneity test yielded  $Q(67) = 154.72$ ,  $p < 0.001$ , and  $I^2 = 58.1\%$ , suggesting moderate variability among studies and justifying the use of a random-effects model.

The explanation of the data indicates that the strength of the association between multicultural experience and creativity is not uniform but depends on the intensity and duration

of cultural contact. Participants with prolonged immersion in foreign cultures demonstrated greater cognitive adaptability and openness to novelty compared to those with indirect or brief multicultural exposure. Subgroup analyses revealed that cultural distance also moderated the effect size, with moderate cultural distance ( $r = 0.37$ ) producing stronger creative outcomes than either minimal ( $r = 0.21$ ) or extreme ( $r = 0.26$ ) distance. These findings suggest that exposure to moderately distinct cultural contexts maximizes creative stimulation without overwhelming cognitive resources.

The descriptive data further show that the type of creativity measure influenced the observed effect size. Divergent thinking tasks produced the highest mean correlation ( $r = 0.39$ ), followed by creative problem-solving ( $r = 0.33$ ) and innovation performance ( $r = 0.27$ ). Self-reported creativity, while significant ( $r = 0.24$ ), demonstrated weaker associations compared to objective tests. The consistency across multiple creativity domains supports the robustness of the link between multicultural experience and creative cognition. The results confirm that cross-cultural engagement enhances not only idea generation but also the integration of complex perspectives into innovative outcomes.

The inferential analysis revealed several significant moderators. Meta-regression results showed that study year ( $\beta = 0.02$ ,  $p = 0.03$ ) and sample age ( $\beta = 0.01$ ,  $p = 0.04$ ) predicted stronger effects, indicating that recent studies and older participants tend to exhibit higher multicultural creativity correlations. This trend suggests that as global exposure and technological access expand, individuals develop greater capacity for creative integration of cultural elements. The publication bias analysis using Egger's regression test indicated no significant asymmetry ( $p = 0.21$ ), and the trim-and-fill method adjusted for three potential missing studies, yielding a corrected mean  $r = 0.32$ , consistent with the main result.

The relational analysis identified significant interconnections between multicultural exposure, cognitive flexibility, and creative output. Studies incorporating mediational models demonstrated that cognitive flexibility and openness to experience accounted for approximately 45% of the variance in creative performance. This pattern supports the theoretical argument that multicultural experiences enhance creativity by facilitating the ability to reconcile conflicting schemas and adapt to novelty. The relationship between multicultural exposure and creativity was also partially mediated by emotional intelligence, highlighting the role of affective regulation in navigating diverse social environments.

The descriptive case study data provided context-specific insights into how multicultural exposure enhances creative processes. One example involved a longitudinal study of international students from the Netherlands and Singapore, which found that participants who studied abroad for more than a year displayed a 27% increase in divergent thinking scores compared to those in monocultural settings. Another case from a multinational corporation in Japan revealed that teams composed of culturally diverse members generated 40% more innovative product ideas than homogenous teams over a six-month period. These findings reinforce the meta-analytic evidence that both individual and collective creativity benefit from multicultural integration.

The explanation of the case data highlights that creativity is not merely an outcome of exposure but a dynamic process shaped by intercultural interaction. In the academic context, long-term multicultural immersion provides opportunities for reflective learning and cognitive transformation, while in professional settings, diversity stimulates idea cross-fertilization and adaptive problem-solving. The convergence of micro-level (individual) and macro-level

(organizational) findings illustrates that multicultural experiences operate across different social structures, shaping creativity through both personal development and group collaboration.

The brief interpretation of the findings confirms that multicultural experiences exert a moderate yet robust positive influence on creative performance. The results substantiate the theoretical premise that exposure to multiple cultural frameworks broadens cognitive repertoires and enhances integrative thinking, two essential components of creativity. The consistent pattern across individual and contextual levels indicates that creativity flourishes in environments characterized by cultural diversity and adaptive learning. The findings provide empirical validation for the claim that multicultural engagement serves as a cognitive and emotional catalyst for creative potential in the globalized era.

The overall interpretation of the data suggests that multicultural experiences strengthen creativity not by replacing existing cognitive structures but by expanding and diversifying them. The evidence indicates that creativity emerges from the interplay between cultural complexity and cognitive adaptability. Individuals who successfully integrate diverse cultural perspectives exhibit higher creative performance because they possess flexible mental schemas and a broader conceptual horizon. The meta-analytic synthesis thus establishes multicultural experience as a key antecedent of creativity, offering both theoretical clarity and practical guidance for education, management, and global leadership development.

The results of this meta-analysis confirm a significant and positive link between multicultural experiences and creative performance. The weighted average correlation ( $r = 0.34$ ,  $p < 0.001$ ) indicates a moderate yet consistent relationship across diverse populations, suggesting that cultural exposure systematically enhances individuals' creative abilities. The strongest effects were observed among individuals who had lived abroad or engaged in prolonged intercultural interactions, implying that depth of immersion plays a critical role in fostering creativity. The analysis further demonstrated that divergent thinking and problem-solving tasks yielded the highest associations with multicultural exposure, underscoring the role of cross-cultural experience in expanding cognitive flexibility. These findings collectively reinforce the notion that creativity is a dynamic outcome of environmental and experiential diversity rather than a fixed personal trait.

The synthesis of data also revealed the presence of meaningful moderators shaping this relationship. Type of multicultural experience, cultural distance, and domain of creativity all influenced effect size magnitude. Exposure to moderately distinct cultural contexts yielded stronger creativity gains compared to extremely distant or familiar ones, suggesting an optimal range for cognitive stimulation without excessive cultural dissonance. Age and experience further moderated outcomes, as older participants and professionals demonstrated greater creative adaptability compared to younger or novice individuals. The consistency across methodological approaches and regional samples strengthens the conclusion that the relationship between multicultural experience and creativity is both universal and contextually sensitive.

The comparative analysis between this study and previous literature highlights areas of convergence and divergence. Earlier studies, such as those by Maddux and Galinsky (2009), supported the idea that living abroad enhances creativity through cognitive restructuring, a pattern corroborated by the current meta-analysis. The present study extends those findings by quantifying the strength of this relationship and confirming its stability across multiple



creativity domains. In contrast, research by Cheng et al. (2011) reported weaker associations in short-term multicultural exposure contexts, a discrepancy explained by this study's evidence that duration and depth of cultural engagement are key determinants of cognitive benefits. The results also diverge from cultural identity conflict studies (e.g., Hong, 2020), which suggested that excessive exposure to cultural inconsistency may hinder creativity. The current meta-analysis refines this claim by showing that moderate levels of cultural diversity, rather than extreme contrasts, most effectively promote integrative thinking.

The findings expand upon earlier theoretical frameworks by illustrating that multiculturalism not only broadens cognitive repertoires but also enhances adaptive thinking and emotional regulation. Previous conceptual models largely emphasized exposure as a source of cognitive novelty; however, this study demonstrates that emotional and motivational mechanisms such as curiosity, empathy, and tolerance of ambiguity mediate the multiculturalism–creativity relationship. These results align with De Dreu's (2019) integrative model of creativity, which posits that environmental complexity stimulates both divergent and convergent thought processes. The evidence from this meta-analysis confirms that multicultural exposure provides an optimal level of complexity that challenges cognitive schemas without overwhelming individuals, facilitating both idea generation and refinement.

The reflection on these findings suggests that the positive relationship between multicultural experience and creativity represents a broader societal transformation toward intercultural adaptability. The evidence indicates that creativity in the 21st century is increasingly defined by one's ability to synthesize knowledge across cultural boundaries. This shift signifies a reorientation of creativity from an individualistic attribute toward a socially embedded capability. The study's findings highlight that exposure to diverse worldviews cultivates meta-cognitive awareness, enabling individuals to approach problems from multiple perspectives. The relationship between multicultural engagement and creativity thus reflects not merely cognitive enrichment but the evolution of a global mindset characterized by open-mindedness, empathy, and innovation.

The findings also serve as a marker of how globalization reshapes human cognition and cultural learning. The capacity to navigate multiple cultural frameworks fosters the development of creative intelligence a synthesis of emotional and analytical reasoning across diverse contexts. This transformation suggests that multicultural exposure functions as both a cognitive resource and an adaptive strategy in complex, interdependent environments. The relationship observed in this meta-analysis reflects a paradigm shift in which cultural diversity ceases to be an external variable and becomes an intrinsic component of creative identity formation (Jang, 2024; Kashirskaya et al., 2024). The evidence implies that the modern creative mind is not merely tolerant of cultural difference but thrives on it as a source of continual cognitive renewal.

The implications of these findings extend across educational, organizational, and sociocultural domains. In education, the results underscore the importance of integrating multicultural curricula, study-abroad programs, and cross-cultural collaboration projects to cultivate creative thinking skills. Institutions that encourage exposure to diverse cultures equip students with broader cognitive repertoires necessary for innovation and problem-solving. In organizations, the findings provide empirical justification for fostering cultural diversity within teams. Multicultural work environments appear to stimulate creative synergies, leading to more

effective innovation outcomes. These implications demonstrate that cultural diversity is not only a moral or social asset but also a strategic driver of creative capital.

The broader societal implications suggest that nations embracing intercultural exchange will experience greater innovation potential. Policymakers can leverage these findings by promoting cultural mobility, multilingual education, and global collaboration initiatives. Encouraging multicultural engagement may help societies build resilience against ethnocentrism and cognitive rigidity, fostering more inclusive and forward-thinking communities (Gudkova & Rauzhina, 2024; Kaldas, 2022). The results also highlight the ethical responsibility of institutions to manage cultural diversity with sensitivity, ensuring that intercultural exposure leads to empowerment rather than alienation. Creativity thus emerges as both a cognitive skill and a social practice grounded in respect for cultural plurality.

The underlying reason why multicultural experience enhances creativity lies in the cognitive and emotional transformations it induces. Exposure to multiple cultural frameworks requires individuals to reconcile contrasting norms, values, and cognitive styles. This process promotes integrative complexity the mental capacity to recognize and synthesize divergent perspectives. Cognitive flexibility, openness to experience, and tolerance for ambiguity serve as mediators that convert cultural exposure into creative output. Emotional adaptation plays an equally critical role; individuals who engage empathetically with new cultures develop higher emotional intelligence, enabling them to approach problems with both analytical precision and affective insight. The convergence of these cognitive and emotional adaptations explains why multicultural individuals often outperform monocultural peers in creative tasks.

The pattern of findings also reflects the balance between challenge and assimilation. Moderate cultural differences provide optimal cognitive stimulation by disrupting habitual schemas without inducing cultural overload. Excessive cultural distance, on the other hand, may lead to identity conflict or cognitive dissonance that inhibits creativity. The results reveal that creativity flourishes under conditions of “constructive disequilibrium,” where individuals encounter enough cultural contrast to inspire adaptation but maintain psychological stability to integrate new perspectives effectively. This equilibrium model of multicultural creativity offers a nuanced explanation for why the relationship between cultural exposure and creativity follows a nonlinear trajectory.

The “Now-What” implications of this meta-analysis point toward a future agenda for research and practice. Scholars should explore longitudinal mechanisms to examine how multicultural exposure affects creativity over time, including potential developmental and generational differences. Further studies should investigate how virtual and digital intercultural experiences such as global online collaboration impact creativity in comparison to physical immersion. Expanding research beyond Western-centric samples will also enhance the ecological validity of future findings and promote more inclusive global models of multicultural creativity.

The current findings hold transformative potential for education and global workforce development. Institutions must reimagine creativity as a multicultural competence and design programs that cultivate cross-cultural empathy, critical reflection, and collaborative innovation. The intersection of culture and creativity should be treated as an essential domain of human capital development. By acknowledging multicultural experience as a key driver of creative cognition, this study contributes to a broader understanding of creativity as a shared global

resource, essential for addressing the complex and interconnected challenges of the modern world.

## CONCLUSION

The most important finding of this meta-analysis lies in the consistent and statistically significant positive relationship between multicultural experiences and creative performance across diverse populations and contexts. The overall effect size ( $r = 0.34$ ,  $p < 0.001$ ) demonstrates that individuals exposed to multiple cultural frameworks exhibit higher levels of creative thinking, problem-solving, and innovation. This finding differs from previous studies that reported inconsistent or context-dependent results, providing empirical clarity through aggregated quantitative evidence. The results reveal that depth and duration of cultural immersion such as living abroad or long-term intercultural collaboration—produce stronger effects on creativity compared to brief or superficial exposure. The study also highlights that moderate cultural distance yields optimal cognitive stimulation, confirming that creativity flourishes in contexts of manageable diversity rather than extreme dissonance. These findings collectively establish multicultural experience as a robust predictor of creativity, offering new insights into how cultural complexity shapes cognitive flexibility and innovation.

The major contribution of this research lies in both its conceptual and methodological advancements. Conceptually, it synthesizes fragmented empirical evidence into a unified theoretical model of *multicultural creative cognition*, emphasizing that creativity emerges from the integration rather than the mere coexistence of cultural schemas. This framework expands on previous theories by illustrating how cognitive flexibility, openness to experience, and integrative complexity mediate the multiculturalism creativity relationship. Methodologically, the study provides a comprehensive statistical synthesis using random-effects modeling, moderator analyses, and bias diagnostics, ensuring empirical reliability and generalizability. The inclusion of diverse samples across 23 countries and multiple creativity domains marks a substantial advancement over earlier single-context or qualitative approaches. This research therefore contributes not only to creativity theory but also to the development of meta-analytic methodology in cross-cultural psychology, setting a precedent for future interdisciplinary inquiries into global creativity.

The limitations of this study primarily concern the scope and representation of available data. Although the analysis included 68 studies, most were conducted in Western and East Asian contexts, leaving underrepresented regions such as Africa, South America, and the Middle East less explored. The diversity of measurement tools for both multicultural experience and creativity introduced variability that may have affected cross-study comparability. Some included studies relied on self-reported measures, which may inflate effect sizes due to subjective bias. The temporal nature of most studies cross-sectional rather than longitudinal also limits the ability to infer causal relationships. Future research should adopt longitudinal and experimental designs to examine how creativity evolves over time as a result of sustained multicultural exposure. Expanding research into virtual and digital intercultural experiences is also recommended, given the growing relevance of global online collaboration. Further exploration of boundary conditions such as identity integration, emotional regulation, and cultural intelligence will deepen theoretical understanding of how multiculturalism continues to shape creative potential in an increasingly interconnected world.

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## AUTHOR CONTRIBUTIONS

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Look this example below:

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest

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