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From Virtual Exchange to Local Action: Advancing Global Citizenship Education through Transnational Telecollaborative Projects in Latin America

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ABSTRACT

This study investigates how transnational telecollaborative projects can advance Global Citizenship Education (GCE) in Latin American secondary schools by linking virtual exchange with locally grounded civic action. Using a mixed-methods case study design, the research examines two projects developed through a six-week teacher training program in Argentina, implemented with partner schools in Peru and Mexico. Data were collected through pre- and post-project surveys, teacher reflections, student-created digital artifacts, and reflective discussions, and analyzed using descriptive statistics and thematic coding guided by UNESCO's GCE competency framework, with triangulation across sources to ensure reliability. Findings indicate that in the inequality project (Argentina–Peru), 87% of students reported increased awareness of how discrimination operates across cultural contexts, while 9% expressed stronger commitment to ethical digital behavior. In the climate action project (Argentina–Mexico), 73% of participants adopted new sustainability practices and reported greater confidence using English for authentic intercultural communication. Across both initiatives, 85% of students indicated feeling more responsible for contributing to social or environmental change, while teachers reported professional growth in digital pedagogy, project-based learning, and intercultural facilitation. The results highlight the transformative potential of transnational telecollaboration in developing the cognitive, socio-emotional, and behavioral competencies essential to Global Citizenship Education (GCE). They also show that low-cost, technology-enabled models

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can overcome barriers to traditional exchange and offer scalable, inclusive strategies for action-oriented global learning in underrepresented contexts.

Keywords: Transnational Telecollaboration; Global Citizenship Education (GCE); Latin America; SDGs; Teacher Training; Intercultural Learning

1. Introduction

Global Citizenship Education (GCE) has increasingly been recognized as a critical framework for preparing young people to navigate an interconnected world and engage with the pressing social, environmental, and economic challenges outlined in the United Nations Sustainable Development Goals (SDGs) (UNESCO, 2015)^[1]. In Latin America, however, opportunities for students to develop global competencies remain unevenly distributed, reflecting broader inequities in access to quality education and digital resources (Remesal & Villaroel, 2023)^[2]. While the theoretical value of GCE is well established, empirical research documenting classroom-based interventions in the region—particularly those leveraging transnational, technology-mediated collaboration—remains limited.

Telecollaboration, broadly defined as the use of internet-based tools to support structured intercultural learning across borders, offers a promising avenue to address these inequities (Toscu, 2023^[3]; Gui & Kew, 2025)^[4]. Early initiatives such as e-tandem learning paired students of different linguistic backgrounds for reciprocal practice (O'Rourke, 2007)^[5], later evolving into broader intercultural exchanges designed to foster awareness and mutual understanding (O'Dowd, 2018^[6], 2020)^[7]. More recently, transnational telecollaboration has shifted toward collaborative problem-solving on global issues such as inequality, sustainability, and digital ethics (Giralt et al., 2022)^[8], aligning with GCE's call for learners to assume active roles in resolving global challenges and contributing to a more just, peaceful, and sustainable world (UNESCO, 2015)^[1].

The integration of telecollaboration into GCE draws from multiple theoretical traditions. Byram's (1997)^[9] model of intercultural communicative competence highlights knowledge, openness, interpretive skills, and critical cultural awareness as key dimensions of global engagement.

Mezirow's (2000)^[10] transformative learning theory emphasizes critical reflection as the basis for perspective change and social action. Nussbaum's (1997)^[11] cosmopolitan education and Altinay's (2011)^[12] notion of global civics extend moral responsibility beyond national borders. Together, these perspectives illustrate how digitally mediated, crossborder collaboration can cultivate GCE's cognitive, socioemotional, and behavioral competencies (Martínez, Sainz & Barry, 2020)^[13].

At the structural level, the design of telecollaborative projects strongly influences their outcomes. Interactional models identified by Harris (1997^[14], 1998)^[15], the use of project-based learning Sadler & Dooly, 2022)^[16], and the careful integration of synchronous and asynchronous tools (Carnicero Sanguinetti, 2023)^[17] all shape the depth and inclusivity of engagement. Digital platforms such as Zoom, Google Docs, and Padlet provide crucial infrastructure, but their effectiveness depends on pedagogical intentionality and accessibility (Falasca & Carnicero, 2024)^[18]. Likewise, the sustainability of telecollaborative initiatives depends on trust, mutual benefit, and professional development for teachers, who must be equipped to facilitate intercultural dialogue and integrate GCE into curricula (De Luca, 2023^[19]; Leite, 2021)^[20].

Building on this rationale, this article investigates how transnational telecollaborative projects, implemented through a teacher training program in Argentina, can advance GCE in secondary schools. Specifically, it examines two case studies explicitly linked to SDG 10 (Reduced Inequalities) and SDG 13 (Climate Action), providing empirical insights into how structured online exchanges can foster critical thinking, intercultural communication, and civic engagement. By documenting these classroom-based implementations, the study contributes evidence-based guidance for educators and policymakers seeking to integrate telecollaboration into GCE initiatives across Latin America.

2. Materials and Methods

2.1. Research Design

This study employed a mixed-methods case study design (Creswell & Plano Clark, 2018^[21]; Yin, 2018)^[22] to examine how transnational telecollaborative projects support the development of Global Citizenship Education (GCE) in Latin American secondary schools. Case study methodology was selected because it allows for an in-depth exploration of complex, real-world educational interventions within their natural contexts, capturing the dynamic interplay between pedagogical strategies, teacher facilitation, and student learning outcomes (Stake, 1995^[23]; Yin, 2018)^[22]. This approach is particularly well-suited for investigating innovative practices, such as telecollaboration, where contextual factors—including school culture, student demographics, and teacher expertise—significantly influence outcomes.

A mixed-methods design was integrated to provide a comprehensive understanding of the phenomenon. Quantitative data, collected through pre- and post-project surveys, measured student awareness of global issues, attitudes toward intercultural engagement, and self-reported behaviors related to social inequality and sustainability. These data were complemented by qualitative evidence from teacher reflections, student quotes, and digital artifacts. By combining quantitative and qualitative sources, the study achieved both breadth and depth in analysis, enabling methodological triangulation and enhancing the credibility and rigor of the findings.

2.2. Research Context

The study was conducted within the framework of a six-week virtual teacher-training program developed and led by the STAR Country Director for Argentina in 2024. This program marked the second training initiative hosted by STAR Argentina, a non-profit organization dedicated to advancing global education through research and strategic partnerships. Its primary objective was to equip secondary school teachers with both the theoretical foundations and practical strategies necessary to integrate Global Citizenship Education (GCE) and the United Nations Sustainable Development Goals (SDGs) into classroom practice through telecollaboration.

The training was delivered entirely online and combined synchronous and asynchronous components to accommodate diverse schedules and foster sustained engagement. Synchronous sessions consisted of weekly interactive workshops facilitated by experienced educators and guest speakers with expertise in global education and international collaboration. These live sessions introduced participants to key theoretical frameworks, pedagogical models, and case studies illustrating the successful integration of GCE and SDGs in different contexts.

Asynchronous activities were hosted on Google Classroom and included curated readings, multimedia resources, reflective prompts, and practical exercises designed to deepen participants' understanding of course content and encourage the transfer of learning to their own teaching contexts. Participants also engaged in discussion forums and peer-feedback activities to share perspectives, critically analyze global education concepts, and collaboratively develop classroom strategies.

The curriculum introduced participants to the core principles of global education and relevant subthemes such as global learning, global citizenship education, intercultural competence, and sustainability. Throughout the program, participants were encouraged to contextualize these concepts by critically examining their relevance to their own local and national educational settings. Facilitators emphasized active and participatory approaches, inviting teachers to experiment with collaborative methodologies, student-centered practices, and problem-based learning linked to real-world issues.

By the end of the program, participants synthesized their learning in a capstone assignment: the design of a telecollaborative project aligned with one or more SDGs. This project required them to define learning objectives, identify potential international partners, outline collaborative activities, and propose methods for evaluating student learning outcomes. The capstone served both as an assessment of participants' understanding and as a practical tool they could implement in their own classrooms, thereby extending the impact of the training beyond the program itself.

2.3. Participants

A total of 20 public high school teachers from Argentina participated in the program, representing a variety of subject

areas, including English as a Foreign Language (EFL), Spanish Literature, Global Perspectives, Art, and History. The cohort included both early-career and experienced teachers, with teaching experience ranging from 2 to over 20 years. This diversity in professional background and experience contributed to a rich exchange of perspectives during workshops, discussions, and collaborative activities.

Teachers were recruited through STAR Argentina's professional network, with participation based on interest in integrating Global Citizenship Education (GCE) and the United Nations Sustainable Development Goals (SDGs) into their teaching practice. All participants voluntarily enrolled in the program and provided informed consent for their involvement in the study.

For the two case studies analyzed in this research, teachers from Lenguas Vivas Secondary School in Buenos Aires partnered with colleagues from Arequipa, Peru, and Cuernavaca, Mexico. These transnational partnerships were established to create authentic opportunities for cross-cultural learning, enabling students to engage in meaningful collaboration with peers from different cultural and educational contexts.

Approximately 60 students, aged 14–17, participated across the two telecollaborative projects, with roughly 30 students involved in each project. Students were selected by their teachers based on interest, availability, and willingness to engage in online collaborative activities. The projects were structured to support active participation, intercultural dialogue, and critical reflection, while promoting awareness of GCE principles and SDGs. Students engaged in activities such as collaborative research, virtual discussions, joint presentations, and reflective exercises, all designed to encourage problem-solving, teamwork, and intercultural understanding.

2.4. Instruments and Data Sources

To capture multiple dimensions of student learning and teacher facilitation, the study employed the following instruments:

1. Pre- and post-project surveys: These measured students' awareness of global issues, attitudes toward intercultural engagement, and self-reported behaviors related to inequality and sustainability. Surveys included a mix of Likert-scale items (adapted from UNESCO's 2.

- GCE competency framework, 2015)^[1] and open-ended questions.
- Teacher reflections: Collected through weekly planning meetings and written logs, these provided insights into implementation challenges, pedagogical strategies, and professional growth.
- Student artifacts: Digital products created during the projects (e.g., posters, infographics, campaigns) were gathered to document evidence of collaboration, intercultural learning, and civic engagement.
- 4. Student quotes: Selected from reflective discussions, these captured students' voices and added qualitative nuance to the findings.

Collectively, these instruments allowed the study to capture a rich, multidimensional picture of how telecollaborative projects facilitated global citizenship competencies, fostered intercultural understanding, and supported both teacher and student professional growth. Data sources were triangulated to strengthen validity and to ensure that findings reflected multiple perspectives within the learning environment.

2.5. Procedure

The projects were structured into four pedagogical phases, drawing on project-based learning (PBL) principles and informed by Mezirow's (2000)^[10] theory of transformative learning and Byram's (1997)^[9] intercultural competence framework. This design ensured that students progressed from local investigation to intercultural collaboration and ultimately to civic action and dissemination.

1. Local Inquiry

In the initial phase, students investigated issues related to the selected Sustainable Development Goals (SDGs) within their local contexts. They gathered data through surveys, interviews with peers and family members, and school-based audits. This phase emphasized critical reflection on community realities, enabling students to identify inequalities, discriminatory practices, or environmental challenges present in their immediate surroundings. Teachers scaffolded this process by helping students formulate guiding questions, ensuring ethical data collection, and encouraging them to connect their findings with SDG targets.

2. Intercultural Dialogue

Building on their local findings, students engaged in intercultural exchanges with their peers abroad. Synchronous meetings were organized through Zoom, while asynchronous discussions took place via platforms such as WhatsApp, Google Classroom, and Padlet. These interactions allowed students to compare experiences, highlight similarities and differences across national contexts, and co-construct knowledge about the shared challenges of inequality and climate change. Teachers played a facilitative role by establishing netiquette rules, moderating discussions to ensure equal participation, and guiding students in framing culturally sensitive questions. When digital literacy gaps emerged, teachers provided step-by-step instructions, tutorial videos, and peer support mechanisms to ensure all students could participate fully.

3. Collaborative Digital Creation

In mixed-nationality teams, students designed digital artifacts that synthesized their learning and proposed concrete solutions. Depending on the project, these included bilingual posters, infographics, campaign materials, and short videos created with tools such as Canva, Google Sites, and Adobe Express. The emphasis was on creativity, collaboration, and ethical digital literacy. Teachers scaffolded teamwork by assigning clear roles within groups (e.g., researcher, designer, presenter), modeling effective online collaboration, and providing formative feedback on drafts. They also monitored group dynamics and intervened when necessary to maintain equitable contributions, particularly in cross-linguistic contexts where students' proficiency levels varied.

4. Reflection and Dissemination

The final phase encouraged students to critically reflect on their learning process and to share outcomes with their wider communities. Reflection took the form of classroom discussions, peer feedback sessions, and written self-assessments. Dissemination activities included presenting projects to families, school authorities, and community groups, as well as posting digital campaigns on social media platforms. Teachers facilitated this stage by organizing school-wide exhibitions, coaching students on public speaking, and integrating reflective prompts that linked personal growth to

broader civic responsibility. They also provided feedback focused on metacognitive skills, helping students recognize how their attitudes and competencies had evolved through the project.

Case Study 1 (Argentina–Peru) centered on **SDG 10: Reduced Inequalities**, with activities conducted primarily in Spanish to promote inclusivity and mutual comprehension. Case Study 2 (Argentina–Mexico) focused on **SDG 13: Climate Action**, and tasks were carried out in English to strengthen students' language proficiency while engaging them in sustainability advocacy. The bilingual nature of the projects not only reflected their academic goals but also modeled the linguistic diversity inherent in global collaboration.

2.6. Data Analysis

The analysis followed a mixed-methods strategy, integrating quantitative and qualitative evidence to capture the multidimensional outcomes of the projects. Survey data were analyzed using descriptive statistics, focusing on frequencies and percentages to identify shifts between pre- and post-project responses. This approach allowed the research team to track changes in students' awareness of global issues, their attitudes toward intercultural engagement, and their self-reported behaviors related to inequality and sustainability. Although not intended to produce generalizable results, the descriptive analysis provided a clear picture of patterns of change within the specific educational contexts under study (Creswell & Plano Clark, 2018) [21].

The qualitative data—comprising teacher reflections, student quotes, and digital artifacts—were analyzed through a thematic coding process. Following Saldaña's (2021)^[24] recommendations, the study employed an inductive—deductive approach to coding. Initial coding categories were derived deductively from UNESCO's (2015)^[1] GCE competency domains (cognitive, socio-emotional, and behavioral), ensuring alignment with the study's conceptual framework. At the same time, new codes emerged inductively from the data, capturing unanticipated themes such as digital ethics, student agency, and cross-border solidarity. This flexible coding process allowed for both theoretical grounding and openness to participants' lived experiences.

To strengthen the credibility and reliability of the find-

ings, data were triangulated across instruments and participant perspectives. Survey results were cross-checked with qualitative insights from teacher reflections and student-produced artifacts to ensure that self-reported changes were corroborated by observable evidence of intercultural dialogue, digital collaboration, and civic engagement. This multi-source validation reduced the risk of bias associated with relying on a single data set and provided a more nuanced account of how telecollaborative projects shaped student learning and teacher practice (Yin, 2018)^[22].

2.7. Ethical Considerations

All participants provided informed consent, and parental authorization was obtained for student involvement. Data were anonymized prior to analysis. The study adhered to ethical guidelines for educational research, ensuring confidentiality and voluntary participation. All procedures followed the ethical standards of the British Educational Research Association (British Educational Research Association [BERA], 2018)^[25], ensuring integrity, confidentiality, and respect for all participants and stakeholders.

3. Results

3.1. Case Study 1: Reducing Inequalities (Argentina-Peru)

The first project examined how students engaged with SDG 10 (Reduced Inequalities) through collaborative inquiry into local forms of exclusion. In Argentina, students focused on racial and socioeconomic disparities, while their Peruvian peers investigated linguistic discrimination against Quechua speakers. This cognitive engagement was evident in survey results, with 87% of participants reporting increased awareness of how inequality operates across cultural contexts. Qualitative evidence further supported this finding. One Peruvian student noted: "I had never thought about how people in my neighborhood are treated differently just for speaking Quechua. This project helped me see that our culture is valuable, not a reason for exclusion."

The intercultural dialogue phase facilitated a move from abstract recognition to critical socio-emotional reflection. For example, an Argentine student remarked: "Before, I thought racism only happened in the U.S. Now I see it in my own

country, in the comments people make online." Teachers also observed that students began questioning normalized forms of discrimination, demonstrating a shift from passive awareness to critical inquiry.

The collaborative creation of digital posters provided opportunities for behavioral engagement, as students actively co-designed advocacy materials to raise awareness within their schools and online communities. Survey data indicated that 91% of participants expressed a stronger commitment to ethical digital behavior, particularly in the responsible use of social media. Teachers confirmed improvements in intercultural communication, digital literacy, and civic engagement, despite ongoing challenges related to time zones and uneven infrastructure.

3.2. Case Study 2: Climate Action (Argentina–Mexico)

The second project focused on SDG 13 (Climate Action) and asked students to investigate sustainability practices in their communities. The local inquiry stage revealed surprising insights, as Argentine students tracked household plastic consumption while Mexican students documented water conservation practices such as rainwater harvesting. These findings stimulated cognitive engagement, helping students connect local habits to global environmental issues. One Argentine participant reflected: "I was surprised to see how much plastic my family throws away in a week. I'd never noticed it until I had to record it."

During intercultural exchanges, students compared practices and innovations across national contexts. This process nurtured socio-emotional competencies such as empathy, respect for difference, and curiosity about alternative solutions. For example, one Mexican student commented: "Seeing how Argentina handles recycling made me realize how much more we could do." An Argentine peer responded: "And we saw your school uses rainwater harvesting systems. That was totally new to us." These dialogues highlighted the reciprocal nature of learning, as students recognized strengths and gaps in their respective contexts.

Behaviorally, the co-creation of bilingual digital campaigns on Instagram and Canva transformed awareness into concrete action. Survey data revealed that 73% of participants adopted at least one new sustainability habit, such as composting, reducing water consumption, or limiting plastic use. Teachers reported that students also gained confidence in using English for authentic intercultural communication, demonstrating the integration of GCE with language learning objectives.

3.3. Cross-Case Findings

When analyzed together, the two case studies illustrate consistent patterns of growth across the three domains of GCE competencies. In the cognitive domain, students deepened their understanding of inequality and climate change by linking local realities to global challenges. In the socioemotional domain, they developed empathy and intercultural sensitivity through sustained dialogue with peers in other countries. In the behavioral domain, students moved from

reflection to action by designing campaigns, adopting new sustainability practices, and committing to more ethical digital behavior.

Quantitative findings reinforce this progression: across both projects, 85% of participants reported feeling more responsible for contributing to social or environmental change. Teachers also documented professional growth, including increased confidence with project-based learning, digital pedagogy, and integration of global issues into subject curricula. Collectively, these results suggest that transnational telecollaboration can serve as a powerful mechanism for advancing GCE in under-resourced contexts.

Table 1 provides a comparative overview of the two projects, highlighting their design, SDG focus, key activities, and outcomes for both students and teachers.

Table 1. Summary of Transnational Telecollaborative Projects Implemented through the STAR Argentina Program (2024).

Project	Partner Countries	Language	SDG Focus	Key Activities	Outcomes (Students)	Outcomes (Teachers)
Reducing Inequalities through Social Media	Argentina-Peru	Spanish	SDG 10: Reduced Inequalities	Local research, intercultural exchange via Zoom/WhatsApp, digital poster co-creation	↑ Awareness of inequality (87%), ↑ digital ethics (91%), ↑ intercultural understanding	↑ Use of project-based learning, ↑ collaboration skills
Climate Action Awareness Campaigns	Argentina-Mexico	English	SDG 13: Climate Action	Environmental audits, intercultural dialogue (Padlet/Zoom), campaign co-creation	↑ Sustainability habits (73%), ↑ confidence in English, ↑ intercultural communication	↑ Digital pedagogy, ↑ integration of GCE in EFL

4. Discussion

The findings from the two case studies demonstrate the potential of transnational telecollaboration to advance Global Citizenship Education (GCE) in secondary schools across Latin America. By engaging students in structured cross-border inquiry, dialogue, and collaborative creation, the projects addressed cognitive, socio-emotional, and behavioral dimensions of GCE in ways consistent with established theoretical frameworks.

4.1. Advancing Cognitive Understanding of Global Issues

The projects fostered deeper awareness of how local realities connect to global challenges, particularly around inequality and sustainability. These results align with UN-ESCO's (2015)^[1] call for GCE to cultivate knowledge of global systems and universal values such as justice and equal-

ity. Students' ability to critically analyze issues such as linguistic discrimination in Peru or water use in Mexico illustrates the value of project-based, inquiry-driven approaches for advancing the cognitive domain of GCE.

4.2. Nurturing Socio-Emotional Competence through Intercultural Dialogue

Sustained intercultural exchanges between students from Argentina, Peru, and Mexico supported the development of empathy, curiosity, and respect for difference. These findings reflect Byram's (1997)^[9] framework of intercultural communicative competence, particularly the importance of openness, interpretation, and critical cultural awareness. Student reflections suggest that engaging with peers' experiences helped them question assumptions and broaden their perspectives, aligning with Mezirow's (2000)^[10] transformative learning theory, which highlights perspective transformation through critical reflection and dialogue.

4.3. Moving from Awareness to Action in the Behavioral Domain

A notable outcome across both projects was students' movement from awareness to concrete action, whether through adopting sustainability habits, committing to ethical digital behavior, or creating public-facing advocacy campaigns. This shift highlights the behavioral domain of GCE, in which learners are expected to take informed and responsible action to address global issues (UNESCO, 2015)^[1]. The fact that over 85% of participants reported feeling more responsible for contributing to social or environmental change underscores the transformative potential of telecollaborative models.

4.4. Teacher Training as a Catalyst for Sustainability

Another significant finding was the role of teacher training in enabling successful implementation. Teachers who participated in the STAR Argentina program gained new skills in digital pedagogy, intercultural facilitation, and project-based learning. This outcome resonates with De Luca's (2023)^[19] argument that sustained professional development is essential for teachers to integrate GCE into curricula and manage the complexities of digitally mediated intercultural exchanges. Without such preparation, the scalability and sustainability of telecollaborative initiatives would be severely limited.

4.5. Addressing Challenges and Inequities

Despite their successes, the projects faced challenges related to time zone coordination, unequal digital access, and misaligned academic calendars. These barriers echo Remesal and Villarroel's (2023)^[2] analysis of post-pandemic inequalities in Latin American education, highlighting the importance of designing flexible, hybrid models that combine synchronous and asynchronous interaction. The effective use of tools like Padlet and Google Classroom in this study suggests practical strategies for mitigating structural barriers, although systemic inequalities remain a pressing concern.

4.6. Contributions to Research and Practice

This study contributes to the growing literature on virtual exchange by providing empirical evidence from under-

represented contexts in Latin America, where opportunities for global learning are often scarce. Unlike traditional exchange programs, the telecollaborative model documented here demonstrates how low-cost, technology-enabled strategies can democratize access to GCE. The findings also illustrate how telecollaboration can be aligned with specific SDGs, creating purposeful, action-oriented learning experiences that extend beyond the classroom.

5. Conclusions

This study has shown that transnational telecollaborative projects can play a pivotal role in advancing Global Citizenship Education (GCE) in Latin American secondary schools. Through two case studies focusing on SDG 10 (Reduced Inequalities) and SDG 13 (Climate Action), students moved beyond awareness to intercultural dialogue and concrete civic action. Findings demonstrated growth across cognitive, socio-emotional, and behavioral domains, underscoring the value of digital collaboration for fostering empathy, critical reflection, and responsible engagement with global issues.

Equally important, the study highlighted the enabling role of teacher training in equipping educators to design and sustain telecollaborative experiences. By providing theoretical grounding, digital tools, and collaborative strategies, professional development created the conditions for meaningful student learning and long-term partnership building.

At the same time, challenges related to technological access, time zones, and institutional alignment reveal ongoing inequities that must be addressed to scale such initiatives. While the mixed-methods case study design provided valuable insights, the study was limited to two projects with a relatively small sample size. Future research should employ longitudinal and comparative approaches to explore the sustained impact of telecollaboration on student agency and civic participation, particularly across diverse regions of the Global South.

Ultimately, this research demonstrates that low-cost, technology-enabled models of exchange can democratize access to global learning and provide actionable pathways for integrating the Sustainable Development Goals into school curricula. In contexts where international mobility remains limited, transnational telecollaboration offers a powerful and

scalable approach to cultivating inclusive, transformative, and action-oriented global citizenship.

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Institutional Review Board Statement

Ethical review and approval were waived for this study due to the exclusive use of publicly available and fully anonymized data.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The datasets generated and/or analyzed during the current study are not publicly available due to privacy and ethical restrictions and cannot be shared.

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Conflicts of Interest

The author declares no conflict of interest.

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