

Global Citizenship Education: a strategic framework for G20 solutions to economic challenges and the 2030 Sustainable Development Goals

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Abstract

Purpose – This structured literature review examines the role of Global Citizenship Education (GCE) as a strategic framework for addressing economic inequality, sustainability challenges and global cooperation within G20 policy frameworks. This study aims to examine how GCE, when embedded in national education and economic strategies, may contribute to advancing the 2030 Sustainable Development Goals (SDGs), particularly SDGs 4.7, 8, 10, 13 and 17.

Design/methodology/approach – The review draws on over 80 scholarly and policy sources, analysed through the lenses of transformative learning theory (Mezirow, 1991) and critical pedagogy (Freire, 1970). It uses a comparative thematic synthesis of eight G20 case studies (Finland, South Korea, Germany, Brazil, South Africa, China, India and the USA) to identify patterns, gaps and contextual dynamics shaping GCE implementation. Criteria included policy integration, funding support, teacher training, pedagogical models and observed societal outcomes.

Findings – The review finds that GCE's transformative potential materialises when it is systemically embedded across national curricula, teacher education and intersectoral development agendas. Countries with robust and well-funded integration (e.g. Finland, South Korea) demonstrate stronger links between GCE and economic mobility, sustainability awareness and global cooperation. Conversely, technocratic (e.g. China) or fragmented approaches (e.g. Brazil, South Africa) often dilute GCE's emancipatory dimensions. The analysis also exposes gaps in monitoring, political resistance and under-researched long-term impacts – particularly in Global South contexts.

Research limitations/implications – While the G20 provides a strategic policy lens, the study's findings are not universally generalisable. Future research should prioritise longitudinal, multi-country studies and participatory approaches that centre marginalised voices, assess GCE's impacts on workforce and civic outcomes and develop culturally responsive implementation frameworks.

Practical implications – This study highlights the need for integrating GCE into national policies to bridge economic inequalities, promote sustainability and enhance global cooperation. By embedding GCE in curricula, governments can equip learners with skills essential for addressing financial instability, environmental challenges and ethical leadership. Policymakers should prioritise teacher training and allocate resources to ensure effective GCE implementation. Collaboration between governments, educational institutions and international organisations is essential for achieving SDGs. Structured assessment frameworks should be established to measure GCE's impact on economic resilience, sustainability and workforce readiness, ensuring long-term global economic stability.



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Social implications – GCE fosters social cohesion by promoting equity, ethical responsibility and cross-cultural understanding. The study underscores GCE's role in reducing social disparities, empowering marginalised communities and fostering inclusive economic growth. By integrating GCE into education systems, societies can cultivate active, responsible global citizens who engage in social justice and sustainability initiatives. However, resistance to GCE in nationalist contexts poses a challenge. Addressing this requires strategic advocacy and policy alignment. Strengthening global partnerships and community-based programmes can enhance GCE's social impact, fostering a more just, inclusive and environmentally conscious global society aligned with the 2030 SDGs.

Originality/value – To the best of the authors' knowledge, this review is the first that presents a policy-facing synthesis of GCE's role in G20 development strategies, bridging education theory and global policy. It moves beyond normative aspirations to provide a comparative, theory-grounded analysis of how GCE can function as a lever for economic equity, climate action and inclusive global governance.

Keywords Global Citizenship Education, G20, Sustainable Development Goals, Economic policy, Critical pedagogy, Transformative learning, Global competencies

Paper type Conceptual paper

1. Introduction

Persistent global economic challenges such as widening inequality, financial volatility and unsustainable development continue to disrupt the progress towards the 2030 Sustainable Development Goals (SDGs). These intersecting crises demand more than traditional economic interventions; they require transformative, education-led responses that can reorient societies towards inclusive, sustainable and equitable futures (United Nations (UN, 2015). Within this context, the Group of 20 (G20) emerges as a critical platform for policy innovation and multilateral cooperation. Representing approximately 85% of global GDP, over 75% of international trade and nearly two-thirds of the world's population, the G20 wields significant influence over global economic trajectories [World Economic Forum (WEF), 2024]. While the G20 originated as a response to financial instability, it has evolved into a forum that shapes broader development strategies, including those connected to social inclusion, climate action and education reform (WEF, 2024). In recent years, rotating G20 presidencies have demonstrated growing commitment to sustainability, equality and global solidarity notably through Brazil's 2024 focus on social inclusion and South Africa's 2025 theme centred on equity and sustainability (G20 South Africa, 2024; Roy, 2024). However, despite this progressive discourse, education policy remains underutilised within the G20's economic reform agenda. Specifically, global citizenship education (GCE) remains marginal in policy frameworks that drive economic and political decision-making.

GCE is a transformative paradigm that seeks to equip learners with the knowledge, values and competencies to engage ethically and critically in local and global contexts [United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2014]. As articulated in SDG Target 4.7, GCE fosters the development of sustainable lifestyles, respect for human rights, cultural diversity and global responsibility (Holland *et al.*, 2020). Scholars have shown that GCE can develop critical consciousness, ethical reasoning and the capacity to engage with structural inequality (Bosio and Schattle, 2021; Freire, 1970; Mezirow, 1991; Pacho, 2020). GCE's alignment with education for sustainable development (ESD) further amplifies its relevance, offering a holistic framework for preparing learners to address planetary challenges while fostering values such as justice, equity, solidarity and intercultural respect (Boehm *et al.*, 2016; Gough, 2018). Despite this promise, existing literature on GCE tends to concentrate on school-level pedagogical innovation, teacher training or national curriculum design, often disconnected from broader economic policy frameworks. There is a growing need to move beyond these isolated analyses and explore

how GCE may function as a strategic lever in the global political economy particularly within the G20, where education, sustainability and economic inclusion intersect. Recent critiques (Khoo and Jørgensen, 2021; Ruano, 2016) focus on the fragmented implementation of GCE and the urgent need for transdisciplinary, policy-integrated approaches. Scholars such as Ruano (2016) argue for a biomimetic and systems-based GCE approach that mirrors ecological relationships, potentially strengthening the bonds between sustainability and social learning.

As globalisation intensifies and reshapes societies, GCE presents a dynamic approach that merges local and global understandings, encourages learners to critically read the world (Khoo and Jørgensen, 2021) and supports the development of ethically grounded responses to complex problems. However, its integration into national and global economic strategies remains limited. The existing gap between GCE's transformative potential and its practical implementation in macro-policy contexts, especially within economic governance structures such as the G20 represents a missed opportunity to align education with the pursuit of social and economic justice. This study addresses that gap. It offers a structured literature review (SLR) that interrogates the alignment between GCE and G20 economic priorities, sustainability agendas and social cohesion goals. Drawing on transformative learning theory (TLT) and critical pedagogy, the review examines how different G20 member states integrate or sideline GCE in their national strategies. It evaluates these trends through a comparative, theory-driven lens, highlighting both enabling conditions and structural constraints. Furthermore, this study introduces a novel conceptual strategy, the GCE strategic integration framework for the G20, which presents pathways for embedding GCE into national and multilateral planning processes. In doing so, this study contributes to the global education discourse by shifting GCE analysis from classroom innovation to macro-level policy strategy. It argues that the G20, as a high-impact policy bloc, has both the capacity and the responsibility to lead on GCE implementation. Education, if framed and influenced strategically, can become not just a social good but a core mechanism for advancing inclusive growth, environmental justice and multilateral solidarity.

2. Theoretical framework and selection process

This study is underpinned by two interrelated frameworks TLT (Mezirow, 1991) and critical pedagogy (Freire, 1970), which collectively provide a robust analytical lens for interrogating the potential of GCE to respond to global economic, social and ecological challenges. These theoretical approaches have been increasingly applied to ESD and global citizenship, particularly in the context of neoliberal globalisation, socio-political polarisation and structural inequalities (Fleming, 2022; Lange, 2012; Fleming, 2018). Together, these frameworks provide critical insight into how learners can become active agents of change through education systems that prioritise justice, reflection, dialogue and participatory engagement. Their relevance is heightened within the G20 context, where education must not only serve national interests but also foster the ethical, ecological and economic competencies necessary for collaborative global action.

2.1 Transformative learning theory

TLT posits that individuals experience deep learning when they critically examine their assumptions, engage in reflective discourse and adopt more inclusive, informed perspectives (Coelho *et al.*, 2022; Mezirow, 1991). This aligns closely with the aims of GCE, which encourages learners to reflect on their positionality, examine global interdependencies and challenge inequitable power structures. In this review, TLT served as a guiding lens to evaluate literature that foregrounded critical reflection, experiential learning and learner

agency. It helped identify how GCE initiatives in countries such as Finland and South Korea have created learning environments that support perspective transformation, intercultural understanding and global solidarity. However, scholars caution that fostering transformative learning is complex and contingent on emotional engagement, social contexts and the quality of dialogue (Christie *et al.*, 2015; Taylor, 2000; Taylor and Cranton, 2013). TLT's applicability to macro-policy analysis lies in its insistence on moving beyond superficial curriculum changes towards deeper shifts in institutional culture and pedagogical orientation, a key concern when evaluating the integration of GCE within national education and development plans.

2.2 Critical pedagogy

Critical pedagogy, developed by Paulo Freire (1970), provides a political and ethical foundation for education as a practice of freedom. It views education not as a neutral enterprise, but as a site of ideological struggle where dominant paradigms can be contested and new futures imagined (Lodge, 2021). Core elements include dialogue, conscientisation (critical consciousness) and the rejection of banking models of education (Skelton, 2024). In this review, critical pedagogy helped illuminate how GCE is enacted in ways that challenge oppression, promote agency and affirm different worldviews. Case study examples from Brazil, South Africa, etc. and community-based learning initiatives highlighted how GCE can be mobilised to resist neoliberalism, re-centre marginalised knowledge systems and localise global learning. Critical pedagogy also framed our critique of state-led models of GCE implementation, as seen in China, where technocratic governance may embed global competencies while restricting civic participation or political critique. Freirean analysis thus enabled a significant reading of both the possibilities and limitations of GCE within varied ideological contexts.

2.3 Selection process

To ensure methodological rigour and transparency, this study adopted an SLR approach (Massaro *et al.*, 2016; Rocco *et al.*, 2023; Tingelhoff *et al.*, 2024). The SLR methodology allowed for the systematic selection, evaluation and synthesis of literature related to GCE integration in G20 contexts. Criteria were based on relevance to the research focus, theoretical richness and policy significance.

2.3.1 Identification and sources. Databases searched included Web of Science, Scopus, Google Scholar, EBSCOhost, SpringerLink and JSTOR. Key policy documents from UNESCO, OECD, the World Economic Forum (WEF) and G20 summits were also reviewed.

2.3.2 Search strategy. Keywords used: "Global Citizenship Education" AND "G20", "Sustainable Development Goals" AND "education policy", "economic challenges" AND "education reform", "GCE in policymaking", "Transformative learning" AND "critical pedagogy".

2.3.3 Inclusion/exclusion criteria:

- *Included:* peer-reviewed articles (2000–2024), empirical/theoretical studies on GCE and economic policy, G20 or transnational focus, major policy reports.
- *Excluded:* local-only studies, articles without economic relevance, non-English texts (unless translated).

2.3.4 Final corpus.

From over 300 sources initially identified:

- eighty studies were selected after abstract/full-text screening;

- fifty-five were peer-reviewed journal articles;
- fifteen were global policy reports; and
- ten were G20-focused case studies.

2.3.5 *Analytical framework.* The final data set was coded thematically under:

- theoretical foundations of GCE;
- GCE in policy frameworks (economic, sustainable);
- case-based comparisons across G20 nations;
- implementation barriers and opportunities; and
- strategic recommendations for G20 action.

This structured approach enabled a broad and theory-informed review, balancing conceptual depth with comparative policy understanding. The study has a potential to contribute meaningfully to debates on how education can serve as a policy lever for economic equity, environmental sustainability and multilateral governance in the G20 context.

3. Results: comparative analysis of global citizenship education integration in G20 countries

The literature review reveals that GCE plays a multifaceted role in advancing G20 priorities, notably promoting economic equity, fostering sustainability and strengthening global cooperation. Rather than uniformly adopting GCE, G20 countries exhibit different implementation patterns. Notable patterns emerge: nations with systematically integrated GCE tend to report higher social mobility, greater climate awareness and workforce readiness, whereas those with fragmented or superficial GCE efforts often show persistent inequalities and weaker sustainability outcomes. These differences suggest a correlation between GCE integration and positive socio-economic outcomes, although causality is complex. The following comparative analysis, organised by the three thematic pillars, examines how each country's approach to GCE correlates with outcomes such as social mobility, environmental consciousness and global engagement. Key examples (Finland, South Korea, Brazil, China, South Africa, the USA, Germany, India) are contrasted to identify common drivers (e.g. policy commitment, teacher capacity) and barriers (e.g. resource gaps, ideological resistance) to effective GCE. This analysis also interprets the findings through the lens of TLT and critical pedagogy, highlighting how GCE may potentially transform learners' worldviews and empower marginalised groups or, conversely, how lacklustre implementation may reinforce the status quo. The comparative results underscore both the transformative potential of GCE and the contextual limitations that influence its influence across the G20.

3.1 *Promoting economic equity through global citizenship education*

Economic inequality remains a defining challenge across G20 nations, intensified by globalisation and unequal access to quality education. GCE is posited as a transformative tool to bridge socio-economic divides by equipping learners with critical thinking and global awareness that enhance their economic opportunities (Auh, and Kim, 2024; Zahabioun *et al.*, 2012). A clear pattern in the literature is that countries with robust, equity-focused GCE integration exhibit stronger social mobility and narrower wealth gaps. For example, Finland's education system often hailed as an international benchmark for equity, has deliberately embedded GCE principles into its national curriculum (Sahlberg, 2016). All

learners, regardless of socio-economic background, receive high-quality, free education that emphasises critical thinking, problem-solving and ethical global awareness. Programmes such as *Yrityskylä* integrate business literacy with global citizenship competencies, preparing youth for equitable participation in the economy. Empirical evidence links Finland's GCE-infused model to lower-income disparities and higher social mobility (OECD, 2018; Kasa *et al.*, 2023). This success aligns with TLT, as Finland's approach encourages learners to critically examine social inequalities and develop new, inclusive perspectives, a process Mezirow (1991) identifies as key to transforming one's worldview. It also reflects Freire's critical pedagogy, empowering learners to recognise and challenge unjust structures (Freire, 1970). By contrast, Germany, another high-income democracy, also shows strong policy integration of GCE, particularly through federal programmes that link education with social inclusion. Germany's structured GCE efforts similarly correlate with relatively high youth skills and moderate inequality, reinforcing the pattern that systematic GCE adoption accompanies greater economic equity.

In emerging economies such as South Africa and Brazil, the review finds a more fragmented implementation of GCE, which corresponds with ongoing socio-economic disparities. South Africa has, on paper, integrated GCE themes into its National Development Plan to redress apartheid-era inequities (Spaull and Jansen, 2019). However, policy commitments have outpaced on-the-ground implementation. Schools in under-resourced townships and rural areas often lack trained teachers and materials to deliver GCE content, undermining its impact (Waghid, 2021; Waghid, 2023). Decentralised education reforms intended to broaden inclusion have paradoxically led to uneven quality, as some provinces or schools fail to prioritise global citizenship amid basic capacity shortfalls. The result is that GCE's potential to empower marginalised South African youth remains unrealised and the country continues to face very high youth unemployment and inequality. Brazil faces similar issues: despite progressive rhetoric on inclusive education, uneven funding and regional disparities mean that GCE-related programmes (especially those outside core subjects) are inconsistently implemented. This fragmentation is reflected in persistent gaps in education and income in both countries. From a critical pedagogy perspective, the experiences of South Africa and Brazil confirm that without structural support (training, resources, political will), education fails to fully empower the oppressed (Freire, 1970). Both cases illustrate that GCE must go beyond curriculum policy, it requires equitable investment and teacher capacity-building to truly combat entrenched inequalities (UNESCO, 2014). Indeed, literature highlights that nations with fragmented GCE delivery (South Africa, Brazil) continue to struggle with unequal access to quality education and limited social mobility.

Meanwhile, ideological and systemic differences shape GCE's role in economic equity in countries such as the USA and China, offering a more nuanced view of cause and effect. In the USA, economic inequality in education is tied to a market-driven system where school quality varies with local wealth (Zahabioun *et al.*, 2012). GCE adoption is uneven across states: some state curricula (and certain districts or schools) incorporate global citizenship and social justice themes, while others resist such frameworks due to political and cultural pushback (Qin, 2023). This patchwork approach means GCE's influence on equity is localised, for instance, schools participating in UNESCO's Global Schools or International Baccalaureate programmes may show heightened student civic engagement and awareness of economic justice, but these benefits are not nationally pervasive (SOLIDAR Foundation, 2023; Stein, 2021). In essence, the USA exemplifies how political ideology and decentralisation limit GCE's general impact: without a national mandate, global equity themes cannot uniformly counteract the deep inequities of the system. In China, GCE is

pursued through a highly centralised, state-guided model. The government integrates select global competencies into education, mainly through programmes linked to poverty alleviation and STEM vocational training (Guo *et al.*, 2018; Ministry of Education of the People's Republic of China, 2020). This has yielded a workforce skilled for global economic competition and contributed to poverty reduction in line with national goals. However, China's GCE approach is predominantly utilitarian, emphasising economic skills over critical civic consciousness. Studies note that Chinese curricula prioritise national development and economic competitiveness over fostering a critical understanding of global inequalities (Xiao *et al.*, 2024; Qin, 2023). Thus, while Chinese learners gain job skills, the absence of a critical, empowerment-oriented dimension means GCE in China has limited effect on challenging domestic inequity or developing global ethical responsibility. This contrast, US plurality vs Chinese state control, underscores that contextual ideologies mediate GCE's link to equity. Where open, critical dialogue is curtailed (as in authoritarian settings or politicised curricula), GCE may reinforce existing hierarchies rather than transform them. In sum, across the G20, comprehensive GCE integration tends to correlate with more inclusive economic outcomes, supporting the idea that education can mitigate inequality; however, incomplete or ideologically constrained GCE has a markedly weaker influence. These findings resonate with Freire's vision of education for liberation and Mezirow's idea of perspective transformation: countries that allow GCE to question social and economic assumptions see more transformative outcomes, whereas those that treat GCE as a token add-on do not fully realise its equity-promoting potential.

3.2 *Fostering sustainability through global citizenship education*

ESD is widely recognised as a core component of GCE, aimed at cultivating environmental literacy, climate awareness and ecological responsibility (Bourn *et al.*, 2017). The G20 countries demonstrate divergent models of infusing sustainability into education, with varying degrees of success. A comparative pattern emerges wherein strong, centralised integration of sustainability education corresponds with high public climate awareness and action, whereas decentralised or community-led approaches, often born of necessity, yield uneven outcomes. South Korea exemplifies a state-driven, comprehensive strategy for sustainability education. Beginning with its Green Growth Strategy in 2009, South Korea embedded environmental and global citizenship themes throughout primary, secondary and higher education curricula (Kim, 2019; Sung, 2015). This top-down commitment included curriculum mandates, specialised institutes (e.g. Yonsei University's Institute for Global Engagement) and local centres of expertise to translate policy into practice. The result has been a generation of learners highly aware of climate issues and equipped to engage in sustainable practices, as evidenced by Taguma *et al.* (2024) reports of South Korea's rising environmental literacy. The South Korean case illustrates how transformative learning can occur at scale: by actively engaging learners in real-world sustainability challenges (through school projects, university programmes and community partnerships), the education system encourages critical reflection on lifestyles and development, leading to shifts in attitudes and behaviour. In essence, South Korea's GCE-oriented approach to sustainability has operationalised Mezirow's theory, learners undergo perspective transformation regarding the human–environment relationship, becoming proactive global citizens in climate action (SDG 13). Similarly, Germany has pursued a proactive integration of sustainable development into education. Backed by federal policies and funding, German schools and universities widely implement climate literacy programmes and sustainability research initiatives (OECD, 2014). This has mainstreamed environmental responsibility in formal education, contributing to high public awareness of climate change and support for green

policies. However, researchers note that even Germany faces challenges reaching marginalised groups not well-served by formal education channels, such as some immigrant communities or low-income regions that may have less access to enriched curricula (OECD, 2025). This caveat highlights that even in successful models, inclusivity is an ongoing concern, an area where critical pedagogy would call for more culturally relevant, community-based outreach to ensure no group is left behind in the sustainability movement.

By contrast, Brazil represents a context where sustainability education is advanced through bottom-up, community-centric initiatives against a backdrop of uneven government implementation. Brazil's policy framework does acknowledge environmental education (e.g. national laws mandate environmental topics in curricula and ministries of environment and education collaborate on programmes; Trajber and Mochizuki, 2015). Yet, in practice, integration of climate and sustainability topics into mainstream schooling is inconsistent. Especially in rural and indigenous communities, local NGOs, educators and even religious organisations often take the lead in bringing sustainability issues into the classroom and community meetings. Such grassroots projects combining scientific, artistic and indigenous knowledge have shown innovative, context-specific pedagogy that can inspire learners (Scarano *et al.*, 2024). These efforts echo Freirean critical pedagogy by rooting learning in local realities and empowering learners to take action for their communities' environmental well-being. A case study from Ceará, for instance, found that earlier community-school collaborations yielded environmental improvements and learner engagement, but recent shifts in policy support left schools without sustained projects, causing momentum to lapse (Oliveira *et al.*, 2024). Ultimately, Brazilian schools are mandated to teach about the environment, but lack of funding and patchy enforcement mean that sustainability content often depends on enthusiastic individuals or external partners. The literature warns that without more consistent support from government and the private sector, these piecemeal efforts cannot fully address looming issues such as resource scarcity (Santos *et al.*, 2020). India faces similar dynamics: as a large democracy, it has articulated goals for environmental and GCE (e.g. through its National Curriculum Framework and various eco-club programmes), yet implementation on the ground ranges from exemplary in some urban elite schools to minimal in under-resourced rural schools (Diaz, 2024; Roberts, 2009). Local initiatives and NGOs play a key role in supplementing formal curricula in India, much such as in Brazil. The common thread in Brazil, India and other middle-income G20 states is that resource constraints and regional inequalities lead to uneven GCE delivery on sustainability, limiting the overall impact on young citizens' climate consciousness.

Comparatively, the degree of institutional support is a determining factor in sustainability education outcomes. State-led models (South Korea, Germany) not only integrate sustainability in curricula but also provide teacher training, materials and national campaigns, resulting in broad-based environmental awareness. Community-led models (Brazil, India) can produce pockets of innovation and critically engaged youth (often aligning with local needs and indigenous knowledge), but without nationwide support, their reach and continuity are limited. This suggests a potential synergy: combining strong policy frameworks with grassroots participation. GCE literature implies that transformative environmental learning thrives when top-down commitment meets bottom-up empowerment, i.e. when governments endorse sustainability as core learning (legitimising it in national exams and school priorities) and communities adapt those principles in locally relevant ways. In all cases, teacher capacity is crucial. South Korea's and Germany's success correspond with substantial teacher training in ESD, whereas Brazil's and India's challenges are exacerbated by a lack of teacher preparation to handle interdisciplinary sustainability topics. Thus, fostering sustainability through GCE requires both structural integration

(policy, curriculum, teacher support) and critical pedagogy in practice (engaging learners as change agents in their own communities). Countries that balance these tend to observe higher climate awareness and youth involvement in sustainability initiatives, contributing to progress on SDGs such as SDG 13 (Climate Action) and SDG 12 (Responsible Consumption and Production).

3.3 *Strengthening global cooperation through global citizenship education*

A central promise of GCE is its potential to cultivate the skills and values necessary for global cooperation, including intercultural understanding, respect for diversity and commitment to peace and human rights (Akkari and Maleq, 2020). The review finds that G20 countries differ markedly in how (and how effectively) they prepare learners to engage in an increasingly multilateral world. Patterns indicate that smaller or more globally oriented states tend to leverage GCE to enhance diplomatic and cultural competencies, whereas larger powers with strong nationalist currents experience greater resistance to GCE's cosmopolitan ethos. Furthermore, scholars caution that GCE's implementation often carries a western-centric bias that may not translate seamlessly across local contexts (Freire Oliveira Piccin and Finardi, 2019). These factors lead to diverging outcomes in learner readiness to participate in global cooperation.

Finland stands out as a country deliberately using education to bolster international cooperation skills. Through a multilingual education system and curricula aligned with European and global citizenship frameworks, Finnish schools encourage learners to engage with international issues and multicultural perspectives [UNESCO Institute for Lifelong Learning (UIL), and Asia-Pacific Centre of Education for International Understanding (APCEIU), 2019]. This alignment with European Union cooperation initiatives effectively turns classrooms into incubators for "education diplomacy", wherein learners gain experience with dialogue and negotiation across cultures. By empowering youth to discuss and tackle global challenges, Finland's approach exemplifies how GCE may produce globally fluent citizens ready to contribute to multilateral forums. This success is underpinned by an educational philosophy consistent with TLT: Finnish learners often participate in exchanges or collaborative projects that challenge them to reconsider ethnocentric viewpoints, thus internalising a more cosmopolitan identity (Lehtonen, 2023). Such experiences represent the kind of perspective transformation Mezirow (1991) describes, triggered by critical engagement with different cultures and viewpoints. South Korea similarly incorporates global cooperation themes, for example, through UNESCO-associated schools and a focus on global competencies in its talent development programmes, though its strongest emphasis has been sustainability as discussed (UNESCO, 2024). South Africa, as another example, has sought to use GCE to strengthen regional ties. Capitalising on its role in the BRICS alliance, South Africa has promoted learner exchange programmes and regional curriculum development with partners such as Brazil, India and China (Tabassum, 2025). These efforts have led to pockets of increased intercultural exchange and understanding, illustrating GCE's role in South-South cooperation (Metternicht *et al.*, 2022). However, disparities in educational quality and access within South Africa mean not all learners are equally prepared to partake in or benefit from these international opportunities. Thus, while some South African youths emerge as globally engaged (often those in well-resourced schools), many others, lacking strong foundational education, struggle to participate, a reminder that global citizenship skills build on local education capacity.

In countries where nationalist or protectionist ideologies are strong, GCE's cooperation-related content often faces pushback. The USA exemplifies this tension: although the USA

has a rich tradition of civic education, attempts to infuse curricula with global perspectives (e.g. teaching about the UN, global interdependence or cross-cultural competencies) have met resistance from groups that perceive GCE as undermining national identity or sovereignty (Akkari and Maleq, 2020; Santamaría-Cárdaba *et al.*, 2024). Education in the USA is highly decentralised, so the incorporation of global cooperation themes varies widely. Some states and districts encourage Model UN clubs, foreign-language learning and world history courses that highlight interconnectedness, all fostering skills for diplomacy and cross-cultural communication (Engel, 2019; Mariyono *et al.*, 2025). Other areas, influenced by political rhetoric against globalism, limit such content. The net effect is that American learners' exposure to GCE's global cooperation dimension is hit-or-miss, potentially affecting the country's long-term public support for multilateral engagement. A similar trend is noted in India, where a rising nationalist discourse coexists with the country's legacy of non-alignment and global south solidarity. Indian national education policies endorse global citizenship values in principle; yet, in practice, schools often emphasise national history and identity over global themes, except in elite institutions (Kadiwal and Jain, 2020). These examples reinforce a key finding: ideological alignment with GCE's values is crucial for its adoption. Where governments or influential groups see global education as a threat to national sovereignty or cultural norms, GCE initiatives in global cooperation are curtailed or reshaped to fit domestic narratives. This ideological filter means learners in those contexts may learn about international issues, but through a narrow lens that limits the transformative impact of encountering diverse perspectives.

Notably, the literature also critiques GCE's prevailing models for having a cosmopolitan bias, assuming a universal set of values and dispositions for global citizens that might overlook local identities and justice issues (Stein, 2021; Freire Oliveira Piccin and Finardi, 2019). Learners in different countries report difficulty seeing how abstract ideals of human rights or sustainability apply in concrete action. For instance, a comparative study found that youth across various G20 contexts struggled to identify "what can *I* do" to promote peace or human rights, pointing to a gap between curriculum rhetoric and actionable knowledge (Nygren *et al.*, 2020). To address this, educators have experimented with collaborative online international learning (COIL) and other exchange programmes to give learners direct collaborative experiences with peers in other countries. Early evidence suggests such approaches can create a third space (neither purely local nor global) where learners jointly solve problems, arguably a critical pedagogy approach on an international scale (Guimarães and Finardi, 2021). By engaging in dialogue and project-based collaboration, learners begin to practice global cooperation firsthand, which can make the ideals of GCE more tangible and meaningful. These innovative methods are attempts to overcome both the structural barriers (e.g. lack of travel or exchange opportunities for less privileged learners) and the conceptual criticisms of GCE. In theoretical terms, they seek to make global learning transformative rather than just additive: learners not only learn about global cooperation but experience it, prompting reflection akin to Mezirow's transformative learning process. The overall comparative finding is that GCE's impact on global cooperation is highest when education systems balance global content with local relevance. Countries such as Finland (and to some extent South Korea) achieve this balance by integrating global themes in everyday learning while still valuing local culture, producing graduates who are global, locally grounded yet globally competent. By contrast, countries that either ignore global education or uncritically impose a one-size-fits-all global curriculum see more limited outcomes, as learners may either remain parochial or become disenchanted with what they perceive as distant ideals.

Comparative [Table 1](#) – GCE implementation across selected G20 countries: [Table 1](#) provides a comparative overview of how each of the eight highlighted countries is implementing GCE, evaluated across five key criteria derived from the literature. This summary highlights the variations in policy commitment and practice that explain the patterns discussed above.

3.4 Limitations of generalisability across the G20

While the above analysis identifies clear patterns, there are important limitations to generalising these findings uniformly across all G20 nations. The G20 countries are highly diverse in their political systems, economic capacities and cultural-ideological contexts, factors that significantly mediate the implementation and impact of GCE.

3.4.1 Political and ideological diversity. G20 members range from liberal democracies (e.g. Canada, Germany) to authoritarian states (e.g. China, Saudi Arabia) and everything in between. This diversity means that the political will to embrace GCE varies greatly. For instance, education systems in nationalist or authoritarian regimes may deliberately reshape or restrict GCE to avoid empowering critical thinking that challenges the status quo. The content and spirit of GCE can thus differ: what is called GCE in one country might focus on international economics and patriotic national achievement, whereas in another, it emphasises human rights and social justice. Such ideological differences limit the generalisability of any single model of GCE success. A strategy effective in Finland with its open society and egalitarian values might not be transplantable to a more conservative or controlled context without significant adaptation. Moreover, within countries, political shifts can rapidly alter GCE's trajectory (e.g. a change in government in the USA or Brazil can lead to curriculum reforms that either advance or roll back global citizenship topics). This politicisation means that broad comparisons must be made cautiously, acknowledging that GCE is not implemented in a political vacuum.

3.4.2 Economic and resource disparities. There is also wide variation in economic resources and educational infrastructure across the G20, affecting GCE outcomes. High-income countries generally can invest in teacher training, curriculum development and programme evaluation for GCE supports that have proven importance in the cases of Finland, South Korea and Germany. Middle- and low-income G20 members (such as India, Indonesia, South Africa) face pressing basic educational challenges (e.g. teacher shortages, large class sizes, limited access to technology) that can overshadow GCE initiatives. Even if policies nominally endorse GCE, funding constraints may result in these topics being treated as low priority or extracurricular. Consequently, the positive correlations observed between GCE integration and outcomes such as social mobility or climate action in well-resourced settings may not (at least not yet) appear in lower-resourced settings, simply because GCE is not implemented at comparable scale or depth. Additionally, reliance on international aid or NGOs for GCE (not uncommon in some G20 countries) can lead to fragmented, short-term programmes that are hard to scale up nationally. These economic and capacity disparities highlight that any general claim such as GCE improves equity must be qualified by asking: under what conditions? The impact of GCE is mediated by the strength of the broader education system and the availability of resources to sustain innovative teaching practices.

3.4.3 Cultural context and local adaptation. The notion of global citizenship may carry different connotations across cultures. In some societies, collective values and global solidarity resonate well; in others, the term may be viewed with suspicion as a western or secular agenda (especially if it is seen as downplaying local religious or cultural identities). This cultural dimension means that GCE curricula and materials effective in one context might not engage learners in another. For example, a case study approach about social justice

Table 1. Comparative evaluation of GCE implementation in eight G20 countries (across five key criteria)

Country	Policy integration	Funding support	Teacher training	Implementation model	Observed social outcomes
Finland	GCE embedded in national curriculum (universal equity focus)	High public funding for education (equal access for all)	Comprehensive teacher education includes GCE and critical pedagogy	Centralised, egalitarian model (strong state oversight)	High social mobility; low-income inequality; globally aware youth
South Korea	GCE/ESD integrated via national Green Growth strategy	Significant government investment in sustainability education	Extensive teacher training in ESD and global competencies	Centralised model with regional centres (state-led plus local init)	High environmental literacy; skilled workforce for green economy
Germany	GCE principles in federal education policies (SDGs emphasis)	Robust funding for climate literacy and global programmes	Formal teacher training on ESD; ongoing professional development	Cooperative federal model (national frameworks, state implementation)	Broad public awareness of sustainability; moderate inequality; strong civic engagement
Brazil	GCE elements in law (e.g. mandatory environmental education)	Moderate funding; reliant on international and NGO support	Limited formal training; some NGO-led teacher workshops	Decentralised/community model (grassroots initiatives fill gaps)	Pockets of high engagement (in communities); overall persistent inequities and environmental challenges
China	GCE tied to national agendas (poverty alleviation, STEM)	High state funding but targeted to economic objectives	Strictly guided teacher training (aligned with state ideology)	Centralised, utilitarian model (state-directed curriculum)	Improved workforce readiness; reduced poverty in target areas; lower critical civic participation
South Africa	GCE noted in policies (constitution, NDP) but uneven in practice	Insufficient domestic funding; heavy disparities by region	Patchy training – some urban programmes, rural teachers unsupported	Decentralised and unequal (progressive policy, weak local capacity)	Improved awareness in well-resourced schools; overall persistent inequality and youth unemployment
USA	No national GCE policy; voluntary state/district adoption	Varies by locality (wealthy districts fund global programmes)	No systemic approach; teacher PD via NGOs or specific programmes	Highly decentralised (some schools adopt global curricula, others do not)	High variance: globally competent graduates from IB/elite schools; many students with minimal global exposure
India	GCE/SDG themes in national curricula (NEP 2020) in principle	Growing but limited funding; priority on universal schooling	Emerging efforts in teacher training (sporadic workshops, MGIEP)	Mixed model: central guidelines with NGO partnerships at local level	Increasing climate and global awareness among urban youth; rural and marginalised communities less reached
Source(s): Authors' own work					

used in an American classroom might not connect with learners in rural India unless it is reframed with locally relevant examples. The review's focus on eight countries inherently cannot capture the full cultural variation among all G20 members (which include, e.g. majority-Muslim nations, highly collectivist Asian cultures, etc. not all represented in this study's case selection). This limits the ability to generalise findings such as critical pedagogy methods enhance GCE without considering local pedagogical traditions and values. In essence, context matters: GCE's principles may be universal, but their expression must be localised. The diversity of ideologies and social values across G20 countries means that the balance between fostering a global identity and respecting national/local identity is delicate and resolved differently in each country.

Ultimately, it should be noted that the evidence base itself has limitations that affect generalisability. Much of the comparative research on GCE focuses on policy analysis and curricular content, often in western or high-income contexts (Hou, 2020). There is a lack of longitudinal empirical studies tracking how GCE exposure translates into socio-economic outcomes in adulthood across different countries. As a result, some links drawn in this review, for example, between GCE and social mobility or workforce readiness are correlational and rely on education outcome indicators or case study observations, rather than direct causal proof. Caution is needed not to over-extend these correlations. The general trend suggests positive impacts from well-implemented GCE, but future research would need to control for confounding factors (such as overall education quality or economic policies) to generalise confidently that GCE causes X outcome across the board. Additionally, the generalisability of what works in GCE is limited by the fact that programme effectiveness can hinge on specific program design, educator skill and community buy-in, which vary widely.

While GCE shows promise as a lever for economic equity, sustainability and global cooperation within the G20, one must be cautious in generalising successes from one context to all. Political ideologies, resource levels and cultural norms decisively shape how GCE is implemented and what outcomes it can achieve. Recognising these limitations is important for policymakers and educators: it underscores the need for context-sensitive strategies when applying lessons from one country to another. The diversity of the G20 is both a challenge and an opportunity – it means there is no single blueprint for GCE, but it also provides a rich laboratory of ideas. Learning from each other will require careful adaptation, respect for local conditions and sustained commitment to the underlying values of GCE.

4. Implications of findings

This section critically interprets the findings of the structured review, focusing on the broader theoretical, practical and policy implications for GCE implementation across G20 contexts. By linking results to TLT (Mezirow, 1991) and critical pedagogy (Freire, 1970), this discussion emphasises the strategic significance of GCE in supporting SDGs, particularly those related to education, equity, climate and cooperation. The analysis also responds to persistent empirical gaps and provides comparative insight across different policy landscapes.

4.1 Theoretical implications: beyond idealism towards critical praxis

The findings reinforce the relevance of TLT, which posits that education can foster deep shifts in learner worldviews through critical reflection and discourse (Mezirow, 1991). In G20 countries such as Finland and South Korea, where curricula promote ethical reasoning and socio-environmental analysis, learners are exposed to these transformative dynamics. These systems reflect Mezirow's call for pedagogical conditions that enable learners to

challenge hegemonic assumptions and develop critical self-awareness. Similarly, Freire's critical pedagogy is evident in bottom-up GCE practices in Brazil and South Africa, which prioritise dialogical engagement, conscientisation and participatory knowledge production (Freire, 1970; Santamaría-Cárdaba *et al.*, 2024). However, in more centralised systems such as China and Russia, GCE has been co-opted for nation-building and economic competitiveness, raising concerns about the dilution of its emancipatory potential (Stein, 2021; Xiao *et al.*, 2024). These cases reveal the tension between GCE's transformative ambitions and the instrumental use of education under authoritarian or neoliberal frameworks (Tikly, 2019). Critically, the review suggests that these theoretical models require contextual extension, especially in systems shaped by technocratic governance or ideological control. A future-oriented framework should explore how Freirean or Mezirowian principles can be adapted to policy cultures that privilege performance metrics or state sovereignty.

4.2 Policy and practice: lessons from comparative models

The study indicates that GCE's transformative promise materialises when it is structurally embedded into national education strategies and economic reform agendas. For example, Finland's national curriculum connects GCE to lifelong learning, equity and sustainability, supported by inclusive teacher training and a coherent policy environment (Kasa *et al.*, 2023; Sahlberg, 2016). South Korea aligns GCE with national green economy strategies and digital skills agendas, illustrating effective policy integration through cross-ministerial coordination (Sung and Choi, 2022; OECD, 2025). Conversely, countries such as Brazil and South Africa demonstrate that progressive intentions can be undermined by fragmented policy ecosystems, underinvestment in teacher training and regional inequalities (UNESCO, 2014; Trajber and Mochizuki, 2015; Waghid, 2023). These differences underline the need for:

- inter-sectoral policy integration, where education, labour and environmental agencies collaboratively support GCE objectives (UNESCO, 2014; Holland *et al.*, 2020);
- sustained investment in professional development, ensuring that teachers are equipped to deliver GCE through participatory and reflexive pedagogies (Bourn and Tarozzi, 2024); and
- robust monitoring systems aligned to SDG Target 4.7, tracking not just curriculum presence but outcomes like global competencies, critical literacy and civic engagement (OECD, 2014).

Thus, the key practical insight is that GCE should not be positioned as an add-on but rather as a core infrastructure for sustainable and inclusive development, requiring systemic commitment from national and subnational institutions.

4.3 Comparative patterns and strategic differentiation

The review's comparative lens reveals that policy coherence, funding distribution and pedagogical freedom are central to GCE's efficacy. Countries with top-down integration and resourced teacher development (e.g. Germany, South Korea) show stronger links between GCE and employability, climate literacy and cross-cultural competencies. These systems exhibit alignment between transformative theory and practice, albeit with limitations in reaching marginalised populations (Gough, 2018; OECD, 2018). By contrast, community-led or grassroots models, such as those in Brazil's indigenous and rural schools, offer culturally grounded practices that foreground decolonial and local knowledge systems

(Scarano *et al.*, 2024). However, their scale and sustainability are hampered by limited institutional backing and political instability (Santos *et al.*, 2020; Oliveira *et al.*, 2024). Technocratic models, notably in China, prioritise workforce readiness over civic engagement, illustrating how state ideologies can instrumentalise GCE for strategic interests (Qin, 2023; Xiao *et al.*, 2024). These systems often suppress dialogical education and limit opportunities for transformative learning.

This variation highlights the need for strategic differentiation:

- In politically resistant contexts, reframing GCE as aligned with national goals (e.g. digital skills, innovation, employability) may facilitate uptake.
- In resource-constrained settings, local-global hybrid models combining community pedagogy with state policy support may ensure relevance and scalability.

4.4 Research gaps and future directions

The review highlights several critical knowledge gaps:

- Lack of longitudinal studies: There is minimal evidence on the long-term impact of GCE on workforce integration, environmental behaviour or civic activism (Bourn and Tarozzi, 2024).
- Weak assessment frameworks: Despite growing rhetoric around SDG 4.7, tools to measure global competencies and critical engagement across diverse systems remain underdeveloped (UNESCO, 2024).
- Ideological contestation: GCE is vulnerable to political pushback, particularly in systems characterised by nationalist agendas or declining multilateralism (Stein and Andreotti, 2021; Dash, 2024).

Addressing these gaps requires empirical innovation, including:

- mixed-methods impact studies comparing GCE learners and non-GCE cohorts across economic and civic domains;
- participatory action research to co-design culturally adaptive GCE strategies in underrepresented contexts; and
- regional case studies exploring how transnational cooperation (e.g. BRICS, EU, AU) may mediate GCE implementation under diverse governance regimes.

In essence, the implications of this review suggest that GCE needs to be treated as a strategic lever, not merely for pedagogical reform, but for system-wide transformation aligned with global sustainability and justice. The integration of theoretical insights, comparative evidence and contextual constraints provides a roadmap for deepening the policy–practice nexus and strengthening GCE’s role in building inclusive, ethical and globally competent societies.

5. Suggested global citizenship education strategic integration framework for the G20

The below framework may provide a practical, policy-relevant model that demonstrates how GCE may be strategically aligned with national economic policies, sustainable development plans and educational systems within G20 nations. This strategic integration framework offers G20 policymakers, educators and civil society actors a practical roadmap to bridge policy, pedagogy and global impact through GCE.

Figure 1 illustrates the proposed GCE strategic integration framework, which aligns policy, pedagogy and societal outcomes across G20 contexts. It visually demonstrates how GCE may be embedded into national education and economic strategies to advance inclusive growth, sustainability and global cooperation.

5.1 Framework overview

The framework conceptualises GCE integration across three interconnected domains:

- (1) policy and governance alignment:
 - embed GCE principles in national education and economic policy instruments;
 - integrate GCE in SDG-aligned national development strategies; and
 - ensure cross-ministerial coordination between education, finance, environment and foreign affairs departments.
- (2) institutional and pedagogical infrastructure:
 - reform teacher education to include GCE competencies;
 - embed GCE across curricula using interdisciplinary and participatory pedagogies; and
 - incentivise schools and universities to lead GCE innovation through funding, accreditation and research support.
- (3) social and global outcomes:
 - enhance learners’ readiness for inclusive economies (SDG 8), ethical leadership and intercultural collaboration;
 - promote environmental responsibility (SDG 13) and global cooperation (SDG 17); and

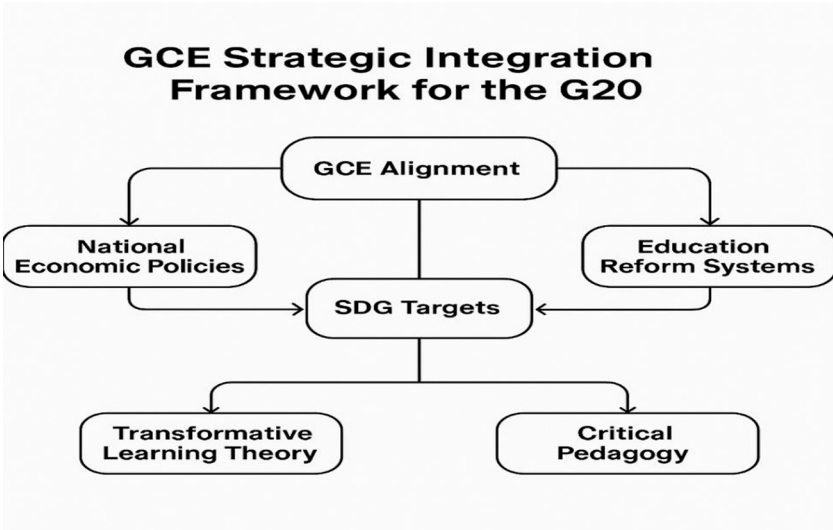


Figure 1. GCE strategic integration framework
Source: Authors' own work

- build citizen agency and critical consciousness aligned with Freirean pedagogy and Mezirow's TLT.
- Journal of Global Responsibility

Table 2 presents the central pillars of the proposed framework, detailing policy integration, teacher development, curriculum transformation, funding mechanisms and monitoring systems. These pillars operationalise how GCE can be systematically embedded into G20 national and multilateral planning.

5.2 Theory–practice nexus

This framework is grounded in:

- TLT (Mezirow, 1991): Promotes critical reflection, self-awareness and worldview transformation.
- Critical pedagogy (Freire, 1970): Advocates for dialogical, participatory and justice-oriented education that addresses systemic inequalities.

Together, these theories underpin the design and implementation logic of the framework, ensuring GCE is not only taught, but lived, experienced and actioned.

5.3 Implementation pathways

The framework encourages nations to:

- pilot regional initiatives that align education with labour market and sustainability needs;
- scale through cross-sector policy instruments and integrated teacher training; and
- sustain through institutional buy-in, international cooperation and embedded monitoring systems.

6. Recommendations

The findings of this structured review reveal that GCE holds significant promise for advancing the SDGs by fostering economic equity, sustainable development and multilateral

Table 2. Core pillars of the framework

Pillar	Description	Example initiatives
Policy integration	Alignment of GCE with national economic and sustainability plans	India's NEP 2020; Finland's National Curriculum
Teacher development	GCE embedded in pre-service and in-service teacher education	South Korea's KEDI framework
Curriculum transformation	Interdisciplinary integration of global issues, ethics and systems thinking	Yrityskylä (Finland); SDG Labs (Germany)
Funding and incentives	Dedicated national budget lines, performance-based incentives and partnerships for GCE	EU Erasmus+; UNESCO SDG 4.7 fund
Monitoring and accountability	Indicators for SDG 4.7 implementation, aligned to national targets and international benchmarks	OECD Education 2030 indicators

Source(s): Authors' own work

cooperation. However, fragmented policy integration, underinvestment in teacher training and socio-political resistance hinder its transformative potential. To realise the full benefits of GCE within the G20 and beyond, targeted action is required across multiple stakeholder levels. The following implications are categorised to provide actionable guidance for key actors in education policy and practice:

- (1) For policymakers and government ministries:
 - Integrate GCE into national education and economic development frameworks. Ministries of education and finance should collaborate to embed GCE competencies such as ethical leadership, sustainability literacy and intercultural fluency into national curricula and policy documents.
 - Develop cross-sector policy alignment mechanisms. Establish inter-ministerial working groups to ensure that GCE objectives are integrated into national climate action plans, digital economy strategies and youth employment programmes.
 - Establish dedicated funding streams. Introduce budget lines for GCE implementation and monitoring within national education expenditure frameworks, possibly co-funded through public-private partnerships or green finance instruments.
- (2) For teacher education institutions and practitioners:
 - Strengthen GCE-focused teacher training. Teacher education programmes must embed GCE principles through participatory pedagogies, critical thinking and contextualised curriculum design. Training should include modules on systems thinking, economic justice, climate literacy and global interdependence.
 - Use contextually adaptive approaches. In resource-constrained settings, low-cost strategies such as community-based learning, storytelling, local case studies and inter-school collaborations can enhance learner engagement and ownership.
 - Support reflective and dialogical pedagogies. Drawing on Freirean praxis, teachers should foster student-led inquiry, ethical reasoning and collaborative problem-solving in both formal and informal learning environments.
- (3) For international organisations and multilateral bodies:
 - Facilitate policy dialogue and benchmarking. UNESCO, the OECD and the WEF should support G20 nations through comparative analysis, capacity-building programmes and global best practice repositories.
 - Enhance coordination and monitoring of SDG Target 4.7. Existing initiatives such as UNESCO's Global Education Monitoring Report and the T20 GCE Working Group can be scaled to track implementation progress, evaluate impact and identify structural bottlenecks.
 - Support regional cooperation platforms. The African Union (AU), European Union (EU), ASEAN and MERCOSUR should mainstream GCE within their education action plans, enabling horizontal learning and regional mobility schemes.
- (4) For civil society and local communities:
 - Promote participatory models of education. NGOs, local governments and community-based organisations should co-develop curricula and educational programmes that reflect local needs, knowledges and identities, thus enhancing contextual legitimacy.

- Leverage digital tools and open education resources. In low-income contexts, digital platforms, mobile learning and open-source curricula can help scale GCE without placing excessive strain on underfunded systems.

(5) *For higher education institutions:*

- Foster interdisciplinary GCE programmes. Universities should design transdisciplinary programmes combining economics, sustainability science, global politics and ethical leadership.
- Establish student exchange and COIL programmes. COIL and student mobility schemes can expose learners to cross-cultural perspectives and policy dialogues.
- Undertake longitudinal impact studies. Universities should lead empirical research evaluating GCE outcomes on workforce readiness, climate action and civic engagement filling the current evidence gap identified in this review.

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By aligning these strategies with the broader SDG agenda, particularly Targets 4.7, 8.6, 10.2, 13.3 and 17.16, GCE can serve as a policy accelerator for inclusive, sustainable and globally integrated societies. Ensuring that implementation is context-sensitive, participatory and equitable is vital, especially for nations grappling with capacity constraints or political resistance. The success of GCE ultimately depends on multilevel cooperation, long-term investment and a shared commitment to education as a transformative public good.

7. Conclusion

As G20 nations confront converging crises of economic inequality, environmental degradation and geopolitical instability, GCE emerges as a transformative and unifying framework. This study has demonstrated that GCE, when strategically aligned with national education and economic policies, can enhance economic equity, promote sustainability and strengthen global cooperation key pillars of the 2030 SDGs. Through the application of TLT and critical pedagogy, this structured literature review has unpacked how GCE fosters critical consciousness, social responsibility and ethical global engagement within G20 contexts. The comparative analysis revealed significant variation in how GCE is adopted and operationalised across G20 nations. Countries like Finland and South Korea exhibit strong integration through inclusive policy frameworks, sustained public investment and embedded teacher training. By contrast, Brazil and South Africa illustrate the challenges of translating GCE principles into practice amidst decentralised governance and limited resources. China and the USA further highlight how political ideologies can constrain or distort GCE's emancipatory potential. Crucially, this study identified a need for more coherent implementation strategies, differentiated by stakeholder roles. Governments must embed GCE into policy and funding instruments; teacher education institutions must foster pedagogical capacity; and international organisations must facilitate cross-national dialogue, support and accountability. Equally important is the role of local communities, higher education and civil society in localising GCE in culturally and contextually relevant ways. These recommendations, if taken seriously, can position GCE as a catalyst for inclusive development and resilient, democratic futures.

Nonetheless, the study's scope is limited by its exclusive focus on G20 nations. While the bloc offers a strategic lens into global trend-setting, the findings are not universally generalisable to lower-income or non-G20 contexts. Moreover, most of the reviewed literature remains policy- or conceptually focused, with limited empirical studies on the long-term effects of GCE on employability, social mobility or civic outcomes. Future research should therefore include longitudinal, multi-country case studies and explore how

GCE can be adapted for diverse political and economic environments, especially in the Global South. Ultimately, GCE's potential lies in its ability to bridge policy aspirations with pedagogical transformation. If implemented holistically, GCE can equip current and future generations with the tools not only to understand the complexities of our interconnected world, but also to shape it equitably, sustainably and justly.

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