**GLOBAL LEADERSHIP PROGRAMS IN K-12 EDUCATION: FOSTERING MULTICULTURAL AWARENESS AND MEDIA LITERACY FOR FUTURE LEADERS**

**ABSTRACT**

|  |
| --- |
| **Objective:** This study examines the structural integration, pedagogical foundations, and impact of Global Leadership Programs (GLPs) within K–12 education systems across diverse global contexts. It explores how GLPs cultivate intercultural competencies, civic engagement, and cross-cultural communication skills necessary for youth leadership in an increasingly interconnected world.  **Study Design:** A comprehensive literature review was conducted using peer-reviewed academic sources published between 2018 and 2025, with attention to the curricular and extracurricular delivery models of GLPs in both Global North and Global South regions. After removing duplicates, titles and abstracts were screened for relevance to the topic. Subsequently, full-text articles were assessed against the inclusion and exclusion criteria. This process resulted in a final selection of 30 studies that met all inclusion criteria.  **Methodology:** Following a qualitative approach, the study examined both empirical and theoretical research, case studies, and comparative policy analyses. Key themes explored include multicultural awareness, media literacy, and global citizenship.  **Results:** Findings indicate that GLPs enhance students’ global awareness, communication abilities, and leadership capacity, especially when embedded into formal curricula and supported by experiential pedagogies. Programs such as Model UN, IB Global Politics, and cross-border digital initiatives were shown to have improved students’ media literacy, civic participation, and intercultural dialogue. However, disparities remain in teacher training, resource allocation, and the visibility of Global South voices in global leadership education discourse.  **Conclusions:** This review paper discusses the need to standardize GLPs within formal K–12 curricula, aligning with SDG 4.7 goals and it recommends scalable and context-sensitive models for integrating GLPs, highlights the need for longitudinal studies, and advocates for inclusive policy reforms and cross-sector collaboration to promote equitable global leadership development for all students..  . |

***Keywords:*** *Global Leadership Programme, K-12 Education, Global Citizenship Education, Media Literacy, Multicultural Awareness, K-12 Curriculum Integration*

1. **INTRODUCTION**

The Sustainable Development Goals (SDGs), approved by the United Nations in 2015, include a focus on education for sustainable development (ESD) and global citizenship education (GCEd). Specifically, by 2030, SDG target 4.7 seeks to “ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promoting a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and culture’s contribution to sustainable development” [1]. Despite the global endorsement of UNESCO's Global Citizenship Education (GCED) framework , the implementation at the basic, national, and institutional levels still faces some challenges. A systematic review by Edwards et al. (2020) highlights the variability in integrating GCED into curricula, teacher education, and assessment practices across different countries, underscoring the need for more coherent strategies to realize the objectives of SDG 4.7. [1]

In response to these policy imperatives, Global Leadership Programs (GLPs**)** have emerged within K-12 education as innovative models that align with the goals of GCED and SDG 4.7. GLPs are structured initiatives designed to develop students' leadership capacities with a global perspective, emphasizing skills such as critical thinking, intercultural communication, ethical decision-making, and collaborative problem-solving. These programs often incorporate experiential learning, community engagement, and interdisciplinary curricula to foster a sense of global responsibility among students. [2]. A study by Bourn (2021) emphasizes that global learning, when infused with a pedagogy of hope, can empower learners to envision and work towards a more just and sustainable future. This approach is grounded in real-life challenges, such as the COVID-19 pandemic and climate change, and draws upon Paulo Freire's ideas to foster critical thinking and social action among students. [3]

Global leadership, within the context of K-12 education, goes beyond the traditional knowledge of leadership, which is often confined to local or national boundaries. It involves the ability to navigate complex cultural landscapes, communicate effectively across diverse populations, and critically engage with media and information sources. Korona and Hutchison mention the need for integrating media literacy across content areas to empower students to critically consume and produce information, fostering a democratic citizenship. [4].

With the rapidly increasing population of ethnically diverse students in K-12 schools throughout the US, the academic success of a culturally diverse student population is more relevant now than it has ever been [5]. Furthermore, the COVID-19 pandemic has exposed and highlighted many racial and economic disparities affecting minority groups in the US [6]. This has intensified the call for culturally competent teachers who can effectively implement the elements of culturally responsive and relevant pedagogy. It is important to note that the current approaches to implementing culturally responsive and relevant pedagogy should be considered. Also, the economic, physical, and emotional conditions of the culturally diverse student population have been severely impacted by this pandemic. [7]

As media encompasses the channels, formats, and communicators to distribute representational content such as traditional print text, audio, images, video, and multimedia, students can now consume and produce media for little or no cost and participate in online communities to share knowledge and promote social change. Thus, scholars and practitioners have pointed to media literacy education to equip students with the necessary skills, strategies, and dispositions applicable to online environments [8].

1. **METHODOLOGY**

This review adopts a systematic narrative approach to analyze and synthesize existing peer-reviewed literature on global leadership programs (GLPs) in K-12 education, with specific emphasis on their contributions to multicultural awareness and media literacy. The review aims to bring together key ideas, popular trends, and common expert opinions from a range of studies published between 2018 and 2025.

A structured search was conducted across multiple reputable scientific databases to capture peer-reviewed articles, reports, and white papers published between 2018 and 2025. The databases included Scopus, Web of Science, Google Scholar, ScienceDirect, SpringerLink, ResearchGate, and MDPI Open Access Journals. Some search keywords were combined using Boolean operators ("AND," "OR") and included "global leadership" AND "K-12" AND "education," "global citizenship education" AND "media literacy" AND "multicultural," "leadership development" AND "school curriculum" AND "global competence," and "21st century skills" AND "K-12" AND "international education." To ensure relevance to the review title and quality, the following inclusion criteria were applied: Peer-reviewed articles published between 2018 and 2025; Focus on K-12 education (or studies that explicitly include K-12 populations even if broader); Address global leadership development in school-based or community-based education programs; Emphasis on at least one of the following: multicultural awareness, media literacy, or global citizenship and Studies conducted in diverse geographical contexts, not limited to Western countries. Excluded were Articles focused solely on higher education leadership programs; Papers with a religious, theological, or parochial bias not tied to generalizable educational leadership outcomes; publications before 2018; and Non-English articles.

The initial search yielded a substantial number of articles. After removing duplicates, titles and abstracts were screened for relevance to the topic. Subsequently, full-text articles were assessed against the inclusion and exclusion criteria. This process resulted in a final selection of 30 studies that met all inclusion criteria. Relevant information from the selected studies was extracted systematically into a structured matrix, including the definition and framing of global leadership; Program type (formal curriculum, co-curricular initiative, extracurricular leadership, etc.); Theoretical frameworks employed (e.g., Transformative Learning Theory, Intercultural Competence, Critical Media Literacy); Outcomes measured (e.g., empathy, cultural responsiveness, media discernment); Region or cultural setting of the study.

It is important to note that, while the approach used ensured a thorough and high-quality examination of existing relevant literature, there were certain limitations, such as the reliance on only English-language sources, which may have excluded relevant research published in other languages, and the relatively low number of studies included in the final evaluation, which restricts the inclusivity of the findings. Also, some of the most important studies may be paywalled or not available in publicly accessible databases. However, the chosen methodology ensures a robust and comprehensive assessment of the impact of Global Leadership Programs in K-12 Education.

1. **RESULTS AND DISCUSSION**

### Pedagogical Foundations of GLPs in K–12 Contexts

GLPs in K–12 settings commonly employ pedagogical approaches that foster global competencies. Experiential learning, grounded in Kolb’s Experiential Learning Cycle, is frequently utilized to develop intercultural communicative competence (ICC) among students. [9]. Intercultural dialogue frameworks, such as virtual exchanges between students from diverse cultural backgrounds, have been effective in enhancing communication skills and cultural understanding. [10]. Critical media analysis is another cornerstone, enabling students to deconstruct media messages and understand the interplay between media, power, and identity. [11].

**Thematic Outcomes of GLPs**

#### Multicultural Awareness

Participation in GLPs has been linked to increased multicultural awareness among students. Programs that incorporate arts-based methodologies and critical literacy workshops have allowed students to explore and express their cultural identities, leading to a deeper appreciation of cultural diversity. [12]. Interactive digital storytelling has also been employed to bring cultural heritage into the classroom, fostering an inclusive learning environment. [13]

#### Cross-Cultural Communication Skills

GLPs have demonstrated effectiveness in enhancing students' cross-cultural communication skills. For instance, the X-Culture Global Virtual Team Project provided students with opportunities to collaborate with peers from different cultural backgrounds, resulting in improved cultural intelligence and communication competencies. [14]. Similarly, immersive intercultural learning experiences in high schools have been reported to significantly bolster students' abilities to engage in cross-cultural interactions. [15].

#### Media Literacy and Global Awareness

GLPs have also been instrumental in developing students' media literacy skills. Programs that focus on critical media literacy have enabled students to analyze media texts critically, understand underlying ideologies, and recognize the role of media in shaping societal perceptions. [11]. These skills are essential for students to navigate the complex media landscape and become informed global citizens. [16].

### GLPs and Civic Engagement

GLPs have been associated with increased civic engagement among students. Educational initiatives that integrate civic education into the curriculum have been shown to enhance students' civic knowledge, skills, and participation. A comprehensive PK3–12th grade integrated school model has been proposed to address civic identity development and promote active citizenship. [16]. Furthermore, studies have indicated that charter schools can positively impact civic performance outcomes, particularly among underserved student populations. [17].

**Structural Variations and Delivery Models of Global Leadership Programs in K-12 Education**

### Global Leadership Programs (GLPs) exhibit diverse structural configurations, influenced by educational policy, institutional priorities, and sociocultural contexts. A key distinction lies in whether programs are embedded within formal curricula or offered as extracurricular initiatives. Curricular GLPs, often mandated by national or regional education standards, provide systematic instruction that integrates global competencies into existing subjects. For instance, in Nordic countries, global leadership skills are often aligned with sustainability education and delivered through interdisciplinary frameworks that are part of students’ formal academic progression. [18]. In contrast, extracurricular GLPs, common in North American and East Asian contexts, tend to focus on experiential learning through student clubs, international exchanges, and leadership camps emphasizing voluntary participation and personalized growth [19] [20].

Regional differences also contribute to the effectiveness of various GLP delivery models. In the Global North, GLPs frequently adopt a rights-based approach grounded in democratic values, emphasizing critical pedagogy and decolonial thinking [21]. For example, UK-based GLPs often intersect with human rights and civic education, aiming to cultivate active and informed citizens [22].

Meanwhile, in parts of the Global South, GLPs are increasingly designed to address local developmental challenges such as inequality, migration, and youth unemployment. These programs frequently incorporate community-based projects and culturally responsive curricula to ensure relevance and inclusivity, although funding and teacher training remain barriers to equitable implementation [20]. Another axis of differentiation is the format of delivery—whether digital or in-person. The shift to digital solutions during the COVID-19 pandemic greatly enhanced the effectiveness of GLPs by enabling virtual collaboration, interactive simulations, and online discussions. Digital programs now commonly utilize project-based learning and real-time global classrooms to foster intercultural awareness and collaborative leadership skills among geographically dispersed students [21]. However, in-person models are still valued for their immersive quality, particularly when involving service-learning, study abroad, and peer-led facilitation [22] These face-to-face experiences often deepen interpersonal understanding and emotional intelligence, critical components of effective leadership in multicultural environments [20].

**Integrating GLPs into the K-12 Curriculum**

**Curriculum Integration and Policy Alignment**

Recent studies highlight efforts to embed the Global Leadership Program (GLP) within national curricula. For instance, Ghana's Common Core Programme (CCP) aims to equip students with 21st-century competencies such as critical thinking and intercultural collaboration. A study by Abudu et al. (2024) found a strong positive alignment between the CCP and GLP objectives, suggesting that the curriculum effectively promotes global citizenship and leadership competencies. The authors recommend strengthening professional development for educators and providing additional resources to support effective teaching practices. [23]

**Teacher Training and Professional Development**

The successful integration of GLPs is heavily dependent on the preparedness of educators. O'Meara et al. (2018) emphasize the role of teacher educators in developing and disseminating GLP strategies [24]. Their study highlights the necessity of equipping teachers with the knowledge and skills to foster global citizenship among students, noting that teacher education programs must prioritize GLP to ensure its effective implementation. [25]

In Hong Kong, Chong and Cheng (2025) explore the essential knowledge, values, and pedagogies required for teaching GLP. They propose a conceptual framework to guide educators in cultivating global citizens, emphasizing the importance of experiential learning and sustainability in pedagogy. [25].

**Resource Allocation and Institutional Support**

Adequate funding and institutional support are critical for the mainstreaming of GLPs. In the Philippines, Hunahunan (2022) conducted a phenomenological inquiry into the integration of GLP in a regional university. The study revealed that while some educators incorporate global issues into their teaching, there is a lack of conceptual understanding of GLP. Challenges identified include scarcity of resources, lack of pedagogical knowledge, and time constraints. The author recommends seminars and training to equip educators with the necessary knowledge and skills for effective GLP integration. [26]

**Implications for Policy and Future Research in Integrating Global Leadership Programs (GLPs) into K–12 Education**

The integration of Global Leadership Programs (GLPs) into K–12 education required a multifaceted approach that covers scalable implementation models, identification of existing research gaps, and the development of robust frameworks for measuring long-term impacts on students. Recent scholarly works provide insights into these areas, offering guidance for policymakers and researchers aiming to enhance the efficacy and reach of GLPs.

**Scalable Models for GLP Implementation**

Effective scaling of GLPs requires models that can be adapted across diverse educational contexts. [27]. El-Hamamsy et al. (2023) propose an adapted cascade model for primary school digital education, which involves training active teachers as trainers who then disseminate knowledge to their peers. This model addresses common limitations of traditional cascade approaches by ensuring ongoing support and prolonged training for teacher-trainers, leading to effective large-scale implementation. [28].

In the context of higher education, Quirk and Gustafson (2018) present an iterative framework for student global leadership development. Their model emphasizes the importance of sequential transformational experiences, such as study abroad programs, in fostering intercultural competencies and leadership skills among students. [29].

**Identified Research Gaps**

Despite advancements in GLP implementation, several research gaps persist:

* **Lack of Longitudinal Data**: VanderWeele et al. (2018) highlight the need for outcome-wide longitudinal designs to assess the causal effects of educational interventions over time. Such designs can provide comprehensive insights into the long-term impacts of GLPs on various student outcomes. [30]
* **Underrepresentation of Global South Perspectives**: Njah et al. (2021) note that evaluations of leadership training programs often lack consideration of the reciprocal impacts on host organizations, particularly in the Global South. This underrepresentation limits the generalizability of findings and overlooks context-specific challenges and successes. [31]

**Frameworks for Measuring Long-Term Impact**

To effectively assess the long-term impact of GLPs, the following frameworks and methodologies are recommended:

* **Theory of Change (ToC)**: Njah et al. (2021) advocate for the use of ToC as a foundational framework in evaluating leadership programs. ToC facilitates the identification of causal pathways and the articulation of expected outcomes at individual, organizational, and community levels. [31]
* **Curricular Analytics**: Heileman et al. (2018) introduce curricular analytics as a method to quantify the complexity of curricula and relate it to student success outcomes. This approach can be instrumental in assessing the structural and instructional properties of GLPs and their influence on student achievement. [27]
* **Outcome-Wide Longitudinal Designs**: As discussed by VanderWeele et al. (2018), implementing outcome-wide longitudinal studies can provide robust evidence on the long-term effects of GLPs across multiple domains, thereby informing policy and practice. [30]

**CONCLUSION**

This review has critically examined the emergence and integration of Global Leadership Programs (GLPs) in K–12 education, situating them within broader pedagogical, curricular, and policy frameworks. Drawing from peer-reviewed literature published between 2018 and 2025, the analysis considers GLPs as both a response to and a proactive mechanism for addressing the complexities of global citizenship in the 21st century. The findings consistently indicate that GLPs, whether embedded in formal curricula or delivered as extracurricular experiences, play a significant role in fostering intercultural awareness, media literacy, and civic engagement among young learners.

The structural and delivery models of GLPs reflect diverse regional, technological, and institutional contexts. Notably, while programs in the Global North often benefit from more structured frameworks and digital infrastructure, there remains a pressing need to adapt and scale context-sensitive models in the Global South. These structural disparities point to broader questions about equity in access, pedagogical preparedness, and institutional commitment.

Furthermore, the evidence presented underscores the necessity of formally integrating GLPs into national education systems. This requires the alignment of educational policy, investment in teacher training, and the development of metrics for long-term impact assessment. Yet, substantial gaps remain in longitudinal research, especially regarding the sustained influence of GLPs on students’ global competencies over time and the inclusion of underrepresented regions in global leadership discourses.

As global challenges, ranging from climate change to misinformation, continue to evolve, so too must our educational systems. GLPs offer a pathway toward equipping students not just with knowledge but with the leadership skills and awareness needed to navigate and shape a more inclusive, interconnected world. Future research should explore scalable models that prioritize inclusivity, sustainability, and contextual adaptability. This ensures that global leadership is not a privilege of geography but a universal right nurtured from the earliest stages of formal education.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

Option 2:

Author(s) hereby declare that generative AI technologies such as Large Language Models, etc. have been used during the writing or editing of manuscripts. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology

Details of the AI usage are given below:

1.

2.

3.

**REFERENCES**

1. D. B. Edwards, M. Sustarsic, M. Chiba, M. McCormick, M. Goo, and S. Perriton, “Achieving and Monitoring Education for Sustainable Development and Global Citizenship: A Systematic Review of the literature,” *Sustainability*, vol. 12, no. 4, p. 1383, Feb. 2020, doi: 10.3390/su12041383.
2. C. Ferguson and P. Brett, “Teacher and student interpretations of global citizenship education in international schools,” *Education Citizenship and Social Justice*, Dec. 2023, doi: 10.1177/17461979231211489.
3. D. Bourn, “Pedagogy of hope: global learning and the future of education,” *International Journal of Development Education and Global Learning*, vol. 13, no. 2, Jan. 2021, doi: 10.14324/ijdegl.13.2.01.
4. M. Korona and A. Hutchison, “Integrating media literacy across the content areas,” *Reading Research Quarterly*, vol. 58, no. 4, pp. 601–623, Aug. 2023, doi: 10.1002/rrq.517.
5. Kahu, E. R. & Nelson, K. (2018). Student engagement in the educational interface: understanding the mechanisms of student success. Higher Education Research & Development, 37(1), 58–71. <https://doi.org/10.1080/07294360.2017.1344197>
6. Thakur, N., Lovinsky Desir, S., Bime, C., Wisnivesky, J. P. & Celedón, J. C. (2020). The Structural and Social Determinants of the Racial/Ethnic Disparities in the U.S. COVID-19 Pandemic. What’s Our Role? American Journal of Respiratory and Critical Care Medicine, 202(7), 943–949. https://doi.org/10.1164/rccm.202005- 1523PP
7. Y. Pierre, N. K. Rathee, and V. S. Rathee, “Developing Cross-Cultural Competency through Multicultural Perspective: An Exploratory Inquiry,” *European Scientific Journal ESJ*, vol. 17, no. 27, p. 324, Aug. 2021, doi: 10.19044/esj.2021.v17n27p324.
8. A. Huguet, J. Kavanagh, G. Baker, and M. S. Blumenthal, “Exploring Media Literacy Education as a tool for mitigating truth decay,” *RAND*, Jul. 11, 2019. <https://www.rand.org/pubs/research_reports/RR3050.html>
9. A. H. Wibowo, B. Mohamad, N. Djatmika, and R. Santosa, “Designing and assessing experiential learning pedagogy for an intercultural communicative competence training module: a quasi-experimental study,” *Frontiers in Education*, vol. 9, Dec. 2024, doi: 10.3389/feduc.2024.1470209.
10. M. Abuzant, M. A. Labuda, and A. Gilbrecht-Hindi, “Leveraging intercultural dialogue and collaborative learning to promote interpersonal and patient care competencies,” *Journal of Virtual Exchange*, vol. 7(SI-IVEC2023), pp. 106–117, Dec. 2024, doi: 10.21827/jve.7.41432.
11. Z. Zhang *et al.*, “Cross-Border Dialogues: a collaborative instructional design inquiry to promote equity and diversity,” *Education Sciences*, vol. 13, no. 6, p. 567, May 2023, doi: 10.3390/educsci13060567.
12. R. Zaidi, G. Da Cunha Moura, and F. R. Cruz, “Critically engaged Language and Literacy workshops as a Disruptive pedagogy in plurilingual classrooms,” *Reading Research Quarterly*, vol. 60, no. 1, Dec. 2024, doi: 10.1002/rrq.597.
13. S. Rizvic, D. Boskovic, V. Okanovic, S. Sljivo, and M. Zukic, “Interactive digital storytelling: bringing cultural heritage in a classroom,” *arXiv (Cornell University)*, Jan. 2020, doi: 10.48550/arxiv.2011.03675.
14. K. L. Stock and S. A. Edelson, “Developing Cross-Cultural communication skills with the X-Culture Global Virtual Team Project,” *Management Teaching Review*, Jan. 2024, doi: 10.1177/23792981241227874.
15. C. Sisisky, “Immersive intercultural learning experiences in high School: reflections from independent school alumni,” *Teachers College Record the Voice of Scholarship in Education*, vol. 125, no. 7–8, pp. 188–216, Aug. 2023, doi: 10.1177/01614681231200943.
16. L. Bush, “Education for Civic Engagement: A PK3-12th grade Integrated School model,” May 23, 2022. <http://jhir.library.jhu.edu/handle/1774.2/67433>
17. C. S. Johnson, G. Gyimah, C. Lu, Y. Maeda, and J. Sdunzik, “Civic Performance Outcomes and Market Morality: Using NAEP to address the civic efficacy of charter schools,” *The Journal of Social Studies Research*, vol. 49, no. 1, pp. 24–36, Dec. 2024, doi: 10.1177/23522798241278281.
18. K. Pashby and L. Sund, “Decolonial options and foreclosures for global citizenship education and education for sustainable development,” *Nordic Journal of Comparative and International Education (NJCIE)*, vol. 4, no. 1, pp. 66–83, Jun. 2020, doi: 10.7577/njcie.3554.
19. E. Bosio and C. A. Torres, “Global citizenship education: An educational theory of the common good? A conversation with Carlos Alberto Torres,” *Policy Futures in Education*, vol. 17, no. 6, pp. 745–760, Feb. 2019, doi: 10.1177/1478210319825517.
20. J. Dill, “Global citizenship education: a critical introduction to key concepts and debates,” *British Journal of Educational Studies*, vol. 66, no. 4, pp. 559–560, Oct. 2018, doi: 10.1080/00071005.2018.1529954.
21. K. Pashby and M. Da Costa, “Interfaces of critical global citizenship education in research about secondary schools in ‘global North’ contexts,” *Globalisation Societies and Education*, vol. 19, no. 4, pp. 379–392, Mar. 2021, doi: 10.1080/14767724.2021.1904213.
22. S. J. Daniels, “Global Citizenship Education and Human Rights in Scottish education: An analysis of education policy,” *Citizenship Social and Economics Education*, vol. 17, no. 2, pp. 85–99, Apr. 2018, doi: 10.1177/2047173418769910.
23. A. M. Abudu, I. Bariham, and J. Y. D. Quansah, “Integrating Global Citizenship Education into Ghana’s Common Core Programme: Pathways to Empowering 21st Century Learners,” *African Journal of Empirical Research*, vol. 5, no. 4, pp. 1997–2013, Dec. 2024, doi: 10.51867/ajernet.5.4.167.
24. J. G. O’Meara, T. Huber, and E. R. Sanmiguel, “The role of teacher educators in developing and disseminating global citizenship education strategies in and beyond US learning environments,” *Journal of Education for Teaching International Research and Pedagogy*, vol. 44, no. 5, pp. 556–573, Oct. 2018, doi:10.1080/02607476.2018.1516347.
25. Chong, K.M.E. and Cheng, C.-K.E. (2025), "Essential knowledge, values and pedagogies for teaching global citizenship education in Hong Kong", Asian Education and Development Studies, Vol. 14 No. 1, pp. 40-58. https://doi.org/10.1108/AEDS-04-2024-0081
26. Lyoid C. Hunahunan "Curriculum Integration of Global Citizenship Education: A Phenomenological Inquiry" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-4, June 2022, pp.2255-2261, URL: <https://www.ijtsrd.com/papers/ijtsrd49826.pdf>
27. G. L. Heileman, C. T. Abdallah, A. Slim, and M. Hickman, “Curricular Analytics: a framework for quantifying the impact of curricular reforms and pedagogical innovations,” *arXiv (Cornell University)*, Jan. 2018, doi: 10.48550/arxiv.1811.09676.
28. L. El-Hamamsy *et al.*, “An adapted cascade model to scale primary school digital education curricular reforms and teacher professional development programs,” *arXiv (Cornell University)*, Jan. 2023, doi: 10.48550/arxiv.2306.02751.
29. [Quirk, S.L.](https://www.emerald.com/insight/search?q=Stephanie%20L.%20Quirk) and [“Gus” Gustafson, J.](https://www.emerald.com/insight/search?q=James%20%E2%80%9CGus%E2%80%9D%20Gustafson) (2018), "Developing the Next Generation of Global Leaders: Proposing an Iterative Framework for Student Global Leadership Development", *Advances in Global Leadership* (*Advances in Global Leadership, Vol. 11*), Emerald Publishing Limited, Leeds, pp. 215-256. <https://doi.org/10.1108/S1535-120320180000011008>
30. T. J. VanderWeele, M. B. Mathur, and Y. Chen, “Outcome-wide longitudinal designs for causal inference: a new template for empirical studies,” *arXiv (Cornell University)*, Jan. 2018, doi: 10.48550/arxiv.1810.10164.
31. J. Njah *et al.*, “Measuring for Success: Evaluating leadership training programs for sustainable impact,” *Annals of Global Health*, vol. 87, no. 1, p. 63, Jul. 2021, doi: 10.5334/aogh.3221.