

Interconnected and Sustainable Education in Local Communities and Korean Governments: A Case Study for Addressing Educational Inequalities and Creating Inclusive

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The Paris Conference on Education 2025
Official Conference Proceedings

Abstract

The Neulbom School Program was highlighted as an exemplary initiative model for solving educational disparities at the 2024 G20 Education Ministers' Meeting due to its collaborative approach between local governments, schools, and communities unlike stereotypical models where resources are unilaterally moderated by the government. Preliminary data from pilot programs such as Jeju Island's KkumNang Project in rural regions have shown a 30% increase in students' participation and a 15% improvement in academic performance in STEM subjects. Edu-tech such as ICT and AI supports tailored after-school through online content and remote learning for schools in rural and fishing villages. By drawing on Elinor Ostrom's Theory on Collective Action, this research will demonstrate how cooperation between local communities and governments leads to efficient resource management and the expansion of educational opportunities, and how this collaboration addresses educational disparities, ultimately illustrating how this flexible and community-driven educational framework holds value as a global model. Using a qualitative research approach, the research incorporates document analysis and reports from local governments to investigate the broader context of the impact and discover concrete and practical data that attribute to collaborative efforts to address educational disparities. After that, the research employed in-depth interviews with school administrators, teachers, and community leaders involved in the program to uncover challenges, success stories, and the role of community collaboration in overcoming educational disparities. This case study provides other countries with valuable insights into how to reduce educational inequities in low-resource settings and to globally ensure educational opportunities regardless of geographic location.

Keywords: inclusive education, sustainable education, Korean education policy, after-school programs, educational disparities

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Introduction

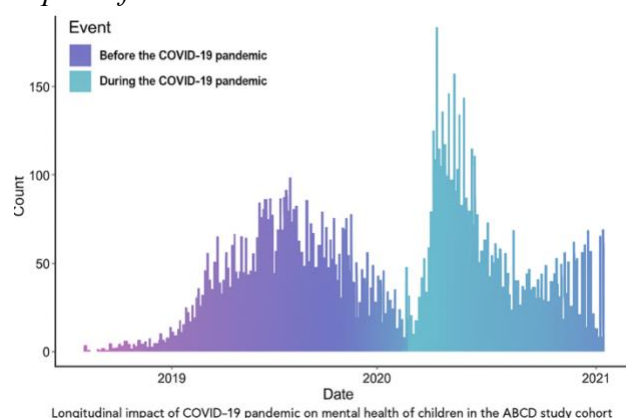
Educational inequality is one of the most urgent challenges of the twenty-first century. UNESCO's 2016 Education for People and Planet Report said that this issue has worsened due to changing social and economic conditions, unequal access to quality education, and the unexpected disruptions caused by the COVID-19 pandemic. UNESCO's 2022 Global Education Monitoring Report states that the pandemic interrupted formal education for more than 1.6 billion learners worldwide. These closures negatively affected children's academic progress, mental health, and social development. The overall decline in children's happiness during this time underscores the urgent need for education systems that can maintain learning even during crises.

In this global context, the need for sustainable and inclusive education has become more visible. Halpern (1999) said that one of the major social changes creating this need is the rise of dual-income households, which increased demand for structured childcare and highlighted the necessity of organized after-school programs. Additionally, the 2022 World Economic Forum stated that low birth rates in many countries have generated stronger political support for initiatives that prioritize children's holistic development and wellbeing. These changes highlight the need for inclusive, adaptable education.

The pandemic further exposed the limits of traditional school-based learning. Disruptions in access revealed weaknesses in existing systems and emphasized the importance of alternative approaches that can adapt to unexpected challenges. After-school programs offer one such approach by providing safe and structured environments where children can continue to learn and gain essential life skills.

Figure 1

Impact of COVID-19 Pandemic on Mental Health



The research from Hamatani et al. (2022) shows that growing concern over educational inequality has led to a renewed focus on programs that address these disparities. Interconnected education, which brings together schools, local communities, and governments, offers a holistic model that can meet the demands of inclusive education. This model encourages collaborative efforts to ensure that every child, regardless of background, has access to academic, emotional, and social support beyond regular classroom hours.

After-school programs serve as a key example of inclusive and interconnected education. They are adaptable across diverse national contexts. UNICEF's 2019 Education Strategy Report stated that International organizations such as UNICEF have developed global after-school

programs in countries like South Africa, India, and Mexico. These programs provide children with access to education, emotional care, and skill development in safe, structured environments. In parallel, national governments have introduced policies that align with these goals. South Korea's Always Care initiative, also known as the Neulbom School program, was created to provide consistent after-school care and educational support. It represents a strong case of government-community collaboration that strengthens educational equity and promotes child wellbeing.

OECD's 2022 Sustainable Development and Education Report supports the role of after-school programs by highlighting their positive effects on children's academic achievement and social development. Grossman et al. (2001) said that collaboration with local communities enables these programs to provide comprehensive support beyond standard school hours. As such, interconnected education programs not only address immediate inequalities but also contribute to long-term goals related to SDG 4 on Quality Education, SDG 5 on Gender Equality, and SDG 10 on Reduced Inequalities in the UN SDGs (2020).

This study aims to examine the effectiveness of interconnected and sustainable education models through a comparative analysis of UNICEF's global programs and Korea's Neulbom School. It explores how after-school programs close education gaps, support holistic child development, and inform future global education policy.

In order to better understand how interconnected education can operate in both international and national contexts, this study focuses on two models: UNICEF's global after-school programs and South Korea's Neulbom School initiative. These programs reflect distinct yet complementary strategies to address educational inequality and ensure sustainable learning environments for children.

Methodology

This study adopts a qualitative research design incorporating document analysis and one round of in-depth interviews. This study investigates how community collaboration in after-school programs addresses educational disparities in underserved areas, using Neulbom School as a case to assess its scalability in similar contexts.

The research is guided by three central questions: (1) How does community collaboration in after-school programs like Neulbom School contribute to the efficient management and sustainability of educational resources? (2) How does Neulbom School promote inclusive education and ensure equal access for children from marginalized areas? (3) What lessons can other countries learn from its collaborative approach for addressing educational inequalities?

Building upon the research objectives, this study utilizes a qualitative research framework that integrates policy document analysis, local government reports, and case-based program data. Guided by Elinor Ostrom's Theory on Collective Action, the framework structured how collaborative governance affects resource management in education. Rather than testing it deductively, the theory was used to organize data collection and interpretation.

Data sources included Ministry guidelines, local implementation plans, pilot site reports (Jeju and Gangwon), and public Neulbom records on Ministry of Education, South Korea (2024). These materials were systematically reviewed to identify patterns of cooperation between schools and local governments, with particular attention to how educational resources were

mobilized and shared. Drawing on Ostrom's principles, which include sustainability, cooperative action, and collective resource management, the study organized the data thematically to uncover how decentralized collaboration contributed to the success and adaptability of the program.

By aligning the interpretation process with Ostrom's theoretical components, the study aimed to trace practical evidence of how shared responsibility and localized decision-making helped address educational disparities. This methodological approach enabled the extraction of context-specific insights that highlight how flexible, community-led education systems can evolve in response to structural inequalities, thereby offering relevant implications for both national and international education policy frameworks.

Data Collection & Key Findings

The data for this study comes from documented cases of after-school programs led by UNICEF and the South Korean government. Implemented across diverse socio-economic settings, these programs have improved educational access and equity. According to UNESCO's 2022 Global Education Monitoring Report, prolonged COVID-19 school closures negatively impacted children's mental health, academic performance, and well-being. In response, India and South Korea introduced targeted after-school initiatives. UNICEF's 2024 Addressing the Learning Crisis Report shows that UNICEF partnered with Room to Read India to launch the "Home as a Learning Space" program, offering learning kits and parental guidance for children in underprivileged communities. In South Korea, the Neulbom School program supported educational continuity through collaboration between schools and local governments, particularly in remote regions like Gangwon Province.

The positive impact of after-school programs is widely recognized in both academic and policy literature. According to UNESCO, students who participate in structured after-school activities show an average 15 percent improvement in academic performance. World Bank's 2022 World Bank Education Strategy 2020 reports that such programs also yield strong economic returns by lowering crime and boosting academic success, generating over three dollars in benefits for every dollar invested. These programs help develop communication, empathy, and teamwork skills, contributing to children's overall development following the review from Center for Latin American and Latino Studies in the American University. For example, UNICEF's Care and Support for Teaching and Learning program in South Africa increased graduation rates in participating schools. UNICEF's 2022 Mexico Humanitarian Situation Report stated that programs targeting indigenous communities in Chiapas raised school attendance by 18 percent, showing the role of structured after-school care in closing education gaps in Mexico.

This study adopts a comparative case study approach to examine two models of interconnected after-school education: UNICEF's global initiatives and South Korea's Neulbom School. Both models represent efforts to ensure equitable and sustainable educational support for children, particularly in contexts marked by social vulnerability, economic disparity, or crisis.

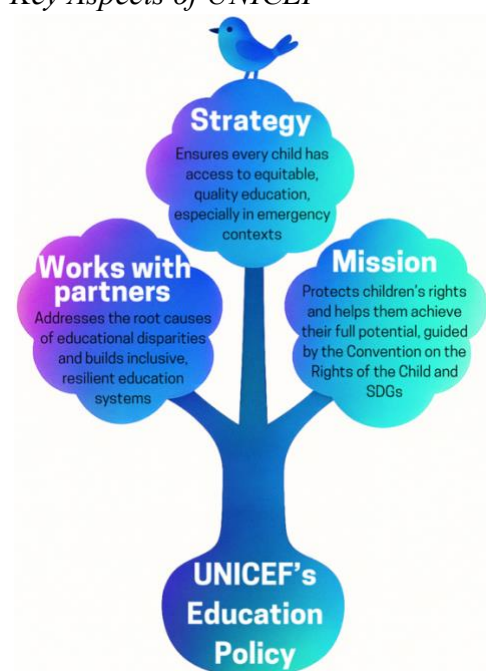
UNICEF, founded in 1946, has consistently worked to protect the rights and well-being of every child, with a strong emphasis on education by following the United Nations's 1989 Convention on the Rights of the Child (United Nations, 1989). The organization's educational mission is grounded in the Convention on the Rights of the Child and is closely aligned with the Sustainable Development Goals. UNICEF's programs are designed to guarantee equitable access to quality learning opportunities, especially in emergency settings. The organization's

strategy focuses on addressing the root causes of educational inequality through partnerships with governments and civil society organizations (UNICEF, 2019). It promotes flexible and inclusive education systems that remain resilient in the face of adversity.

At the core of UNICEF's approach is a commitment to three key areas: education in emergencies, equitable access, and quality learning, which stated in UNICEF's 2019 Linking Child Rights and the SDGs. These focus areas guide the design and implementation of after-school programs across different regions. UNICEF works with local partners to build systems that uphold children's rights and allow them to reach their full potential. This child-centered and rights-based approach ensures that even during crises, such as natural disasters or pandemics, children continue to learn in safe, supportive, and inclusive environments.

Figure 2

Key Aspects of UNICEF



By examining how UNICEF operationalizes these principles in its after-school education programs, this study seeks to understand the effectiveness of global strategies in addressing educational inequality and in building sustainable education systems that are adaptable across various local contexts.

To explore how interconnected and inclusive education models work in practice, this study examined UNICEF's after-school programs in South Africa, India, and Mexico. These programs were chosen for their measurable effects on academic outcomes, emotional support, and learning continuity in vulnerable and disrupted settings.

In South Africa, UNICEF's Care and Support for Teaching and Learning program offers a safe, supportive space for students beyond school hours. It combines academic and emotional support through local resources. A key initiative is the Breakfasts for Better Days program, run with FoodForward South Africa and Kellogg, which provided daily meals to over 30,000 children in 47 schools across major cities in 2019. This program has improved both academic performance and student well-being (FoodBanking.org, n.d.).

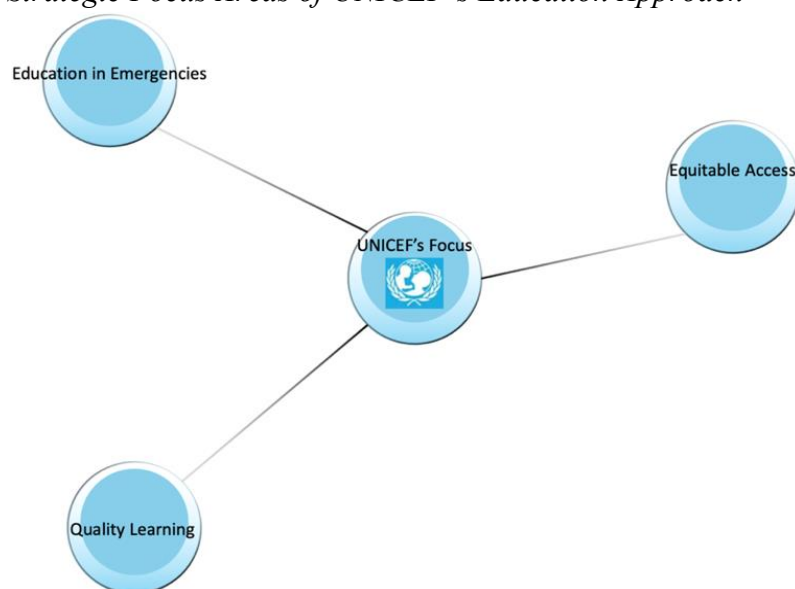
In India, UNICEF partnered with Room to Read India in 2021 to deliver the Home as a Learning Space initiative in Rajasthan and Jharkhand. This program responded to pandemic-related learning disruptions by distributing home-learning kits and support materials. A 2022 survey showed a 25 percent gain in literacy among participants. It also increased re-enrollment and helped narrow learning gaps.

In Mexico, UNICEF launched a 2022 pilot program in Chiapas to provide tutoring and mental health support for underprivileged children. The initiative offered academic help and emotional resilience workshops. It led to an 18 percent rise in school attendance, and teachers observed improved student confidence and classroom participation.

These international cases show that UNICEF's after-school programs strengthen learning, social development, and emotional health. By offering safe and inclusive environments, they reduce education gaps and help children thrive in diverse settings.

Figure 3

Strategic Focus Areas of UNICEF's Education Approach



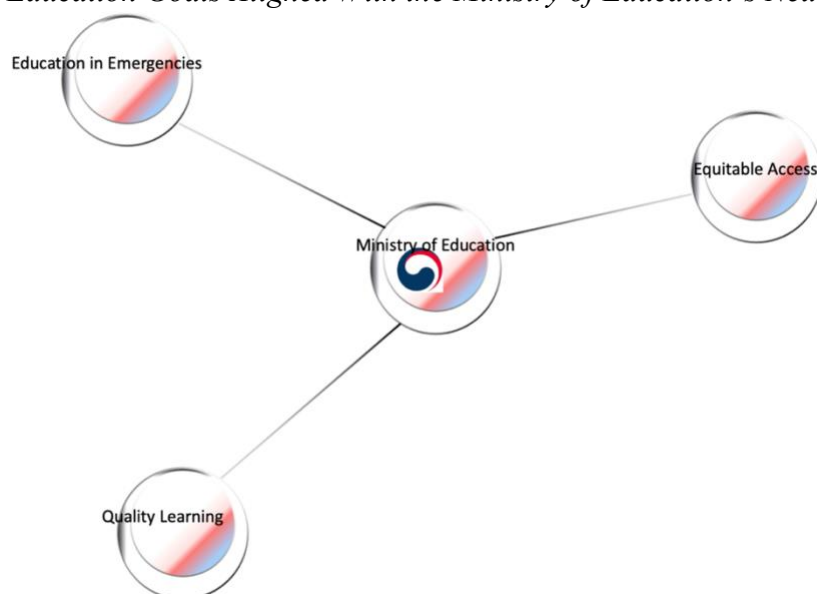
In South Korea, the Ministry of Education introduced the Neulbom School program, also known as the Always Care policy, to respond to the dual pressures of declining birth rates and the rising demand for structured childcare. This initiative was created to ensure that all children, regardless of region or background, have access to quality education and after-school care. The program integrates local community resources with formal education systems to provide continuous learning support, especially in rural and underserved areas such as Gangwon Province, where educational access has historically been limited.

The key goals of the Neulbom School policy reflect a strong alignment with global development agendas. These include education in emergencies, equitable access, and quality learning. First, it ensures that all students, regardless of gender, income, or disability, receive equal educational opportunities. This directly supports Sustainable Development Goals 4.1 and 4.5, which emphasize inclusive and equitable quality education. Second, by offering dependable after-school care, the program supports working mothers and contributes to SDG 5.4, which highlights the importance of recognizing and valuing unpaid care work through accessible services. Third, it promotes social inclusion by providing targeted support to

children from low-income and disadvantaged backgrounds, aligning with SDG 10.2, which focuses on reducing inequality.

Figure 4

Education Goals Aligned With the Ministry of Education's Neulbom Policy



By addressing both academic and social dimensions of inequality, the Neulbom School program serves as a comprehensive model for inclusive after-school education. It demonstrates how national policies, when implemented in collaboration with local communities, can respond to demographic and economic shifts while promoting sustainable development.

The Neulbom School program in South Korea has produced measurable outcomes through its inclusive design and collaborative implementation. By integrating school-based learning with community resources, the program extends educational support beyond regular classroom hours. It particularly targets students in rural and underserved regions, providing continuous care and learning opportunities through coordinated efforts between local governments and the Ministry of Education.

One notable outcome of the program is its internationally recognized success in addressing educational inequality. During the 2024 G20 Education Ministers' Meeting held in India, the Neulbom initiative was highlighted as an exemplary model for its effective collaboration between local authorities and schools (Yonhap News Agency, 2024). The program's structure, which enables schools to manage weekday care and local governments to operate weekend activities, was praised for ensuring consistent and equitable learning environments. This recognition was supported by localized examples such as Jeju Island's "KkumNang Project," which utilized community resources to deliver specialized programs in STEM and the arts. According to the Jeju Provincial Office of Education, this project resulted in a 20 percent increase in student engagement in 2023.

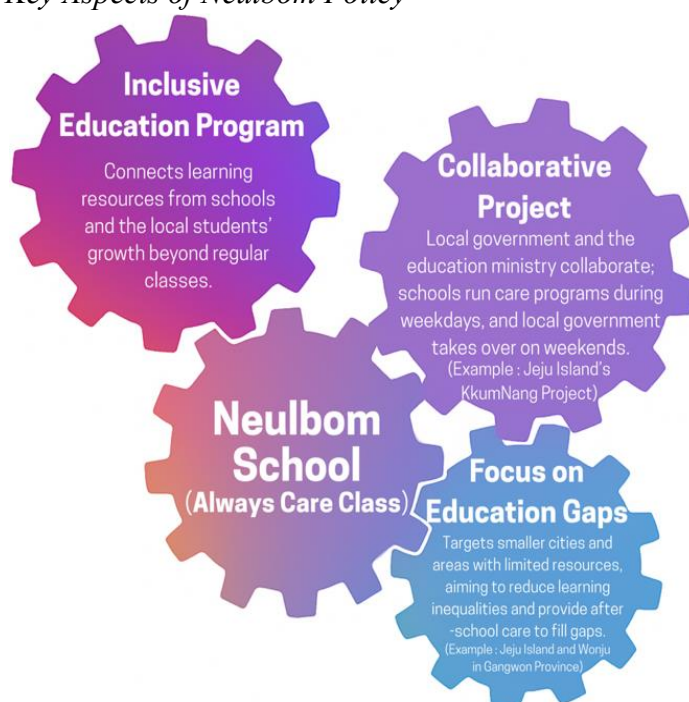
Further evidence of the program's effectiveness comes from other regions across the country. At Yangju Elementary School in Gyeonggi Province, students participating in Neulbom activities experienced improved academic motivation and reduced absenteeism. Programs such as art therapy and science-based workshops provided emotional support alongside academic enrichment. In Gangwon Province, the city of Wonju implemented targeted services including

free tutoring and after-school math support for students from low-income families. These efforts were facilitated by local community centers and resulted in a 15 percent improvement in standardized test scores, according to the Gangwon Education Policy Review.

The Neulbom School initiative also extends its focus to agricultural and science education in rural districts such as Boseong in South Jeolla Province. Workshops in agricultural science helped students with limited educational access gain exposure to practical and engaging learning experiences. These locally adapted programs demonstrate how after-school education, when supported through government-community collaboration, can significantly narrow educational gaps while responding to diverse regional needs.

Figure 5

Key Aspects of Neulbom Policy



The collaborative nature of the Neulbom School program, which engages not only schools and the Ministry of Education but also local governments and community organizations, distinguishes it from more centralized models of educational provision. This decentralized, participatory model was specifically recognized at the 2024 G20 Education Ministers' Meeting as a flexible and effective approach to addressing educational disparities. Unlike conventional systems where resources are unilaterally distributed by central authorities, the Neulbom School initiative demonstrates how shared governance and local engagement can enhance program adaptability and efficiency.

To interpret these findings within a broader theoretical context, this research draws on Elinor Ostrom's Theory on Collective Action. Ostrom's framework offers a useful lens through which to understand the Neulbom model's capacity for community-based resource coordination and sustainable educational outcomes. The theory highlights how cooperation between individual actors, including schools, governments, and local communities, can support the efficient and equitable management of shared resources. Applying this theory provides insight into how the Neulbom School program transforms after-school care from a top-down administrative service into a co-managed, adaptive, and community-driven educational ecosystem.

Figure 6*Elinor Ostrom's Theory on Collective Action*

In Elinor Ostrom's (1990) *Governing the commons*, Elinor Ostrom's Theory on Collective Action offers a comprehensive framework for analyzing how communities can jointly manage shared resources in ways that are sustainable, inclusive, and resilient. Originally developed to understand the governance of natural resources such as water, forests, and fisheries, Ostrom's theory has since been extended to various domains including education, health, and digital commons. Her work challenges the conventional belief that only centralized governments or private markets can effectively manage public goods. Instead, she highlights the potential of local actors to collaborate and create institutional arrangements that ensure efficient and equitable resource use.

The theory is structured around three core concepts: sustainability, cooperative action, and collective resource management. Sustainability refers to the ability to use and preserve resources in a way that meets current needs without compromising the needs of future generations. In Ostrom's framework, sustainability is not just a matter of conservation but also of institutional design. It requires the active participation of communities in shaping the rules, monitoring usage, and making adjustments to avoid overuse or depletion. Sustainability is thus achieved when local actors are empowered to govern resources in a way that maintains their availability over time.

The second principle, cooperative action, describes the process by which individuals or institutions work together toward a common goal. Rather than acting in isolation or in competition, actors coordinate their efforts through communication, trust-building, and shared decision-making. Cooperative action is crucial in settings where resources are limited and require joint stewardship. It enables communities to reach agreements, distribute responsibilities fairly, and solve complex problems that cannot be addressed by one actor alone. This dynamic is particularly important in contexts where top-down interventions may fail to capture the nuanced needs of diverse local environments.

The third concept is collective resource management. This refers to the efficient and sustainable governance of resources that are shared among multiple stakeholders and cannot be exclusively owned or monopolized. Examples include clean air, water systems, and public education infrastructure. In such cases, the management of resources depends on mutual responsibility

and collaborative enforcement. In Ostrom's (2005) *Understanding institutional diversity*, Ostrom argues that communities are capable of designing their own institutions to regulate access, usage, and benefit distribution in ways that are context-specific and culturally appropriate.

Together, these three concepts provide a lens through which to analyze the governance of public services that require coordinated effort across multiple sectors. By applying this theory, researchers and policymakers can better understand how decentralized and cooperative systems function, and how shared ownership and accountability contribute to long-term success. The framework is particularly relevant in the field of education, where learning opportunities and care systems often rely on multiple actors, such as governments, schools, families, and communities, working together to manage time, space, and pedagogical resources.

Figure 7

Elinor Ostrom's Theory on Collective Action



Results and Findings

In this study, the key findings are examined through the lens of Elinor Ostrom's Theory on Collective Action. The data were interpreted according to three core concepts drawn from the theoretical framework: collective resource management, sustainability, and inclusive education. These categories provided a structure for understanding how the Neulbom School program operates in practice, particularly in terms of how educational resources are distributed, maintained, and expanded through cooperation among schools, local governments, and communities. Each theme highlights a distinct dimension of how decentralized collaboration contributes to equitable and resilient after-school education systems.

The Neulbom School program demonstrates a clear case of collective resource management, in which schools, local governments, and communities jointly coordinate the use of educational resources. Rather than relying solely on centralized allocation from the national government, the program distributes operational responsibility among local actors who are best positioned to understand and address regional needs. This shared management structure not only increases administrative efficiency but also ensures that after-school resources are deployed in ways that directly respond to community-specific challenges.

The need for this shift emerged from the recognition that traditional top-down approaches were insufficient to address the growing complexity of educational inequality in rural and

underserved regions. As Ostrom's theory suggests, cooperative action among multiple stakeholders helps prevent the depletion of limited resources and promotes fair and responsive distribution. The Neulbom program reflects this principle by empowering local authorities to plan and manage learning support services in alignment with regional demands. For example, the Ministry of Education provides the overarching policy framework and initial funding, but local education offices and schools work together to design and operate after-school care models tailored to their communities. This approach enables better alignment of resources with local needs and promotes a sense of shared ownership and accountability.

A prominent example of effective collective resource management can be found in Jeju Province's "KkumNang Project." In this case, collaboration between schools and the local government led to the integration of community resources into after-school programming. The project offered specialized activities such as STEM workshops and art-based learning, and participation rates among students rose by 30 percent following the introduction of these coordinated efforts. The success of this initiative illustrates how local actors, when given the autonomy to manage educational delivery, can innovate and optimize available resources more effectively than centralized systems alone.

Overall, the Neulbom School's operational structure reflects a practical application of Ostrom's collective resource management concept. Through shared responsibility, flexible governance, and collaborative implementation, the program achieves more than administrative efficiency. It builds capacity at the local level to deliver targeted support to students, especially those in regions that face systemic underinvestment in education. These findings support the argument that decentralized, community-driven models are better positioned to adapt, sustain, and scale educational interventions in diverse contexts.

The Neulbom School program offers a strong example of how sustainability in educational delivery can be achieved through decentralized collaboration. Drawing from Elinor Ostrom's principle of sustainability, which emphasizes the long-term management of shared resources for the benefit of future generations, the program operates through continuous coordination between schools, local governments, and communities. Rather than relying on temporary funding cycles or top-down directives, Neulbom establishes a system in which responsibility is distributed across actors at multiple levels, creating structures that are more resilient and responsive to changing needs.

A defining feature of this sustainability model lies in the division of operational roles. Schools manage weekday after-school programs while local governments support and operate weekend initiatives. This cooperative structure allows for consistent service provision without overburdening a single actor and reduces the risk of burnout or resource depletion. In Wonju, a mid-sized city in Gangwon Province, this arrangement has enabled a stable delivery of educational services across the entire week. By sharing responsibility, local institutions are able to maintain a reliable system that supports both academic and emotional development, particularly for children in underserved communities.

The long-term success of the Neulbom model also depends on strong community support, which is consistent with Ostrom's emphasis on social capital. Sustainability is not only technical or administrative but also deeply social. In Neulbom, community members play an active role in program development, and their involvement increases both relevance and accountability. Local professionals often lead enrichment activities such as art therapy, STEM education, and environmental workshops. These contributions build a sense of ownership

among stakeholders (Ostrom, 2005). This encourages the continued use and support of after-school resources.

Ultimately, the Neulbom School program demonstrates how sustainable education systems can be developed through shared governance and persistent collaboration. By reducing dependence on centralized structures and activating regional networks of support, the program reflects Ostrom's vision of locally governed, adaptive systems. The sustainability achieved here is not a static goal but an evolving process of negotiation, coordination, and collective stewardship, making the model both durable and adaptable in the face of future educational challenges.

The Neulbom School program exemplifies how inclusive education can be promoted through cooperative and decentralized governance. Drawing from Ostrom's framework, inclusive education in this context refers to systems that ensure access to learning for all children regardless of socioeconomic background, geographic location, or physical or developmental challenges. Rather than designing separate interventions for marginalized groups, the Neulbom model incorporates inclusivity into its foundational structure by enabling collaborative decision-making and equitable resource allocation across communities.

A key example of cooperative management supporting inclusive education is found in Yangju, a city in Gyeonggi Province. In this region, local schools and community members jointly manage after-school initiatives that focus on both cognitive and emotional development. Programs such as art therapy and STEM education were developed with the goal of reaching students who might otherwise face exclusion due to economic or social disadvantages. These programs were led not only by teachers but also by local professionals and volunteers, ensuring that the activities were culturally relevant and emotionally supportive. The collaboration made these services more accessible and allowed children from marginalized backgrounds to benefit from sustained, personalized engagement.

The inclusive outcomes of the Neulbom model are deeply linked to its reliance on cooperative action. Ostrom identifies cooperation among diverse actors as critical to the resilience of shared systems. In the Neulbom program, this cooperation takes the form of shared roles among schools, parents, local governments, and civic organizations. These stakeholders work together to identify barriers to participation and co-develop strategies to overcome them. For example, community centers often host after-school tutoring and meal support programs tailored for children from low-income families. Rather than treating inclusivity as an add-on, the program embeds it into its daily operations through active cooperation.

The sustainability of inclusive education within Neulbom is also strengthened by consistent community involvement and long-term support from local governments. These relationships prevent the fragmentation or depletion of inclusive efforts over time. In alignment with Ostrom's principle of sustainability, Neulbom builds the necessary social capital to maintain inclusive services even in the face of funding fluctuations or policy shifts. By mobilizing a network of community contributors and institutional allies, the program avoids dependency on singular funding streams or administrative directives.

Taken together, these findings suggest that inclusive education is not merely a product of policy intentions but rather a dynamic process enabled by cooperative resource management, local ownership, and embedded social trust. The Neulbom School program provides a scalable model for how education systems can achieve inclusivity not through central mandates but through localized collaboration, shared governance, and sustained community engagement.

Implications & Conclusion

The Neulbom School program shows how cooperative governance among schools, local governments, and communities reduces educational disparities and fosters inclusion. The initiative illustrates that shared resource management and localized decision-making create more responsive and sustainable education systems. In particular, the Neulbom School's structure, which includes weekday programs led by schools and weekend programs managed by local governments, shows that differentiated roles can enhance operational continuity and adaptability.

The program also contributes directly to achieving several Sustainable Development Goals. Neulbom supports SDG 4 by offering after-school care in rural areas like Gangwon and Jeju, ensuring inclusive and equitable education. Furthermore, by relieving working mothers of exclusive caregiving responsibilities through reliable after-school care, the program aligns with SDG 5, promoting gender equality and supporting women's participation in the workforce. It also contributes to SDG 10 by targeting low-income and marginalized communities, providing academic support and reducing systemic disparities in access to education. These outcomes are reflected in increased attendance and academic performance, particularly in regions with previously limited infrastructure or opportunity like World Bank education strategy 2020 was reported.

While the Neulbom School program provides a strong model for national-level cooperation, its global applicability depends on careful contextual adaptation. Cases like the CSTL program in South Africa and after-school initiatives in Chiapas show that effective education requires local tailoring and stakeholder input in the report from MIET Africa's 2021 Care and support for teaching and learning (CSTL) manual. Scaling such programs must consider infrastructure gaps, funding limits, cultural factors, and personnel shortages. In Sub-Saharan Africa, limited electricity and transport access hinder extended programming. In Latin America, regional differences in educational values demand adapted teaching approaches.

To successfully expand after-school models globally, several strategies are essential. First, countries can share best practices through international forums such as the G20, using data and cases like Jeju's "KkumNang Project" to inform localized design. Second, international organizations including UNICEF, UNESCO, and the World Bank can assist in resource mobilization, technical support, and evaluation mechanisms. Collaborative funding partnerships between international institutions and local governments, especially in Southeast Asia, have proven effective in improving program sustainability and scalability. Third, deep engagement with local communities is necessary to ensure cultural legitimacy and relevance. Programs that empower local leaders to co-design activities, such as those in Mexico's indigenous communities, foster greater ownership and long-term commitment (UNICEF, 2022).

Future research is needed to explore how the Neulbom School model can be extended to other national or regional contexts with differing economic conditions. Comparative studies across countries with varying income levels and educational governance structures can reveal which aspects of Neulbom are transferable and which require adaptation. Additionally, further studies should investigate the role of community involvement and government partnerships in sustaining after-school care programs in resource-constrained settings. Longitudinal research may also help track how shifts in local policy, social trust, or economic development influence program outcomes over time.

The findings of this study support the broader understanding that community-driven, flexible, and cooperative after-school education models can contribute meaningfully to global educational equity. Both UNICEF's global initiatives and South Korea's Neulbom School program serve as practical examples of how after-school education can bridge learning gaps, promote gender equality, and reduce systemic inequities. These efforts have increased school attendance, improved academic performance, and enhanced workforce participation among parents, especially women.

Importantly, UNESCO's 2022 Education for Sustainable Development said that the success of these programs stems not only from government funding or standardized curricula but from dynamic collaboration among schools, families, local authorities, and international partners. While UNICEF's initiatives are tailored to diverse global contexts through multilateral coordination, Neulbom School embeds inclusivity and sustainability into a national policy framework. Together, these models show that educational systems can be designed to adapt to local realities while contributing to global development goals.

As countries seek solutions to persistent educational inequality, the lessons from Neulbom and similar programs offer a roadmap for designing after-school initiatives that are inclusive, sustainable, and socially rooted. By combining collective action, contextual adaptation, and shared responsibility, future after-school systems can be both effective and equitable, even in the most challenging environments.

In light of these findings, it becomes clear that Elinor Ostrom's Theory on Collective Action offers more than a conceptual lens. It provides a practical framework for understanding how inclusive and sustainable after-school education can be governed in real-world settings. The Neulbom School program reflects all three of Ostrom's key principles: collective resource management, cooperative action, and sustainability. Resource-sharing between central authorities and local actors ensures that educational infrastructure is used efficiently. Cooperative planning among schools, governments, and communities fosters local accountability, trust, and program relevance. Finally, the sustainability of these programs is anchored in social capital, which enables long-term adaptability even in times of financial or institutional uncertainty.

This framework also strengthens the case for applying the Neulbom model beyond South Korea. By illustrating that equitable educational access can be achieved through decentralized structures, the model challenges the assumption that national governments alone must design and execute education policy. Instead, it affirms that shared governance and local participation are critical for tailoring after-school systems to the needs of specific communities. As global policymakers consider how to design effective, adaptable, and inclusive learning systems, Ostrom's principles can serve as a guide for cultivating cooperation, empowering local actors, and sustaining innovation through collaborative stewardship.

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