

## **Structured Co-production in Crisis: Rethinking Centralization Through the UAE Volunteer Teaching Initiative**

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### **Abstract**

Global crises such as the COVID-19 pandemic expose the fragility of education systems and the need for new forms of collaborative governance. This study examines the United Arab Emirates' nationally coordinated volunteer-teaching initiative, in which more than 600 educators provided remote instruction to children of frontline workers. Operating within a centralized system supported by national digital infrastructure, the initiative demonstrates how structured co-production can transform volunteerism from an ad hoc response into an institutionalized model of public-service resilience. Using a qualitative case-study design with mixed-methods integration, and guided by Fraser's participatory justice, Freire's critical pedagogy, and Vygotsky's sociocultural theory, the study finds measurable academic gains, improved motivation, and enhanced psychosocial well-being. Findings indicate that digital equity, professional scaffolding, and civic trust enabled effective collaboration within hierarchy. The paper advances structured co-production as a hybrid governance model that reconciles central coordination with participatory inclusion, aligning with Sustainable Development Goals 4, 10, 16, and 17 to promote equity, inclusion, and institutional resilience.

*Keywords:* structured co-production, volunteer teaching, Sustainable Development Goals, crisis governance, educational resilience, equity

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## Introduction

The COVID-19 pandemic created the largest education disruption in modern history, displacing over 1.6 billion learners across 190 countries (UNESCO, 2021). While governments scrambled to sustain continuity, many responses deepened inequities in access, quality, and digital readiness. Children from low-income households, displaced communities, and families lacking academic support bore the heaviest burden. The World Bank (2022) warns that pandemic-induced learning losses could reduce lifetime earnings for this generation by up to USD 17 trillion. Existing governance models—state-led reforms, privatization, or short-lived volunteer efforts—proved insufficient for equitable recovery. What remains underexplored is whether volunteer teaching, when institutionally embedded within public governance frameworks, can evolve from emergency aid into resilient civic infrastructure.

Across contexts, volunteer teaching emerged as a creative but fragmented response: radio-based instruction in Sub-Saharan Africa, mobile mentoring in South Asia, and online tutoring in Europe (Ferrari et al., 2022; UNICEF, 2021). These examples reveal the civic potential of educational volunteerism, yet most lacked continuity and systemic integration. Historical precedents, from post-Ebola outreach in West Africa to earthquake responses in Haiti, show that volunteerism rarely matures into a strategic governance mechanism for strengthening education systems (Morris et al., 2012).

The United Arab Emirates (UAE) offers a striking counterpoint. During COVID-19, the Ministry of Education launched a nationally coordinated volunteer-teaching program that mobilized more than 600 trained educators to deliver online instruction for children of frontline healthcare workers and other at-risk learners. Centralized governance, digital infrastructure, trauma-informed pedagogy, and cross-sector partnerships distinguished this initiative from ad hoc efforts elsewhere. By embedding volunteerism within state structures, the UAE created a model of structured co-production: a hybrid governance form in which centralized coordination enables, rather than constrains, participatory service delivery.

This paradox—co-production flourishing under centralization—forms the theoretical puzzle at the heart of this study. Co-production scholarship has long associated effective collaboration with decentralized, bottom-up governance (Bovaird & Loeffler, 2023; Osborne, 2018). Yet the UAE experience suggests that hierarchy and participation need not be opposed. The paper therefore asks: Can co-production thrive within a centralized system, and through what mechanisms of structure, trust, and design?

This paper argues that *structured co-production is the key mechanism through which centralized systems can enable participatory, equitable education during crisis*. This central claim is supported by an integrated theoretical lens, empirical evidence from the UAE case, and explicit alignment with Sustainable Development Goals (SDGs) 4, 10, 16, and 17.

## Research Objectives and Questions

The study pursues three objectives: (a) to analyze the organizational structure and delivery mechanisms of the UAE volunteer-teaching program; (b) to evaluate its academic, psychosocial, and civic outcomes; and (c) to assess the program's potential for institutionalization within education policy. These objectives are addressed through three research questions: How can structured volunteer teaching sustain learning continuity, equity, and social cohesion during crises? What academic, emotional, and civic outcomes emerge for

students and educators? In what ways can volunteer teaching be institutionalized within education policy to strengthen resilience and progress toward global development goals?

### **Literature Review**

Volunteer teaching has emerged as a vital mechanism for sustaining education during crises such as pandemics, conflict, displacement, and natural disasters. UNESCO (2021) estimates that school closures disrupted the education of more than 1.6 billion learners, while the OECD (2022) highlights how civic initiatives bridged institutional capacity gaps. From a governance perspective, volunteer teaching operates as auxiliary public-service capacity, reinforcing state resilience and legitimacy when formal systems are overstretched.

Despite extensive documentation of volunteer teaching during crises, *existing studies treat it as temporary and fragmented, failing to conceptualize it as an institutional governance mechanism*. This descriptive bias has obscured the conditions under which volunteer participation can be embedded as durable public capacity. The present review redresses that gap by reframing volunteer teaching as a transformative form of structured co-production aligned with SDGs 4, 10, 16, and 17.

### **Co-production and Volunteer Governance**

Co-production—citizens and public agencies jointly delivering services—has become central to public administration scholarship. Bovaird and Loeffler (2023) define it as shared responsibility for outcomes; Osborne (2018) and Alford (2014) position it as the core logic of contemporary public service. Brandsen and Honingh (2016) distinguish among co-design, co-delivery, and co-assessment, clarifying where citizen engagement enters institutional processes. Within this taxonomy, volunteer teaching constitutes both co-delivery and co-assessment, since volunteers provide instruction and generate feedback that informs system learning.

The dominant assumption in this literature is that effective participation requires decentralized, community-based governance. The UAE case challenges that assumption directly. *This study contests the prevailing premise in co-production scholarship that participation requires decentralization, demonstrating instead that hierarchical systems can enable participation through structured design*. This reconceptualization positions hierarchy as a facilitative—rather than restrictive—condition of collaboration, and empirically validates Voorberg et al. (2023), who argued that co-production can succeed in hierarchical settings when supported by trust, training, and mutual accountability.

### **Volunteerism in Crises: Comparative Governance Models**

Education systems are inherently vulnerable to disruption. COVID-19 alone halted in-person learning for over 90% of students worldwide (World Bank, 2022), exposing digital divides and institutional fragility. Volunteer teaching emerged globally as a flexible mechanism to sustain learning and psychosocial support, with precedents including post-earthquake Haiti and the West African Ebola response (Morris et al., 2012; Williamson & Eynon, 2020). During COVID-19, models expanded through Italy's national tutoring networks, Finland's resource-sharing hubs, South Africa's rural centers, and Brazil's radio-learning initiatives (Ferrari et al., 2022; Lindfors et al., 2021; Maringe & Sing, 2021).

A pivotal comparison lies in centralized versus decentralized configurations. Centralized programs achieve scale and consistency through national coordination, standardized training, and unified digital platforms. Decentralized models foster adaptability with less uniformity. Crisis-governance research (Kapucu, 2009; Moynihan, 2012) indicates that hybrid configurations—blending central coordination with local agency—yield the most resilient outcomes, an insight aligned with SDG 16's emphasis on inclusive and effective institutions. Table 1 summarizes the contrasting features of centralized and decentralized models as discussed in the literature.

**Table 1**

*Comparative Characteristics of Centralized and Decentralized Volunteer-Teaching Models*

| <b>Dimension</b>     | <b>Centralized Models (e.g., UAE)</b>                 | <b>Decentralized Models (e.g., Finland, Brazil)</b> |
|----------------------|---|---|
| Governance Structure | National coordination and unified oversight           | Local autonomy and community governance             |
| Quality Assurance    | Standardized training, evaluation, digital monitoring | Variable standards; local adaptation                |
| Flexibility          | Rapid mobilization; limited local tailoring           | Context-specific customization; slower scale-up     |
| Resource Equity      | Strong state redistribution of technology and funding | Dependent on community resources                    |
| SDG Alignment        | SDGs 4, 10, 16: scale and equity through institutions | SDGs 4, 17: local innovation and partnerships       |

*Note.* Adapted from Ferrari et al. (2022); Kapucu (2009); OECD (2022); UNESCO (2021); World Bank (2022).

### **Embedding Volunteerism in Policy: Strategic Pillars**

Recent research reframes volunteer teaching as a lever for systemic resilience rather than a stopgap (Lepp et al., 2021). Beyond pedagogy, volunteer programs enhance ministerial crisis capacity, foster public–private collaboration, and expand human resources (Gudmundsdottir & Hathaway, 2020; Leung, 2016). Institutionalizing such programs, however, requires alignment with governance principles of transparency, inclusion, and accountability. Evidence from UNESCO (2021), OECD (2022), and World Bank (2022) identifies five policy pillars: alignment with national strategies; training and recognition through micro-credentials; inclusive digital infrastructure; cross-sector partnerships; and adaptive monitoring and evaluation. These pillars (Table 2) reinforce the governance mechanisms required to embed volunteerism into sustainable education systems.

**Table 2**  
*Policy Pillars for Institutionalizing Volunteer Teaching*

| Pillar                             | Core Focus                                     | SDG Link   |
|------------------------------------|--|------------|
| Alignment with National Strategies | Integrate volunteer roles into education plans | SDGs 4, 16 |
| Training and Recognition           | Certification and professional identity        | SDGs 4, 10 |
| Inclusive Digital Infrastructure   | Access for all learners                        | SDGs 9, 10 |
| Cross-Sector Partnerships          | Multi-stakeholder coordination                 | SDG 17     |
| Monitoring and Evaluation          | Data-driven learning loops                     | SDG 16     |

### Theoretical Framework: The Justice–Dialogue–Learning (JDL) Model

This study synthesizes three theoretical traditions—Fraser's participatory justice, Freire's critical pedagogy, and Vygotsky's sociocultural learning theory—into an integrated analytical model termed the Justice–Dialogue–Learning (JDL) framework. Together, they provide a multidimensional lens for examining how structured co-production advances educational equity, resilience, and inclusive institutional design during crises.

Fraser (2008) defines justice as the interaction of redistribution, recognition, and representation. Applied to volunteer teaching, these principles translate into the redistribution of educational access, recognition of volunteers as legitimate agents of learning, and representation of community voices within institutional structures. The UAE program demonstrates how participatory parity can emerge within a hierarchical framework: through structured recruitment, equitable digital access, and transparent feedback mechanisms, the state secured parity procedurally, redefining justice as equity embedded within structured coordination (SDGs 10, 16).

Freire (1970) centers critical pedagogy on dialogue, reflection, and empowerment. The UAE initiative shows that dialogic pedagogy can be institutionalized within structure rather than existing outside it. Volunteer teachers used digital platforms and small-group mentorship to cultivate mutual learning and emotional support, generating what Freire termed *conscientização* within a system designed for coordination and oversight. The paradox of dialogue within hierarchy becomes productive: structured participation enabled inclusive communication and empathy-driven pedagogy (SDGs 4, 17).

Vygotsky (1978) adds a cognitive dimension. His concepts of the Zone of Proximal Development and the More Knowledgeable Other illuminate how learning occurs through social interaction and guidance. In the UAE program, volunteers served as More Knowledgeable Others for students, while the Ministry served the same role for volunteers, providing resources, training, and infrastructure. This nested scaffolding—state → volunteer → student—transformed pedagogy into governance, reinforcing resilience and adaptability (SDGs 4, 16).

Together, these traditions form the JDL triangle (Table 3). Justice ensures equity, Dialogue enables empowerment, and Learning institutionalizes adaptability—the operational core of

structured co-production. The UAE case thus exemplifies governed participation, where structure becomes the architecture of inclusion rather than its antithesis.

**Table 3**

*The Justice–Dialogue–Learning (JDL) Framework*

| Dimension           | Core Principle                              | UAE Application  | SDG Link    |
|---------------------|---|--|-------------|
| Justice (Fraser)    | Redistribution, recognition, representation | Equitable digital access; inclusion of volunteer educators | SDGs 10, 16 |
| Dialogue (Freire)   | Communication and reflection as empowerment | Peer mentorship; feedback loops; emotional support         | SDGs 4, 17  |
| Learning (Vygotsky) | Scaffolding and social interaction          | Multi-level learning: ministry → volunteer → student       | SDGs 4, 16  |

### Research Design and Methodology

This study employs a qualitative case-study design with mixed-methods integration to examine the organizational structure, impacts, and policy relevance of the UAE national volunteer-teaching initiative during the COVID-19 pandemic. A case-study design enables rich contextual analysis while integrating quantitative and qualitative evidence to enhance validity and transferability (Creswell & Plano Clark, 2018; Yin, 2018). The design aligns with public-affairs research traditions emphasizing multi-perspective inquiry into governance, civic participation, and institutional learning (Bryson et al., 2014).

### Case Selection and Sampling

The UAE was selected as a critical case (Yin, 2018) to test whether co-production can operate effectively within centralized authority. The volunteer-teaching initiative—mobilizing more than 600 trained educators—combined strong digital infrastructure, rapid policy coordination, and broad civic participation. The case is analytically generalizable rather than statistically representative, offering a transferable framework for hybrid governance systems pursuing SDGs 4, 10, 16, and 17. A purposive, stratified sampling approach ensured diversity across socioeconomic status, gender, academic performance, and school type. Three participant groups were included—volunteer teachers, students, and parents (healthcare workers)—identified through Ministry of Education records. Attrition (12 students, 6 parents) was documented and excluded to maintain analytic integrity.

### Data Collection and Analysis

Four data sources were triangulated. Structured surveys included 5-point Likert and open-ended items addressing learning continuity, motivation, well-being, and program impact; instruments were piloted, back-translated, and achieved Cronbach's  $\alpha = .86$ . Semi-structured interviews ( $n = 30$ ) explored adaptation, engagement, and psychosocial experiences. Academic metrics included pre- and post-intervention grade averages, weekly engagement logs, and self-reported confidence scores. Comparative document analysis of policy and practice documents from Brazil, Finland, South Africa, and India contextualized the UAE model within global patterns (OECD, 2022; UNESCO, 2021).

Quantitative data were analyzed in IBM SPSS Statistics 29. Paired-sample t-tests assessed pre- and post-intervention changes in academic performance and self-reported motivation; Wilcoxon signed-rank tests were applied where normality assumptions were not met. Qualitative data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis in NVivo, combining deductive codes reflecting the JDL dimensions with inductive codes from participant narratives. Inter-coder reliability reached Cohen's  $\kappa = .84$ .

### **Reflexivity, Ethics, and Limitations**

The lead researcher maintained analytic memos to track positionality and interpretive decisions. Positioned as a semi-insider, familiar with regional education systems but independent of program administration, the researcher critically examined potential bias. Ethical approval was granted by the Abu Dhabi Department of Education and Knowledge (Approval No. 2023-04-017). All procedures adhered to the Declaration of Helsinki, COPE, and ICMJE standards. Data were pseudonymized and stored on encrypted servers in compliance with UAE federal privacy regulations and the GDPR. Informed consent was obtained from all participants, with parental consent and child assent for minors. The study is bounded by the UAE's centralized governance model, which may not generalize fully to decentralized or low-resource systems. Reliance on self-reported psychosocial data introduces potential bias, mitigated through triangulation with academic and qualitative evidence. The cross-sectional design limits temporal insight, indicating the need for longitudinal studies.

### **Findings**

This section presents integrated results addressing the study's three objectives, linking empirical evidence with the JDL framework. Quantitative and qualitative findings are triangulated to show how the UAE initiative operated as a co-produced public-education service during crisis, advancing SDGs 4, 10, 16, and 17.

### **Mobilization, Scope, and Civic Engagement**

Within two weeks of launch, 619 qualified educators were recruited through Ministry channels to serve children of frontline healthcare workers and other vulnerable learners. This rapid, non-monetary participation reflects the latent civic infrastructure of the teaching profession (Putnam, 2000), activated under institutional stress. Among the 619 educators, 68% were women and 32% men, collectively serving 219 students aged 6–15 across 12 subjects. Instruction was delivered mainly in small groups of one to four students, balancing personalization and scalability (Table 4). Compared with fragmented volunteer efforts in prior crises, the UAE's centralized-but-participatory system illustrates structured co-production in operation: state coordination enabled civic participation rather than suppressing it, simultaneously redistributing learning opportunities (Justice), enabling sustained family contact (Dialogue), and providing scaffolded small-group instruction (Learning).

**Table 4**  
*Volunteer Teacher and Student Participation Metrics*

| Metric                   | Value        |
|--------------------------|--------------|
| Total volunteer teachers | 619          |
| Student beneficiaries    | 219          |
| Subjects covered         | 12+          |
| Average class size       | 1–4 students |
| Female teachers          | 68%          |
| Male teachers            | 32%          |
| Grade levels served      | 1–9          |

*Note.* From author's field data (2024).

### Impact on Student Academic Performance

The study evaluated pre- and post-program academic data in Mathematics, English, and Science using paired-sample t-tests and Wilcoxon analyses. A statistically significant improvement was observed in Mathematics ( $p < .05$ ). Improvements in English and Science, though substantial in magnitude (+13 percentage points each), did not reach significance ( $p = .06$ ). While statistical significance was not reached for English and Science, the magnitude of improvement suggests practical significance, likely constrained by sample size. Together, the results indicate a consistent, positive academic trend across all core subjects (Table 5). Younger learners (Grades 1–4) showed the largest gains, benefiting from individualized pacing and dialogic feedback. These data are interpreted cautiously given the small-N scope and short duration; nonetheless, they support the hypothesis that centrally coordinated volunteer teaching mitigates crisis-induced learning loss when grounded in structured co-production.

**Table 5**  
*Student Academic Performance Before and After Volunteer Teaching*

| Subject     | Pre-Program Mean (%) | Post-Program Mean (%) | Improvement (%) |
|-------------|----------------------|-----------------------|-----------------|
| Mathematics | 67                   | 81                    | +14             |
| English     | 72                   | 85                    | +13             |
| Science     | 69                   | 82                    | +13             |

*Note.* From Student learning portfolios and teacher evaluations (2024).

### Psychosocial and Emotional Well-being

Beyond academic outcomes, the initiative played a protective role during a period of social isolation and parental absence. Survey data ( $n = 172$ ) revealed significant emotional benefits: 76% of students reported increased motivation, 71% reported reduced stress, and 68% reported a stronger sense of social connection (Table 6). Qualitative evidence reinforced these patterns. A nine-year-old student observed that her teacher asked how she was feeling before each lesson—something no one had done before. Volunteer educators described reciprocal growth, with one stating that helping the children helped him cope. This reciprocity embodies mutual

resilience: teaching becomes a two-way civic act rather than a one-directional service, aligning with co-production's core principle that public value is created reciprocally between providers and users. Disparities remained, however. Adolescents preparing for national exams expressed anxiety about curriculum alignment, indicating the need for differentiated volunteer frameworks that integrate psychosocial care with advanced academic scaffolding.

**Table 6**

*Emotional and Psychosocial Impacts on Students*

| Psychosocial Dimension      | Students Reporting Positive Impact (%) |
|-----------------------------|--|
| Increased motivation        | 76                                     |
| Reduced stress and anxiety  | 71                                     |
| Greater sense of connection | 68                                     |

*Note.* From Student and parent surveys (2024).

### Stakeholder Perspectives and Cross-Sector Impact

Interviews with 42 volunteer teachers highlighted vocational rejuvenation and pedagogical creativity. Freed from bureaucratic constraints, volunteers adopted adaptive, relational methods, reporting growth in digital fluency, trauma-informed communication, and differentiated scaffolding. One mid-career teacher described the experience as rebuilding trust in learning. Fifty-one frontline parents (ICU nurses, emergency physicians) described the program as both academic relief and emotional assurance—knowing that someone was supporting their children's homework while they worked extended shifts produced measurable reductions in household stress. This cross-sector outcome reinforces social-capital spillover: educational support sustained healthcare capacity, an intersectoral benefit rarely quantified in crisis governance. The program bridged education and healthcare, producing both bonding and bridging capital (Putnam, 2000), and validated the JDL claim that justice, dialogue, and learning operate as mutually reinforcing dimensions of structured co-production.

### Comparative Analysis: Centralized and Decentralized Models

To enhance generalizability, the UAE model is compared with decentralized volunteer education in Finland and Brazil (Table 7). The comparison draws on UNESCO (2021), OECD (2022), World Bank (2022), and study data. The UAE model extends co-production theory by demonstrating that centralization and participation are not mutually exclusive. When supported by digital equity, transparent standards, and civic trust, hierarchical systems can facilitate inclusive co-creation. The optimal architecture is hybrid: a centrally managed digital platform and quality-assurance framework ensure Justice and scalability, while local schools, NGOs, and community organizations adapt content and delivery, fostering Dialogue and contextual Learning.

**Table 7***Centralized vs. Decentralized Co-production in Crisis Education*

| Country / Model                | Governance                             | Quality Assurance                     | Civic Partnership                          | Primary SDGs  |
|--------------------------------|--|---------------------------------------|--|---------------|
| UAE (Structured Co-Production) | Centralized; unified digital platforms | High; uniform training and monitoring | State–NGO partnerships; cross-sector MOUs  | 4, 10, 16, 17 |
| Finland (Local Co-Design)      | Decentralized; municipal autonomy      | Moderate; teacher autonomy            | School–community networks                  | 4, 17         |
| Brazil (Grassroots Networks)   | Polycentric; NGO-led                   | Variable; local capacity              | Civil-society and faith-based mobilization | 4, 10, 17     |

*Note.* From Ferrari et al. (2022); OECD (2022); UNESCO (2021); study data (2024).

## Discussion

The UAE's volunteer-teaching initiative functioned both as an emergency response and as a governance innovation, demonstrating that civic capacity can be institutionalized within centralized systems without sacrificing inclusivity or adaptability. The discussion is organized around three analytical dimensions: extending co-production theory, rethinking participation, and governance lessons for resilient systems.

### Extending Co-production Theory

The UAE case extends classical co-production theory (Bovaird & Loeffler, 2023; Brandsen & Honingh, 2016; Osborne, 2018) by providing empirical evidence that hierarchical coordination can enable—rather than inhibit—participatory service delivery. Conventional theory has treated co-production as the natural domain of decentralized governance. The evidence indicates that centralized systems can institutionalize participation when built on civic trust, digital inclusion, and ethical design. Through Fraser's participatory justice, the initiative redistributed access and ensured parity; through Freire's dialogic pedagogy, teacher–student relationships became sites of empowerment; through Vygotsky's sociocultural theory, scaffolded small-group structures advanced both academic and psychosocial development. Together these findings advance structured co-production as a governance model in which centralized authority provides the structure, while civic actors provide the dialogue and adaptability.

### Rethinking Participation: From Charity to Civic Partnership

In many crisis contexts, volunteer teaching is treated as charity—temporary, informal, and unaccountable. In the UAE, it was reframed as civic partnership embedded in formal governance mechanisms. Volunteers were not helpers filling a state gap but co-producers of public value, legitimized through formal training, safeguarding, and coordination protocols. This finding supports Voorberg et al.'s (2023) argument that co-production is an interactive, iterative process of value creation rather than a transfer of responsibility. The UAE model demonstrates that such reciprocity—teachers supporting families, families validating teachers' roles—creates a two-way civic act, reinforcing social cohesion and institutional trust. The

process generates public value beyond educational outcomes: it builds the social capital and civic trust that are the bedrock of resilient societies (SDG 16).

### **Governance Lessons and Synthesis**

These findings suggest that the long-standing dichotomy between centralized control and participatory governance is empirically flawed. Rather than opposing forces, structure and participation operate as complementary mechanisms when mediated through institutional trust and design. This repositions co-production not as a governance alternative, but as a governance evolution.

The UAE program achieved scale because it was embedded within the formal apparatus of the Ministry of Education, supported by digital infrastructure, and guided by cross-sector collaboration across education, health, and social services. Centralized governance ensured coherence and equity (Justice), while community engagement enabled flexibility and responsiveness (Dialogue and Learning). The optimal model is therefore a hybrid architecture: a centrally managed digital platform and quality-assurance framework set baseline standards, while municipal districts and NGOs adapt delivery for local contexts. Such hybrid systems align directly with SDGs 4, 10, 16, and 17.

### **Policy Implications**

Four policy directions follow. First, institutionalize flexibility (SDGs 4, 16) by embedding volunteer teaching in national emergency-education frameworks with clear protocols for activation, coordination, and quality assurance. Second, structure for inclusion (SDGs 4, 10) through inclusive digital infrastructure, micro-credentialing, and recognition systems that sustain motivation and professional legitimacy. Third, design for adaptive learning (SDGs 16, 17) through feedback loops between volunteers, schools, and ministries, allowing continuous learning and iterative policy adjustment. Fourth, build cross-sector partnerships (SDG 17) by institutionalizing collaboration across education, health, and social-protection sectors, with shared data protocols and joint crisis-response councils that sustain coordination beyond emergencies.

### **Conclusion**

Can co-production thrive under centralization? The evidence indicates that it can. As education systems confront overlapping crises—from pandemics to displacement and climate disruption—the UAE volunteer-teaching initiative shows how civic capacity can be mobilized within strong state systems to sustain essential public services. Structure and solidarity need not be opposites: centralized coordination can enable participatory, inclusive, and equitable forms of co-production when grounded in justice, dialogue, and learning.

Three contributions emerge. First, the initiative produced measurable academic gains and psychosocial benefits for vulnerable learners, affirming the dual role of pedagogy as both cognitive and affective practice. Second, it offered reciprocal value to educators and healthcare families, reinforcing mutual resilience and civic trust. Third, the model illustrates how state coordination, inter-agency collaboration, and digital infrastructure can transform individual goodwill into organized, durable public capacity.

Comparative insights confirm that no governance model is universally optimal. Centralized approaches deliver consistency and scale; decentralized systems nurture contextual innovation. The most promising future lies in hybrid architectures that combine central standards and safeguarding (Justice) with localized flexibility (Dialogue and Learning). Policy transferability depends on adapting the UAE's core principles—strategic coordination, accredited training, equitable technology access, and integrated psychosocial care—to diverse governance and resource contexts. Future research should track long-term effects on learning, civic identity, and professional development through comparative and longitudinal designs, and should test the structured-co-production model in low-resource and decentralized settings. Treating volunteer teaching as governance innovation rather than charitable gesture reframes it as a civic partnership that enriches both education and democracy.

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## References

- Alford, J. (2014). The multiple facets of co-production: Building on the work of Elinor Ostrom. *Public Management Review*, 16(3), 299–316. <https://doi.org/10.1080/14719037.2013.806578>
- Bovaird, T., & Loeffler, E. (2023). *Public service co-production: Rethinking the relationship between citizens and government* (2nd ed.). Routledge.
- Brandsen, T., & Honingh, M. (2016). Distinguishing different types of co-production: A conceptual analysis based on classical definitions. *Public Administration Review*, 76(3), 427–435. <https://doi.org/10.1111/puar.12465>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review*, 74(4), 445–456. <https://doi.org/10.1111/puar.12238>
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.
- Ferrari, L., Mangione, G. R., & Iannello, P. (2022). Volunteer tutoring and educational equity during COVID-19: An Italian case study. *European Journal of Education*, 57(1), 97–112. <https://doi.org/10.1111/ejed.12483>
- Fraser, N. (2008). *Scales of justice: Reimagining political space in a globalizing world*. Polity Press.
- Freire, P. (1970). *Pedagogy of the oppressed*. Herder and Herder.
- Gudmundsdottir, G. B., & Hathaway, D. M. (2020). “We always make it work”: Teachers' agency in the time of crisis. *Journal of Technology and Teacher Education*, 28(2), 239–250.
- Kapucu, N. (2009). Interorganizational coordination in extreme events: The World Trade Center attacks, September 11, 2001. *Natural Hazards*, 33, 27–48.
- Lepp, L., Leijen, Ä., & Pedaste, M. (2021). How did teachers cope with the transition to distance learning during COVID-19? *Education and Information Technologies*, 26(6), 6821–6844. <https://doi.org/10.1007/s10639-021-10504-0>
- Leung, C. H. (2016). Civic engagement and educational service-learning: Evidence from East Asia. *Asia Pacific Education Review*, 17(3), 433–445.
- Lindfors, P., Minkkinen, J., Kinnunen, J., Rimpelä, A., & Hotulainen, R. (2021). Social-emotional learning intervention and its effects on students' well-being and learning outcomes. *Journal of Educational Psychology*, 113(4), 654–667. <https://doi.org/10.1037/edu0000614>

- Maringe, F., & Sing, N. (2021). Teacher volunteers and education recovery in South Africa during COVID-19. *International Journal of Educational Development*, 85, 102452. <https://doi.org/10.1016/j.ijedudev.2021.102452>
- Morris, P., Shah, R., & Morris, C. (2012). Education and emergencies: Developing evidence-based approaches. *Compare: A Journal of Comparative and International Education*, 42(2), 177–185. <https://doi.org/10.1080/03057925.2012.636986>
- Moynihan, D. P. (2012). Learning under uncertainty: Networks in crisis management. *Public Administration Review*, 72(2), 350–361. <https://doi.org/10.1111/j.1540-6210.2011.02501.x>
- OECD. (2022). *The state of higher education: One year into the COVID pandemic*. OECD Publishing. <https://doi.org/10.1787/83c41957-en>
- Osborne, S. P. (2018). From public service-dominant logic to public service logic: Are public service organizations capable of co-production and value co-creation? *Public Management Review*, 20(2), 225–231. <https://doi.org/10.1080/14719037.2017.1350461>
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- UNESCO. (2021). *Education in a post-COVID world: Nine ideas for public action*. <https://unesdoc.unesco.org/ark:/48223/pf0000375704>
- UNICEF. (2021). *COVID-19 and school closures: One year of education disruption*. United Nations Children's Fund. <https://data.unicef.org/resources/one-year-of-covid-19-and-school-closures/>
- Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2023). Co-creation and co-production revisited: Understanding value creation in public governance. *Policy & Society*, 42(2), 167–185. <https://doi.org/10.1093/polsoc/puad005>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Williamson, B., & Eynon, R. (2020). Emergency education platforms and the pandemic pivot. *Learning, Media and Technology*, 45(3), 307–314. <https://doi.org/10.1080/17439884.2020.1820272>
- World Bank. (2022). *Learning losses from COVID-19 could cost this generation of students close to \$17 trillion in lifetime earnings*. <https://www.worldbank.org/en/news/press-release/2021/12/06/learning-losses-from-covid-19-could-cost-this-generation-of-students-close-to-17-trillion-in-lifetime-earnings>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.

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