

Supporting learning in contexts of disruption by natural disaster, war, and communal violence:

A COMPARATIVE CASE STUDY OF SCALABLE STRATEGIES FROM FOUR SETTINGS

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INTRODUCTION

- Impact of disasters and educational disruption
- Frequency and intensity increasing
- Over 224m. Students impacted annually (UNESCO)
- Recovery and survival does not address educational continuity
- Different types of disruption shape educational outcomes and responses
- Disruption as a multidimensional process
- We explore potential pathways of risk management and amelioration.

IDENTIFYING GAPS IN THE RESEARCH

- First, a cross-contextual comparison of educational disruption mechanisms across natural disaster, war, and communal violence is needed
- Second, quantitative retention data needs to be integrated with qualitative teacher and learner perspectives in a single mixed-method design.
- Third, a pragmatic, actionable framework linking scalable delivery models to governance and equity is required.

THE FOUR SETTINGS

- Hurricane Katrina in the United States
- Protracted communal violence in Northern Ireland,
- Recent war-related disruptions in Gaza
- A 2024 disaster-management e-learning initiative in Saudi Arabia led by ULS.

KEY QUESTIONS

- How do physical displacement, infrastructure loss, psychosocial trauma, and institutional breakdown interact to undermine educational access, quality, and equity?
- Which hybrid delivery models achieve higher short-term retention and foundational skill gains during disruption?
- What barriers and enablers shape program sustainability across different disruption types?

CONTEXTUAL ISSUES

- Impact of Covid-19 pandemic
- Growing impact and integration of new technologies has created a new paradigm in educational systems.
- Globalization, spread of the knowledge economy and vastly improved and sophisticated communications technologies have been paralleled by significantly increased student and faculty mobility.

DIMENSIONS OF DISRUPTION

- *Physical displacement*: forced relocation of learners and educators away from their normal school communities.
- *Infrastructure loss*: destruction of school buildings, electricity, internet connectivity, and learning materials.
- *Psychosocial trauma*: encompasses fear, grief, hypervigilance, and loss of routine experienced by both children and adults.
- *Institutional breakdown*: collapse or severe weakening of governance systems, including assessment, credentialing, teacher payroll, and ministry oversight.

FOUR SETTINGS

| | | | |
|-------------------------------|--|--------------------------|--|
| New Orleans, Louisiana | Natural disaster (hurricane, flooding, displacement) | 2005–2008 | Displaced students, relocated teachers |
| Northern Ireland | Protracted communal violence (sectarian) | Retrospective: 1972–1998 | Cross-community education initiatives |
| Gaza, Palestine | War and traumatic disruption (active conflict) | 2023–2026 | School-based and shelter-based learning |
| Saudi Arabia | Disaster management e-learning preparedness | 2024 | E-learning policy, displaced/remote learners |

DATA SOURCES

- Rapid assessment reports from humanitarian and government agencies.
- Semi-structured interviews with educators and learners
- Classroom observations (across active and post-disruption phases).
- Monitoring data from interventions implemented between 2018 and 2024, including ULS e-learning program logs.
- Policy and program evaluation documents from the European Union (Northern Ireland) and especially the EU Peace II program, and the Saudi Arabian Ministry of Education.

QUANTITATIVE RESULTS

- Across all four settings, hybrid delivery models - combinations of low-tech solutions (radio, printed packets), community-based learning hubs, protected learning spaces, and context-tailored e-learning platforms - consistently outperformed standard relief distributions (which typically provided only food, shelter, and basic supplies, with no structured educational component).
- In the ULS Saudi Arabia case alone the initiative maintained instructional continuity for 89% of displaced or remote learners when paired with local support structures (teacher mentors and community Wi-Fi hotspots). E-learning platform usage peaked at 7,200 daily active users during the second month of disruption, with average session duration of 23 minutes.

QUALITATIVE RESULTS

- Theme 1: *Community adaptation as the primary resilience mechanism.* In all settings, communities that self-organized learning spaces - mosques, community centers, churches, tents - before external aid arrived had significantly better outcomes.
- Theme 2: *Teacher decision-making under stress shifts from coverage to care.* Teachers consistently reported rationing their emotional energy and prioritizing psycho-social safety over curriculum coverage.
- Theme 3: *Shared problem-solving reduces hostility in contested societies.* In Northern Ireland, EU-supported cross-community education programs reduced mutual hostility not through mere contact but through structured, sustained, shared problem-solving (e.g., joint community mapping and restoration projects). Respondents described this as building procedural trust before emotional reconciliation.
- Theme 4: *Informal learning pathways are safety nets that widen equity gaps.* When formal schools closed, peer tutoring, family-led instruction, and self-directed digital learning filled gaps. However, equity worsened: learners with educated parents or stable internet access fared much better.

PERSISTENT BARRIERS

- **Fragmented funding** – Short-term humanitarian grants (typically 6–12 months) prevented multi-year planning, teacher retention, and sustainable partnerships.
- **Weak outcome measurement systems** – Few settings had real-time data on learning (viz. attendance). Most relied on proxy indicators like food distribution counts or shelter enrollment.
- **Limited pathways for credentialing disrupted learners** – Lost transcripts, unrecognized informal learning, and bureaucratic inertia blocked grade progression, certification, and transition to higher education.

FINDINGS I

- Hybrid delivery models outperform single-modality relief. This aligns with recent guidance from the *Inter-Agency Network for Education in Emergencies* (INEE, 2024), but adds evidence from both natural disaster and active war settings. Notably, the advantage of hybrid models persisted even when internet connectivity was low, provided that low-tech components (printed materials, community hubs) were well designed.

FINDINGS 2

- Trauma-informed teacher training and flexible, modular curricula improved both psychosocial wellbeing and classroom engagement. This suggests that pedagogical adaptations are not separate from mental health support—they are intertwined. A teacher trained to recognize trauma responses and adjust lesson pacing effectively delivers psychosocial first aid while teaching literacy.

FINDINGS 3

- The European Union's support for cross-community education in Northern Ireland is widely credited as a factor in reducing sectarian hostility. Our analysis suggests that EU funding was effective not merely because of financial resources, but because it was designed with specific conditions: long-term commitment (more than 10 years), mandatory cross-community collaboration for grant eligibility, and pairing of funding with mediation and dialogue training.
- Short-term aid without these conditions—as seen in the early Katrina response—failed to reduce tension and sometimes exacerbated competition for scarce resources.

SUPPORT FRAMEWORK FOR LEARNING IN DISRUPTION

- Content sensitive modality selection – matching delivery (radio printed packets, hubs, e-learning) to connectivity, security, cultural norms and available infrastructure
- Adaptive assessment and credentialing - Micro-credentials, portfolio-based assessment, portable digital learner records (offline-capable)
- Investments in policy capacity and governance - Pre-position contingency curricula, train local education cluster coordinators, embed education in disaster risk reduction plans



SPECIFIC RECOMMENDATIONS

- **Flexible funding:** Shift from 6–12 month humanitarian grants to multi-year, unearmarked education-in-emergencies funding.
- **Interoperable data systems:** Deploy lightweight, offline-capable learner tracking systems (open-source platforms such as OpenEMIS or Tangerine).
- **Mediation supports:** Train teachers in conflict-sensitive communication and basic mediation for communal violence settings.
- **Post-trauma counselling:** Integrate into teacher professional development, not only as pull-out services for learners.
- **Pre-positioned contingency curricula:** Develop modular, grade-agnostic skills packs covering literacy, numeracy, and social-emotional learning that can be deployed within 72 hours.
- **Longitudinal tracking of credentialing pathways** for disrupted learners over five to ten years.
- **Cost-effectiveness comparisons** of hybrid versus standard relief models across different disruption types.
- **Controlled studies of AI-assisted offline learning** tools in active conflict zones where connectivity is intermittent or absent.

CONCLUSION

- Educational continuity amid severe disruption is achievable, but not through technical fixes alone. It requires governance, trauma awareness, community leadership, and flexible systems that treat learning as a lifeline, not a luxury.
- The evidence from these five settings suggests that waiting for stability before investing in education is exactly the wrong strategy—by then, too many learners have already been left behind.

THANK YOU

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