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A REVIEW OF EDUCATION SYSTEMS RESILIENCE IN THE MENA REGION

LESSONS FROM EGYPT, JORDAN, LEBANON, TUNISIA, AND YEMEN

Saliba, Rachel - Brun, Cathrine - Hammoud, Mohammad - Shuayb, Maha

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LIST OF ACRONYMS

CRE	Climate-Resilient Education
CRM	Crisis and Risk Management
CSP	Crisis-Sensitive Educational Planning
DRR	Disaster Risk Reduction
ECE	Early Childhood Education
EDEP	Education During Emergency Plan
EECRP	Education Emergency Costed Response Plan
EiE	Education in Emergency
EFA	Education for All
EKB	Egyptian Knowledge Bank
EMIS	Education Management Information System
ESDP	Education Sector Development Plan
ESP	Education Sector Plan
ESPIG	Education Sector Plan Implementation Grant
ESR	Education System Resilience
GESI	Gender Equality and Social Inclusion
GPE	Global Partnership for Education
GPE KIX	Global Partnership for Education Knowledge and Innovation Exchange
HRD	Human Resource Development
JOD	Jordanian Dinar
ICT	Information and Communications Technology
IDP	Internally Displaced Persons
IIEP	UNESCO's International Institute for Education Planning
LCRP	Lebanon's Crisis Response Plan
LERSAP	Lebanon's Education Reform Strategy and Action Plan
MEHE	Ministry of Education and Higher Education
MENA	Middle East and North Africa
MoE	Ministry of Education
MoETE	Ministry of Education and Technical Education
MOPIC	Ministry of Planning and International Cooperation
MTRF	Medium-Term Results Framework
NEET	Not in Education, Employment, or Training
OECD	Organization for Economic Co-operation and Development
RACE	Reaching All Children with Education
TEP	Transitional Education Sector Plan
TIMSS	Trends in International Mathematics and Science Study
TVET	Technical and Vocational Education and Training
TWG	Technical Working Group

EDUCATION SYSTEMS RESILIENCE

Introduction: Background of the project

Education Systems Resilience (ESR) is a relatively new concept but builds on more established thinking around risk, crisis, conflict, emergencies, and systems reform in education. The increased attention to ESR must be understood as part of the global policy shift towards resilience. ESR focuses on ensuring that education systems are better equipped to respond to both current and future shocks and disruptions. This emphasis has become particularly important within the growing field of Education in Emergencies (EiE) and after the COVID-19 pandemic, which exposed vulnerabilities and inequalities in education systems worldwide (Brun & Shuayb, 2023; Tarricone et al., 2021).

Despite the emerging manifestation of ESR in global policy, there is limited understanding of what resilience in education systems means in both theory and practice. There is also a gap between the general globalized policy concept and local meanings of resilience. This is especially relevant in the Middle East and North Africa (MENA), where global interpretations of resilience, once translated into national policies and programs, tend to replace local understandings and usages. In many contexts, those local understandings of resilience carry deeper political connotations and are associated with collective resistance, justice, belonging, and the power to remain (Badarin, 2023; Giacaman, 2020).

This report examines education resilience in five of the MENA countries. More specifically, it explores the context of education in the Global Partnership for Education (GPE) MENA countries and analyzes how the concept of resilience is integrated within the Ministries of Education's strategies, plans, and reforms. It seeks to assess the extent to which these strategies, plans, and reforms are resilient against shocks and disruptions, and to position them within the components of the conceptual framework adopted in this study. The report discusses the meaning of education systems' resilience and how it is approached in national education policies and plans in the MENA.

The report is part of the MENA Observatory on Education System Resilience run by the Centre for Lebanese Studies (CLS). The Observatory is an initiative by the GPE's Knowledge and Innovation Exchange (GPE KIX) aiming to critically discuss and understand Education Systems Resilience (ESR) in the MENA context. Our vision is to provide research-based evidence that can help the countries included in the study to strengthen education systems, recover from disruptions and have the capacity to anticipate and adapt to future adversities.

We thus develop a working definition of education systems' resilience for the MENA region, with the aim of analyzing how it is presented in education reforms, strategies, and plans in the five GPE MENA countries: Egypt, Jordan, Lebanon, Tunisia, and Yemen. We discuss the meaning of resilience and education systems resilience (ESR), and apply a framework for analyzing ESR in national education strategies and plans in the five countries. In the case studies presented, we analyze to what extent ESR is present as well as the meaning of resilience applied in official education strategies, plans, policies, and reforms.

The study seeks to answer the following questions:

1. What is the state of education in the GPE MENA countries?
2. How is "resilience" manifested in the Ministries of Education's strategies, plans, and

reforms?
3. To what extent are national education strategies, plans, and reforms resilient against shocks and disruptions?
4. Where do these education strategies, plans, and reforms fall within a framework of education system resilience that this study adopts?

In addressing these questions, our study focuses on marginalized groups in education, including women, individuals with disabilities, migrants, and those affected by socioeconomic, class, and urban-rural divides.

The remainder of this introduction is structured to provide a comprehensive understanding of resilience within global and regional education policy contexts. It begins by examining the global discourse on resilience, crises, and emergencies, tracing its conceptual evolution and the critiques surrounding its adoption in development and education policy. The following section explores how resilience has been translated, interpreted, and operationalized across the Arab region, highlighting the nuances between concepts such as *sumud* and *muruneh* and their implications for local understandings of resilience. The third section introduces the framework of Education Systems Resilience (ESR) (Cameron et al., 2024), outlining its analytical components and its relevance as a lens for examining education policy and reform. This is followed by the methodology section, which explains the study's temporal and analytical approach. The final section situates these discussions within the broader context of educational reform in the MENA region, underscoring the political, social, and structural dimensions that shape the possibilities for resilient and transformative education systems.

The following chapters in this report present a detailed analysis of the five case study countries: Egypt, Tunisia, Jordan, Lebanon, and Yemen. Each section begins with an overview of the national context, followed by a summary of key education strategies, plans, and reforms since 2011. These are then examined through the lens of Cameron et al.'s (2024) Education Systems Resilience (ESR) framework to assess how each country's policies align with the framework's core components. Each country's analysis concludes with a synthesis that evaluates the findings from an overview of the educational system. The final chapter synthesizes these findings, presenting a cross-country comparison of recurring challenges, a temporal analysis of resilience and ESR before, during, and after COVID-19, and forward-looking recommendations derived from the desk review.

Resilience, crisis, and emergencies: the global discourse

The discourse on resilience has become a dominant one in global development and policy (Joseph, 2013; Reid, 2012; Tierney, 2015). Resilience, in this context, refers to the capacity of individuals, communities, or systems to anticipate, prepare for, respond to, and recover from adverse situations such as economic shocks, environmental disasters, or social upheavals (MacKinnon & Derickson, 2013). The concept is applied in a diverse set of disciplines. In education, the origin of the concept derives mainly from psychology and ecology and is applied through fields such as disaster management, humanitarianism, and EiE.

Resilience has become a core focus of EiE and the organizing grammar of action in the field (Shah et al., 2019). According to Shah et al. (2019), resilience shifts the focus from external interventions to building internal strengths and coping capacities, making it appealing as it provides an alternative to narratives that emphasize weakness or dependency. In education,

resilience is often seen as a capacity that schooling helps to develop in individuals, framing it as an essential trait that allows both individuals and communities to cope with and manage their own challenges (Shah et al., 2019).

Scholars have critiqued resilience for being appropriated and operationalized with neoliberal values that emphasize individual responsibility and market-based solutions (Evans & Reid, 2015; Joseph, 2013; MacKinnon & Derickson, 2013). This critique forefronts resilience as a form of governance that disciplines individuals and communities to conform to market-driven imperatives. It promotes a vision of the world that aligns with neoliberal values, such as competition, efficiency, and self-reliance, while marginalizing alternative perspectives that advocate for collective action and structural transformation (Joseph, 2013; Bryant & Aggleton, 2025). To this end, resilience as an agenda tends to depoliticize poverty, inequality, and environmental degradation (Joseph, 2013) that produce vulnerabilities during a crisis.

Resilience is often associated with crises such as natural disasters and violent conflicts, communicable diseases like COVID-19 and political conflicts (Cameron et al., 2024; Tarricone et al., 2021). Critical scholarship on resilience has, however, pointed to the consequences of defining a crisis in specific ways as it is not just an objective event, but based on a specific understanding shaped by discourses and language, power relations, perceptions, institutional practices, and social interaction (Hay, 1999; Gigliotti, 2020; Zhao, 2020; Pál, 2025).

Building on this, resilience as a crisis response runs the risk of normalizing crises, emergencies, and disruption. This normalization, reinforced by the growing "humanitarianization" of aid to education (Brun & Shuayb, 2020), has reduced the urge by the international community and national actors to pursue deeper systemic and structural reform needed to address and eliminate underlying inequalities (Evans & Reid, 2015; Joseph, 2013).

The normalization of crisis has produced a cycle in which constant exposure to crisis dulls the capacity for political imagination and limits the possibility of transformative action (Masco, 2017). In this dynamic, a crisis-discourse functions less as a means to question the historical and structural conditions that created vulnerability and more as a way to preserve and stabilize existing institutions and practices. The crisis-discourse produces an emergency imagery (Brun, 2016; Calhoun, 2004, 2010; Pandolfi, 2003) framing the present as both a state of exception (Agamben, 2005) and a continuous anticipation of future emergencies. Within this context, the global discourse on resilience becomes central as it positions resilience as a necessary capacity to withstand potential shocks, rather than as a way to imagine or work towards a desirable future. As a result, the future is increasingly conceived through the lens of expected crises and disruptions (Brun, 2016; Opitz & Tellmann, 2015).

MENA, the Arabic-speaking world, and resilience

Some translate resilience to Sumud (steadfastness, meaning sticking to the land), others to Jalad (meaning ability to withstand), or Muruneh (flexibility) or thabat (pliability), and yet others call it alqudra ala attahamul (capacity to withstand) (Giacaman, 2020, p. 1).

There is a substantial body of academic work on the origin and use of resilience as a practice in the Arab speaking world, with a central focus on Palestine. As the quote by Giacaman (2020) shows, there is a number of different translations of resilience in Arabic.

Sumud is perhaps the most known concept outside the MENA and can be understood in a decolonial ontology and epistemology of resistance (Badarin, 2023). *Sumud* refers to collective forms of agency, solidarity, and support networks, embedded in relationships, connections to the land, historical memory, and symbolic capital. It is based on social justice and with an aim to reduce structural violence and injustice (Giacaman, 2020).

While *Sumud* is the most known concept in the international discourse, the most common Arabic translation of resilience is *Muruneh* (meaning coping/adapting), which is closer to the global discourse and meaning of resilience discussed above.

International policy actors sometimes conflate *Sumud* with *Muruneh* (Elhendi & Buzzanell, 2024; Giacaman, 2020), focusing on resilient individuals coping with settler colonialism and global inequalities, rather than resisting these violations. The conflation risks contributing to normalizing oppression, structural violence, collective punishment, and genocide (Badarin, 2023). Hence, the global policy concept of resilience fails to capture the coping and adaptation mechanisms that communities in the region have embraced for years (Elhendi & Buzzanell, 2024).

Education Systems Resilience: a framework for analysis

Resilience has become a 'travelling concept' moving between both academic disciplines and world regions (Stocker, 2024). The meaning in Arabic is multifaceted, as discussed above, and could be seen as a continuum from coping to transforming. This is also reflected in academic scholarship on resilience, which expanded the meaning of resilience to adaptive and transformative resilience to allow for the potential of change that lies in disturbance (Asadzadeh et al., 2022; Ferguson, 2013; Folke, 2006; UNESCO, 2016; Walker, 2020). Transformative resilience helps to move the focus from individuals to systems and to go beyond absorbing shocks (coping) or making small adjustments (incremental adaptation) to rethinking and restructuring systems so they become more just, sustainable, and capable of evolving with changing circumstances.

As mentioned above, 'Education Systems Resilience' (ESR) is an emerging concept and discussion in global policy and has gradually entered the discourses in GPE MENA countries. It is not commonly used, and there is little agreement on a single concept. Our working definition for ESR follows, but expands, Dülks et al (2023, p.3, in Cameron et al 2024, p.4) definition by including a transformative element (Asadzadeh et al. 2022; Ferguson et al., 2013): the capacity of an education system to absorb, resist, and adapt to disturbances, ensuring the continuity of its vital functions and enhance its reformative adaptive capacities.

A study of Education Systems Resilience (ESR) requires an analysis of resilience that can bridge responses to ongoing crises as well as the strategies for systems strengthening and transformation (Brun & Shuayb, 2020; Ferguson et al., 2013). Rooted in a social-ecological perspective, studies on ESR view education as a dynamic ecosystem of interconnected actors and institutions, emphasizing collaboration and learning across system levels (Kelcey et al., 2024) and including the government, policymakers, civil society, international donors, learners (students), teachers, parents, and educational institutions. ESR frameworks typically highlight three interrelated dimensions: 1) resilient structures, including policies, financing, and governance mechanisms that ensure stability and flexibility; 2) resilient processes, encompassing coordination, data systems, and participatory decision-making; 3) and

resilient people, such as teachers, learners, and administrators equipped with adaptive skills and values (Seng Tan & Jia as cited in Tan & Chua, 2025; Cameron et al., 2024). Following the working definition of ESR and Cameron et al. (2024)'s ESR framework, the following strategic components for ESR will be the starting point for our analysis: Strengthen, Anticipate, Plan, Respond and Recover, Prevent and Mitigate, and a cross-cutting component on Gender Equality and Social Inclusion (GESI), as set out in Figure 1.

To enhance the resilience of education systems, the framework is helpful to indicate that various forms of change should be implemented across the system at multiple levels. This often begins with changes within a country's Ministry of Education. The research presented in this report analyzes national education strategies, plans, and reforms developed and/or adopted by the Ministry of Education and variably international actors in each of the five countries. Each plan was assessed based on Cameron et al.'s (2024) framework of ESR, which primarily focuses on policies and plans and does not consider ground-up resilience activities such as those conducted by students, schools, and other educational institutions (Cameron et al., 2024). The five strategic components are:

1. **Strengthen:** A resilient system requires continued strengthening regardless of crisis and emergency status (GPE, 2024). This component involves the ongoing improvements to education systems as well as systemic reforms. It includes addressing present-day vulnerabilities and inequalities as well as ongoing efforts to build reliable, flexible systems for quality education, regardless of emergency status. It reflects forms of system strengthening (Cameron et al., 2024)**.** Like resilience, definitions of systems strengthening can vary and activities could include planning for EiE, collaboration, coordination, communication, financing, supervision, and support to schools, as well as quality teaching, setting clear goal, human resources, reform strategies, curriculum and development, assessments, data management, planning, monitoring, accountability, and governance and management (Cameron et al., 2024; GPE, 2024; Tarricon et al., 2021; USAID, 2022).

2. **Anticipate:** This component involves predicting future challenges and risks. It is strongly linked to the "Plan" component below and emphasizes the need for having policies, procedures, and contingencies in place to address immediate and known emergencies and disruptions, as well as anticipate future unknowns through foresight analysis. This is typically achieved through Education Sector Plans, which must be context-sensitive, evidence-based, and inclusive.

3. **Plan:** As a component of the framework, this area is often equated with *policymaking* and encompasses efforts to articulate strategic objectives, define rights and responsibilities, and outline a course of action. Planning also specifically refers to developing policies for resilience at the national level, such as Disaster Risk Reduction (DRR)[1], Crisis-Sensitive Educational Planning (CSP)[2], and Climate-Resilient Education (CRE) that ensures planning for times of emergencies.

4. **Respond and Recover:** This component involves short, medium, and long-term activities to ensure effective recovery measures post-crisis.

5. **Prevent and Mitigate:** This component includes implementing strategies for sustainable development and climate change, disaster risk reduction, and peacebuilding. It includes

1 DRR is a practice of reducing the risk of disasters through systematic efforts to anticipate, analyze, plan, and manage causal factors

2 CSP education planning involves identifying and analyzing risks to education as a result of conflict and crises. CSP covers conflict, disaster, climate change prevention and mitigation and supporting education for displaced populations.

policies and programs that attempt to prevent future crises and mitigate the impacts of ongoing disruptions (GPE, 2024).

It is essential to acknowledge that there is a degree of overlap between components, which reflects the complexity of the underlying concepts and literature used to construct it. It indicates that ESR is in the early stages of emergence (Cameron et al., 2024).

A deeper understanding of how crises affect vulnerable and marginalized groups is essential for ESR. Gender Equality and Social Inclusion (GESI) considerations are included in all levels of the framework. Effective resilience requires equitable access to education and inclusive policies that address the needs of vulnerable populations (Cameron et al., 2024). For a system to be considered resilient, it is necessary for marginalized populations to be included in policy development activities (GPE, 2024).

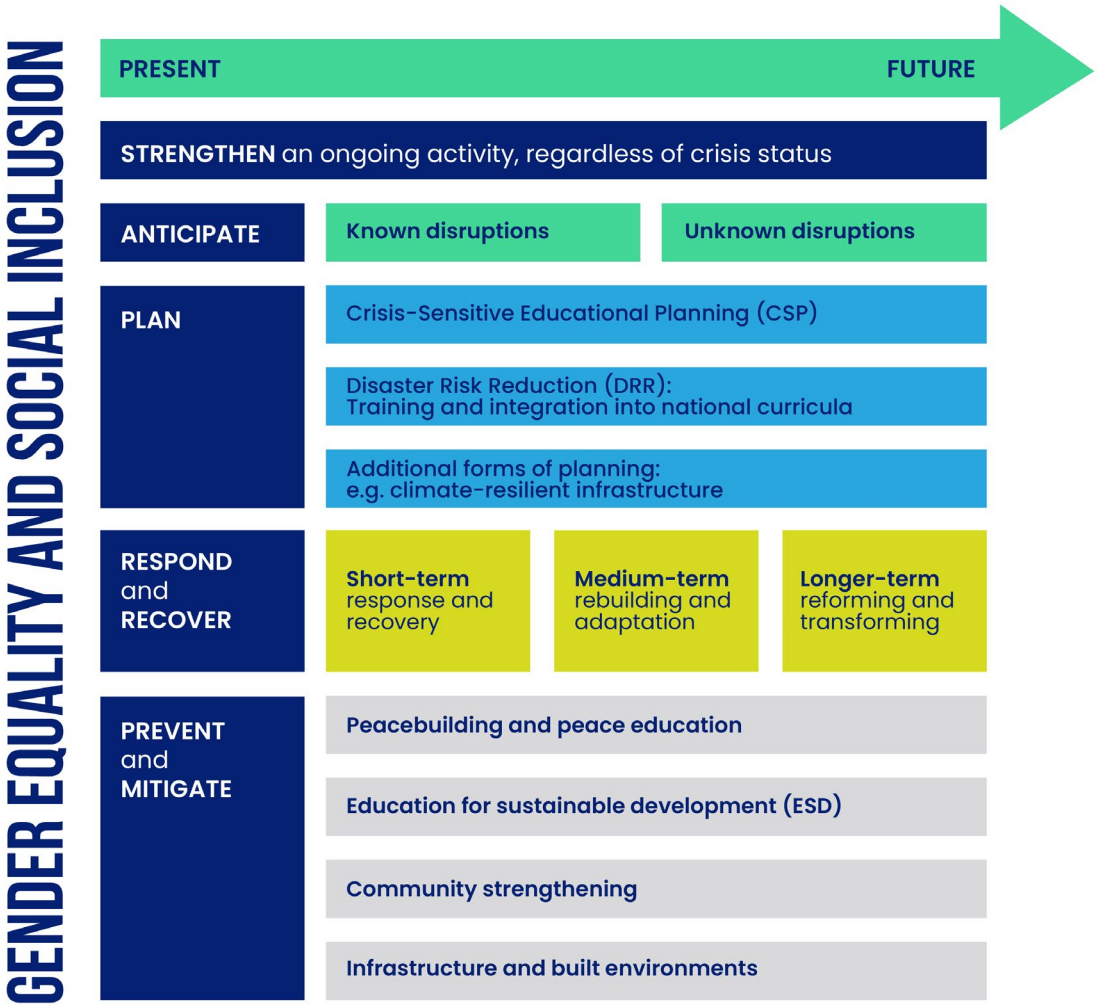

Figure 1- Emerging framework to conceptualize ESR (Cameron et al., 2024)

Methodology

All countries in the GPE KIX MENA region have experienced compounded or pluri-crises, with different ongoing crises emerging, operating simultaneously, and interacting to create specific outcomes and needs. The COVID-19 pandemic served as a recent significant stress test for educational systems worldwide. The pandemic challenged the sector's immediate response mechanisms and its enduring capacity to manage future crises. In understanding

ESR, the timing of resilience —meaning resilience before, during, or after a disruption —is crucial (Ferguson et al., 2013; Horàk & Špaček, 2024). To understand the resilience of education systems to disruptions, we suggest adopting a temporal lens that considers the pre-, during, and post-COVID-19 periods as a baseline for research, examining how COVID-19 interacted with concurrent crises and disruptions.

The project is not primarily focused on COVID-19 and its impact on education, but rather on how MENA GPE countries have addressed multiple and overlapping crises before, during, and after the COVID-19 pandemic. Hence, we use the pre-COVID, during COVID, and post-COVID periods as temporal reference points. This temporal reference point serves as a baseline for examining how education systems evolved in countries' crisis response and preparedness, thereby creating a clear basis for understanding the phenomenon of ESR in the five country contexts and its evolution over time.

Therefore, instead of emphasizing COVID alone, our approach aims to understand how education systems, primarily education strategies, plans, and reforms prepared and adopted by the ministry of education in each of the five countries, have managed and adapted to compounded crises over time, with a focus on how different crises have intersected at various points to shape the nature of specific educational responses.

For the sake of consistency across the country studies, we started the timeline in 2011, which coincides with the Arab Spring and the subsequent Syrian crisis. These events significantly impacted all the countries involved and provided a relevant starting point for our analysis. In some cases, a review of previous years is included for clarity and overall understanding of the system.

The Context of Educational Reform in the MENA

Education reform in the Middle East and North Africa (MENA) has been marked by challenges and incomplete efforts (World Bank, 2007). It carries vast untapped potential to enhance human capital, well-being, and prosperity. While it has continued to receive major investment in modern times, the rewards of these efforts remain largely unrealized (El-Kogali & Krafft, 2019). Educational systems in the region are embedded within complex political, social, and economic structures, and any analysis must reflect these dynamics (Alayan et al., 2012). Several critical studies on education reform in the MENA suggest that the limited success of reform policies stems from top-down approaches and politically driven reforms that exclude experts and professionals (Alaoui & Springborg, 2021; Shuayb, 2018; Karami-Akkary, 2014). They are often driven by political agendas that are detached from the actual local priorities and needs, especially when initiated and supported by international, developmental, and humanitarian agencies, as well as Western governments. Hence, they are driven by the political agendas of donor countries. This eventually leads to difficulties in implementing and integrating the reform, resulting in resistance to the proposed change (Karami-Akkary, 2014). Education is also deeply political nationally, dominated by elite insiders who shape education systems and maintain their dominance, prioritizing regime stability over quality and inclusive reforms (Alaoui & Springborg, 2021). This results in education being a battleground for competing visions of national identity, cultural values, and political authority. Efforts to modernize curricula and promote critical thinking, for example, frequently face resistance, as they challenge entrenched power structures and are perceived as ideological threats (Alayan et al., 2012).

The literature suggests some recommendations for effective educational reforms. According to Alaoui and Springborg (2021), lasting educational reform in the Arab world necessitates more than just technical fixes; it requires profound political and economic restructuring. Without democratization that opens up political space and allows meaningful participation from educators, civil society, and other stakeholders, education systems will remain instruments of elite preservation rather than engines of equitable development. Only by shifting from elite-dominated, limited-access governance to inclusive and accountable institutions can education reforms be both effective and sustainable. Karami-Akkary (2014) suggests a paradigm shift: reform should be collaborative, contextually grounded, and sustained by capacity building and action research rather than imposed from above or borrowed uncritically from abroad.

In conclusion, the trajectory of education reform in the MENA region underscores that sustainable and effective reform requires not only investment and policy design but also a reconfiguration of power relations that enables genuine participation, contextual understanding, and accountability. Only through such inclusive and locally driven approaches can education in the region move beyond symbolic reform to become a true driver of equity, innovation, and social transformation.

DESK STUDIES

Introduction to the Desk Studies

The following sections analyze the education systems' resilience of Egypt, Tunisia, Jordan, Lebanon, and Yemen, countries that have faced distinct challenges and followed diverse reform paths since 2011. Each case study opens with a contextual overview, followed by a focused discussion of key education strategies, reforms, and plans over the past decade. Using Cameron et al.'s (2024) ESR framework, we assess how these initiatives align with resilience principles. Each case study concludes with a synthesis highlighting the main findings based on a general overview of the desk review for each country. Across these cases, national strategies display varying degrees of alignment with the ESR framework, underscoring how contextual pressures, governance capacity, and policy priorities shape the capacity of education systems to anticipate shocks, adapt to change, and pursue sustainable, equitable reform.

EGYPT

Context and Background

Egypt hosts the largest pre-university student population in the Middle East and North Africa, with over 23 million enrolled learners (UNICEF, 2021). Its education system is characterized by overcrowded classrooms, high student–teacher ratios, weak performance in international assessments, and a prevalent reliance on private tutoring, which continues to undermine educational equity and quality (El Baradei, 2021). Persistent shortages of qualified teachers, coupled with inadequate professional development and stagnant salaries, further erode instructional effectiveness (Moustafa et al., 2022). Governance challenges compound structural barriers and are marked by centralization, fragmented accountability, lack of coordination and communication between institutions and decision-makers, and limited monitoring and evaluation capacity (Ewiss, 2021). Informal settlements have expanded in major cities, exacerbating inequalities in access to quality education and basic services. These demographic and social pressures compound the effects of political, economic, and health crises, reinforcing cycles of inequality and marginalization (CAPMAS, 2023).

Egypt's education system has achieved broad enrollment and retention while still facing persistent quality and equity challenges. The government's Education Sector Plan 2023–2027 reports a primary gross enrollment ratio of about 107%, reflecting near-universal access when over-age and under-age enrollments are included, even as adjusted/net measures vary across sources (MoETE, 2023). However, international databases and national reports show the adjusted/net primary enrollment rate as lower and more variable (roughly in the 90% range depending on the indicator and year), underlining inconsistencies between enrollment records and population estimates that complicate precise measurement (UNESCO Institute for Statistics [UIS], 2025). Out-of-school rates at the primary and lower-secondary levels are relatively low by regional standards, but remain non-negligible (UIS, 2025). Administrative data indicate very low reported primary dropout rates; however, official figures mask localized pockets of exclusion and relatively high classroom densities in some governorates (UNICEF, 2024a). Similarly, indicators from CAPMAS show very low dropout rates: for the 2023/2024

school year, the primary dropout rate reached 0.3%, up slightly from 0.29% in the prior year, and the preparatory dropout rate dropped substantially to 0.7% (El-Sayed Gamal El-Din, 2024). These figures suggest high retention in the early grades, albeit with some fluctuation.

However, despite high enrollment and low dropout rates, there are signs of density and resource stress. Teacher-student dynamics remain a critical concern. According to UNICEF, the Ministry of Education is targeting a pupil–teacher ratio (PTR) of 26:1 in primary schools by 2027 (UNICEF, 2024b). However, current national data suggest that class sizes are significantly larger, with wide disparities: some primary schools reportedly have more than 60 students per teacher (MoETE, 2023). CAPMAS reports average class sizes of 50 students in primary schools, which are well above the optimal level, and 48 in preparatory schools (El-Sayed Gamal El-Din, 2024). These ratios, coupled with overcrowded classrooms, highlight structural resource constraints that may limit instructional quality and student engagement.

Learning outcomes remain a major concern. Egypt has participated in multiple TIMSS cycles (2003–2019), and the TIMSS (Trends in International Mathematics and Science Study) 2019 benchmarking results show that average achievement in mathematics and science remains below international averages, highlighting persistent gaps in curriculum delivery, instructional time, and home- and school-level resources (Ramdan et al., 2020). Moreover, Egypt is undertaking preparatory work to engage fully with PISA (OECD capacity-building and needs assessments), signaling a policy priority to strengthen large-scale assessment capacity and international benchmarking (OECD, 2023). The Egyptian Ministry of Education and Technical Education (MoETE) holds primary responsibility for the country's education system, overseeing everything from preschool to higher education, including planning, policy development, quality assurance, coordination, and overall advancement. Implementation at the local level is managed by education officials within each governorate. The Minister of Education periodically convenes with various councils and presides over the Supreme Council of Universities, which guides planning and policymaking in the higher education sector. Egypt is administratively divided into 140 education districts, each supported by a network of supervisors and administrators (Fitria et al., 2022).

The Egyptian education system is composed of several parallel and complementary structures, each characterized by distinct curricula, administration, and target groups (Fitria et al., 2022):

1. **Public Education System**: Administered by the MoETE, the secular system includes early childhood education (ECE) (kindergarten), basic education (grades 1–5), preparatory education (grades 6–8), and secondary education (high school). Secondary education offers both general and specialized tracks, allowing students to choose between science and non-science fields. Higher education is provided through universities and specialized institutions, following general academic curricula.
2. **Al-Azhar (Religious) Education System**: The Ministry of Al-Azhar oversees this parallel system and places a greater emphasis on Islamic religious education while covering the same general subjects as the secular system. At the secondary level, students can opt to continue in public or religious schools. Higher education within Al-Azhar mirrors the faculties found in the secular system, but with a stronger religious focus. Teacher training for religious education is exclusively conducted within Al-Azhar institutions, and this system has no provision for technical or vocational education.

3. **Vocational and Technical Education**: Vocational and technical education is highly popular in Egypt, with hundreds of vocational and technical schools at the secondary level and numerous technical institutes at the tertiary level. This pathway is designed to equip students with practical skills for the labor market, addressing national needs for skilled workers in various technical fields.
4. **Private and International Education**: The private sector plays a significant role in Egypt's educational landscape, offering schooling at all levels. This includes international schools that provide foreign curricula (such as British or American systems) and are certified by the MoETE. These institutions often offer a broader range of curricular choices and individualized teaching programs.
5. **Special Education**: Egypt has developed a network of schools and classes catering to students with special needs, including facilities for the blind, the deaf, and those with other disabilities. Inclusive classes are also available in public schools, particularly in larger cities.
6. **Non-Formal Education**: Non-formal education encompasses a range of planned learning activities outside the formal school system. This includes adult literacy programs, vocational training for out-of-school youth, community and evening schools for marginalized children, and traditional Islamic classes ("kuttab") focusing on Quranic instruction and basic literacy.

Foreign languages are incorporated into the secondary school curriculum, and in some cases, into private primary schools. The study of foreign languages is mandatory, with English, French, and German being the most commonly chosen options (Fitria et al., 2022). Promotion exams are administered in grades 2, 4, and 5, while the first national examination takes place at the end of grade 8. Students who successfully pass this exam receive a Basic Education Certificate, which qualifies them to advance to higher levels of education (Fitria et al., 2022).

Egypt has faced numerous crises and shocks since 2011, which have significantly impacted its education system. Political instability following the 2011 revolution[3] disrupted education, eroded trust, and curtailed the momentum for reform (Brownlee et al., 2015; Cook, 2017). The COVID-19 pandemic further exposed vulnerabilities, particularly in terms of access and quality in education (El Baradei, 2021), as well as in areas such as teacher training, examinations, and curriculum, among others (Mahdi & Gharib, 2021). Although the MoETE mobilized digital platforms, televised lessons, and the Egyptian Knowledge Bank to sustain continuity, these measures amplified existing inequities. Rural and low-income households often lacked internet connections and access to tablets/devices, while many teachers were unprepared to integrate digital tools into their pedagogy (Abdelrahman Tera & Rabie, 2020).

In addition to major shocks such as the 2011 revolution and the COVID-19 pandemic, a range of less acute yet highly consequential disruptors have also affected the education system. Economic volatility – including energy and resource strains, IMF-backed austerity reforms, inflation, and rising poverty – constrained household investment in education, fueling dropout and child labor (El Gamal, 2016; IMF, 2016; Roll, 2017). Additionally, environmental crises have become increasingly visible in Egypt. Climate change has accelerated desertification, contributed to extreme weather events, and aggravated air pollution, particularly in Cairo, one of the world's most polluted cities. These challenges pose a threat to agricultural production,

3 Arab Spring protests in Egypt, which began on January 25, 2011

food security, and public health, with direct and indirect implications for education. Floods and infrastructure damage occasionally disrupted school operations, while long-term environmental degradation undermined livelihoods, increasing economic vulnerability and child labor (World Bank, 2022).

There have been general disruptions to education, such as the January 25th political revolution and tense strikes by teachers, transportation workers, and other public employees. Reactions to these shocks led to a variety of school emergency measures, including restructuring instructional delivery, reorganizing security measures, and revising health procedures, as well as other measures by the MOETE (Rissmann-Joyce, 2013). Additionally, despite numerous strategies aimed at reforming the educational system, the results and impacts of educational processes remain limited, and Egypt's developmental status lags behind that of other nations. Analysis of educational outcomes reveals that the school system is primarily focused on quantity rather than quality, and it struggles significantly to meet the demands of the modern knowledge-based era (Ewiss et al., 2019).

Educational reforms, strategies, and plans in Egypt between 2007 and 2030

Since 2011, the MoETE has developed several educational strategies, plans, and reforms that have significantly impacted education in Egypt. This has been achieved with the support of international partners and stakeholders contributing to education reform, mainly UNICEF, the World Bank, USAID, the Japanese International Cooperation Agency (JICA), GIZ, UNDP, and UNESCO (Education 2.0 Research & Documentation Project, n.d.). These education strategies and plans, since 2011 include the following:

The National Strategic Plan (2007–2012) for Pre-University Education

The plan was the country's first fully comprehensive, medium-term education strategy. It was developed by the Policy and Strategic Planning Unit within the MoETE, with technical support from UNESCO's International Institute for Education Planning (IIEP).

The plan was guided by three core goals: improving quality, enhancing system efficiency through decentralization and community engagement, and ensuring equitable access to education. Anchored in values of social justice, transparency, and accountability, the MoETE aimed to create a rights-based, innovative pre-university system that fostered lifelong learning and active citizenship (UNESCO, 2007). The strategy operationalized its vision through twelve programs grouped into three clusters: 1) quality programs, which focused on curriculum reform, teacher professionalization via the Teachers' Professional Academy, and school-based management; 2) system support and management programs, which institutionalized decentralization, strengthened ICT (Information and Communication Technology) systems (EMIS and SMS), modernized monitoring and evaluation, and improved school infrastructure; and 3) level-based programs, which expanded ECE, reformed basic and secondary education (including TVET), and promoted inclusion for girls, out-of-school children, and learners with disabilities (UNESCO, 2007).

One of the plan's most innovative features was its adoption of a program-based budgeting system, calculated using the Egyptian Analysis and Projection Model (ANPRO), adapted from UNESCO's international models. This allowed policymakers to link educational reforms directly to costs, financing, and performance outcomes, departing from traditional line-item budgeting. The plan also stressed school-based management as the unit of reform,

envisioning schools as the focal points for change, with local boards of trustees and governorate councils empowered to shape priorities. Furthermore, the plan incorporated Egypt's obligations under international frameworks such as the Dakar "Education for All" goals and the Millennium Development Goals (MDGs), aligning national reforms with global standards.

However, despite institutional progress, such as the creation of the Teachers' Professional Academy and the National Authority for Quality Assurance and Accreditation, implementation was constrained by financial limitations, bureaucratic resistance, and political instability following the 2011 revolution (Moustafa et al., 2022).

The 2014 Egyptian Constitution

It was drafted in the wake of the 2011 revolution and subsequent political upheavals, positioning education as both a fundamental right and a central pillar of national reconstruction. In Articles 19–25, it offers education as free, compulsory, and a public good, mandating the state to provide schooling until the end of secondary education, expand higher and technical education, and allocate a minimum of 4% of GDP to the sector, with provisions for gradual increases to meet international standards (Constitute Project, 2014; OHCHR, 2014). Beyond guaranteeing access, the constitutional text constructs education as a vehicle for preserving national identity, consolidating civic values such as tolerance and non-discrimination, and fostering innovation and scientific advancement.

The Strategic Plan for Pre-University Education (2014–2030)

Emerging in the wake of the 2011 revolution and the adoption of the 2014 Constitution, the MoETE established the 2014-2030 strategic plan. The plan reflects the political, social, and economic transformations that reshaped Egypt during this period. It was developed following extensive consultations with local experts, civil society actors, universities, and international agencies, including UNICEF, UNESCO, USAID, and the British Council. This participatory design was intended to ensure transparency, shared ownership, and alignment with international commitments such as the Dakar "Education for All" framework and the Millennium Development Goals. The plan is informed by a medium-term expenditure framework, which links policies to financing priorities and promotes accountability in an often-underfunded sector. It also aims to shift Egyptian education away from short-term, reactive policy shifts toward a coherent, long-term vision extending to 2030. Hence, this plan prolonged the horizon to align with Egypt Vision 2030[4] and shifted focus towards ECE, expanded enrollment, infrastructure development, and stronger accountability systems. It was conceived as a national road map, intended to consolidate improvements from previous reforms while addressing persistent weaknesses in governance and quality.

The plan outlines three strategic policy directions: 1) expanding equitable access, 2) improving quality and relevance through curriculum reform, ICT integration, and teacher development, and 3) strengthening governance through decentralization, capacity building, and improved resource allocation. Implementation spans all education levels, with an emphasis on ECE, reducing dropouts in basic education, and restructuring secondary education into general and technical tracks aligned with labor market demands. Special initiatives target girls, out-

4 Egypt Vision 2030 is a national, long-term sustainable development framework launched in 2016, aimed at achieving economic, social, and environmental objectives by aligning with the United Nations Sustainable Development Goals (Ministry of Planning and Economic Development, n.d.)

of-school children, and learners with disabilities, while STEM programs nurture gifted students. Cross-cutting priorities include gender equality, lifelong learning, and citizenship education, linking schooling to Egypt's broader democratic and human development goals. The plan also underscores sustainable financing and multi-stakeholder collaboration, framing education as central to national security and socio-economic progress (MoETE, 2014).

The Education 2.0 (EDU 2.0) initiative (2018–2030) (with disclaimer[5])

In 2018, the MoETE launched a comprehensive reform initiative known as EDU 2.0, aimed at establishing a new national education system. The reform represents the first six years of a long-term transformation, designed for full implementation by 2030 in alignment with Egypt's Vision 2030 and Sustainable Development Goal 4 (SDG4). At its core, EDU 2.0 sought a fundamental pedagogical shift from rote memorization and exam-driven instruction, replacing it with student-centered pedagogies and competency-based approaches that cultivate lifelong learning skills and technological proficiency required for the twenty-first century. The World Bank supported this reform through a US$500 million project, which aimed to expand access to quality kindergarten education, provide digital learning tools, improve teacher training for nearly half a million educators, and build modernized student assessment mechanisms (World Bank, 2018a, 2018b).

The initiative responds to persistent challenges in the system, including low performance in international assessments such as TIMSS and PIRLS, a heavy reliance on rote memorization and the high-stakes "Thanawiya Amma" examination[6], weak integration of ICT, and enduring inequities in access and inclusion. EDU 2.0 addresses these issues through seven interrelated components (World Bank, 2019): 1) Expanding access to and quality of ECE; 2) Primary and Preparatory Reform ; 3) Secondary Education and Thanawiya Amma Reform; 4) Technical EDU 2.0 (restructures vocational education through Applied Technology Schools); 5) Professional Development for Educators; 6) ICT Revolution in Education (introduces a nationwide digital infrastructure—including student tablets, a Learning Management System (LMS), and data-driven management—to modernize learning and bridge the digital divide); and 7) Equity and Inclusion for students with Special Educational Needs (UNESCO, 2016; World Bank, 2019).

A key digital enabler of EDU 2.0 is the Egyptian Knowledge Bank (EKB), a national digital library launched in 2016 and subsequently integrated into the reform agenda. The EKB offers open access to global academic and educational resources and is directly aligned with the reformed Egyptian curricula through partnerships with international publishers, including Discovery and Britannica. During the COVID-19 pandemic, the EKB played a crucial role in ensuring continuity of learning when schools nationwide closed. It provided free access to digital curricula, interactive lessons, and resources aligned with the EDU 2.0 reforms, while supporting teachers with online training and assessment tools. The EKB also enabled online examinations for certain grades, facilitating the education system's transition to

5 The document reviewed and analyzed is a concept note and included the following disclaimer: "This document was originally drafted as a concept note for internal use only about the Education 2.0 Reform. It was not intended to serve as a blueprint of the reform in any way. It is provided here by consent of H.E. Dr. Tarek Shawki, Minister of Education & Technical Education (2017-2022), to be included as part of the historical record collected by the Education 2.0 Research and Documentation Project." The full plan for EDU 2.0 is not available.

6 The *Thanawiya Amma* is Egypt's national secondary school leaving examination, a high-stakes test that determines university admission and has traditionally driven rote memorization and exam-oriented teaching across the education system.

emergency remote learning. Despite persistent inequalities in internet access and device availability, the EKB functioned as the cornerstone of Egypt's digital education response, complementing televised lessons and other outreach strategies (UNICEF, 2020; World Bank, 2021).

Nevertheless, EDU 2.0 has faced criticism for inadequate teacher preparation, uneven implementation of ICT, and limited community engagement (Sobhy, 2018). The plan was established during shifting political, economic, and social contexts, while it attempted to address structural weaknesses in access, quality, governance, and financing.

Three Consecutive Strategic Plans

As of 2022, three consecutive and yearly educational strategic plans were developed: the 2022-2026 Strategic Plan, the Education Sector Plan (2023-2027), and the Education Strategy (2024-2029). Each of those strategies has significant and different goals and are produced with different stakeholders; however, given that they were so closely developed and all spanning to the current date of issuing this report (2025), it remains unclear which of the plans is currently being used and implemented by the MoETE.

The 2022-2026 Strategic Plan

Developed by the Central Administration for Planning and Quality and the General Directorate for Planning and Projects, the plan addresses long-standing systemic challenges, including quality gaps in learning outcomes, persistent inequities in access, weak alignment between educational outputs and labor market needs, and governance inefficiencies. It acknowledges the detrimental effects of outdated rote-based pedagogy, insufficient infrastructure, and external shocks such as COVID-19, which exposed the fragility of existing delivery mechanisms. Against this backdrop, the strategy seeks to consolidate and expand the EDU 2.0 reforms, prioritizing a transition to student-centered, competency-based learning and the integration of digital literacy, creativity, and life skills across all levels of education. It places strong emphasis on equity and inclusivity, targeting disadvantaged groups such as girls, rural communities, and children with disabilities, while simultaneously investing in technical and vocational education to better match graduates' skills with the evolving labor market. In addition, the plan focuses on system resilience and sustainability by embedding digital transformation, environmental awareness, and crisis-response capacity within education delivery. Governance reform is also central, with calls for strengthened accountability, transparency, and multi-stakeholder partnerships involving civil society and the private sector.

Interestingly, the 2022-2026 MOETE Strategic Plan is the first plan to mention the concept of resilience. It frames resilience in terms of **Institutional resilience** (strengthening governance, transparency, and accountability to withstand shocks), **Educational resilience** (embedding digital tools, e-learning, and electronic exams to ensure continuity during crises like COVID-19), **Infrastructure resilience** (building sustainable, energy-efficient, and adaptable school facilities), and **Social resilience** (expanding equity and inclusivity measures for vulnerable groups).

However, "resilience" is often framed in Arabic as *muruneh* "المرونة" (flexibility/adaptability) or through references to "system sustainability and crisis preparedness." For example, the plan links resilience to "environmental sustainability and green economy policies", emphasizing the need for the education system to adapt to economic, social, and environmental transformations. The terms used were "التكيف والمرونة مع التغيرات" (to adapt and be resilient to change). Regarding infrastructure and system resilience, the plan employs the term "Sumud" and states, "إقامة بنية تحتية قادرة على الصمود" (Building infrastructure capable of resilience). Finally, while the word "resilience" itself is not overused, its logic is evident throughout the strategy in references to sustainability (الاستدامة), flexibility/adaptability (المرونة), and the system's capacity to respond to shocks.

The Education Sector Plan (ESP) (2023–2027)

Developed by the MoETE in Egypt with technical support from UNESCO, coordination by UNICEF, and guidance from the Global Partnership for Education (GPE), the ESP was the outcome of extensive consultations with government ministries, civil society organizations, private sector actors, and international development partners (UNESCO, UNICEF, & GPE, 2023). It adopts a system-wide reform framework, structured around four policy pillars: 1) access and participation; 2) quality of learning and teaching; 3) equity and inclusion; and 4) governance and management, underpinned by two enabling levers—digital transformation and teacher workforce development. Its strategy translates into seven operational components: (i) expansion and improvement of pre-primary education, (ii) enhancement of basic education with a focus on foundational learning and dropout reduction, (iii) strengthening of secondary education through competency-based curricula and increased access to both general and technical streams, (iv) scaling of community schools to reintegrate out-of-school children, (v) expansion of adult literacy programs, (vi) reforms in sector-wide governance and sustainable financing, and (vii) integration of digital transformation and innovation through hybrid learning, IT infrastructure, and digital content provision (MoETE, 2023).

Available in the English language, the ESP incorporates the concept of resilience, even if it does not consistently deploy the technical term "education system resilience" used in academic frameworks. It explicitly commits to "enhancing the transparency, agility, resilience, financial and environmental sustainability, efficiency, and effectiveness of the system" (MoETE, 2023, p. 95). The COVID-19 pandemic is viewed as a pivotal moment, underscoring the need for a more agile and resilient education system, particularly through investments in digital platforms and hybrid learning, to safeguard continuity during crises. Similarly, the ESP integrates climate change resilience by embedding environmental education into curricula, introducing green school accreditation, and preparing the system to withstand the risks of extreme weather and water scarcity. Within risk analysis, resilience is linked to crisis preparedness, calling for disaster management planning, teacher training for emergency contexts, and digital infrastructure to sustain learning during shocks.

The Education Strategy (2024-2029)

The MoETE in Egypt has developed the Education Strategy 2024–2029 as a continuation of national reform trajectories aligned with Egypt Vision 2030 and the SDGs. The strategy is presented in a PowerPoint format, which does not provide many details about the plan. However, what can be understood is that the strategy is designed to address persistent systemic challenges in the education sector, including inequities in access across

geographic and socio-economic groups, high dropout rates, and the weak alignment between educational outcomes and labor market demands. Particular emphasis is placed on marginalized communities, students with disabilities, and peripheral governorates, where gaps in provision and quality remain stark.

The plan's strategic goals are organized under four broad pillars: 1) access and equity, which seeks to reduce disparities and guarantee inclusive provision; 2) quality and excellence, which targets improved learning outcomes, global competitiveness, and strengthened research and innovation capacity; 3) sustainability and lifelong learning, which emphasizes digital literacy, vocational skills, and environmental sustainability; and 4) citizenship and national security, which highlights the role of education in strengthening social cohesion, cultural identity, and national resilience. However, systemic weaknesses persist. Chronic underfunding, weak implementation capacity, and limited integration of gender equality and social inclusion (GESI) into crisis-sensitive planning continue to undermine progress (UNESCO, 2020).

Evaluating the Alignment of Egypt's Education Plans with the ESR Framework

Egypt's sectoral plans and reforms demonstrate strong investment in system strengthening (curriculum reform, teacher professional development, EMIS/digital platforms, TVET) and an emergent orientation to anticipation (largely via digital readiness and climate education). However, when measured against Cameron et al.'s (2024) full ESR framework (strengthen, anticipate, plan, respond & recover, prevent & mitigate, and systematic GESI mainstreaming), the system is partially resilience–adaptive in places (notably digital continuity after COVID-19) but insufficiently crisis-sensitive, under-financed, and uneven in inclusion for vulnerable groups.

Strengthen

The Strengthen pillar seems to be the strongest. Egypt's reforms, such as 2007–2021 and EDU 2.0, prioritize structural improvements: competency-based curriculum, teacher workforce reform, EMIS and digital platforms (Egyptian Knowledge Bank, digital exams), and expanded pre-primary provision. These investments, however, focus on long-term system quality and efficiency, and not explicitly on resilience to crisis. Newer strategies, such as the 2022–2026 and 2023–2027 plans, align closely with Cameron et al.'s "Strengthen" dimension of ESR, ensuring that systems are reliable, adaptable, and resilient.

Anticipate

The "anticipate" component is moderate, although less so in the pre-COVID-19 pandemic period. More recent plans, such as the ESP (2023–2027), explicitly integrate lessons from COVID-19 and promote digital and climate foresight (green schools, environmental education), showing improved anticipation for sudden shocks such as pandemics and slow-onset climate risks. Hence, "anticipation" is a central feature of this resilience-building plan.

Plan

Similarly, the "plan" component is also moderate. The 2022–2026 plan aligns with Egypt's Vision 2030 and the SDGs, embedding resilience into national development priorities. Similar to EDU 2.0, the 2022-2026 plan typically remains development-oriented rather than

crisis-centered: DRR, Crisis-Sensitive Planning (CSP), and costed contingency plans are not yet mainstreamed across all operational areas. The 2023–2027 plan, on the other hand, incorporates risk analysis related to pandemics, financing volatility, and climate risks.

Respond and Recover

The "respond and recover" components are partially effective and mostly aspirational. The rapid pivot to TV/online content and EKB during COVID-19 (based on the EDU 2.0 existing platforms) demonstrates real capacity to maintain continuity. Nevertheless, recovery mechanisms (costed rapid response, nationwide contingency financing, surge staffing, psychosocial and remedial learning packages scaled for the most vulnerable) are not yet institutionalized at the level ESR requires; the system still relies on ad-hoc or donor-supported responses for large shocks. We also notice moderate response and recovery components in the 2022-2026 and stronger in the 2023-2027 plan, focusing on hybrid learning.

Prevent and Mitigate

Prevention measures in the 2024–2029 strategy, such as expansion of ECE, community schools, and climate/green schooling, contribute to long-term mitigation of vulnerabilities. These align with ESR practices, where peace education, climate resilience, and sustainable development are critical to long-term prevention. However, prevention and mitigation components often remain weak or are sometimes non-existent in other plans. GESI components are present in policies, such as the 2007–2012 plan, EDU 2.0, and the 2022–2026 education strategies; however, operational gaps remain.

GESI

Equity and inclusion are identified as key pillars across various strategies, with programs focused on disability inclusion, community schools, and gender targets. However, GESI is often high-level: tools for intersectional risk assessment, differential costing, and inclusive emergency protocols for girls, children with disabilities, or remote communities are not yet consistently embedded in operational plans.

In conclusion, Egypt's education reform trajectory reflects an evolution from developmental planning (2007–2012, 2014–2030) towards modernization and digitalization (EDU 2.0) and, more recently, resilience and sustainability (2022–2026, ESP 2023–2027, 2024–2029). When analyzed against Cameron et al.'s (2024) ESR framework, most plans demonstrate strong system strengthening, long-term planning, and incremental equity measures. However, they consistently underperform in anticipating risks, institutionalizing response and recovery mechanisms, as well as prevention and mitigation strategies, and integrating comprehensive GESI approaches.

Synthesis

The previous section analyzed Egypt's educational plans through the lens of the ESR framework. In this section, the insights from that analysis are synthesized with broader contextual and empirical considerations to provide an overarching understanding of the education landscape in relation to education systems' resilience. The synthesis identifies persistent systemic constraints – particularly limited funding, teacher shortages, weak implementation capacity, and deep-seated inequalities – that collectively undermine the effectiveness and

sustainability of Egypt's education reforms.

Funding Gaps

The priority on education budget has declined, with GDP spending on education averaging 2–2.5%, far below the constitutional target of 4% and international benchmarks of 4–6% (MoETE, 2021). Education also accounts for only 9.2% of total public spending, compared to averages of 15–20% in comparable economies, and is significantly lower than in Morocco (21.3%) and Tunisia (22.6%). Within this limited budget, 89% is allocated to salaries, leaving little room for investment in infrastructure, goods, and services (MoETE, 2021). This fiscal imbalance constrains the quality and scalability of reforms, such as EDU 2.0.

Teacher Shortages and Distribution

Despite reform goals, teacher shortages and uneven distribution continue to be critical barriers. Egypt has 1.3 million teachers across 50,000 schools, yet large class sizes persist, averaging 43 students per class in the 2017/18 academic year, which undermines instructional quality and learning outcomes (Saavedra, 2019; MPED, 2018). Teacher salary stagnation, weak professional development, and inadequate digital competencies further hinder the implementation of reform (Moustafa et al., 2022). A significant proportion of teachers lack formal educational qualifications, with the highest deficits found in community schools (34%) and technical secondary schools (19%), exacerbating inequities for already disadvantaged learners (MoETE, 2021).

Recent reforms in Egypt have introduced "school support groups," a policy that effectively legalizes and institutionalizes private tutoring. While framed as a solution to teacher shortages, this approach shifts the financial burden of education onto families and legitimizes the employment of underqualified personnel. Rather than addressing structural weaknesses, such policies represent a continuation of long-standing privatization trends in education, where public resources are diverted, and educational access increasingly depends on household income. This shift undermines the principle of education as a public good, exacerbates inequality, and signals the state's withdrawal from its obligation to provide quality education for all (Sobhy, 2023).

In the EDU 2.0 reform, in particular, the most glaring omission in the reform agenda, according to Sobhy (2018c), is the neglect of teachers. While official discourse acknowledges the importance of teacher training, little has been done to provide comprehensive professional development, raise salaries, or improve working conditions. International experience, such as the Finnish model, underscores that teacher quality is the single most important factor in educational success. Yet reforms in Egypt appear to assume that technology can substitute for teachers, or that teachers can adapt to new curricula with minimal preparation. Without investing in teachers as professionals—through selective recruitment, rigorous training, and adequate remuneration—any reform will remain unsustainable and ineffective (Sobhy, 2018c).

Implementation Capacity and Decentralization Gaps

The MoETE in Egypt struggles with weak monitoring, inadequate infrastructure, and limited coordination among stakeholders. EDU 2.0, in particular, lacked transparent implementation and evaluation, as MoETE did not publish complete strategy documents, monitoring frameworks, or impact reports. Much of the available evidence comes from external partners and academic studies rather than official government evaluations (El Zayat, 2022; Marey

& Maged, 2022; Zahran, 2023). The planned Research and Documentation Project (RDP) to systematically assess EDU 2.0 was formally closed in 2020 due to the COVID-19 pandemic, leaving accountability gaps and limiting evidence-based policymaking. However, the documentation, research, and training activities continued on a volunteer basis (Education 2.0, Egypt, n.d.). Furthermore, frequent ministerial turnover, weak decentralization, and limited monitoring and evaluation (M&E) constrain the translation of plans into rapid, crisis-sensitive action.

Critiques of EDU 2.0

Egypt made substantial digital investments under the EDU 2.0 initiative. By 2021, approximately 2,500 public secondary schools had been equipped with fiber optic connectivity, while 100 "smart classrooms" were established to reach students in remote and densely populated areas. The government also distributed two million tablets to secondary teachers and students and introduced digital examinations for Grades 10–12. Since 2016, the Egyptian Knowledge Bank (EKB) has served as a cornerstone of digital reform. During the COVID-19 school closures in 2020, it was rapidly scaled to provide comprehensive online content for all primary and secondary grades (UNICEF, 2021). However, EDU 2.0 has faced widespread criticism, particularly from parents and teachers. Parents resisted reforms due to dissatisfaction with poor communication, the entrenched culture of private tutoring, and delays in textbook delivery, which forced them to rely on informal networks, such as Facebook and WhatsApp groups (Sharouda, 2020, as cited in Zahran, 2023). Teachers reported insufficient support, ineffective professional development, and a lack of clarity in implementation steps (Zahran, 2023). ICT infrastructure rollouts were highly uneven: by 2017, only 16% of public schools were technology-enabled, despite MoETE's investment in computer labs and classroom hardware (Oxford Business Group, 2017). The lack of contextual adaptation and community engagement threatened the acceptance and sustainability of EDU 2.0. Additionally, the substantial financial investment in devices contrasts sharply with schools' urgent needs for basic facilities, smaller class sizes, and adequate teacher compensation. Evidence from both Egypt and abroad demonstrates that technology alone does not improve learning outcomes; without pedagogical reform and teacher empowerment, it merely adds layers of inequality and frustration. The tablet experiment reflects a misplaced belief in technological shortcuts to systemic problems, while neglecting more fundamental investments (Sobhy, 2018a).

Moreover, the COVID-19 pandemic in 2020 both tested and accelerated the digital transformation of EDU 2.0. MoETE rapidly expanded the Egyptian Knowledge Bank (EKB) to cover all grades within four days, introduced the Edmodo platform for communication and assignments among teachers, students, and parents, broadcast educational content via TV, and distributed SIM cards to address digital inequities (Badran et al., 2021; El Zayat, 2020; Moustafa et al., 2022). Additionally, an online study platform was set up aimed at primary students in Grade 4 and above; the learning management system was aimed at secondary students; online lessons, Hesas Masr, were available for free, and recording of Madrasetna (Our School) lessons were available for free on YouTube and on two television channels (UNICEF, 2021). End-of-year exams were replaced with research projects, while Grades 10–11 sat for tablet-based exams, and Grade 12 students sat in schools under health protocols (El Baradei, 2021). However, the pandemic also revealed stark inequalities: poorer and rural families lacked access to

the internet, devices, and the capacity to support children's learning, thereby widening pre-existing disparities (MoETE, 2021). While digital platforms are strong assets, unequal access (particularly among rural and low-income households) reduces their protective value during crises.

More critically, the crisis highlighted the irreplaceable social role of schools as spaces not only for learning but also for childcare, nutrition, socialization, and the safeguarding of children. In a society where millions of women's labor force participation depends on schools, and where many students rely on school meals as a vital form of social protection, the idea of replacing schools with technology exposes the risks of deepening inequality and neglecting education's broader functions (Sobhy, 2020).

Inequalities in Access and Learning Outcomes

Not only during the COVID-19 pandemic, but also more generally, socioeconomic and geographic disparities remain entrenched. Children from poorer households, particularly rural girls, face lower access and completion rates across all education levels. In contrast, urban boys from wealthy households report near-universal completion of primary and preparatory education (around 99%), while only 48% of rural poor girls complete secondary education (MoETE, 2021). Kindergarten access is similarly stratified: 65% of children from the wealthiest quintile attend, compared to just 16% from the poorest. The digital divide further compounds these inequalities, as rural and low-income students were least able to benefit from EDU 2.0's digital components during the COVID-19 pandemic. Additionally, inclusion principles are stated in education plans and strategies, but not consistently costed or mainstreamed into emergency continuity plans.

Teaching Practices and Curriculum Gaps

Instruction remains dominated by teacher-centered, rote-based methods. In Grade 4 reading, 87% of teachers report relying on reading aloud, while only 33% regularly teach decoding skills. Similarly, in Grade 8 math and science, instruction is largely taught through passive memorization (MoETE, 2021). Newly qualified teachers remain misaligned with EDU 2.0 curricula, as Faculties of Education were not provided with updated competencies or learning outcomes, resulting in graduates trained under outdated frameworks (MoETE, 2021). While in-service training was introduced as a stopgap, this systemic disconnect undermines long-term curriculum reform.

International Experts and Guarantees

A central feature of the reforms has been the reliance on foreign experts and international education companies and organizations, raising concerns about the commodification of learning and the imposition of exam-centered cultures that are ill-suited to Egypt's context. While international expertise may appear to be a guarantee of success, Sobhy (2018b) states that experience shows that reform cannot be imported wholesale. Past strategies similarly involved foreign experts but failed to address core challenges such as financing, realistic planning, and teacher development. The real guarantees for success lie not in foreign consultancy but in setting achievable goals, ensuring sustainable funding, preparing teachers, and building societal consensus around reforms. Without these foundations, reforms risk becoming costly exercises in spectacle rather than substantive change (Sobhy, 2018b).

Lack of Clarity

With all of the reforms, strategies, and plans that go beyond the current year (2025), it is unclear which plan is being followed, operationalized, and implemented. Clarity on this matter is crucial in order to understand the direction the MoETE is currently taking and what plan is being implemented. Perhaps this could be followed up on through KIIs in the next phase of this project (case studies).

TUNISIA

Context and Background

The Republic of Tunisia, located in North Africa, is a middle-income country with a population of approximately 12.4 million (World Bank, 2024). Since gaining independence from France in 1956, Tunisia has prioritized human development, with education positioned as a central pillar of national progress.

The education system is divided as follows (Tunisia Education, n.d.):

1. Pre-primary education for students ages 3-6. It is mostly optional, but the government has made efforts to expand access, particularly in disadvantaged regions.
2. Basic education is compulsory and free for children aged 6 to 16. It is divided into primary and lower secondary. While around 90 % complete primary school, only around 70 % complete lower secondary. The percentage is even lower among poor households (UNICEF, 2025).
3. Secondary education for children ages 15 to 19.
4. Vocational and Technical Secondary Education (TVET) provides an alternative pathway to mitigate youth unemployment, offering post-basic and post-secondary programs leading to technical certificates.

Tunisia maintains high levels of access to primary education. Gross enrollment remains robust at 103.5%, reflecting over-age or under-age enrollment that contributes to near-universal access (The Global Economy, 2023). However, net primary enrollment, which accounts for children of official primary school age, has declined to 92.2% in 2023, down from 96.9% in 2018 (Institut National de la Statistique [INS], 2023). This decline may indicate delayed entry, dropout, or demographic shifts. Furthermore, according to a 2025 census-based report, the school enrollment rate for Tunisian youth aged 6–24 is 79.2%, indicating that about one-fifth of youth in this age group are not enrolled in formal education or training (INS, 2025). Completion is also a challenge. Data from the African Development Education Alliance (ADEA) indicate that primary completion rates were approximately 92.7% in 2022, lower-secondary completion rates were about 75.6%, and upper-secondary completion rates were only 35.6% (ADEA Knowledge Hub, n.d.). These figures indicate significant attrition in the education sector.

Tunisia's near-universal access to primary education was not translated into strong learning outcomes or equitable progression. Analyzes based on TIMSS 2011 data (the last year that Tunisia participated in TIMSS) indicate that fourth-grade students scored significantly below the international average in mathematics and science, with performance influenced by factors such as school resources, teacher quality, and home environment (Soudani, 2024). Subsequent national and international assessments highlight persistent weaknesses: more than 70% of students struggle with basic literacy, numeracy, and science competencies (OECD, 2022). In the 2015 PISA evaluation, Tunisia ranked 66th out of 70 participating countries, and the majority of the participating students scored below the proficiency level 1 (Bouhlila, 2021). Regional disparities exacerbate these challenges, as urban and coastal governorates outperform interior regions by wide margins in exam success rates (Ben Youssef, 2024).

Staffing levels remain relatively favorable, with a student–teacher ratio of 16.9 pupils per primary school teacher (The Global Economy, 2018). However, despite manageable class sizes, declining net enrollment, and low completion rates suggest that other systemic factors, such as household poverty, regional disparities, and school quality, continue to limit educational outcomes (INS, 2023; ADEA Knowledge Hub, n.d.).

In basic education, the main language of instruction at schools is Arabic. French is introduced in grade 3. French and Arabic are used in secondary and higher education, with some subjects, such as sciences and technical subjects, taught only in French. The private sector plays a significant and growing role in schools and higher education.

Despite these achievements, Tunisia's education system continues to face persistent challenges, particularly in addressing socio-economic disparities, reducing dropout rates, improving system governance, and enhancing learning outcomes (UNICEF, 2025). The country has experienced periods of political instability and social unrest, which have at times disrupted educational activities and hindered progress in education reform initiatives (Grazzi, 2025). Learning deficits prevail: only slightly more than six in ten children aged 7–14 demonstrate basic reading proficiency, and fewer than one-third achieve fundamental numeracy, with outcomes significantly worse among the most disadvantaged (UNICEF, 2025). Gender dynamics reveal that while girls outperform boys academically and maintain higher enrollment in secondary and tertiary education, their educational gains are not matched by labor market participation, highlighting systemic socio-economic barriers (World Economic Forum, 2025). Conversely, declining male academic engagement poses risks to workforce competitiveness and social cohesion, underscoring an urgent need for policies that target male student outcomes alongside female empowerment initiatives (Ngundu, 2025).

The Tunisian education system has been subject to multiple shocks that have affected learning continuity. The 2011 revolution, which led to the end of Zine el-Abidine Ben Ali's authoritarian regime, triggered a period of political transition marked by instability and disruptions to educational activities (Usman et al., 2025). Over the years, there has also been a decline in democracy in the country. This was clearly reflected in the 2022 Constitution, which expanded the President's decision-making power and authority (Usman et al., 2025). Similarly, an article by Jmal (2025) revealed that people in Tunisia have fallen into authoritarian nostalgia, suggesting that not only the older generation but also the younger generation has a fondness for the pre-revolution period. The latter group emphasized the need for safety and security. This has been lacking as a result of extremist groups and terrorism (Usman et al., 2025). Di Vozzo (2024) states, "Unfortunately, the reforms implemented following the revolution failed to resolve the country's persistent social problems, which have led to a resurgence in protests and social unrest" (p.6).

More recently, the COVID-19 pandemic caused unprecedented educational disruption: schools were closed for six months, remote learning access was uneven due to digital divides, and curriculum delivery was significantly streamlined to focus on essential learning (Bouhlila, 2021; Bouhlila et al., 2022). Nearly 70,000 children dropped out during the 2020–2021 academic year, increasing their vulnerability to violence, child labor, and irregular migration (Watanabe, 2022). These shocks exacerbated existing educational inequities and contributed to a rise in youth inactivity and NEET (Not in Education, Employment, or Training) rates, which escalated from 32% in 2019 to 41.2% in 2022, reflecting labor market fragility and disillusionment among young people (Di Vozzo, 2024).

Tunisia's socio-economic and political crises, including prolonged financial instability, the COVID-19 pandemic, and global economic shocks such as the war in Ukraine, have exacerbated regional disparities and eroded employment prospects for young people. Despite these challenges, education remains a governmental priority, consistently receiving the highest share of social sector spending—averaging 22% over the past decade and reaching 28% in 2021—with over 90% of the public recurrent budget allocated to salaries, limiting investment in infrastructure, curriculum reform, and governance improvements (UNICEF Tunisia, 2022; Di Vozzo, 2024).

In conclusion, Tunisia's education system demonstrates significant accomplishments in access, literacy, and gender parity. However, persistent socio-economic disparities, learning deficits, declining male engagement, and vulnerabilities to political and health shocks underscore the need for targeted reforms.

Educational reforms, strategies, and plans in Tunisia between 2011 and 2035

Seven major education reforms were passed between 1956 and 2010 (post-colonialism to pre-Arab Spring) (Mokhtari, 2017). These are the 1958, 1969, 1991, 2000 (fourth and fifth), 2002, and 2008-2009 reforms. The pre-Arab Spring educational policies and reforms addressed and aimed at achieving the following: 1) identity issues (Arabic language and Islamic religion); 2) increasing student enrollment in primary, secondary, and tertiary education; 3) decreasing the high illiteracy rates; 4) centralized higher education under University of Tunis; 5) ensuring that enrollment up to Grade 9 is mandatory; 6) change to K-12 curriculum reform that incorporated English teaching; 7) switching from objectives-based approach to competency-based approach, among others (Mokhtari, 2017).

Since 2011, Tunisia's education system has undergone various education strategies and plans as highlighted below.

The 2011 Revolution & 2014 Constitution

The 2011 Revolution, which took place between December 17, 2010, and January 14, 2011, ushered in a new era of political openness and civil society activism. As a result, the Constitution of the Tunisian Republic was adopted on January 26, 2014. It recognized the "civil state," guaranteed gender equality, free public education, and strengthened anticorruption measures—creating a constitutional foundation for education reforms. It also provided broad governance improvements (rights to unionize, transparency initiatives), indirectly supporting educational policy environments.

Article 39 of the 2014 Constitution outlines the state's commitment to education as a fundamental right and responsibility. It mandates that education is compulsory for all children up to the age of sixteen. The Constitution guarantees the right to free public education at all levels, ensuring that the state provides the necessary resources to maintain a high standard of education, teaching, and training. Article 39 also reflects cultural and ideological objectives. It emphasizes the state's role in consolidating the Arab-Muslim identity, fostering a strong sense of national belonging among younger generations, and promoting and strengthening the Arabic language. Additionally, it encourages openness to foreign languages and civilizations,

promoting a broader cultural understanding while simultaneously supporting the diffusion of a human rights culture within the educational system. This balanced approach highlights Tunisia's intent to root education in its cultural heritage while also embracing global values and knowledge. These ideas were also reiterated in the 2022 Constitution, Chapter 2, Article 44.

Strategic Vision for Education 2016–2020

The Ministry of Education initiated more structured reforms under the "Strategic Vision for Education 2016–2020", which was developed in cooperation with UNESCO. This plan focused on improving teacher training, upgrading curricula and infrastructure, and enhancing private sector partnerships to improve the quality of education (GPE, 2025). It also aimed to concentrate on issues such as improving learning in basic education and expanding access to pre-primary education (TheirWorld, 2018).

Grounded in the White Paper (MoE, 2016), a 10-year policy proposal to overhaul the national education system, the strategy identified structural challenges, including disparities in educational quality, outdated curricula, high dropout rates, and weak alignment between education and labor market needs. It aimed to establish an equitable, inclusive, and high-performing education system by enhancing teacher training, infrastructure, governance, and digital transformation.

The plan articulated nine strategic goals that reflected national priorities: ensuring equity and equal opportunity, curriculum modernization, developing human resources, improving learning outcomes, enriching school life, restructuring secondary and technical education, addressing dropout rates, integrating ICT in education, and promoting good governance (MoE, 2016). Key priorities included expanding access to early childhood education, reforming primary and secondary curricula, professionalizing teacher training, integrating technology, and fostering partnerships with the private sector and international agencies. The plan also introduces governance reforms aimed at decentralizing education management, increasing accountability, and fostering a results-based management culture.

One landmark reform was the introduction of sex education into the public-school curriculum in 2019, making Tunisia the first Arab country to implement it (New Arab, 2019). Implemented in collaboration with the United Nations Population Fund (UNFPA) and the Arab Institute for Human Rights (Yerkes, 2019), the initiative integrated age-appropriate lessons on health and gender equality across subjects (New Arab, 2019).

Despite its ambitious framework, implementation encountered significant challenges. Financial constraints, regional disparities, and the COVID-19 pandemic disrupted progress and exposed systemic weaknesses.

COVID-19 Preparedness and Response Plan

Amid the global COVID-19 pandemic outbreak, Tunisia, like many other countries, implemented an emergency strategy to transition to distance learning in an effort to preserve the academic year and maintain educational continuity. However, Tunisia's official sector-wide education plan continued to be the 2016-2020 Education Sector Strategic Plan, and it remained the guiding framework until 2022. Although the plan was developed before the pandemic, it was quickly adapted during the period from 2020 to 2022.

The Ministry of Education, with the support of UNICEF, created the COVID-19 Preparedness and Response Plan[7]. This plan was not published in a unique and public document but was referenced by partners such as UNICEF and GPE. However, the plan did not include a specific section on education; it mainly focused on economic recovery.

Since the COVID-19 Preparedness and Response Plan is not accessible, we were unable to analyze it within the Conceptual Framework of this study. Nonetheless, these plans were mentioned here for the record.

2023-2025 Strategic Education Plan

In preparation for the 2025-2035 Strategic Education Plan, the GPE approved and funded in 2022 a preparatory phase from 2023 to 2025, totaling €700,000. It focuses on developing the curriculum and books at the primary and secondary levels (GPE, 2025). This phase provides a budgeted three-year action plan for 2025–2035 that aligns with the country's National Plan. Both plans (2023-2025 and 2025-2035) have been designed in close collaboration with local education partners and are grounded in evidence and data, which will be detailed in an upcoming analysis of the education sector. The GPE financial support, along with technical support from UNICEF (UNICEF, 2025), has facilitated this process.

2025-2035 Strategic Education Plan

A new 2025-2035 education sector plan is currently under development aligning with the national development plan and supported by the Global Partnership for Education (GPE). This new plan is expected to incorporate lessons learned from the COVID-19 period, particularly in terms of digital transformation and system resilience (MoE, 2022).

In preparation for the 2025-2035 strategic education plan, a meeting was held in February 2023 in collaboration with UNICEF and GPE (MoE, 2023), followed by a workshop focusing on the strategic educational plan on December 13-14, 2024 (MoE, 2024). During the latter meeting, Minister Nourredine Nouri highlighted the critical context of the Tunisian educational landscape and the need for reforms to meet current challenges. The goal is to foster a qualitative leap in the education sector through innovative educational approaches, including a participatory approach involving all educational actors in the reform process and new educational methodologies to enhance the quality of education. The national workshop included participation from various educational experts and stakeholders, both local and international, to discuss the strategic educational plan.

In December 2024, the approval of the Education Sector Strategic Plan 2025–2035, supported technically by UNICEF and financially by the GPE, marked a major advance for education reform, focusing on equity and learning (UNICEF, 2025). The second regional high-level meeting in June 2024, organized by major UN agencies such as UNICEF, GPE, UNDP, UNFPA, ILO, and UNESCO, further strengthened efforts toward education, employment, and social inclusion for youth, especially those not in education, employment, or training (NEET) (UNICEF, 2025).

7 The plan was also referenced as National Education Response Plan in a GPE document: https://www.globalpartnership.org/node/document/download?file=document/file/GPE%20Qualitative%20Responses%2027Aug2020.pdf#:~:text=Tunisia%20UNICEF%20supported%20the%20drafting,19

Evaluating the Alignment of Tunisia's Education Plans with the ESR Framework

Tunisia's education sector has long been a national priority, underpinned by strong public spending and early commitments to universal access. However, political instability, socioeconomic crises, and structural inequities have undermined the continuity of reform efforts. When assessed against Cameron et al.'s (2024) ESR framework, Tunisia's plans reveal a strong emphasis on system strengthening but weaker attention to anticipatory, preventive, and crisis-sensitive planning dimensions as detailed herein:

Strengthen

Tunisia demonstrates significant system-strengthening efforts. The 2014 Constitution (Article 39) highlighted compulsory, free education until the age of 16, thereby embedding access as a legal right. The Strategic Vision for Education 2016–2020 sought to modernize curricula, teacher training, ICT integration, and governance. Key priorities included reducing dropouts, ensuring equity in access, decentralizing management, and promoting inclusive education. Investment levels were substantial, averaging 22–28% of social spending, though highly skewed toward salaries (83–93% of recurrent budget) at the expense of infrastructure and innovation (Di Vozzo, 2024). These measures remain concentrated in routine strengthening rather than adaptive resilience.

Anticipate

Anticipatory elements in Tunisia's plans are underdeveloped. The 2016–2020 plan acknowledged modernization needs but lacked explicit risk analysis for pandemics, climate change, or political instability. COVID-19 starkly exposed this gap: school closures (March–September 2020) resulted in significant learning losses and 70,000 dropouts, while uneven access to digital tools exacerbated inequalities (Bouhlila et al., 2022). Although certain measures were implemented under the COVID-19 Preparedness and Response Plan, the unavailability of the document precludes an assessment of whether, and to what extent, the plan incorporated anticipation, response, and recovery components.

Plan

Planning has been ambitious but fragile. The 2016–2020 plan translated its "White Paper" vision into nine strategic goals, addressing equity, teacher development, and dropout reduction. Nevertheless, crisis-sensitive education planning (CSP) and disaster risk reduction (DRR) were absent. Attempts at participatory planning were often stalled due to frequent ministerial turnover (12 ministers since 2001). The forthcoming 2025–2035 Strategic Plan, co-designed with GPE and UNICEF, signals a more systematic approach, with promises of integrating resilience and driving digital transformation. Still, Tunisia's history of fragmented implementation raises questions about sustained execution.

Respond and Recover

Response and recovery mechanisms have largely been reactive. During the COVID-19 pandemic, Tunisia implemented alternating school schedules and streamlined curricula but failed to prevent mass dropout or foundational learning deficits, particularly among disadvantaged students. Digitalization was accelerated, but benefits remained concentrated in urban areas. Tunisia lacked a pre-existing national digital platform, limiting its recovery capacity. While international partners (UNICEF, GPE) supported stopgap measures, no institutionalized rapid response or recovery protocols were established.

Prevent and Mitigate

Preventive and mitigation measures remain weak. While Tunisia pioneered progressive curriculum reforms, such as introducing sex education in 2019, broader DRR, school safety, and climate-resilience education are missing. Persistent inequities—urban-rural divides, gendered outcomes, and high NEET rates (41% in 2022)—reflect a lack of preventive strategies to address structural vulnerabilities. The education system continues to reproduce socio-economic marginalization, with reforms that are insufficiently addressing the underlying risks (UNICEF, 2025; World Bank, 2024).

GESI

Despite Tunisia's achievement of gender parity in enrollment and the consistent outperformance of girls in secondary and tertiary education, substantive gender equality and social inclusion remain limited. The country's main education strategies and plans did not explicitly integrate Gender Equality and Social Inclusion (GESI) components. Although sex education has been introduced, it continues to reflect a narrow focus on gender parity rather than a broader, gender-responsive framework. Persistent structural inequities are evident, as boys experience increasing levels of disengagement from schooling, while women's participation in the labor market remains disproportionately low despite their educational attainment. Disability inclusion is not acknowledged in national policies.

Tunisia's reform trajectory is marked by strong system strengthening—especially in access, governance, and curriculum modernization—but weak integration of resilience logics across anticipation, planning, response, and prevention. Political instability, budget rigidity, and entrenched inequities undermine progress. The forthcoming 2025–2035 Strategic Plan offers an opportunity to embed crisis-sensitive planning, disaster risk reduction, and systemic GESI mainstreaming. Without these, Tunisia risks maintaining a reformist but fragile system that fails to protect learners from recurrent shocks and structural vulnerabilities (Cameron et al., 2024; Di Vozzo, 2023; UNICEF, 2025; World Bank, 2024).

Synthesis

This synthesis aims to provide an integrated overview of Tunisia's education landscape by bringing together evidence from policy analysis, sectoral reports, and contextual factors. Rather than focusing on individual plans or reforms in isolation, it highlights the persistent systemic challenges, including governance discontinuity, urban-rural disparities, limited investment, and gaps in teaching and learning conditions, that have shaped reform outcomes over the past two decades.

Over the past two decades (since 2001), Tunisia has had 12 different education ministers across 14 different governments. The current minister (in 2025) has been in office for less than a year. This **discontinuity** and frequent turnover have impacted and prevented any serious reform process from being achieved.

Under successive post-revolutionary governments, education reform has remained a national priority. In particular, and more recently, there has been a **digital education** push whereby a plan for expanding EdTech platforms and digital resources is in place. However, it is important to note that there is an issue of education gap between **urban and rural areas** (Ramadhani & Anshori, 2022; Usman et al., 2025) that has been ongoing and continues to

be so even post-revolution. Consequently, the technology gap also remains between urban and rural areas, whereby urban areas have more and better access to the internet, iPads/ laptops, etc. The same applies to unemployment among graduates (Usman et al., 2025).

Fourth, **conditions in learning, teaching, and educational leadership** have not changed much since the revolution (Usman et al., 2025; Bouguerra & Aboulkacem, 2016). For example, the French language still dominates academia and is still the language of choice for the Tunisian elites (Usman et al., 2025).

Tunisia's current disappointment with its education system reflects broader economic stagnation. In 2021, a region-wide poll found that 77% of respondents were **dissatisfied with education**. For nearly a decade, the country's economic growth has been weak, and this macroeconomic underperformance has limited what educational reform alone can achieve. A primary challenge lies in the Ministry of Education's lack of sufficient capital investment to meet development needs. Moreover, disruptions caused by COVID-19 have compounded existing issues. While initial **pandemic-related interruptions** were immediate, the longer-term implications for the affected student are likely to be enduring. These compounded disruptions have disproportionately harmed disadvantaged and vulnerable students, widening educational inequalities (Bouhlila, 2021).

Additionally, while the law and legal frameworks in the education reforms have been prepared, **the implementation** of these laws are far from being a reality. The issue is related to the lack of capacity to act on these legislative reforms through actual and tangible measures. In an article by The Legal Agenda on Tunisian schools, dropout, and legislation states that the issue of students' early school dropouts cannot be addressed by legislative measures alone. The real issue is social marginalization, poverty, and destitution (Legal Agenda, 2023). Despite significant investments by the Ministry of Education, especially in expanding access and improving literacy, persistent challenges remain regarding education quality, effectiveness, and early school dropout rates (Di Vozzo, 2024).

While many sectoral ministries and agencies are involved in managing the different sub-sectors of education, interinstitutional cooperation remains a challenge. It is therefore difficult to develop an overarching vision and strategy for lifelong learning and to unlock the full potential of human capital in Tunisia. (Di Vozzo, 2024). The hope now holds onto the new 2025-2035 framework, which can help Tunisia fully realize the transformative potential of its substantial investments in education.

JORDAN

Context and Background

Jordan, a resource-scarce country in the Middle East, has historically prioritized education as a key driver of economic and social development (Rauschenberger & Sabella, 2023; Rauschenberger, Palmer, & Sabella, 2023). It is one of the countries that has been most impacted and affected by the Syrian crisis, hosting the second-highest share of refugees per capita in the world (UNHCR, n.d.a). This is not a current phenomenon. Jordan hosts millions of refugees, having welcomed them over the past 70 years (Rauschenberger & Sabella, 2023; Rauschenberger, Palmer, & Sabella, 2023). According to data from UNHCR as of April 2025, over 600,000 refugees were registered in Jordan, with 90.9% of them being Syrians, followed by Iraqis (6.4%), Yemenis (1.7%), and smaller groups from Sudan and Somalia (UNHCR, n.d.b), as well as Palestinians.

Refugees are integrated into the MoE's "education for all" system, often through double-shift schools or catch-up programs. Nonetheless, in general, they are considered a vulnerable population and are at risk of facing educational challenges (Rauschenberger & Sabella, 2023). This is the case for Syrian refugees in Jordan, who are most at risk of falling behind. However, this is not the case for Palestinian refugees in Jordan studying at UNRWA schools; they continue to consistently outperform students, even those with Jordanian citizenship, by a margin equivalent to almost one full scholastic year of learning (Abdul-Hamid et al., 2016)[8].

The number of out-of-school children in Jordan who are not enrolled in school is significant. The latest available data, provided by UNICEF, reveal that approximately 112,016 children (6.2%) in Jordan are out of school from Grades 1 to 10 (UNICEF Jordan, 2020). This figure includes over 50,650 Syrian refugees, 39,830 Jordanian nationals, and 21,530 children of other nationalities. More recent data suggest that about 124,043 children, adolescents, and youth (around 6.1% of the school-age population) are out of school as of 2023, noting that many had previously enrolled but later dropped out, especially among economically vulnerable families, including refugees (AlZawahreh et al., 2025). Consequently, dropout and absenteeism appear to be rising. According to Tamkeen, about 11,720 students dropped out of basic education during the 2023/2024 academic year alone; boys represented a larger share (58%) of these dropouts (Weldadi, 2025).

Jordan continues to use international benchmarking to monitor learning outcomes and quality, notably through the TIMSS 2019 cycle, where it recorded gains of 34 points in mathematics and 26 points in science compared with 2015, placing the country among the strongest improvers globally (Wedaldi, 2020). Despite this progress, a considerable share of students still fall below minimum proficiency levels, reflecting persistent challenges in curriculum implementation, teaching quality, and school-level resourcing (Wedaldi, 2020). PISA 2022 data also reveal a mixed picture: while 77% of Jordanian students reported making friends easily and 76% felt a sense of belonging, figures broadly aligned with OECD averages (OECD, 2023), learning outcomes in reading, mathematics, and science remain uneven across socioeconomic and refugee populations (UNICEF Jordan, 2020).

8 However, a recent GAGE study revealed that averages can mask critical disparities. While this may be the case in some Palestinian camps in Jordan, it is not so in the Gaza camp. Among Palestinian boys—almost all living in Gaza camps—only 22% could read at the second-grade level, and just 28% were able to subtract (Jones et al., 2019).

Student–teacher ratios are comparatively favorable at the national level. A 2022 vulnerability analysis reported an average pupil-teacher ratio (PTR) of 15.4:1 across public, private, and UNRWA schools, with an average class size of 25 students (UNICEF, 2022). However, these averages mask substantial regional disparities, particularly in high-refugee governorates such as Amman, Zarqa, and Irbid, where classes frequently exceed the official 20:1 target and schools face shortages of qualified teachers and adequate facilities (UNICEF Jordan, 2020).

Furthermore, research has shown that Syrian girls have similar educational outcomes and scores as boys and Jordanian girls (taking into account socioeconomic differences) (Krafft et al., 2021). However, in camp schools, girls scored 18 percent lower than boys on the EGMA (Early Grade Mathematics Assessment) (Rauschenberger & Sabella, 2023). Furthermore, boys generally tend to drop out of school at a higher rate than girls. Given that most international funding also targets female students, this has left boys with little to no support and interventions to help them continue their education (Rauschenberger & Sabella, 2023).

Education in Jordan is compulsory and free in public schools for grades 1–10, while upper secondary (grades 11–12) is optional, offering academic and vocational pathways. Early childhood education is underdeveloped, with most provision offered by the private sector, though the Ministry of Education (MoE) has committed to universalizing KG2 (UNESCO, 2024). Beyond public schools, many nationals attend private schools, which generally follow the national curriculum but may also include instruction in English. In contrast, international schools, primarily located in Amman, cater to affluent Jordanians and expatriates, offering curricula such as the American, British, or International Baccalaureate (IB) programs. Religion-affiliated schools, both Islamic and Christian, also exist and follow the national curriculum while integrating additional religious instruction. Meanwhile, UN and NGO-operated schools play a crucial role, especially in refugee education. For example, the United Nations Relief and Works Agency (UNRWA) manages schools for Palestinian refugees, offering free basic education (UNRWA, n.d.). At the same time, other international and local NGOs support schools in underserved or crisis-affected areas, particularly for Syrian refugee children

Specialized institutions include military and elite schools, such as King's Academy (King's Academy, 2023), vocational schools that address youth unemployment (UNESCO, 2023), and special education schools for children with disabilities. Non-formal education programs, often supported by UNICEF, target out-of-school youth through accelerated learning and life skills training. Refugee education is delivered through public double-shift schools, camp-based schools in Zaatari and Azraq, and community hubs such as UNICEF's Makani centers. Key actors include the MoE, UNICEF, UNHCR, UNRWA, and NGOs.

Despite progress toward universal primary enrollment and gender parity, persistent challenges remain. Children with disabilities face particularly high exclusion rates—estimates suggest nearly 80% of school-aged children with disabilities remain out of school (Humanity & Inclusion, 2022). Economic hardship, limited inclusivity, and infrastructural deficits continue to drive disparities in access and learning outcomes.

Two major shocks have particularly shaped Jordan's education system since 2011. First, the Syrian refugee crisis compelled the MoE to integrate large numbers of Syrian students into public schools, camps, and second-shift programs. While this arrangement broadened access, it exacerbated challenges of quality, fatigue among learners, and unequal access to resources (Rauschenberger & Sabella, 2023). Second, the COVID-19 pandemic forced

323 days of school closures between March 2020 and September 2021, affecting 2.37 million learners (Rauschenberger, Palmer, & Sabella, 2023). The government responded with digital platforms such as Darsak and televised lessons, supplemented by printed kits and SMS learning. Nevertheless, barriers such as weak connectivity, limited devices, and insufficient teacher preparation undermined the effectiveness of remote learning, disproportionately affecting refugees, children with disabilities, and marginalized groups.

Educational reforms, strategies, and plans in Jordan between 2011 and 2030

Jordan's education system has been significantly shaped by overlapping crises, particularly the protracted Syrian refugee crisis and the COVID-19 pandemic. Despite limited natural resources and fiscal pressures, the Ministry of Education (MoE) has pursued ambitious reform agendas. In response, Jordan has developed several education strategies and reforms since 2011, as follows:

Jordan Response Plan (2015–ongoing)

The Jordan Response Plan (JRP), initiated in March 2015 by the Ministry of Planning and International Cooperation (MoPIC) under the Jordan Response Platform for the Syria Crisis (JRPSC), represents a government-led, multi-year framework aimed at integrating humanitarian and development responses to the Syrian refugee crisis (MoPIC, 2014, 2017). The 2015 JRP aimed to consolidate national and international efforts, enhance health, education, water, sanitation, and hygiene (WASH), livelihoods, shelter, and social protection systems, and support government budgets and municipal services, which were under considerable strain from the influx of refugees (MoPIC, 2020). Developed in close collaboration with over 150 partners – including UN agencies, NGOs, and international donors – the plan's coordination mechanism is anchored within MoPIC's Humanitarian Relief Coordination Unit, supported by sector task forces and a central JRPSC Secretariat. The JRP has since evolved into a three-year rolling plan, updated annually, and continues to promote national ownership and integration of the refugee response within Jordan's broader development strategy.

Focusing on the education sector, the JRP in education aimed at integrating refugee children into public schools by expanding the double-shift system, where Syrian students attended afternoon classes in more than 200 public schools across Jordan (UNHCR, 2024). The MoE supported double-shift schools and non-formal and remedial education. The plan also focused on enhancing psychosocial and health support services for Syrian refugee children, as well as teacher training.

The JRP 2025 prioritizes strengthening Jordan's education system by ensuring equitable access to quality education for all children, improving school infrastructure and resources, enhancing teacher capacity through training, promoting inclusive and safe learning environments, and fostering community engagement. Collectively, these strategies aim to create a more adaptive and sustainable system capable of addressing challenges, including those stemming from the refugee crisis.

Human Resource Development Strategy (2016–2025)

Jordan's Human Resource Development (HRD) strategy is outlined in the National Strategy for Human Resources Development 2016–2025, launched under the guidance of King Abdullah

II. It aims to align the country's education, training, and labor market with broader national goals such as Jordan Vision 2025[9] and the National Employment Strategy. The National Center for Human Resources Development (NCHRD), established in 1998, is responsible for implementing the strategy. It provides policy support, conducts research, and facilitates coordination among stakeholders in education and labor (NCHRD, n.d.) In 2024, the World Bank approved $700 million in support for two programs designed to improve education, health, and social sectors in Jordan. One such initiative, the MASAR program, allocates $400 million to enhance youth employability and advance HRD goals (Reuters, 2024).

Jordan's Human Resources Development (HRD) strategy aims to transform the country's education and workforce system through five key pillars: 1) enhancing early childhood education by integrating health and education and training caregivers; 2) reforming basic and secondary education through curriculum improvements, Tawjihi exam updates, teacher training, and infrastructure upgrades; 3) strengthening Technical and Vocational Education and Training (TVET) to align skills with labor market needs and foster industry collaboration; 4) aligning higher education with market demands through curriculum reform, research support, and public-private partnerships; and 5) promoting workforce development by bridging education-employment gaps via career counselling, entrepreneurship, and lifelong learning opportunities. The strategy's implementation is phased, beginning with immediate reforms, followed by the rollout of new services and regulations, and culminating in full system-wide execution, overseen by bodies such as the HRD Reform Board and the Results and Effectiveness Unit.

The Education Strategic Plan (2018–2025)

Jordan's Education Strategic Plan (ESP) 2018–2025 serves as the country's main education reform framework, developed by the Ministry of Education (MoE) in collaboration with UNESCO's International Institute for Educational Planning to improve access, quality, and equity in line with Jordan Vision 2025 and the SDGs. Initially covering the period from 2018 to 2022, the plan was extended to 2025 as a result of a mid-term review in 2021, which aimed to address the challenges posed by the COVID-19 pandemic and promote digital and inclusive learning (MoE, 2022). The ESP focuses on six priority domains: (1) expanding early childhood education with universal KG2 access by 2025 (The Jordan Times, 2023); (2) enhancing access and equity for refugees, children with disabilities, and out-of-school youth, and removing barriers to enrollment, especially for Syrians (Rauschenberger, Palmer, & Sabella, 2023); (3) improving system governance and data-driven decision-making (MoE, 2018); (4) ensuring quality education through curriculum and teacher development (MoE, 2018); (5) professionalizing human resources and promoting gender equity (MoE, 2022); and (6) strengthening vocational education aligned with labor market needs.

The Education Strategic Plan includes strategic, planning, and technical coordination mechanisms/working groups that provide a platform for key stakeholders to engage in policy dialogue toward achieving the SDG4 goal and targets. These mechanisms comprise six Technical Working Groups (TWGs), corresponding to each of the six priorities outlined in the ESP. A relevant MoE department head chairs each TWG and includes representatives from relevant MoE units, field directorates (FDs), schools, development partners, and other education stakeholders. These working groups are coordinated and overseen by two higher

9 Jordan Vision 2025 is part of a long-term roadmap aimed at revitalizing the economy in Jordan. It intends to achieve economic growth, and reduce poverty, unemployment, and the public debt.

bodies:

1. The Policy, Planning, and Coordination (PPC) Body is chaired by the MoE Managing Directorate for Strategic Planning and Research. It coordinates the work of all six TWGs and reports to the High-level Steering Committee.
2. A high-level Steering Committee, chaired by the Minister of Education or Secretary General, provides strategic oversight and involves other ministries (e.g., finance, planning), national organizations, and donor representatives (MoE, 2022).

The Education Strategic Plan (ESP) adopts a comprehensive approach to addressing systemic shortcomings, with clearly defined future objectives. While high-level policy planning has been robust, challenges have arisen in translating plans into effective implementation, particularly due to misalignment with available financial resources. Several factors have contributed to this implementation gap, notably the impact of COVID-19, which exacerbated existing pressures by prompting a substantial transfer of students from private to public schools. Furthermore, a significant disconnect exists between the ambitious vision outlined in the ESP and the MoE's actual budget. This discrepancy is highlighted in the 2022 Mid-Term Review, where the MoE identified a "financing gap" of 300 million Jordanian Dinars between the projected strategy costs and the allocated education budget (Rauschenberger & Sabella, 2023).

The Education During Emergency Plan (2020–2022)

Jordan's Education During Emergency Plan (EDEP) 2020–2022 was developed by the MoE in response to the COVID-19 pandemic, focusing on ensuring learning continuity, digital access, and student well-being through a multi-modal e-learning strategy (MoE, 2022). The plan introduced diverse remote learning channels—including online platforms, TV broadcasts, mobile learning (SMS), printed kits, and teaching caravans—to reach all students, including Syrian refugees and those in vulnerable areas. It was implemented in three phases:

1. **Response Phase (Mar–May 2020):** Rapid deployment of e-learning systems, teacher training, content development (via platforms like *Edrak*, *Jo Academy, Mawdoo3,* and *Abwab*), and risk management tools to sustain education during school closures.
2. **Remedial and Enrichment Phase (May–Sept 2020):** Focused on supporting students who missed online learning, with tailored remedial, enrichment, and skills-based programs (e.g., critical thinking, coding, well-being) for grades 1–12, and specific adaptations for students with disabilities.
3. **Sustainability Phase (Sept 2020–Sept 2022):** Institutionalized distance learning into the national education system, developed a national e-learning framework, improved digital infrastructure and quality assurance, expanded teacher training, and promoted equity and crisis preparedness. The estimated budget for the sustainability phase was 20 million JOD, covering costs related to infrastructure, training, content development, school upgrades, well-being and public health programs, as well as technical assistance and evaluations.

The EDEP 2020-2022 is the first comprehensive plan that outlines some components of ESR. During and post-crisis planning was included, and hence the EDEP infers that resilience is not merely about bouncing back but about bouncing forward. It reframes resilience as a system's capacity to adapt, transform, and sustain learning for all in the face of ongoing or future uncertainty.

The 10-Year Inclusive Education Strategy (2020–2030)

Jordan's 10-Year Strategy for Inclusive Education (2020–2030), developed by the Ministry of Education (MoE) in collaboration with the Higher Council for the Rights of Persons with Disabilities (HCD), seeks to transform the education system to ensure equal access and quality education for children with disabilities in mainstream schools (MoE, 2020). Grounded in Law No. 20 of 2017 on the rights of persons with disabilities and Jordan's commitment to the UN Convention on the Rights of Persons with Disabilities (2006) and SDG4, the strategy sets a target for at least 10% of school-aged children with disabilities to be enrolled in inclusive schools by 2031. It focuses on nine key areas: 1) policies and legislation, 2) awareness and advocacy, 3) identification and support systems, 4) accessibility and reasonable accommodation, 5) inclusive curricula and pedagogy, 6) teacher training and capacity building, 7) preschool inclusion, 8) outreach to out-of-school children, and 9) research and data systems.

As part of its strategy, the MoE also aims to promote collaboration among government bodies, NGOs, and international partners, and to introduce systems to measure implementation progress and outcomes (MoE, 2020). Finally, implementation is led by the MoE in coordination with the Higher Council for the Rights of Persons with Disabilities (HCD) and supported by organizations such as GIZ and UNESCO, which provide technical and training support.

Inclusion is an essential part of the ESR and the Gender Equality and Social Inclusion (GESI) component of this study's ESR framework. Jordan's 10-year inclusive education strategy embodies this by prioritizing inclusive access and support for marginalized groups, particularly students with disabilities, thus promoting equity throughout the system.

The National Framework for Inclusion and Diversity (2022)

In June 2022, Jordan adopted the Jordan Declaration on Inclusion and Diversity in Education (UNESCO, 2025), recognizing ten vulnerable groups—including refugees, children with disabilities, children in poverty, and those at risk of abuse, neglect, or institutionalization—as priorities for equitable education. Building on this, the National Framework on Inclusion and Diversity in Education was developed by the Ministry of Education (MoE) with support from UNESCO and other national and international stakeholders, aligning with ongoing reforms such as the Education Strategic Plan (2018–2025), the 10-Year Inclusive Education Strategy (2020–2030), and Jordan's Economic Modernization Vision (2023–2033)[10].

The framework defines inclusion as a systemic commitment ensuring all children, regardless of gender, disability, background, or circumstance, have equitable access to quality education within their communities. The focus extends beyond access to include active participation, learning achievement, and overall well-being. It identifies ten key components: inclusive school environments, community and parental involvement, adaptable curricula, digital technology integration, professional development, data monitoring and evaluation, positive societal attitudes, effective support structures, financing inclusion, and multi-tiered systems of support.

Roles are clearly delineated across central, regional, and school levels, with the Education Management Information System (EMIS) playing a central role in tracking inclusive practices and supporting data-driven policy and practice. The framework emphasizes inter-ministerial

10 Jordan's Economic Modernization Vision (2023–2033) is a 10-year plan focused on accelerated growth and an improved quality of life for citizens, driven by sustainability and encompassing 35 key sectors and over 360 initiatives

collaboration and partnerships with NGOs and organizations of persons with disabilities, while highlighting the need for operational tools, guidelines, and training programs to translate policy into effective action across Jordan's educational system.

The Crisis and Risk Management Strategy (2023–2027)

Jordan's Crisis and Risk Management (CRM) Strategy was developed by the Ministry of Education (MoE) to assess and evaluate the risks that affect the education system in Jordan and ensure education continuity and equitable access to quality education in times of crisis (MoE, 2023). The plan aims to ensure a safe educational environment by reducing risks, enhancing resilience, and ensuring proper use of resources for planning, preparing, and responding to crises and shocks. Consequently, as part of the plan, the MoE prepared alternative scenarios, operational solutions, and respective budgets to quickly and professionally address potential risks across all levels of the educational system.

The strategy builds on existing frameworks, including the Education Strategic Plan (ESP 2018–2025), Jordan Vision 2025, the SDGs, and international standards such as the Sendai Framework and the GADRRRES framework. It addresses a wide range of potential risks, including biological hazards, weather risks and earthquakes, border risks, social unrest, cyber threats, flooding, food insecurity, drought, industrial hazards, landslides, sinkholes, and locusts.

The CRM is structured around four main components: (1) enabling systems and management, focusing on strengthening institutional capacity and risk monitoring; (2) safe learning facilities, ensuring infrastructure is resilient, accessible, and inclusive; (3) school safety and educational continuity, integrating flexible learning modalities, psychosocial support, and inclusive access; and (4) risk reduction and resilience education, embedding disaster awareness and preparedness into curricula and school activities.

Implementation involves developing educational legislation in line with the ESP, establishing a Risk Management Section, integrating CRM into school development and operational plans, fostering a risk-aware culture, and coordinating with internal and external partners, including the NCSCM, civil society, and UNESCO/IIEP for technical guidance. While the strategy represents a significant advancement in institutionalizing risk preparedness, challenges remain in funding, variability in regional risk profiles, and the need for ongoing data collection and stakeholder engagement to refine localized responses.

The CRM approach focuses on fostering resilience among students, staff, and school communities through content and learning opportunities related to disaster risk, climate change, health, child protection, and conflict prevention. However, despite some efforts, CRM is not yet fully integrated into formal or non-formal curricula, and gaps remain in teacher training and awareness. To address this, the MoE aims to enhance both pre-service and in-service teacher training to systematically include CRM topics, including first aid, community health, and psychosocial support. Training materials will also be developed to support emotional well-being in post-crisis contexts (MoE, 2023).

Evaluating the Alignment of Jordan's Education Plans with the ESR Framework

Jordan's education sector demonstrates a layered, evolving approach to resilience, reflecting both long-term structural reforms and short-term crisis responses. Using Cameron et al.'s (2024) ESR framework, Jordan's major education plans and strategies were evaluated

against the ESR framework. The table below summarizes the location of each main national plan and strategy within these components of the ESR framework: strength, anticipate, plan, respond and recover, and prevent and mitigate.

Strengthen

Across Jordan's education policy portfolio, system strengthening emerges as the most dominant ESR component. This is primarily because the education system in Jordan is already fragile and requires strengthening, with or without crises. Nearly all plans – particularly the *ESP (2018–2025)*, *EDEP (2020–2022)*, *HRD Strategy (2016–2025)*, and *CRM Plan (2023–2027)* – focus on governance reform, infrastructure development, digital transformation, and capacity building. This reflects a sustained national commitment to constructing a robust, adaptive education system capable of absorbing and managing disruptions.

Anticipate and Plan

The "Anticipate" and "Plan" dimensions are also well embedded, especially in the *ESP*, *EDEP*, and *CRM*, which institutionalize foresight, risk assessment, and contingency planning. These efforts signal an important shift from reactive responses toward anticipatory, evidence-based decision-making within Jordan's Ministry of Education.

Respond and Recover

The "Respond and Recover" component is most clearly operationalized in the *EDEP* and *Jordan Response Plan (JRP)*, both of which demonstrate comprehensive crisis management capacities in response to major shocks such as COVID-19 and the Syrian refugee crisis. However, this dimension remains less consistently institutionalized across long-term strategies, indicating that response mechanisms often emerge in an ad-hoc or project-based manner rather than as systemic functions.

Prevent and Mitigate

The "Prevent and Mitigate" domain remains comparatively underdeveloped, though notable progress is visible in newer policies such as the *CRM Plan (2023–2027)* and inclusion-focused frameworks. These introduce sustainable and risk-reduction elements – such as safe school design, WASH facilities, and disability inclusion – that begin to integrate prevention and sustainability into the core of education planning.

GESI

Finally, in Jordan, GESI has evolved from a peripheral focus on access toward a core pillar of resilience and system transformation. The 10-Year Inclusive Education Strategy (2020–2030) and the National Framework for Inclusion and Diversity (2022) represent significant progress by embedding inclusion and equity into policy, planning, and implementation mechanisms. These frameworks operationalize inclusion through accessible infrastructure, teacher training, and data systems, aligning with the ESR components of *Strengthen*, *Plan*, and *Prevent & Mitigate*.

The Education During Emergency Plan (EDEP 2020–2022) demonstrated how GESI principles can guide crisis response, ensuring that marginalized learners – particularly girls, refugees, and students with disabilities – remained engaged through adapted learning modalities. Similarly, the Crisis and Risk Management (CRM) Plan (2023–2027) introduces a gender- and inclusion-responsive approach to disaster risk reduction and preparedness, signaling a move toward institutionalizing GESI within the MoE's operational culture.

However, gaps remain. Gender responsiveness in the Education Sector Plan (2018–2025) and HRD Strategy (2016–2025) remains largely confined to parity in participation and teacher leadership, with limited integration of gender analysis or intersectional data in planning and monitoring frameworks. Moreover, while disability inclusion is now well articulated, gender-based vulnerabilities, such as early marriage and differential dropout among refugee boys and girls, remain insufficiently addressed within resilience planning and budgeting.

The central paradox is that Jordan's education system is rich in policy frameworks but poor in implementation capacity. Chronic underfunding, donor dependence, and weak alignment between plans and resources undermine effectiveness. Moreover, persistent inequities, especially for refugees, children with disabilities, and boys at risk of dropout, continue to erode resilience outcomes. In conclusion, Jordan's trajectory demonstrates a genuine commitment to resilience and inclusivity, but effectiveness will remain constrained unless financial sustainability, equity, and preventive planning are systematically addressed.

Synthesis

This section provides a synthesis that highlights both progress and persistent gaps, providing a holistic understanding of Jordan's evolving trajectory from reactive crisis management toward proactive, inclusive, and sustainable education system resilience.

Financing Constraints and Implementation Gaps

Several documents have guided Jordan's national education strategy and sector. These plans addressed the state and educational needs at the time of establishment and provided vision and targets for future progress. Consequently, well-developed strategic documents exist that are intended to guide the education sector. However, the effective implementation of these strategies is significantly constrained by financial shortfalls and challenges in operationalizing the plans. For example, the ESP 2018–2025 faced many issues, including, but not limited to, COVID-19, which placed additional pressure on an already fragile education sector. Furthermore, there were large discrepancies between the MOE's budget for the ESP and the actual funding resources (Rauschenberger & Sabella, 2023). The MoE highlighted in the ESP mid-term report (MoE, 2022) that there was a "financing gap" of around 300 million JODs between the projected costs of the strategy and the available education budget. Even with the additional projected support from international donors, the financial gap remained around 100 million JODs.

Similarly, a UNICEF brief on the MoE's budget in 2019 revealed that the MoE in Jordan allocated the majority of its education budget (1.16 billion in total and 12.54% of total government spending) – about 88.6% of total spending – towards salaries and personnel costs, making the wage bill the dominant component of current expenditures (UNICEF, 2019). This reflects a system heavily focused on operational expenses, leaving limited resources for infrastructure or quality enhancements. Approximately 77% of the MoE's budget was allocated to basic education (Grades 1–10), covering teacher salaries, materials, and administrative expenses. Secondary education (Grades 11–12) received about 14% of the funds, while vocational education was allocated a modest 3%. Administrative and support services accounted for 5% of spending, while only 1% was allocated to other programs, including kindergarten, special education, adult literacy, and extracurricular activities. Capital expenditures, which include investments in school construction and facility upgrades, comprised less than 5%

of the total budget. This distribution highlights a significant underinvestment in educational infrastructure and non-salary recurrent costs, limiting funding for developmental work.

Sustainability Issues and High Dependence on Donors

Strategic plans are ambitious but face significant implementation gaps due to financial constraints and dependence on international donor support (Rauschenberger & Sabella, 2023). A heavy reliance on donor funding (UNICEF, 2019; Rauschenberger & Sabella, 2023) leads to fragmented reforms and raises concerns about sustainability when external projects end. Hence, it creates a significant dependence on international funding, which leads to donor influence in the reform plans, the projects undertaken, and the overall education system. Hence, chronic underfunding remains the most significant barrier.

Furthermore, there is a lack of clarity regarding how international donor projects and funds align with the MoE's plans and projects (Rauschenberger & Sabella, 2023), which hinders the fulfilment of the MoE's plan.

Education and Employability

The MoE has invested in ensuring that plans contain goals to increase employability within the labor market. However, as highlighted in a report by Shuayb et al. (2022) on the trajectory from education to employment, education appears to be a weak determinant of employability in Jordan. Completing a post-secondary or vocational training program poses no greater probability of employment than completing primary level education or having no education, and it does not determine employment outcomes such as income. Therefore, while the ministry is making additional efforts to ensure employment and better employment outcomes, a gap still remains between education and employability.

Equity and Inclusion

There have been significant efforts and planning towards inclusive education in Jordan through several plans, such as the National Framework for Inclusion and Diversity in Education and the 10-year Strategy for Inclusive Education. The ministry has also taken various steps to ensure the implementation of those policies such as working with partners on achieving goals outlined in the strategy, reviewing existing legislation related to the acceptance of children with disabilities in public schools, developing criteria for accepting children with disabilities and integrating them into kindergartens and schools, as well as curricula, teaching methods and teacher training, and adapting the infrastructure in schools and educational facilities to building code requirements for persons with disabilities (The Jordan Times, 2025).

Despite progress in gender parity, vulnerable groups remain underserved. Nearly 80% of children with disabilities are excluded from education (Humanity & Inclusion, 2022). Refugee children face overcrowded schools, second-shift scheduling, and psychosocial stress. Boys are more likely to drop out, but interventions disproportionately target girls, creating gendered imbalances (Rauschenberger, Palmer, & Sabella, 2023).

Systemic Coherence

The proliferation of overlapping educational strategies such as the Education Strategic Plan (ESP), Human Resource Development (HRD) frameworks, Jordan Response Plan (JRP), Crisis and Risk Management (CRM) protocols, and Inclusion Frameworks, has led to significant fragmentation and duplication of efforts within the Ministry of Education (MoE). This lack of coordination undermines the efficiency and effectiveness of educational interventions, as

evidenced by studies that highlight how fragmented systems can impede progress and increase administrative costs (U.S. GAO, 2015).

To address these challenges, it is imperative for the MoE to consolidate these disparate initiatives into a unified, overarching strategy. Such consolidation would streamline efforts, enhance interdepartmental coordination, and ensure that resources are allocated more effectively. Aligning with best practices observed in other sectors, where strategic consolidation has led to improved outcomes and reduced redundancies (U.S. GAO, 2015), a cohesive strategy would enable the MoE to better meet its educational objectives and respond more adeptly to emerging challenges.

LEBANON

Context and Background

Lebanon's education system reflects the nation's intricate social fabric, shaped by sectarian divides, colonial legacies, and successive conflicts. Since the Taef Agreement of 1989, reforms have been overshadowed by instability and recurrent crises. Hosting over 1.5 million Syrian refugees alongside a large Palestinian population, Lebanon operates a divided system: public schools run double shifts with Lebanese in the morning and Syrians in the afternoon, while Palestinians are primarily served by UNRWA. The sector is also split between public and private institutions, with private schools enrolling 71% of Lebanese students in 2023 (CERD, 2023). Public expenditure on education remains only 1.8% of GDP, largely explained by reliance on private schooling (AbdulHamid and Yassine, 2020). Prior to 2011, the system already suffered from fragmented governance, fragile infrastructure, insufficient financing, and inequalities driven by socioeconomic status (Nehme, 2023). According to the World Bank net school-enrollment rates in Lebanon in early childhood education reached 66.5 per cent in 2022 (World Bank, 2022), and gross enrollment rate for secondary education stands at 64.7 per cent for 2023 (The Global Economy, 2023). According to UNHCR, approximately 27 per cent of children and youth in Lebanon are out of school, with particularly high rates among displaced Syrian children (about 58 per cent) and Palestinian children (about 19 per cent) (UNHCR, 2024). Additionally, UNICEF estimates that "one in three children of all school-aged children in Lebanon" are out of school or out of learning (UNICEF, 2025). Lebanon's performance in the 2022 Programme for International Student Assessment (PISA) reflects substantial learning deficits when compared to international benchmarks. National mean scores reached 399 in mathematics, 375 in reading, and 396 in science, far below the corresponding OECD averages of 472, 476, and 485 (CRDP, 2024). In addition, only 44.4 percent of students attained at least proficiency Level 2 in mathematics, 38.7 percent in reading, and 45.5 percent in science, compared with OECD averages of 68.9 percent, 73.7 percent, and 75.5 percent, respectively (CRDP, 2024). Lebanon's student-teacher ratios remain relatively low by regional standards. Recent World Bank data for the 2022–2023 academic year indicate that the primary-level student-teacher ratio is about 13.0 students per teacher, while the secondary-level ratio is approximately 5.9 students per teacher (World Bank, 2024).

Since 2011, a cascade of crises has compounded these structural weaknesses. The influx of nearly half a million Syrian children placed severe strain on schools, leading to delayed implementation of RACE I and II and reliance on double shifts that entrenched segregation and compromised quality (Shuayb et al., 2022; 2023). Refugee students faced language barriers in key subjects taught in English or French, bureaucratic hurdles in registration and exams (Shuayb, 2021; Shuayb et al., 2023), and socioeconomic pressures that drove child labor and dropout, with only 4% reaching secondary school (NRC, 2020; Shuayb et al., 2023). These vulnerabilities were aggravated by the financial collapse from 2019, which eroded teacher salaries by over 90%, triggered recurrent strikes, and left families unable to cover tuition or basic costs (Hammoud & Shuayb, 2022; 2023). Private fees rose to nearly $4,000 per child, consuming up to 65% of household income (Hammoud, 2023b). Public students lost 765 instructional days since 2016 due to disruptions (Nehme, 2023), with only 25% completing curricula in 2023 compared to 67% in private schools (Hammoud, 2023a). The World Bank (2021) and UNICEF (2023) warned of worsening exclusion, with more than 700,000 students out of school.

The COVID-19 pandemic in 2020 further deepened inequalities. Afternoon shifts serving refugees received little support (Human Rights Watch, 2020), and most Syrian children missed schooling altogether (VASyR, 2020). Barriers included unaffordable devices, poor connectivity, electricity shortages, and increased child labor (Abu Moghli & Shuayb, 2020; Hammoud & Shuayb, 2021). Teachers lacked digital training and faced pay disputes, particularly during afternoon shifts, which reduced access to instruction and the quality of learning (Hammoud & Shuayb, 2021).

The Israeli aggression of 2023–2024 displaced 1.3 million civilians and repurposed 40% of public schools as shelters (OCHA, 2025; MEHE, 2024a; 2024b). Nearly one million students and 45,000 teachers were affected, with public education nearly paralyzed (Shuayb et al., 2024). Refugees and children with disabilities faced heightened exclusion (OCHA, 2023; Hammoud & Brun, 2024). Contractual staff, who constitute a large proportion of the workforce, faced intensified precarity due to suspended afternoon shifts for Syrian students and delayed or uncertain compensation. (Association of Secondary Public Education Teachers, 2024). MEHE's hybrid response failed to reach the most affected populations, particularly those in high-risk areas or without access to the required technology and infrastructure (Shuayb et al., 2024), while international pledges to fund education response fell short (Khaleej Times, 2024).

A key structural factor that has constrained the education system's ability to respond to overlapping crises is the lack of a robust, research-informed foundation for reform. In Lebanon, educational policymaking remains largely disconnected from academic and field-based research, due in part to a weak institutional culture of collaboration and evidence use within the Ministry of Education (Shuayb, 2018). The absence of structured mechanisms to incorporate research into the planning, design, and evaluation of reforms reflects a broader systemic gap, where knowledge is often sidelined rather than mobilized to inform strategic decision-making. Compounding this challenge are critical gaps in education data, which severely undermine efforts to monitor and guide reform (Brun et al., 2024). This disconnection between the production of knowledge and its application in reform practice undermines efforts toward building a more resilient, sustainable, equitable, and contextually grounded education transformation. The limited impact of these reform efforts is further revealed by the fact that, despite donor funding amounting to $2.5 billion between 2011 and 2021 (Nehme, 2023), learning outcomes declined and inequalities deepened, highlighting how financial inputs alone have not translated into meaningful improvements in educational quality or equity.

Educational reforms, strategies, and plans in Lebanon between 2010 and 2024

Between 2010 and 2025, Lebanon implemented several educational policies and reforms aimed at enhancing the quality, accessibility, and resilience of its education system. These initiatives were developed in response to various challenges, including political instability, economic crises, and the influx of refugees. Key policies and reforms during this period will be presented in the following sections.

Education Sector Development Plan (ESDP) 2010–2015

The Education Sector Development Plan (ESDP) 2010–2015, developed by MEHE and CERD, sought to modernize Lebanon's education system after the shortcomings of the 1994 reform (Shuayb, 2018). Unlike the detailed 1994 plan, the ESDP outlined only broad recommendations

without specifying implementation steps (Shuayb, 2018).

Its vision of "Quality Education for Growth" rested on five priorities: equitable access, teacher professionalization and curriculum renewal, education for social cohesion, alignment with labor market needs through vocational and ICT frameworks, and improved governance through institutional reform and decentralization (Hamdan, 2015). The plan was supported by ten programs and significant donor funding from the World Bank, EU, USAID, UNDP, and UNICEF (Shuayb, 2018).

Execution, however, was undermined by underfunding, weak monitoring, limited policy enforcement, political instability, and the Syrian refugee crisis, which placed unprecedented pressure on public schools (Hamdan, 2015). Research highlights that the process was largely top-down, with limited stakeholder participation and weak integration of evidence and field-based research (El-Amine, 2005; Akkary, 2014; Shuayb, 2018).

By 2015, modest gains were achieved in infrastructure, early childhood coverage, and teacher training. Yet dropout and repetition rates, regional inequalities, and public-private disparities persisted. Under-resourced public schools continued to enroll the most disadvantaged students, while most Lebanese children remained in private education (El-Ghali, 2014; Hamdan, 2015).

Lebanon's Education Reform Strategy and Action Plan (LERSAP) 2011

Launched in 2011 by MEHE and CERD, the Education Reform Strategy and Action Plan (LERSAP) placed ICT integration at the heart of Lebanon's education reform. It aimed to modernize pedagogy and administration and prepare graduates with 21st-century skills (MEHE, 2012; Awada & Diab, 2016). It sought to address gaps between curriculum and classroom practice while complementing ongoing reforms under the ESDP.

The five-year roadmap (2012–2017) focused on six pillars: infrastructure, curriculum, instruction, assessment, professional development, and educational leadership (MEHE, 2012). Key initiatives included readiness assessments, ICT standards, procurement policies, and significant investments in teacher training to promote learner-centered, technology-enhanced pedagogy (Awada & Diab, 2016).

Implementation, however, faced infrastructural deficits, uneven connectivity, financial constraints, and weak monitoring systems (MEHE, 2012). The gap between curricular aspirations and classroom realities persisted, especially in public schools with limited training and resources. Studies show significant disparities in ICT use between private and public schools, and between urban and rural areas (Awada & Diab, 2016).

While LERSAP aligned with global trends and created a policy roadmap, its impact was undermined by resource shortages, weak institutional support, and persistent inequalities. Ultimately, it raised awareness of ICT's importance but fell short of bridging the policy-practice divide (Awada & Diab, 2016).

Reaching All Children with Education (RACE) I & II (2014–2021)

The onset of the Syrian refugee crisis in Lebanon catalyzed the most significant educational reform of the past decade: the Reaching All Children with Education (RACE) strategy. Developed by the Ministry of Education and Higher Education (MEHE) with support from the international community, RACE was designed as an ambitious, multi-phased initiative to provide educational opportunities for both vulnerable Lebanese and Syrian refugee children, in response to a crisis that saw Lebanon hosting the highest number of refugees per capita worldwide (MEHE, 2014).

RACE I (2014–2016): Focus on Immediate Access and Humanitarian Response

RACE I prioritized rapid access, aiming to reach 413,000 children annually through double-shift public schools, school rehabilitation, and financial support, with a budget of $634 million (MEHE, 2014). Its three pillars were access, quality, and system strengthening. While enrollment increased, the strategy treated refugee education largely as a temporary humanitarian measure, assuming eventual repatriation. This led to structural shortcomings, including language barriers (math and science taught in English/French, unfamiliar to Syrian students), afternoon-shift segregation, weak certification pathways, and bureaucratic barriers linked to documentation and legal status (Brun & Shuayb, 2020; NRC, 2020).

Although access improved, education quality remained low. Overcrowded schools, reduced instructional time, and weak monitoring fueled high dropout rates. By 2016, only 2% of Syrian secondary-aged children and 14% at pre-primary were enrolled, despite primary-level gains (World Bank, 2016).

RACE II (2017–2021): From Access to Quality and System Strengthening

Launched in 2016, RACE II shifted Lebanon's education response from emergency access to broader goals of quality and system strengthening. Its objectives were to expand equitable access, improve teaching and learning, and reinforce system management and accountability (World Bank, 2016).

Key innovations included explicit targets for retention and completion, efforts to reduce legal and documentation barriers, development of a national learning assessment framework, and stronger monitoring systems and community engagement. Policy reforms also aimed to recognize refugee learning and expand certification pathways (World Bank, 2016; NRC, 2020).

Despite these advances, secondary-level enrollment remained very low, with persistent obstacles such as language barriers, poverty, and bureaucratic restrictions. Public schools faced mounting strain, characterized by overcrowding, uneven teacher training, and limited gains in learning outcomes, particularly in second-shift schools (World Bank, 2016).

RACE I and II together represented an unprecedented mobilization of resources, yet by 2021, over 40% of refugee children remained out of school, and both refugees and vulnerable Lebanese students continued to face weak learning outcomes and structural barriers to progression (NRC, 2020; Brun & Shuayb, 2020).

Lebanon Crisis Response Plan (LCRP) 2015-present

Launched in 2015, the LCRP is Lebanon's central framework for managing the impact of the Syrian crisis, jointly led by the Government of Lebanon and the UN with wide donor support. It combines humanitarian relief with development goals, updated annually to address shifting needs (UNHCR, 2022; UNHCR, 2023).

In education, the LCRP has aimed to expand access for Syrians, vulnerable Lebanese, and Palestinian refugees; improve teaching quality through curriculum adaptation, teacher training, psychosocial support, and new learning modalities; and strengthen governance via institutional capacity, data systems, and coordination (UNHCR, 2023). Operational achievements include enrollment of thousands of children, school rehabilitation, and protective measures against dropout, though documentation requirements, language barriers, and costs remain major obstacles. Progress has been steady but uneven, constrained by funding gaps, school closures, teacher strikes, and Lebanon's economic collapse.

Critical scholarship highlights that while the LCRP has improved state–humanitarian coordination, it has also reinforced refugee precarity. Dinger (2022) argues that legal and administrative classifications used to facilitate aid often undermined rights, with policies such as mass evictions exacerbating insecurity rather than addressing root vulnerabilities.

Five-Year General Education Plan 2021–2025

Amid overlapping crises, including Syrian displacement, economic collapse, COVID-19, political instability, and the Beirut Port explosion, MEHE launched the Five-Year General Education Plan (2021–2025), Lebanon's most comprehensive attempt to stabilize and modernize the sector (MEHE, 2021). Its vision centers on equitable access, improved quality, and stronger governance, with emphasis on resilience and inclusivity.

The plan is structured around three pillars: (1) expanding access and retention for vulnerable groups, improving early childhood education, and providing psychosocial support; (2) enhancing quality through teacher professionalization, curriculum reform, assessment, and leadership development; and (3) strengthening governance, transparency, and evidence-based policymaking (MEHE, 2021).

Key initiatives include a new K–12 curriculum with 21st-century competencies, institutionalized remote learning platforms (e.g., Microsoft Teams, Mawaridi), renewed investment in teacher training and Professional Learning Communities, infrastructure rehabilitation with inclusion measures, and social protection schemes such as school feeding, cash transfers, and accelerated learning.

Yet implementation faces persistent barriers: rising migration from private to public schools, severe learning losses from closures, inequitable access to digital learning, declining completion rates, and underfunding compounded by teacher strikes. Despite these challenges, some progress is noted, particularly in girls' higher enrollment and completion rates at the secondary level (MEHE, 2021).

Education Reform Roadmap 2023

Launched in June 2023 with support from UNESCO and Education Cannot Wait, Lebanon's Education Reform Roadmap aimed to revitalize the education system amid protracted crises, underfunding, and demographic pressures. Developed with MEHE and international partners, it provided a practical guide to building a more inclusive, equitable, and accountable system (UNESCO,2023).

The roadmap focused on three reform clusters: (A) teaching and learning, including curriculum modernization, digital integration, and psychosocial support; (B) governance reforms to strengthen management, accountability, and participatory planning; and (C) efficiency and cost-saving measures, such as resource rationalization and innovative financing. Aligned with the Five-Year General Education Plan (2021–2025), it reinforced ongoing sector interventions (UNESCO,2023).

UNESCO's technical support facilitated investments in school rehabilitation, teacher training, and blended learning environments to address learning losses and psychosocial needs exacerbated by COVID-19, the Beirut Port explosion, and the economic crisis. Yet, challenges persisted: declining enrollment, weak foundational literacy, collapsing teacher salaries, and a widening funding gap. At its launch, government and partners urged accelerated support to sustain reform and prevent further exclusion (UNESCO, 2023).

The Revised Education Emergency Costed Response Plan (EECRP) 2024

Introduced in October 2024 after the Israeli aggression, which disrupted schooling for over 500,000 students and left 73% of public schools affected or repurposed as shelters, the EECRP was designed by MEHE with UNESCO's support as a multi-sectoral framework to ensure continuity of inclusive, quality education during and beyond the crisis (MEHE, 2024c).

The plan was built around four strategic goals: (1) ensuring access through student registration, digital classrooms, and learning hubs, with attention to children with disabilities; (2) embedding psychosocial and well-being support via mental health professionals, child protection measures, and school counselors; (3) enhancing quality through teacher training in digital literacy, trauma-informed pedagogy, and blended learning, supported by devices and internet bundles; and (4) strengthening system resilience through improved data management, coordination, monitoring, and infrastructure rehabilitation (MEHE, 2024c).

The EECRP incorporated flexible learning modalities, remote, hybrid, and in-person, supported by platforms such as Mawaridy and Madristi, and extended interventions to TVET and higher education through digital learning rooms and alternative centers. With an estimated budget of $25 million, it combined immediate priorities (registration, psychosocial support, emergency repairs) with medium-term goals of digital transformation and institutional capacity-building.

By prioritizing inclusivity, psychosocial support, and digital innovation, the EECRP sought to mitigate learning losses, protect vulnerable groups, and lay the groundwork for recovery and longer-term resilience (MEHE, 2024c).

Evaluating the Alignment of Lebanon's Education Plans with the ESR Framework

Lebanon's education reforms between 2010 and 2024 reveal recurrent efforts to enhance system quality, equity, and resilience under prolonged crises. When assessed through Cameron et al.'s (2024) Education System Resilience (ESR) framework, comprising the five components of strengthen, anticipate, plan, respond and recover, and prevent and mitigate, the system demonstrates fragmented progress and limited institutional capacity to withstand and adapt to recurrent shocks. Across successive initiatives such as the Education Sector Development Plan (ESDP, 2010–2015), Lebanon's Education Reform Strategy and Action Plan (LERSAP, 2011), Reaching All Children with Education (RACE I and II, 2014–2021), the Lebanon Crisis Response Plan (LCRP, 2015–present), the Five-Year General Education Plan (2021–2025), the Education Reform Roadmap (2023), and the Revised Education Emergency Costed Response Plan (EECRP, 2024), patterns of underfunding, donor dependency, and institutional fragmentation have consistently constrained systemic resilience (Shuayb, 2018; Awada & Diab, 2016; Brun & Shuayb, 2020).

Strengthen

Across all reforms, strengthening measures aimed to build institutional capacity, improve quality, and modernize infrastructure, yet their effectiveness remained partial and uneven. The ESDP and LERSAP sought to revitalize the education system through teacher professionalization, curriculum reform, and digital integration. However, persistent underfunding, bureaucratic inertia, and limited enforcement mechanisms undermined progress (Shuayb, 2018; Awada & Diab, 2016). Similarly, the RACE programs expanded access for both Lebanese and Syrian children but lacked sustainable strategies to support teacher capacity and school infrastructure, weakening long-term strengthening outcomes (Brun & Shuayb, 2020). The LCRP also invested in institutional rehabilitation and capacity-building, yet funding shortfalls and high staff turnover limited sustainability (UNHCR, 2023). Later reforms, including the Five-Year General Education Plan and EECRP, introduced digital learning and professional training initiatives aimed at bolstering system resilience. Nonetheless, persistent inequalities between public and private education, unreliable infrastructure, and inequitable regional capacity hindered their impact (MEHE, 2021; MEHE, 2024c; Shuayb et al., 2024). These gaps reveal that, while Lebanon's reform discourse has consistently prioritized strengthening, implementation has not achieved the depth or reach required for systemic transformation.

Anticipate

Crisis anticipation has remained the weakest pillar of Lebanon's education resilience. Earlier reforms such as the ESDP and LERSAP lacked comprehensive risk assessments or contingency frameworks capable of forecasting demographic, economic, or political shocks (Shuayb, 2018; Awada & Diab, 2016). Even reforms explicitly designed in response to crises, such as RACE I and II, were built on the assumption of a temporary humanitarian emergency, failing to anticipate the long-term nature of refugee integration (Brun & Shuayb, 2020). The LCRP introduced more advanced scenario planning, but its approach remained reactive rather than predictive, often adapting to crises after they unfolded. Although the Five-Year General Education Plan and EECRP introduced digital learning as a preparedness mechanism, implementation was constrained by infrastructural fragility and limited access to electricity and connectivity (MEHE, 2024c). Despite incremental progress in digital readiness, Lebanon's education system continues to lack institutional mechanisms for systematic risk anticipation and crisis foresight.

Plan

Educational planning in Lebanon has demonstrated ambition and alignment with international frameworks but remains insufficiently crisis-sensitive. The ESDP and LERSAP offered structured visions for reform but did not embed risk analysis, costed contingency plans, or monitoring frameworks that could sustain continuity during crises (Shuayb, 2018; Awada & Diab, 2016). RACE II and the LCRP introduced more coherent planning mechanisms, incorporating data systems, certification pathways, and stakeholder coordination (World Bank, 2016; UNHCR, 2023). However, planning often depended on donor priorities rather than national policy direction, leading to inconsistent implementation. The Five-Year General Education Plan advanced planning by integrating digital transformation, curriculum reform, and governance improvements, yet lacked reliable financial and institutional backing to operationalize these objectives (MEHE, 2021). The EECRP further strengthened planning capacity through inter-sectoral coordination and costed emergency frameworks but faced logistical barriers that restrictedimplementation.

Respond and Recover

Lebanon's education system has repeatedly demonstrated the capacity to mobilize emergency responses but has struggled to sustain recovery. RACE I and II effectively expanded access through double shifts and donor mobilization, yet they entrenched segregation between Lebanese and Syrian students and failed to ensure long-term educational continuity (Brun & Shuayb, 2020; MEHE, 2014). Similarly, the EECRP represented a rapid national response to the 2023–2024 Israeli aggression, establishing hybrid and remote learning modalities to maintain continuity (MEHE, 2024c). However, these interventions often remained short-term, with limited integration into the broader policy landscape (Shuayb et al., 2024). Weak monitoring and fragmented governance further undermined sustained recovery, while persistent teacher strikes and salary devaluation eroded institutional stability (Hammoud & Shuayb, 2022; 2023). The absence of structured post-crisis evaluation and institutional learning mechanisms has prevented Lebanon from consolidating gains or embedding adaptive recovery practices into long-term policy frameworks.

Prevent and Mitigate

Preventive and mitigative measures have remained marginal and reactive within Lebanon's education reforms. Initiatives addressing psychosocial well-being, remedial learning, and cash support for vulnerable families were implemented in limited scope and duration (MEHE, 2021; Shuayb et al., 2024). Structural inequities across socioeconomic status, geography, and nationality, remain largely unaddressed, perpetuating vulnerability to shocks (Hammoud & Brun, 2025). The Five-Year General Education Plan and EECRP incorporated psychosocial and inclusion measures, but these have yet to evolve into a coherent prevention framework. Furthermore, no systematic integration of disaster risk reduction or crisis-sensitive planning is evident across reform cycles. Prevention and mitigation efforts thus remain fragmented and heavily dependent on external funding, leaving the system exposed to recurrent disruption.

Synthesis

Our ESR-based assessment reveals that Lebanon's education system exhibits only partial resilience, limited by weak governance, financial fragility, and fragmented coordination. While successive reforms have articulated comprehensive visions for quality and equity, their realization has been constrained by structural and contextual limitations.

Governance fragmentation

The most persistent challenge lies in governance fragmentation. The Ministry of Education and Higher Education (MEHE) operates within a centralized and often politicized system that lacks coordination between its departments and with external stakeholders. As Shuayb (2018) notes, policymaking remains largely disconnected from research and evidence, and implementation frequently depends on short-term donor funding rather than national strategy. This has created a cycle of ad hoc interventions with limited institutional ownership or sustainability.

Financial constraints

Financial constraints remain a central barrier. Despite receiving over $2.5 billion in education aid between 2011 and 2021, Lebanon's public expenditure on education continues to hover around 1.8% of GDP (Abdul-Hamid & Yassine, 2020; Nehme, 2023). This chronic underinvestment has widened inequalities, eroded teacher motivation, and restricted system recovery. International assistance has filled immediate gaps but has not strengthened the fiscal base or enabled independent policy action.

Implementation gap

The implementation gap between policy articulation and practice persists across all reforms. Many initiatives, including the ESDP, RACE, and the Five-Year General Education Plan, demonstrate well-formulated frameworks but weak monitoring and accountability mechanisms (Awada & Diab, 2016; Brun & Shuayb, 2020). This has resulted in uneven progress, limited evaluation, and repeated reform cycles without cumulative improvement.

Persistent Inequalities and Barriers to Inclusive Resilience

Lebanon's education system continues to suffer from entrenched inequalities and deep social fragmentation. Refugee children, those with disabilities, and students from low-income families experience disproportionate exclusion (NRC, 2020; Shuayb et al., 2022). The dual-shift structure institutionalized under RACE has perpetuated segregation and undermined social cohesion, while digital expansion under the EECRP and the Five-Year Plan has reinforced divides between urban and rural, private and public, and Lebanese and refugee learners (Hammoud & Shuayb, 2021; Shuayb et al., 2024). Despite explicit policy commitments to equity and inclusion, substantial gaps persist across Lebanon's education sector. Reforms such as RACE and the LCRP sought to expand access for vulnerable groups, yet significant barriers remain, including legal documentation hurdles, linguistic obstacles, and socioeconomic disparities, all of which impede full integration and contribute to high dropout rates (Brun & Shuayb, 2020; NRC, 2020; World Bank, 2016; UNHCR, 2023). The COVID-19 pandemic and the 2023–2024 Israeli aggression further magnified existing inequities, exposing acute disparities in digital access and educational continuity between private and public-school students, and national and refugee communities (Hammoud & Shuayb, 2021; Shuayb et al., 2024). While the EECRP represented a comprehensive attempt to design inclusive responses, its implementation was hindered by logistical and infrastructural limitations, leaving many of the most vulnerable students without sufficient support (Shuayb et al., 2024).

Weak institutional learning

Finally, weak institutional learning remains a defining limitation. The absence of robust data systems and feedback mechanisms prevents evidence-informed planning and evaluation (Brun et al., 2024). As a result, Lebanon's education reforms often repeat past shortcomings, failing to embed lessons learned from previous crises.

YEMEN

Context and Background

Yemen is home to a rapidly growing population, estimated at 40.5 million in 2024 (World Bank, 2024a), with almost half of its citizens under the age of 18 (UNICEF, 2023a). Approximately 40 percent of the population reside in urban areas, while the remainder are dispersed across rural settings that are often isolated and underserved (UNICEF, 2023a). The country continues to face complex demographic pressures, including the presence of roughly 4.3 million internally displaced persons (IDPs) as a result of ongoing armed conflict, natural disasters, and economic hardship, in addition to about 100,000 migrants and asylum seekers primarily from Ethiopia and Somalia. Widespread food insecurity, recurrent price shocks, environmental disasters such as floods, and public health crises including cholera and the COVID-19 pandemic have collectively exacerbated the vulnerabilities of Yemeni households and communities. Over 2.3 million children under five are affected by acute malnutrition, including 538,000 cases of severe acute malnutrition, and the United Nations estimates that more than 21.6 million people in Yemen require humanitarian assistance as of 2023 (UNICEF, 2023a). Moreover, Yemen consistently ranks among the lowest globally on the UNDP Human Development Index, occupying the 183rd position out of 191 countries. This reflects the country's critical deficits in health, education, and standards of living, and positions Yemen within the category of low human-development contexts (UNICEF, 2023a).

The gross enrollment rate in Yemen's primary education reached 93.6 per cent in 2020, while the net enrollment rate stood at 84.2 per cent (Ministry of Planning & International Cooperation, 2023). However, at the secondary level, enrollment levels are considerably lower, with a gross enrollment rate of 51.6 per cent and a net enrollment rate of 47.6 per cent in 2020 (Ministry of Planning & International Cooperation, 2023). The dropout rate in primary education stood at 16 per cent that same year, comprising 11.5 per cent among boys and 22.1 per cent among girls (Ministry of Planning & International Cooperation, 2023). According to a recent UNICEF factsheet, about 23.2 per cent of children of primary-school age are reported as not attending any level of education (UNICEF, 2024). The most recent internationally comparable learning data are based on the 2012 assessment of the Trends in International Mathematics and Science Study (TIMSS), in which fourth-grade students in Yemen achieved an average score of 248 in mathematics and 209 in science, both results substantially below regional and global benchmarks (Zakout, 2014). Furthermore, estimates of student-teacher ratios indicate a constrained instructional environment: about 26.9 students per teacher at primary level in 2016 (The Global Economy, 2016). Complementing this, World Bank data report a basic-education pupil-teacher ratio of about 25.4 students per teacher, highlighting a similarly constrained instructional environment (World Bank, 2015).

Since 2010, education in Yemen has been disrupted by a sequence of overlapping shocks. Political instability and economic fragility during 2010–2014 undermined the Ministry of Education's Strategic Plan (2010–2020), as fiscal contraction, inflation, and governance failures impeded implementation and reduced access, particularly for girls and rural learners (Atarodi, 2010; Moqueet, 2013; World Bank, 2015; UNICEF, 2014). The escalation of armed conflict from late 2014 produced widespread school closures and damage, with thousands of facilities shut, occupied, or unusable, incomplete curricula in many schools, mass displacement, and sustained non-payment of teacher salaries that eroded provision and learning time (Al Refai, 2016; OCHA, 2016; UNICEF, 2016a; Çınar, 2023). Public health crises compounded these effects.

Yemen experienced one of the world's largest recorded cholera epidemics between 2016 and 2018, with renewed transmission in 2024, straining WASH systems, closing or repurposing schools, and heightening absence and dropout risks (UNICEF, 2016b; UNICEF, 2018a; UNICEF, 2018b; UNICEF, 2024a). The COVID-19 pandemic prompted nationwide school closures from 16 March 2020, affecting around 5.8 million students in a context of limited connectivity and weak distance-learning infrastructure, while widespread salary suspensions further undermined instruction and safeguarding (World Bank, 2020; Save the Children, 2021; UNICEF, 2021a; UNICEF, 2021b).

Climate-related shocks have also exacerbated educational disruptions. The floods of 2020 damaged school infrastructure, forcing many educational facilities to serve as temporary shelters, and restricting students' access to classrooms. Similarly, Cyclone Tej in October 2023 led to widespread school closures and the displacement of numerous households in eastern regions. Yemen is assessed as facing extremely high climate risk, with recurrent floods, droughts, and water scarcity that raise time burdens for children and particularly affect girls' attendance (Education Cannot Wait, 2023; World Bank, 2022; UNICEF, 2023b; UNICEF, 2024b). Since 2018, an intensifying economic and aid crisis has deepened poverty and service collapse. Oil export suspensions, sharp currency depreciation and dual monetary regimes have driven prices beyond household reach, while declining external assistance has reduced coverage of essential programs. By 2025, millions required humanitarian support, with more than four million children out of school and thousands of schools damaged (World Bank, 2024; World Bank, 2024b; OCHA, 2025a; OCHA, 2025b; IMF, 2025; Oxfam, 2025). These combined pressures have encouraged negative coping strategies, including withdrawing children from school, child labor, and early marriage, with disproportionate impacts on girls, displaced learners, and marginalized groups such as the Muhamasheen (World Bank, 2024b; UNICEF, 2016a).

Educational reforms, strategies, and plans in Yemen Between 2010 and 2024

MoE Strategic Plan (2010-2020)

The Ministry of Education (MoE) Strategic Plan 2010–2020 represented Yemen's primary attempt to modernize and reform its national education system prior to the escalation of large-scale conflict. The plan was developed in response to a growing consensus regarding the need to enhance educational quality, promote equity, and better align student outcomes with labor market requirements and broader societal needs. Key objectives focused on curriculum reform, teacher development, improved governance, and expanded access for marginalized groups. The strategy also emphasized the roles of students, teachers, parents, and communities in fostering a holistic educational environment, and articulated ambitious targets for student learning, school infrastructure, and institutional effectiveness.

The MoE Strategic Plan (2010–2020) in Yemen marked an ambitious step toward systematizing quality, equity, and effectiveness in education. However, the strategy was primarily focused on developmental objectives rather than risk management or crisis response. The limited attention to anticipatory planning, crisis recovery, and mitigation left the education sector highly vulnerable to the subsequent political, economic, and humanitarian shocks that defined the latter half of the decade. The experience of Yemen's 2010–2020 plan highlights the critical importance of embedding resilience and preparedness in educational reforms, especially in fragile and crisis-prone contexts.

Education Sector Plan Implementation Grant (2014–2022)

The Education Sector Plan Implementation Grant (ESPIG) in Yemen originated as a response to the country's urgent need for educational reform and support, as outlined in the 2013 proposal developed by the Government of Yemen and UNICEF. Initially, the grant was intended to cover the 2013–2015 period and focused on the implementation of Yemen's Medium-Term Results Framework (MTRF), with the aim of improving educational quality, equity, and institutional capacity (Government of Yemen & UNICEF, 2013). However, the outbreak of conflict in 2014 and the subsequent deterioration of the national context led to multiple extensions and substantial revisions of the project. As a result, the effective implementation period stretched until mid-2022, transforming the ESPIG into the most significant and sustained external education program operating throughout the years of crisis (GPE, 2023). The grant, managed by UNICEF in collaboration with the Ministry of Education and other partners, provided over US$72 million in support. Its priorities evolved in response to rapidly shifting needs, with major emphases on (i) ensuring quality basic education through curriculum and teacher development, (ii) improving equitable access, especially for girls and marginalized groups, (iii) strengthening institutional capacity, and (iv) supporting education in emergencies (Government of Yemen & UNICEF, 2013; GPE, 2023).

The ESPIG adapted repeatedly to conflict-related challenges. Major activities included rehabilitation of schools, provision of school operational grants to thousands of schools, support for rural female teachers, training in psychosocial support, and the introduction of emergency interventions to maintain education system functionality amid crisis (GPE, 2023). Over its implementation period, the program directly benefited more than 3 million children (1.47 million girls and 1.61 million boys), rehabilitated 2,360 classrooms, and delivered school grants, learning supplies, and teacher training on a national scale. The grant was also notable for fostering institutional innovations, such as supporting the development of Yemen's Education Management Information System (EMIS) and promoting the operational decentralization of school management. In a context of severe disruption and divided governance, the ESPIG enabled continued, education service delivery, safeguarded the retention of girls in school, and strengthened national and local educational capacities (GPE, 2023).

The Education Sector Plan Implementation Grant (2014–2022) illustrated both the challenges and the potential of education reform in fragile contexts. While the grant's original vision was overtaken by political and humanitarian crises, the flexibility and adaptability of the program enabled Yemen's education system to endure and recover under extraordinary conditions. Moreover, the ESPIG demonstrates substantial contributions to system strengthening, adaptive crisis response, and the gradual mainstreaming of resilience within education sector planning and operations. Nevertheless, the persistent fragility of national institutions and ongoing conflict highlighted the need for further investment in risk-informed, resilience-focused educational reforms in Yemen.

National Assessment Report on Education for All (2014)

The release of Yemen's 2014 National Assessment Report on Education for All (EFA) reflected the Republic's formal commitment to the Universal Declaration of Education for All and the global Dakar Framework for Action. Prepared by the Ministry of Education and national stakeholders, with support from UNESCO, the report reviews educational progress from 2000 to 2014 and benchmarks achievements against the EFA goals to be met by 2015. The

objectives outlined in the report emphasized the importance of harnessing information and communication technologies, diversifying technical expertise, and adapting the curriculum to address labor market needs and 21st-century skills. The report further underscored the critical role of technology in both teaching and administration, identifying this as a prerequisite for developing "modern schools" (Ministry of Education, 2014).

The EFA assessment revealed modest but uneven progress across the six EFA goals, with Yemen achieving improvements in primary enrollment, gender parity, and adult literacy, yet falling short in early childhood care, quality, and education for marginalized groups. The report highlights persistent structural barriers, including high population growth, poverty, food price volatility, and repeated shocks from conflict and displacement, which undermined educational access and learning outcomes. While notable gains were observed in girls' enrollment and reductions in urban–rural disparities, the challenges of internal efficiency, high repetition and dropout rates, and low quality, reflected in poor student performance in national and international assessments which remained significant obstacles (Ministry of Education, 2014).

The assessment also noted that decentralization, community engagement, and improved resource mobilization had supported some advances in access and management, but financial and institutional constraints persisted. Future directions proposed in the report included the integration of ICT, strengthening early grade literacy and numeracy, promoting inclusive education for out-of-school children and those with special needs, and reinforcing the alignment between education and national development strategies.

The 2014 National Assessment Report on Education for All stood as a significant milestone in Yemen's educational policy landscape, providing a comprehensive review of achievements, challenges, and future priorities. While the process strengthened sector planning, fostered stakeholder dialogue, and shaped national policy directions, its limited integration of anticipatory and crisis-responsive measures left the system exposed to subsequent shocks.

Transitional Education Sector Plan (2020)

The Transitional Education Sector Plan (TEP) 2019/20–2021/22 was conceived as Yemen's principal national framework to combine humanitarian and development objectives for education in the context of protracted crisis. Developed amidst ongoing conflict, the TEP sought to address immediate challenges to access, quality, and management, while safeguarding educational gains from previous decades. The plan was structured as a short-term solution due to the inability to formulate a comprehensive, long-term education sector strategy during a period of extreme instability (Ministry of Education, 2019).

Recognizing the significant disruptions caused by conflict, such as school closures, teacher displacement, loss of infrastructure, and a steep rise in the number of out-of-school children, the TEP set out to provide a "holistic response package." This included, but was not limited to, alternative educational modalities such as distance learning, the rehabilitation of learning spaces, and community-driven initiatives to support continuity of education (Ministry of Education, 2019). The TEP prioritized four key program areas: (1) safe, equitable access to education; (2) improved teaching and learning; (3) rehabilitation of educational infrastructure and provision of equipment; and (4) strengthened institutional capacities.

The preparation and implementation of the TEP were marked by collaboration between the Ministry of Education, humanitarian and development partners, and civil society. The plan's design was informed by extensive needs assessments and sought to ensure a flexible response capable of adapting to Yemen's evolving crisis environment. The Local Education Group, comprising both government and international actors, played a central role in coordinating these efforts. Moreover, the TEP explicitly aimed to bridge immediate humanitarian needs with long-term development priorities. By integrating risk prevention, preparedness, and mitigation measures, the plan represented a significant step towards embedding resilience into Yemen's education system (Ministry of Education, 2019).

The Transitional Education Sector Plan (TEP) 2020 represented a significant evolution in Yemen's approach to educational planning under crisis conditions. By prioritizing flexibility, risk prevention, and the integration of humanitarian and development efforts, the TEP marked a shift towards resilience-centered policy and practice. The plan demonstrated advances in system capacity, anticipation of risk, and coordinated response; yet persistent contextual constraints and resource limitations continued to challenge its comprehensive implementation. The importance of the TEP lies in its attempt to build a bridge between immediate crisis response and long-term system recovery, laying the groundwork for future sector planning in Yemen.

National Vision for the Modern Yemeni State (2030)

Launched in 2019, the National Vision for the Modern Yemeni State (Vision 2030) was the most comprehensive long-term policy framework in Yemen's recent history. The Vision aspired to establish a modern, unified, and democratic Yemen, founded on strong institutions, social justice, and sustainable human development. The framework was developed through extensive national consultations and aimed to respond to both the immediate implications of conflict and the requirements for future prosperity (Supreme Political Council, 2019).

Within the education sector, Vision 2030 set the objective to "provide high-quality education for all members of society by stimulating the acquisition of knowledge and skills, instilling values and ethics, meeting the needs of development, and keeping pace with scientific and technological progress" (Supreme Political Council, 2019). The Vision specifically prioritized the introduction of technology at all educational levels, the promotion of digital transformation, and the fostering of a knowledge-based economy through societal initiatives and institutional reforms. The strategy called for investments in science, innovation, and digital literacy, alongside improvements in curriculum, teacher development, and equitable access to learning opportunities.

Vision 2030 articulated a phased approach to implementation, with early efforts directed at stabilization and recovery, followed by institutional restructuring, and culminating in sustainable development and international competitiveness by 2030. The Vision identified persistent challenges, including fragmented governance, outdated educational models, and insufficient integration of technology and innovation in teaching and learning.

The National Vision for the Modern Yemeni State (2030) represented an ambitious and future-oriented strategy for Yemen's recovery and development. Moreover, the Vision advanced the integration of technology, digital literacy, and innovation as central pillars of

reform. Vision 2030 demonstrated strengths in system strengthening, anticipatory planning, and participatory coordination, yet its operational mechanisms for rapid response and risk mitigation were less clearly defined.

Evaluating the Alignment of Yemen's Education Plans with the ESR Framework

Between 2010 and 2024, Yemen's education system experienced profound instability, alternating between reform ambition and crisis management. When examined through Cameron et al.'s (2024) Education System Resilience (ESR) framework, the system shows periodic advances in strengthening and response, yet limited institutional capacity to anticipate, plan, and mitigate the effects of recurrent shocks. Key policy frameworks, the Ministry of Education (MoE) Strategic Plan (2010–2020), the Education Sector Plan Implementation Grant (ESPIG, 2014–2022), the National Assessment Report on Education for All (2014), the Transitional Education Sector Plan (TEP, 2020), and the National Vision for the Modern Yemeni State (2030), collectively illustrate Yemen's evolving but incomplete trajectory toward resilience-building under protracted crisis conditions.

Strengthen

Efforts to strengthen Yemen's education system across crisis contexts have been consistently challenged by institutional fragmentation, political volatility, and recurrent shocks. Reforms such as the MoE Strategic Plan (2010–2020) and Vision 2030 sought to establish a foundation of quality, equity, and governance through curriculum renewal, teacher development, and data system upgrades. However, the escalation of armed conflict, coupled with chronic underfunding, has repeatedly undermined institutional capacity and continuity of reform efforts. Widespread non-payment of teacher salaries, infrastructural damage, and loss of qualified personnel have further eroded the foundations of the sector, restricting the scalability and sustainability of even well-designed interventions. The Education Sector Plan Implementation Grant (ESPIG) and the Transitional Education Sector Plan (TEP) demonstrated some gains in operational strengthening, especially through decentralized management and community mobilization, but persistent fragmentation of authority and resource constraints significantly limited systemic gains. Thus, despite periodic advances in planning, capacity-building, and stakeholder engagement, overall system strengthening has remained fragile and uneven, with the sector frequently reverting to emergency modalities rather than consolidating developmental progress.

Plan and Anticipate

Systematic risk anticipation and forward planning have represented persistent gaps across Yemen's education reforms. The initial MoE Strategic Plan and the 2014 EFA Assessment largely omitted robust risk analysis or scenario-based planning, despite Yemen's well-documented exposure to conflict, economic instability, and environmental hazards. The ESPIG's original design similarly underestimated the scale and persistence of conflict, necessitating repeated re-alignment and adaptation. Not until the TEP (2020) was anticipatory capacity more systematically embedded, with explicit provisions for contingency planning, scenario modelling, and crisis prevention. Nevertheless, anticipatory mechanisms often lacked operational depth, with limited integration of real-time risk monitoring or early warning systems for rapid response. While the 2030 Vision incorporated a degree of strategic foresight, including scenario planning for technological transformation, practical implementation remained contingent on overcoming severe contextual constraints. Overall, the sector's

limited risk anticipation and adaptive planning left it repeatedly exposed to the compounding effects of political, economic, health, and environmental shocks.

Respond and Recover

Yemen's education system has demonstrated periods of reactive adaptation and crisis response, particularly under significant shock conditions. The ESPIG and TEP, for instance, pivoted towards emergency school rehabilitation, distribution of learning materials, and support for displaced and out-of-school children in conflict-affected areas. Emergency interventions, including the establishment of temporary learning spaces and psychosocial support, enabled partial restoration of education services following major disruptions. However, the absence of robust preparedness protocols and dedicated recovery mechanisms in earlier reforms often delayed effective responses and left significant learning losses unaddressed. Recovery efforts have been hindered by funding shortfalls, restricted humanitarian access, and fragmented governance, particularly in areas of ongoing conflict or displacement. While donor-funded programs provided essential support, the lack of systematic institutionalization of crisis response limited the sector's ability to sustain recovery and transition back to long-term development pathways.

Prevent and Mitigate

The evolution of Yemen's education policy frameworks reflects a gradual, though incomplete, shift towards integrating risk prevention and mitigation. The MoE Strategic Plan and EFA Assessment largely approached risk reduction through indirect means, such as efforts to reduce dropout and improve health and hygiene, but did not systematically embed disaster risk reduction, school safety, or resilience-building. Subsequent reforms, notably the TEP, incorporated explicit school safety initiatives, disaster risk reduction plans, and community preparedness activities. However, chronic funding gaps, insecurity, and logistical barriers frequently constrained implementation, with many schools remaining ill-equipped to prevent or mitigate the impact of recurring shocks such as conflict, epidemics, and natural disasters. While Vision 2030 articulated aspirations for digital inclusion and adaptive management, realization of such measures remain undermined by structural deficits in governance, capacity, and resources.

Synthesis

The ESR-based assessment indicates that Yemen's education system demonstrates signs of resilience amid state collapse, conflict, and economic crisis, but remains structurally fragile and heavily dependent on external support. While national and donor frameworks have progressively integrated elements of crisis sensitivity, the sector continues to operate in a state of suspended recovery, oscillating between emergency response and limited reconstruction.

Fragmented Governance and Divided Authority

The most defining feature of Yemen's education landscape is the fragmentation of governance and division of authority. Since the escalation of conflict in 2014, authority over the education sector has been divided between competing administrations, each maintaining separate structures, policies, and fiscal systems. This fragmentation has eroded coherence, obstructed coordination across regions, and complicated donor engagement. Even well-designed frameworks such as the TEP and ESPIG were forced to operate through parallel

mechanisms, reducing efficiency and accountability (GPE, 2023; Ministry of Education, 2019). The absence of a unified national system has turned education delivery into a patchwork of humanitarian, community, and local initiatives rather than a coordinated public service.

Humanitarian dependency and aid volatility

Humanitarian dependency and aid volatility form the second defining constraint. Reforms such as the ESPIG and TEP sustained essential operations through donor funds, but unpredictable disbursement cycles and short project horizons undermined continuity (OCHA, 2025a; OCHA, 2025b; Oxfam, 2025). Yemen's education financing has become increasingly externalized, with national budget contributions shrinking under fiscal collapse. The result is a sector that survives but cannot strategically plan or self-finance. This dependency is compounded by the erosion of domestic revenue and the absence of fiscal decentralization capable of sustaining local schools once donor projects end.

Erosion of the teacher workforce and human capital base

A third cross-cutting theme is the erosion of the teacher workforce and human capital base. The non-payment of salaries, displacement, and insecurity have forced thousands of teachers out of the profession, while those remaining face deteriorating conditions and limited professional support (UNICEF, 2016a; Save the Children, 2021). Loss of experienced educators has crippled instruction quality and weakened institutional continuity, undermining both short-term recovery and long-term system strengthening. Reforms such as the ESPIG attempted to stabilize teacher training and psychosocial support, but without consistent remuneration or protection, gains remain short-lived.

Rise of community-based and non-state provision

A fourth feature distinguishing Yemen's trajectory is the rise of community-based and non-state provision as informal resilience mechanisms. In areas where formal governance has collapsed, community education committees, NGOs, and local councils have sustained learning through flexible and often voluntary arrangements (Al Refai, 2016; GPE, 2023). This bottom-up resilience, while crucial, operates without integration into a national policy framework, leading to uneven quality and sustainability. Nonetheless, it demonstrates the latent potential for decentralized and participatory approaches to anchor future recovery if adequately supported.

Persistent Inequalities and Barriers to Inclusive Resilience

Equity remains a persistent vulnerability across Yemen's education sector. Although all major reforms prioritized girls, displaced populations, rural communities, and children with disabilities, the cumulative effect of conflict, poverty, and displacement has entrenched exclusion. Gender-based violence, early marriage, and domestic labor continue to drive dropout among girls, particularly in rural areas. Children with disabilities and internally displaced children face compounded barriers due to inaccessible infrastructure, lack of assistive devices, and insufficient specialized support (UNICEF, 2016a; NRC, 2020). While targeted interventions under the ESPIG and TEP expanded access for some groups, overall disparities have widened, particularly between conflict-affected and relatively stable governorates. The 2030 Vision's emphasis on digital literacy and technological inclusion remains aspirational, as connectivity gaps and electricity shortages have rendered digital learning inaccessible to most (Supreme Political Council, 2019; UNICEF, 2024b).

Institutional learning and data utilization

Finally, institutional learning and data utilization remain limited. The absence of reliable education data systems, despite EMIS development efforts under the ESPIG, continues to constrain evidence-based planning and coordination. This gap undermines Yemen's ability to identify vulnerabilities, monitor implementation, and evaluate recovery outcomes (World Bank, 2015; GPE, 2023).

CONCLUSION

This final chapter synthesizes key findings from the five country analyzes (Egypt, Tunisia, Jordan, Lebanon, and Yemen) to identify shared systemic challenges and trace the evolution of Education Systems Resilience (ESR) across the region. It examines common structural and policy constraints while highlighting emerging priorities like climate resilience and long-term planning. Using a temporal lens, the chapter analyzes how education systems have responded to successive crises before, during, and after COVID-19, revealing a prevailing focus on adaptation rather than transformation. It concludes by reframing resilience as a continuum between *muruneh* (adaptation) and *sumud* (steadfastness), and calls for a shift toward justice-oriented, transformative approaches that address the root causes of vulnerability and inequality in education.

The review of education plans across the five MENA GEP countries over the past 14 years reveals a gradual but uneven evolution in education system resilience (ESR). In the pre-COVID period, national strategies primarily focused on system strengthening, including curriculum reform, teacher development, and EMIS enhancement, while rarely incorporating mechanisms for anticipating or mitigating shocks, leaving systems predominantly reactive despite recurring disruptions. During the COVID-19 pandemic, governments rapidly expanded emergency responses, introducing remote learning, remedial programs, and re-enrollment initiatives with substantial support from international partners (UNESCO, UNICEF, & World Bank, 2020). Yet long-term prevention and multi-hazard planning remained limited (Vegas & Winthrop, 2020). COVID-19 also catalyzed a shift toward crisis anticipation, with ministries beginning to integrate forward-looking strategies. Post-2020 plans in Egypt and Jordan now include hybrid learning frameworks and climate risk considerations, while Tunisia's forthcoming 2025–2035 strategy signals similar intentions. In Lebanon, the pandemic highlighted significant disparities between public and private schools, with limited digital readiness and fragmented governance hindering the continuity of learning. Although hybrid modalities were introduced, implementation remained inconsistent due to infrastructural deficits and unreliable internet access. In Yemen, COVID-19 compounded an already dire crisis, closing schools nationwide and disrupting education for nearly six million students in a context devoid of digital infrastructure.

The post-COVID period marked a significant shift, as the pandemic exposed systemic fragilities and heightened awareness of limited preparedness for future crises (Anderson, 2022), sparking intensified interest in embedding resilience into education policy. Governments and international organizations (UNESCO, 2021; and UNICEF, 2021) are increasingly promoting resilience as a mechanism for sustaining education amid disruptions. Digital trends indicate this growing focus: Google Trends data show searches for "education resilience" were limited before 2020, surged in March 2020, and nearly doubled in subsequent years (GPE, 2024). As a result, recent plans in Egypt, Jordan, and Tunisia incorporate crisis anticipation, hybrid learning models, and climate-related risks (GADRRRES, 2022).

A resilience discourse now permeates education planning, driven by agencies such as UNICEF, GPE, and UNESCO-IIEP (GADRRRES, 2022). While contemporary plans emphasize anticipation and continuity, there is a risk of reducing resilience to technocratic adaptability unless equity and systemic justice are explicitly incorporated (Joseph, 2013; MacKinnon & Derickson, 2012).

Shared Systemic Challenges Across Five Countries

Governance and Financing: Centralization and Resource Constraints

Education governance in the MENA region is characterized by centralized decision-making, which often leads to bureaucratic inertia and delayed policy implementation. In Egypt, for instance, the education system faces challenges related to rigid administrative structures that impede timely reforms. Similarly, Jordan struggles with chronic underfunding in education, which impacts the quality and accessibility of learning opportunities. Tunisia's higher education budget allocation is disproportionately directed towards salaries, leaving limited resources for infrastructure development and pedagogical improvements. In Lebanon, governance fragmentation and politicization within the Ministry of Education have produced parallel systems reliant on donor funding, while recurrent fiscal crises have reduced education spending to one of the lowest regional levels, undermining equity and service delivery. In Yemen, divided authority between competing administrations and the collapse of domestic financing have rendered the education system almost entirely dependent on humanitarian assistance, with aid volatility further eroding institutional stability. These financial constraints have hindered the capacity of education systems to adapt and respond effectively to emerging challenges.

Equity and Inclusion: Persistent Disparities

Despite policy commitments to inclusive education, significant disparities persist in access to quality education for marginalized groups, including refugees, children with disabilities, and rural learners. In Jordan, while there are initiatives aimed at integrating refugees into the education system, implementation gaps remain, and many refugee children still face barriers to education. More particularly, refugees with disabilities face compounded challenges in accessing education, including physical barriers, a lack of specialized support, and discrimination (UNHCR, 2017). Furthermore, children with disabilities across the region encounter physical, attitudinal, and systemic obstacles that prevent their full participation in education (UNICEF, 2022). Rural students often attend under-resourced schools with limited access to qualified teachers and educational materials, exacerbating educational inequalities. These inequities are compounded by socio-economic factors and cultural attitudes that marginalize certain groups, hindering their educational attainment and future opportunities.

Crisis Responsiveness: Reactive Measures and Strategic Gaps

The education systems in the MENA region have predominantly adopted reactive approaches to crises such as political instability, displacement, and health emergencies. For example, Lebanon's public schools have been repurposed as shelters for displaced populations, disrupting the educational process and highlighting the lack of preparedness for such contingencies (Reuters, 2024). In contrast, Jordan's 2023–2027 Crisis and Risk Management Strategy represents a proactive effort to integrate crisis preparedness into educational planning. Tunisia's forthcoming 2025–2035 education plan is anticipated to further this approach by incorporating resilience and risk management strategies. However, these initiatives are still in early stages, and comprehensive, long-term strategies that address the multifaceted nature of crises are lacking in many countries.

Role of International Agencies: Influence and Implications

International organizations play a significant role in shaping education agendas and strategies in the MENA region. While their involvement has brought attention and resources to critical issues, it can also lead to a disconnect between global frameworks and local realities. The prioritization of international standards and objectives may overshadow the unique needs and contexts of individual countries, limiting the effectiveness and sustainability of educational reforms. Furthermore, the dominance of external actors in policy development can marginalize local expertise and hinder the development of homegrown solutions that are more likely to be contextually relevant and widely accepted.

Transformative Resilience in Education: Moving Past Reactive Measures

As a continuation of the previous point, while some national education plans have begun to integrate resilience components that go beyond routine system strengthening – incorporating anticipation, planning, recovery, and prevention or mitigation of shocks (such as Jordan's Crisis Management Plan) – they frequently fall short of fostering a transformative dimension. In practice, actors tend to prioritize short- to medium-term crisis response and recovery, focusing on stabilizing education systems in the face of immediate disruptions. This approach overlooks the deeper, structural reforms necessary to develop transformational resilience capacities, which require coordinated social, economic, and policy shifts that enable education systems not merely to withstand shocks but to adapt and evolve in ways that strengthen equity, inclusion, and long-term sustainability (Anderson, 2022; Bou Zeid & Abouchedid, 2025; Cameron et al., 2024). Without embedding such transformative objectives, resilience remains largely reactive, limiting the potential for systemic change that can address underlying vulnerabilities and build genuinely adaptive education systems.

Climate as an Emerging but Underexplored Disruptor

Climate change has been identified in several education plans and strategies as a potential disruptor to education and broader social systems. However, most references to climate remain at a conceptual level, lacking detailed analysis of its mechanisms of disruption or specific pathways through which it may affect educational continuity, access, and quality. There is also limited articulation of how climate risks might interact with existing vulnerabilities in the system. This indicates a gap in both policy and research that needs to be addressed through evidence-based planning, risk assessment, and integration of climate resilience measures within the education sector framework. This, hence, signals an emerging but still underdeveloped area of inquiry, one that calls for stronger evidence-based planning, risk assessment, and the systematic integration of climate resilience within education sector frameworks.

Temporal Blind Spots: Insufficient Foresight in Planning

Many education plans in the MENA region lack robust foresight mechanisms to anticipate and mitigate future challenges such as climate change, recurring conflicts, and economic volatility. The absence of long-term strategic planning that incorporates risk assessment and scenario modelling leaves education systems vulnerable to unforeseen disruptions. Without integrating anticipatory measures into policy development, education systems may struggle to adapt to rapidly changing circumstances, compromising their resilience and sustainability (World Bank, 2024).

Addressing these interconnected challenges requires a comprehensive approach that includes decentralizing governance to enhance responsiveness, increasing investment in

education to ensure equitable access, adopting proactive crisis management strategies, empowering local stakeholders in policy development, and integrating long-term foresight into planning processes with an aim of overall systemic transformation. Only through such holistic reforms can the MENA region build education systems that are resilient, inclusive, and capable of meeting the evolving needs of all learners.

Implementation Challenges and Donor Dependence

The post-COVID emphasis on ESR has led Ministries of Education in the five countries to increasingly integrate resilience into their national plans. Pre-COVID international support contributed modestly to the development and implementation of national education plans; post-COVID interest and involvement expanded significantly. Consequently, rather than being internally developed and co-constructed with local stakeholders familiar with contextual realities, national strategies are increasingly shaped by international organizations. This marginalization of local knowledge – essential for anticipating, adapting to, and mitigating crises – undermines a critical component of education system resilience (Bou Zeid & Abouchedid, 2025). Local knowledge, which is often marginalized, constitutes a critical component of education system resilience (Bou Zeid & Abouchedid, 2025). Context-specific and experiential knowledge enables stakeholders to anticipate and mitigate crises, supporting strategic foresight – an essential element of the anticipation stage of resilience. Such knowledge is equally vital during the adaptation and transformation stages, enabling systems not only to survive disruptions but also to evolve and improve (Bou Zeid & Abouchedid, 2025). Local creativity and the capacity to implement innovative practices further strengthen ESR (Bou Zeid & Abouchedid, 2025). However, when international organizations dominate the shaping of national strategies, the uptake and effective implementation of locally grounded solutions are often constrained.

Furthermore, across the region, ambitious plans are hampered by limited domestic financing, capacity gaps, and heavy reliance on external agencies for both planning and funding (Andrews, Pritchett, & Woolcock, 2017). Over-reliance on international agencies, weak domestic financing, and capacity constraints have created a pattern of "isomorphic mimicry," where ambitious plans align with global rhetoric but remain weakly institutionalized (Andrews, Pritchett, & Woolcock, 2017). True ESR requires embedding local knowledge, fostering community-driven planning, and enabling structural transformation, rather than relying solely on externally driven agendas. After all, resilience is not just reactive ("bouncing back") but involves proactive, community-driven planning and structural transformation (Bou Zeid & Abouchedid, 2025).

The influence of international organizations has been particularly evident in how and when the concept of resilience began to appear in education strategies, plans, and reforms across the five countries. The timing of its introduction often coincided with the involvement of major international actors—such as UNESCO, UNICEF, and the World Bank—who have promoted resilience as part of a broader global policy agenda emphasizing adaptability and systems strengthening in the face of crises. This external influence is also linguistically visible. When resilience-related frameworks first emerged, the majority of policy documents and strategic plans in the five countries were written in English, with only a few exceptions. This linguistic choice reflects not only the target audience of these documents, often international donors and partners, but also the epistemic authority of international organizations in shaping how resilience is conceptualized and operationalized in education policy.

Moreover, the portrayal and interpretation of resilience within these documents align closely with international framings that emphasize adaptation and flexibility. The reference to resilience in English documents has often preserved this adaptive connotation (*muruneh*), rather than invoking local or political notions of steadfastness, justice, and resistance, such as *sumud*. This framing contrasts with an understanding of resilience grounded in *sumud*, which would highlight justice, transformation, and the need to address the root causes of vulnerability. Thus, this linguistic and conceptual gap illustrates how global discourses on resilience have influenced local understandings, often privileging technocratic and depoliticized interpretations over more contextually rooted or politically engaged ones.

As Badarin (2023) argues, resilience discourse can serve to normalize colonial or unequal conditions by framing adaptation as the appropriate response, rather than questioning or resisting the structural causes of vulnerability. Within this logic, resilience becomes a call to endure and adjust rather than to confront or transform injustice or the entire educational system. In contrast, the concept of *sumud* embodies a different form of resilience, one grounded in steadfastness, collective resistance, and the pursuit of justice. The dominance of the former narrative within education policies, therefore, reflects not only linguistic influence but also a deeper epistemic shift shaped by international agendas that privilege stability and control over political agency and transformation.

Hence, this raises several important questions about the ways resilience is framed, translated, and enacted within education systems in the region. To what extent do international organizations continue to define the parameters of what counts as "resilient" education? How have local actors, such as ministries, educators, and communities, understood, appropriated, resisted, or reinterpreted this concept in their own contexts? And, crucially, how does this framing shape the kind of education systems that are imagined, funded, and implemented?

It is important to bring into future studies a more plural and contextually grounded understanding of resilience – one that moves beyond the language of adjustment, adaptability, and efficiency to include dimensions of transformation, justice, dignity, and collective agency. Rather than seeing resilience merely as the capacity to absorb shocks or return to "normal," we might explore it as a transformative process: the ability of education systems and communities to question, resist, and reshape the structures that produce vulnerability in the first place. This involves re-centering local epistemologies and practices, acknowledging the political nature of resilience, and reclaiming it as a concept that speaks not only to survival but also to steadfastness, hope, and social transformation.

Viewed through the lens of resilience as a continuum between *muruneh* and *sumud*, the working definition of ESR as "the capacity of an education system to absorb, resist, and adapt to disturbances while ensuring the continuity of its vital functions and enhancing its reformative adaptive capacities" must be reimagined as transformative in nature. ESR should not merely aim for systems that respond or adapt to crises but rather for systems that actively question, resist, and transform political and structural conditions that create and confront the root causes of inequality and injustice. A resilient education system, therefore, must advance equity and justice in both access and quality, positioning resilience not as endurance of the status quo but as a pathway toward meaningful and lasting transformation.

REFERENCES

Education Systems Resilience

Agamben, G. 2005. *States of Exception*. Chicago, IL: The University of Chicago Press.

Alaoui, H., & Springborg, R. (2021). Ch11- The Challenges of Educational Reform in the Arab World. In *The Political Economy of Education in the Arab World*. Lynne Rienner Publishers.

Alayan, S., Rohde, A., & Dhouib, S. (Eds.). (2012). *The Politics of Education Reform in the Middle East: Self and Other in Textbooks and Curricula* (1st ed.). Berghahn Books.

Asadzadeh, A., Khavarian-Garmsir, A. R., Sharifi, A., Salehi, P., & Kötter, T. (2022). Transformative Resilience: An Overview of Its Structure, Evolution, and Trends. *Sustainability*, *14*(22), 15267.

Badarin, E. (2021). Localizing resilience: discursive projections, entrapments and domination. *British Journal of Middle Eastern Studies*, *50*(3), 515–530.

Brun, C. (2016). There is no Future in Humanitarianism: Emergency, Temporality and Protracted Displacement. *History and Anthropology*, *27*(4), 393–410.

Brun, C., & Shuayb, M. (2020). Exceptional and Futureless Humanitarian Education of Syrian Refugees in Lebanon: Prospects for Shifting the Lens. *Refuge, 36*(2), 20 – 30.

Brun, C., & Shuayb, M. (2023). Twenty years of the Inter-agency Network for Education in Emergencies: towards a new ontology and epistemology. *Globalisation, Societies and Education, 22*(2). doi: 10.1080/14767724.2023.2191936Bryant, J., & Aggleton, P. (2025). The Problem With Resilience: Individualisation, Reductionism and Relationality in Health Discourses on Resilience. *Sociology of Health & Illness*, *47*(4), e70031.

Bryant, J., & Aggleton, P. (2025). The problem with resilience: Individualisation, reductionism, and relationality in Health Discourses on Resilience. *Sociology of Health & Illness*, *47*(4).

Calhoun, C. (2004). "A World of Emergencies: Fear, Intervention, and the Limits of Cosmopolitan Order." *Canadian Review of Sociology and Anthropology/Revue canadienne de sociologie et d'anthropologie* 41 (4), 373–395.

Calhoun, C. (2010). "The Idea of Emergency: Humanitarian Action and Global (dis)Order." In *Contemporary States of Emergency: The Politics of Military and Humanitarian Interventions*, edited by D. Fassin and M. Pandolfi, 29–58. New York: Zone Books.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J.-P., & Page, E. (2024). *Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange*. Washington, DC, USA, and Ottawa, Canada.

Dülks, J., Fekete, A., Karutz, H., Kaufmann, J., & Posingies, C. (2023). Identification of methodologies to quantify education system resilience—A scoping review. *International Journal of Disaster Risk Reduction*, *97*, 103967.

Elhendi, R., & Buzzanell, P. M. (2024). The rubber band is already broken: An extended case study of UNDP transformative resilience framework in the context of Palestine. *Communication Monographs*, *91*(4). 589-610.

El-Kogali, S. E. T., & Krafft, C. (2019). *Expectations and aspirations: A new framework for education in the Middle East and North Africa*. World Bank Publications.

Evans, B., & Reid, J. (2015). Exhausted by resilience: response to the commentaries. *Resilience*, *3*(2), 154-159.

Folke, C. (2006). Resilience: The emergence of a perspective for social-ecological systems analyses. *Global Environmental Change*, *16*(3), 253–267.

Ferguson, B. C., Brown, R. R., & Deletic, A. (2013). A diagnostic procedure for transformative change based on transitions, resilience, and institutional thinking. *Ecology and Society*, *18*(4), Article number: 57.

Giacaman, R. (2020). Reflections on the meaning of 'resilience' in the Palestinian context. *Journal of Public Health*, *42*(3), e-369-e373.

Gigliotti, R. A. (2020). The perception of crisis, the existence of crisis: navigating the social construction of crisis. *Journal of Applied Communication Research*, *48*(5), 558-576.

Global Partnership for Education (GPE). (2024, August 14). *Education system resilience: Moving beyond buzzwords.*

Hay, C. (1999). Crisis and the Structural Transformation of the State: Interrogating the Process of Change. *The British Journal of Politics and International Relations, 1*(3), 317-344. (Original work published 1999)

Horák, P., & Špaček, D. (2024). Organizational Resilience of Public Sector Organizations Responding to the COVID-19 Pandemic in Czechia and Key Influencing Factors: Use of the Nograšek and Vintar Model. *International Journal of Public Administration*, *48*(8), 485–501.

Joseph, J. (2013). Resilience as embedded neoliberalism: a governmentality approach. *Resilience*, *1*(1),38–52.

Karami-Akkary, R. (2014). Facing the challenges of educational reform in the Arab world. *Journal of Educational Change, (15),*179–202.

Kelcey, J., Akar, B., & Bouvier, M. (2024). Evidence for system transformation brief: Education resilience. *Global Partnership for Education*.

MacKinnon, D., & Derickson, K. D. (2012). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, *37*(2), 253-270. (Original work published 2013)

Masco, J. (2017). The crisis in crisis. *Current Anthropology, 58*(15), S65-S76.

Opitz, S., and U. Tellmann. 2015. "Future Emergencies: Temporal Politics in Law and Economy." *Theory Culture Society* 32 (2): 107–129.

Pál, G. (2025). Crisis frames in the public discourse of the Municipality of Budapest after the COVID-19 pandemic. *Frontiers in Political Science*. Advance online publication.

Pandolfi, M. (2003). "Contract of Mutual (In)difference: Governance and the Humanitarian Apparatus in Contemporary Albania and Kosovo." *Indiana Journal of Global Legal Studies* 10 (1), 369–381.

Reid, J. (2012). The disastrous and politically debased subject of resilience. *Development Dialogues, 58*(58), 67-80.

Shah, R., Paulson, J., & Couch, D. (2019). The rise of resilience in Education in Emergencies. *Journal of Intervention and Statebuilding,14*(3), 303-326.

Shuayb, M. (2018). Who shapes education reform policies in Lebanon? *Compare: A Journal of Comparative and International Education, 49*(4), 548–564.

Stocker, J. (2024). Resilience Conceptualised through Transformation: A Framework for Interdisciplinary Application. In: Van Reisen, M. & Mawere, M. (eds.) *Tigray. War in a Digital Black Hole,* Volume 1. Langaa, Bamenda. Pp. 53-102. Book URL

Tan, O. S., & Chua, J. J. E. (2025). Structures, processes, and people: Creating optimism and resilience for future education systems. In E. King, D. Suryadarma, M. Kaffenberger, D. Dohmen, & T. Sonobe (Eds.), *Building resilience in education systems* (pp. 16–32). Asian

Development Bank Institute.

Tarricone, P., Mestan, K., & Teo, I. (2021). Building resilient education systems: A rapid review of the education in emergencies literature. *Australian Council for Educational Research*.

Tierney, K. (2015). Resilience and the Neoliberal Project: Discourses, Critiques, Practices—And Katrina. *American Behavioral Scientist, 59*(10), 1327-1342. (Original work published 2015)

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2016). *Reaching the marginalized*: *Guiding-principles on multicultural education and the re-thinking of cultural diversity* (UNESDOC digital library No. pf0000234806). Paris: UNESCO.

USAID. (2022). *All Children Reading–Asia (ACR-Asia): USAID Systems Strengthening Review*. USAID.

Walker, B. (2020). Resilience: What it is and is not. *Ecology and Society*,*25*(2), 11.

World Bank (2007). *The road not traveled : education reform in the Middle East and North Africa - executive summary (English).* MENA development report Washington, DC: World Bank.

Zhao, H. (2020). Explicating the social constructionist perspective on crisis communication and crisis management research: a review of communication and business journals. *Journal of Public Relations Research, 32*(3-4), 98–119.

Egypt

Abdelrahman Tera, M. A., & Rabie, A. A. (2020). *The crisis of the Covid-19 and its impact on education in Egypt*.

Brownlee, J., Masoud, T., & Reynolds, A. (2015). *The Arab Spring: Pathways of repression and reform*. Oxford University Press.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J.-P., & Page, E. (2024). *Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange*. Washington, DC, USA, and Ottawa, Canada.

CAPMAS. (2023). *Statistical yearbook*. Central Agency for Public Mobilization and Statistics, Government of Egypt.

Constitute Project. (2014). *Egypt's Constitution of 2014 with amendments through 2019*.

Cook, S. A. (2017). *False dawn: Protest, democracy, and violence in the new Middle East*. Oxford University Press.

Education 2.0 Egypt. (n.d.). *About Education 2.0*. Retrieved August 28, 2025.

El Baradei, L. (2021). *Education reform in Egypt: A long and winding road*.

El Gamal, R. (2016). Energy crisis in Egypt: Trends and implications. *Middle East Policy*, 23(4), 69–81.

El-Sayed Gamal El-Din. (2024, November 20). *Egypt under-18 population drops slightly in 2024: CAPMAS*. Ahram Online.

El Zayat, N. (2022). "Egypt: K-12 Egyptian Knowledge Bank study portal and new form of assessment", in Vincent-Lancrin, S., C. Cobo Romaní and F. Reimers (eds.), *How Learning Continued during the COVID-19 Pandemic: Global Lessons from Initiatives to Support Learners and Teachers* (pp. 167–170), OECD Publishing, Paris.

Ewiss, M. (2021). *Challenges in educational reform in Egypt*.

Fitria, H., Ahmed, S., & Ali, R. (2022). *Parallel education systems in Egypt: Structures, governance, and challenges*.

International Monetary Fund. (2016). *Arab Republic of Egypt: Request for Extended Arrangement under the Extended Fund Facility*. IMF Country Report No. 16/xx.

Mahdi, A. A., & Gharib, M. N. (2021).

متطلبات مواجهة تداعيات جائحة كورونا (Covid-19)المستجد على نظام التعليمي بمصر في ضوء مبادرات بعض الدول.

مجلة كلية التربية – جامعة بورسعيد. العدد 36. DOI: JFTP-2018-1159

Marey, R., & Magd, A. (2022). The Current Curriculum, Instructional, and Assessment Reforms in Egypt: The Experience and Lessons Learned. *In Handbook of Research on Teacher Education: Pedagogical Innovations and Practices in the Middle East* (pp. 207-225). Singapore: Springer Nature Singapore.

MoETE. (2014). *Strategic plan for pre-university education reform 2014–2030*. Ministry of Education and Technical Education, Egypt.

MoETE. (2021). *Statistical report on education in Egypt*. Ministry of Education and Technical Education, Egypt.

MoETE. (2023). *Education Sector Plan 2023–2027*. Ministry of Education and Technical Education, Egypt.

Moustafa, A., Marey, H., & Zahran, H. (2022). *Teacher shortages and education reform in Egypt*.

MPED – Ministry of Planning, and Economic Development. (2018). Egypt's Voluntary National Review 2018.

OECD. (2023). *PISA capacity-needs assessment: Egypt*. OECD Publishing. Retrieved from

Office of the United Nations High Commissioner for Human Rights (OHCHR). (2014). *Egypt Constitution (unofficial English translation)*. Retrieved from

Oxford Business Group. (2017). How will Egypt reform its education system? *Oxford Business Group*.

Ramdan, R. M., Hasseb, H. M., & Ahmed, K. M. S. (2020). *Egypt*. In M. O. Martin, I. V. S. Mullis, & V. A. S. Centurino (Eds.), TIMSS 2019 Encyclopedia: Education Policy and Curriculum in Mathematics and Science. TIMSS & PIRLS International Study Center, Boston College.

Rissman-Joyce, S. (2013). Egyptian education in times of social and political unrest: Crisis or serendipity? *International Journal of Humanities and Social Science, 3*(6). 302-307.

Roll, S. (2017). *Managing Egypt's economic transition: IMF reforms and their social impact*. Carnegie Middle East Center.

Saavedra, J. (2019). Shaking up Egypt's public education system. *World Bank Blogs*.

Sobhy, H. (2018). *The politics of education reform in Egypt: Privatization, digitalization, and the neglect of teachers*.

Sobhi, H. (2018a, July 8). نظام التعليم الجديد: هل سننجح بالتكنولوجيا؟. *Al-Shorouk News*.

Sobhi, H. (2018b, July 21). نظام التعليم الجديد: الإصلاح بدون معلمين. *Al-Shorouk News*.

Sobhi, H. (2018c, August 7). نظام التعليم الجديد: عن الخبرات الأجنبية والإيجابيات والضمانات. *Al-Shorouk News*.

Sobhy, H. (2020). *Schools and social protection in Egypt during COVID-19*.

Sobhi, H. (2023, February 11). النسخة الجديدة من خصخصة التعليم [The new version of education privatization]. *Al-Shorouk News*.

UNESCO. (2007). *UNESCO support for Egypt's education reform: International Institute for Educational Planning (IIEP)*. Paris: UNESCO.

UNESCO. (2016). *Education for people and planet: Creating sustainable futures for all, Global education monitoring report 2016*. Paris: UNESCO.

UNESCO. (2020). *Global education monitoring report: Inclusion and education – All means all*. UNESCO Publishing.

UNESCO Institute for Statistics (UIS). (2025). *SDG 4 country profile: Egypt* (SDG4 profile).

UNESCO, UNICEF, & Global Partnership for Education (GPE). (2023). *Support to the development of Egypt's Education Sector Plan 2023–2027*. Paris/Cairo.

UNICEF. (2020). *COVID-19 response: Education case study – Egypt*. New York: UNICEF.

UNICEF. (2021). *Education in Egypt: Country profile*. United Nations Children's Fund.

UNICEF. (2024a). *Situation analysis of children and adolescents in Egypt (country brief / education snapshot).*

UNICEF. (2024b, June). *Egypt data snapshot: Education.* UNICEF.

World Bank. (2018a). *Supporting Egypt's education reform project*. The World Bank.

World Bank. (2018b). *Project appraisal document: Egypt education reform project*. The World Bank.

World Bank. (2019). *Egypt: Supporting Egypt education reform project (P157809)*. Washington, DC: World Bank.

World Bank. (2021). *Remote learning during the global school lockdown: Multi-country lessons*.

Washington, DC: World Bank.
World Bank. (2022). *Climate change and education resilience in Egypt*. The World Bank.
Zahran, N. (2023). Assessing The Implementation of Egypt's Education 2.0 Reform: The Case of Sohag [Master's Thesis, the American University in Cairo]. AUC Knowledge Fountain.

Tunisia

Association for the Development of Education in Africa (ADEA) Knowledge Hub. (n.d.). *Tunisia: Education and skills country profile.* ADEA Knowledge Hub.

Ben Youssef, A. (2024). *Education and health in Tunisia: Is human capital at risk?* Economic Research Forum.

Bouguerra, F., Aboulkacem, S. (2016). Vulnerability of the Tunisian Education System. In: Mohamed, E., Gerber, H.R., Aboulkacem, S. (eds) Education and the Arab Spring. SensePublishers, Rotterdam.

Bouhlila, D. S. (2021, March 25). *Education in Tunisia: Past progress, present decline and future challenges*. Arab Barometer.

Bouhlila, D. S., Jules, T. D., Hentati, I., & Arnold, R. (2022). Navigating through the COVID-19 pandemic: Unfinished learning in primary and secondary education in Tunisia. *Tertium Comparationis 28* (3), 274-299.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J.-P., & Page, E. (2024). *Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange*. Washington, DC, USA, and Ottawa, Canada.

Di Vozzo, D. (2024). *Key policy developments in education, training and employment – Tunisia 2023.* European Training Foundation.

Global Partnership for Education. (2025). *Education in Tunisia: Where we work*.

Grazzi, V. (2025, October 8). Navigating educational challenges in Tunisia: A roadmap for reform. Broken Chalk.

Institut National de la Statistique (INS). (2023). *Enquête nationale par grappes à indicateurs multiples (MICS) – Tunisie 2023: Résumé français / Livret FR – Récap des données MICS 2023.*

Institut National de la Statistique. (2025). *Tunisia: 79.2% school-enrollment rate among youth aged 6 to 24*. Tunisienumerique.

Jmal, N. (2025, June 5). *Lost in transition: The traps of authoritarian nostalgia in Tunisia.* Arab Reform Initiative.

Legal Agenda. (2023, October 29). *Tunisian schools: Between glossy legislation and grim realities.*

Ministry of Education. (2016). الكتاب الأبيض: مشروع إصلاح المنظومة التربوية في تونس (*White paper: Reform project of the educational system in Tunisia)*. Tunis: Ministry of Education.

Ministry of Education (Tunisia). (2022, December 10). *Actu Min 10-12-2022* [PDF].

Ministry of Education (Tunisia). (2023, February 4). *Actu Min 04-02-2023* [PDF]. Ministère de l'Éducation.

Ministry of Education (Tunisia). (2024, December 13). *Actu Min 13-12-2024-1* [PDF]. Ministère de l'Éducation.

Mokhtari, A. (2017). Perceptions of Tunisian Educators of the effects of the Arab Spring on Tunisia's Educational Policies and Reforms Related to Corruption, Job Preparation, and English Language: A Mixed Methods Study [Doctoral dissertation, University of Louisiana]. ProQuest Dissertations & Theses.

New Arab. (2019, November 21). *Tunisia becomes first Arab country to introduce sex education in schools.*

Ngundu, M. (2025, August 14). *Tunisia.* Institute for Security Studies.

Organisation for Economic Co-operation and Development (OECD). (2022). *OECD Economic Surveys: Tunisia 2022*. OECD Publishing.

Ramadhani, T. R., & Anshori, I. (2022). Declining muslim religious levels in the Middle East and North Africa Region. *Journal of Islamic Civilization, 4*(2).

Soudani, K. (2024). Determinants of the quality of primary education in Tunisia: A micro-econometric analysis applied to the TIMSS 2011 study. *International Journal of Elementary Education, 13*(3), 39-48.

The Global Economy. (2018). *Tunisia: Student teacher ratio, primary school* [Data].

The Global Economy. (2023). *Tunisia: Primary school enrollment* [Data series].

Their World. (2018, May 24). *Tunisia aims for better basic education and more children in pre-primary*.

Tunisia Education. (n.d.). *Education system of Tunisia.* Retrieved October 8, 2025.

UNICEF Tunisia. (2022). *Education Budget Brief 2022* (Analyse budgétaire : éducation, période 2010–2021).

UNICEF. (2025). UNICEF Tunisia Annual Report 2024, UNICEF, New York, February 2025

Usman, Z. A., Salbiah, R., Aufa, N., & Znaidi, N. B. (2025). Socio-political, legal, and educational transformation in Tunisia after the Arab Spring. *Journal of Islamic Civilization, 6*, (2), 147-165.

Watanabe, C. (2022, September 7). *Tunisia's post-independence's efforts towards the quality of education and further challenges after the COVID-19 pandemic.* EDU-Port Japan.

World Bank. (2024). *Tunisia Overview*.

World Economic Forum. (2025). *Global gender gap report 2025*. World Economic Forum.

Yerkes, S. (2019, December 2). *It'll take more than sex ed to break taboos in Tunisia*. Carnegie Endowment for International Peace.

Jordan

Abdul-Hamid, H., Patrinos, H. A., Reyes, J., Kelcey, J., & Diaz Varela, A. (2016). *Learning in the face of adversity: The UNRWA education program for Palestine refugees*. World Bank.

AlZawahreh, S., Palmer, R., Rauschenberger, E. & AlAtari, S. (2025). Supporting Students At Risk of Dropping Out of School in Jordan: Evidence-Informed Solutions for Reducing Student Disengagement and Dropout. ERICC Policy Brief.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J.-P., & Page, E. (2024). *Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange*. Washington, DC, USA, and Ottawa, Canada.

Humanity & Inclusion. (2022). *Factsheet: Inclusive education in Jordan*.

Jones, N., Baird, S., Presler-Marshall, E., Małachowska, A., Kilburn, K., Abu Hamad, B. and Abu Hammad, B. (2019a) Adolescent well-being in Jordan: exploring gendered capabilities, contexts and change strategies. A synthe sis report on GAGE Jordan baseline findings. London: Gender and Adolescence: Global Evidence.

King's Academy. (2023). *About King's Academy.*

Krafft, C., Ragui, A. & Pastoor, I. (2021). *How Do Gender Norms Shape Education and Domestic Work Outcomes? The Case of Syrian Refugee Adolescents in Jordan.* Working Paper. Washington, DC: World Bank.

Ministry of Education (MoE). (2018). *Education Strategic Plan 2018–2022*. Amman: MoE. Ministry of Education [MoE]. (2020). *Strategy for Inclusive Education 2020–2030*. Amman, Jordan. Ministry of Education (MoE). (2022). *Mid-term review of the Education Strategic Plan 2018–2022*. Amman: MoE.

Ministry of Education (MoE). (2023). *Crisis and Risk Management Strategy 2023–2027*. Amman, Jordan.

Ministry of Planning and International Cooperation (MoPIC). (2014, December 17). *Jordan Response Plan for the Syria crisis 2015: Final draft*. Government of Jordan.

Ministry of Planning and International Cooperation (MoPIC). (2017). *The Jordan Response Plan for the Syria crisis 2017–2019: Executive summary*. Government of Jordan.

Ministry of Planning and International Cooperation (MoPIC). (2020). *Jordan Response Plan for the Syria crisis 2020–2022*. Government of Jordan.

National Center for Human Resources Development (NCHRD). (n.d.). *Home*.

OECD. (2023). *PISA capacity needs assessment: Egypt* (CNA). OECD Publishing.

Rauschenberger, E., & Sabella, M. (2023). *Education in Jordan: Challenges and opportunities*. Rauschenberger, E., Palmer, A., & Sabella, M. (2023). *Syrian refugee education in Jordan: Systemic impacts and responses*.

Shuayb, M., Hammoud, M., Alsamhoury, O. (2022). A Comparative Longitudinal Study of the Schooling of Refugee Children in Lebanon, Turkey, and Australia. *Centre for Lebanese Studies*.

UNESCO. (2023, August 7). *Transforming the education system in Jordan towards greater inclusion and diversity in education.*

UNESCO. (2024, May 12). *Jordan Technical and Vocational Education and Training System Review 2023*.

UNESCO. (2025, February 24). *Jordan launches the National Framework for Inclusion and Diversity in Education.*

UNHCR. (n.d.a). *Jordan*. UNHCR. Retrieved October 2, 2025.

UNHCR. (n.d.b). *Jordan country data*. UNHCR Operational Data Portal. Retrieved October 2, 2025.

UNHCR. (2024). Thematic factsheet: Education – Jordan. UNHCR.

UNICEF. (2019). Budget Brief 2019: Public Education Sector in Jordan. Amman, Jordan: UNICEF.

UNICEF Jordan. (2020, December). Jordan country report on out-of-school children. UNICEF.

UNRWA. (n.d.). What we do: Education. Retrieved October 8, 2025.

Weldali, M. (2025, June 12). *Tamkeen warns of growing school dropout crisis linked to child labour.* The Jordan Times.

World Bank. (2024). *Out-of-school rate, primary, female (% of primary school age children) — Jordan (SE.PRM.UNER).* World Bank Open Data. Retrieved October 3, 2025.

Reuters. (2024, July 1). *World Bank approves $700 million to boost Jordan's education, health and social care.* Reuters.

The Jordan Times. (2023, June 14). Education Ministry holds joint Education Strategic Plan annual review.

The Jordan Times. (2025, January 23). Jordan launches inclusive education campaign to promote equality, accessibility for all students.

U.S. Government Accountability Office. (2015, April 14). *Fragmentation, overlap, and duplication: An evaluation and management guide* (GAO-15-49SP).

Lebanon

Abdul-Hamid, H. and Yassine, M. (2020). Political Economy of Education in Lebanon : Research for Results Program (English). *Washington, D.C. : World Bank Group.*

Abu Moghli, M., & Shuayb, M. (2020). Education Under Covid-19 Lockdown: Reflections from Teachers, Students & Parents. *Centre for Lebanese Studies*.

Akkary, R. K. (2014). Facing the challenges of educational reform in the Arab world. Journal of Educational Change, 15(2), 179-202.

Association of Secondary Public Education Teachers. (2024, October 25). Statemen issued by the Association of Secondary Public Education Teachers—Beirut—25 October 2024 [Statement].

Awada, G., & Diab, H. (2016). Lebanon's 2011 ICT education reform strategy and action plan: Curriculum success or abeyance. Cogent Education, 3(1), 1245086.

Brun, C. (forthcoming). The hybrid governance of education in Lebanon: A frontstage/ backstage analysis.

Brun, C., and Shuayb, M. (2020). Exceptional and Futureless Humanitarian Education of Syrian Refugees in Lebanon: Prospects for Shifting the Lens. Refuge: Canada's Journal on Refugees 36: 20–30.

Brun, C. Maalouf, M. Hammoud, M. (2024). Mapping of Education data systems in Lebanon. ERICC Policy Brief.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J-P., & Page, E. (2024). Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange: Washington DC, USA, and Ottawa, Canada.

CERD. (2023). Statistical Bulletin for the Academic Year 2023–2024.

CERD. (2024). PISA 2022 Lebanon results: Infographic summary. CRDP.

Dinger, S. (2022). Coordinating care and coercion: Styles of sovereignty and the politics of humanitarian aid in Lebanon. Humanity: An International Journal of Human Rights, Humanitarianism, and Development, 13(2), 218-239.

El Amine, A. (2005). Executive summary. In A. El Amine (Ed.), Reform of general education in the Arab world (pp. 321–368). Beirut: UNESCO.

El-Ghali, H. A. (2014). Perspectives on Practice and Policy: Success in Increasing Access and Retention in Primary Education in Lebanon.

Hamdan, H. (2015, March). Defence for Children International Lebanon: Connect Children Now - Towards Education Improvement in Lebanon.

Hammoud, M. (2023a). Are the Students in Lebanon Ready for the Official Exams? Centre for Lebanese Studies.

Hammoud, M. (2023b). Children in Lebanon are at risk of losing another academic year. Centre for Lebanese Studies.

Hammoud, M., & Brun, C. (2024). Lebanon's Education Crisis: Pre-existing Challenges Before the Escalation of Israeli Aggressions. ERICC.

Hammoud, M., & Brun, C. (2025). ERICC Working Paper _ Education and crises - The cost of delayed recovery in Lebanon. figshare. Online resource.

Hammoud, M., & Shuayb, M. (2021). The impact of Covid-19 lockdown on access & quality of education: Reflections from students & teachers in Lebanon. *Centre for Lebanese Studies.*

Hammoud, M., & Shuayb, M. (2022). Children in Lebanon Cannot Afford to Lose Another Academic Year. *Centre for Lebanese Studies*.

Human Rights Watch. (2020). Lebanon Events of 2020 [Online].

Khaleej Times. (2024, November 21). "Eager to help others": Tributes pour in for community leader CA Khalil who passed away in Dubai. Khaleej Times.

MEHE. (2012). Teaching and Learning in the Digital Age: Lebanon's National Educational Technology Strategic Plan 2012–2017. Beirut: MEHE.

MEHE. (2014). Reaching All Children with Education in Lebanon (R.A.C.E). Beirut, Lebanon: Ministry of Education and Higher Education.

MEHE. (2021). Lebanon five-year General Education Plan 2021-2025.

MEHE. (2024a, October 31). Public Schools.

MEHE. (2024b, November 4). Fact Sheet on Education Emergency Response—Reporting Period 28 October – 4 November 2024. MEHE.

MEHE. (2024c). Education Emergency Costed Response Plan (EECRP) September 2024 Crisis in Lebanon.

Nehme, N. (2023). The Cost of Education in Lebanon -Treasury and Society Expenditure. *Centre forLebaneseStudies.*

NRC (2020). The Obstacle Course. Barriers to Education for Syrian Refugee Children in Lebanon.

OCHA. (2023). Escalating Needs in Lebanon: A 2023 Overview. OCHA.

OCHA (2025). Lebanon: Flash Update #57 - Escalation of hostilities in Lebanon, as of 30 January 2025. OCHA Lebanon.

Shuayb, M. (2018). Who shapes education reform policies in Lebanon? Compare: *A Journal of Comparative and International Education,* 49(4), 548–564.

Shuayb, M. (2021). Lebanon: "Ahmed Will Not be Part of the One Percent."

Shuayb, M., Hammoud, M., Alsamhoury, O. (2022). A Comparative Longitudinal Study of the Schooling of Refugee Children in Lebanon, Turkey, and Australia. *Centre for Lebanese Studies*.

Shuayb, M., Hammoud, M., & Al Samhoury, O. (2023). Schooling Experiences and Outcomes of Refugee Children in Lebanon, Turkey, and Australia. *Centre for Lebanese Studies.*

Shuayb, M., Hammoud, M., Nehme, N., Antoun, S., Al Samhoury, O., Maalouf, M., Brun, C., Shuayb, I., Tutunji, S., & Sayed, Y. (2024). Education Under Fire: A Rapid Study of Parents' and Teachers' Readiness for School Amidst Israeli Attacks on Lebanon. Beirut and Cambridge: Centre for Lebanese Studies and REAL Centre, University of Cambridge. ISBN: 978-1-914521-08-9.

The Global Economy (2023). Lebanon: Secondary school enrollment (gross).

UNESCO. (2023, November 10). Strengthening Lebanon's education reform through strategic partnership: Marking a milestone in educational advancement [Press release].

UNHCR. (2022). Lebanon Crisis Response Plan (LCRP) 2022-2023.

UNHCR. (2023). 2023 Lebanon Crisis Response Plan (LCRP).

UNICEF. (2023). Trapped in a Downward Spiral.

UNHCR. (2024) LRP 2025: Education Sector Strategy.

UNICEF (2025). On International Day of Education, UNICEF strengthens its commitment to children's right to education.

VASyR (2020). Lebanon - VASyR 2020 Dashboard with Key Findings.

World Bank. (2016). *The World Bank Program for Results for the Lebanese Republic for Support to RACE II Project: Environmental and Social Systems Assessment (ESSA)*.

World Bank. (2021). Foundations for Building Forward Better: An Education Reform Path for Lebanon.

World Bank (2022). Lebanon country brief: Education indicators.

World Bank. (2024). Lebanon: Education Public Finance Review (Report No. P175814). World Bank Group.

Yemen

ACLED. (2023). Yemen: Uncertain Trajectory Amid Truce Collapse and Ongoing Negotiations.

Al Refai, S. (2016). Civil society's efforts to revive a war-ravaged education system in Yemen.

Atarodi, A. (2010). *Yemen in Crisis: Consequences for the Horn of Africa* (FOI-R–2968–SE). FOI, Swedish Defence Research Agency.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J-P., & Page, E. (2024). Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange: Washington DC, USA, and Ottawa, Canada.

Çınar, M. (2023). Educational Challenges in Yemen: How the Conflict Puts Education at Risk?

Education Cannot Wait. (2023). RIGHT HERE,RIGHT NOW: An Emergency Appeal to Support Education for Children and Adolescents Affected by Climate Hazards.

Government of Yemen and UNICEF. (2013). Proposal to the Global Partnership for Education for a catalytic contribution: towards implementation of Yemen's education sector plan 2013-2015.

GPE. (2023). Grant completion report 2014-2022. Yemen.

IMF. (2025). IMF Staff Concludes Visit to Yemen.

Ministry of Education. (2014). EFA national report for the Republic of Yemen.

Ministry of Education. (2019). Transitional Education Sector Plan (TEP) 2019/20-2021/22.

Ministry of Planning & International Cooperation, Economic Studies & Forecasting Sector. (2023, October). Yemen socio-economic update, Issue (82).

Moqueet, N. (2013). *Graduation Out of Poverty in Yemen: Impact of the Political Crisis on the Extreme Poor* (CGAP-Ford Foundation Graduation Pilot). Nazia Moqueet (Author).

OCHA. (2016). 2016 Humanitarian Needs Overview.

OCHA. (2025a). Learning for all: more children, more classrooms.

OCHA. (2025b). Yemen Humanitarian Fund.

Oxfam. (2025). Yemen faces economic freefall and devastating aid crisis after a decade of conflict.

Save the Children. (2021). Education in Crisis in Yemen.

Supreme Political Council. (2019). National Vision for the Moden Yemeni State.

The Global Economy. (2016). Yemen: Student-teacher ratio, primary school.

UNICEF. (2014). *Situation Analysis of Children in Yemen 2014*.

UNICEF. (2016a). Children on the Brink.

UNICEF. (2016b). 2016 in review: UNICEF's impact in five of the most dangerous crises.

UNICEF. (2018a). If not in School: The Paths Children Cross in Yemen.

UNICEF. (2018b). UNICEF Yemen Humanitarian Situation Report.

UNICEF. (2021a). Yemen's Hidden Emergency: An Education System in Crisis.

UNICEF. (2021b). Education Disrupted: Impact of the Conflict on Children's education in Yemen.

UNICEF. (2023a). State of the World's Children 2023.

UNICEF. (2023b). Climate Landscape: Analysis for Children in Yemen.

UNICEF (2024). Yemen MICS-EAGLE Factsheet.

UNICEF. (2024a). Cholera outbreak threatening lives of vulnerable children in Yemen.

UNICEF. (2024b). Growing up in a changing climate: The Impact on Children in the Middle East

andNorthAfrica.

World Bank. (2015). *Education in Federal States: Lessons from Selected Countries—A Study of Decentralization and School-Based Management for the Republic of Yemen* (Report No. ACS13298). The World Bank Group.

World Bank. (2015). SABER country report: School autonomy and accountability – Yemen.

World Bank. (2020). Yemen Restoring Education and Learning Project.

World Bank. (2022). Rainwater Harvesting in Yemen: A Durable Solution for Water Scarcity.

World Bank. (2024a). Population, total - Yemen, Rep.

World Bank. (2024b). Yemen Poverty and Equity Assessment 2024.

Zakout, W. (2014, December 15). Raising the quality of education in Yemen. The World Bank.

Conclusion

Anderson, A. (2022). *COVID-19 outbreak highlights critical gaps in school emergency preparedness.* Brookings.

Andrews, M., Pritchett, L., & Woolcock, M. (2017). *Building state capability: Evidence, analysis, action*. Oxford University Press.

Badarin, E. (2021). Localizing resilience: discursive projections, entrapments and domination. *British Journal of Middle Eastern Studies*, *50*(3), 515–530.

Bou Zeid, M. & Abouchedid, K. (2025). Reconceptualizing education system resilience through inclusive participation in conflict-affected societies. *International Journal of Educational Research, 133*.

Cameron, L., Thomas, E., Amenya, D., West, H., Mugiraneza, J.-P., & Page, E. (2024). *Education System Resilience. Global Partnership for Education Knowledge and Innovation Exchange*. Washington, DC, USA, and Ottawa, Canada.

GADRRRES. (2022). *Comprehensive School Safety Framework 2022–2030*. Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector.

Global Partnership for Education (GPE). (2024, August 14). *Education system resilience: Moving beyond buzzwords*.

Joseph, J. (2013). Resilience as embedded neoliberalism: a governmentality approach. *Resilience*, *1*(1), 38–52.

MacKinnon, D., & Derickson, K. D. (2012). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, *37*(2), 253-270. (Original work published 2013)

Reuters. (2024, November 12). *Lebanon's public schools reopen amid war and displacement*. Reuters.

UNESCO. (2021). Acting for recovery, resilience, and reimagining education: the Global Education Coalition in action.

UNESCO, UNICEF, & World Bank. (2020). *What have we learned? Findings from a survey of ministries of education on COVID-19 responses*. UNESCO.

UNHCR. (2017). *Power of Inclusion: Building Inclusive Education Systems for Refugees.*

UNICEF. (2021). *Reopening with resilience: Lessons from remote learning during COVID-19.* New York and Florence: UNICEF Office of Research – Innocenti.

UNICEF. (2022). *Children with Disabilities in the Middle East and North Africa.*

Vegas, E., & Winthrop, R. (2020). *Beyond reopening schools: How education can emerge stronger than before COVID-19*. Brookings.

World Bank. (2024). *Embracing and Shaping Change: Human Development for a Middle East and North Africa Region in Transition.*