

**Endogenous systems
leadership for
education in crises:
A framework for
inclusive and equitable
quality education in
low- and middle-
income countries**

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Endogenous systems leadership for education in crises: A framework for inclusive and equitable quality education in low- and middle- income countries

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Executive Summary

- The working paper develops a framework for '**endogenous systems leadership**' as a means of supporting the distribution of leadership across the local, middle and central tiers of complex education systems in low- and middle-income countries affected by crisis; in ways that respect the values, knowledge, practices and agency of actors in these contexts, which are characterised by the involvement of multiple international partners with a remit to support, and an obligation to respect and not override, local authority and decision-making. The framework identifies entry points for strengthening endogenous systems leadership of inclusive and equitable quality education for all.
- The framework proceeds from an understanding of education systems as **complex systems**. Key characteristics of complex systems are that they: cannot be explained simply by breaking them down into their component parts because these parts are interdependent; are self-organising and difficult to predict; give rise to 'wicked problems'; exhibit 'emergence;' may produce small effects from large actions (and vice versa); are particularly sensitive to initial conditions that produce a long-term momentum or 'path dependence'; demonstrate extended periods of regularity punctuated by short bursts of change; emerge and develop within a 'fitness landscape' that is provided by their interactions with other systems.
- Another key strand of literature we draw on is **systems leadership** which has primarily been developed and applied in high-income contexts as a means of facilitating change in complex systems. The paper adapts this research to explore possibilities for strengthening the leadership of inclusive, equitable quality education in low- and middle-income countries affected by crisis.
- Drawing together ideas around endogenous leadership, complex systems and systems leadership, the paper identifies the key features of endogenous systems leadership:
 - **Systems thinking** – a perspective which recognises the complexity of education systems and seeks to understand the workings of the system as a whole. The framework highlights the importance of developing *shared commitments and visions; joined up policy and action; and coherence between national interests and donor agendas*.
 - **Democratising education governance** involves *engaging stakeholders at all levels* in order to mobilise capacities which are widely distributed across different tiers, including in those without positional authority. It also requires intentional efforts to recognise and overcome existing inequalities through *equity-oriented evidence decision-making*.
 - **Strengthening system capacities at all levels**. Extending the scope for endogenous leadership in responding to crises in complex education systems requires developing new, untested practices and improvised solutions which cannot be centrally mandated. This requires *an enabling environment for flexibility and innovation*, particularly at the local and middle tiers, and ensuring *multi-directional information-sharing* across these levels.
 - **Strengthening learning systems** requires *context-relevant information systems* which are oriented towards the experiences and outcomes of marginalised groups, and *adaptive approaches to problem solving*.

- **Resourcing education for times of crisis** requires *bridging the funding gap, ensuring coherence between national and international priorities, and matching resources to need at the middle tier and local level.*

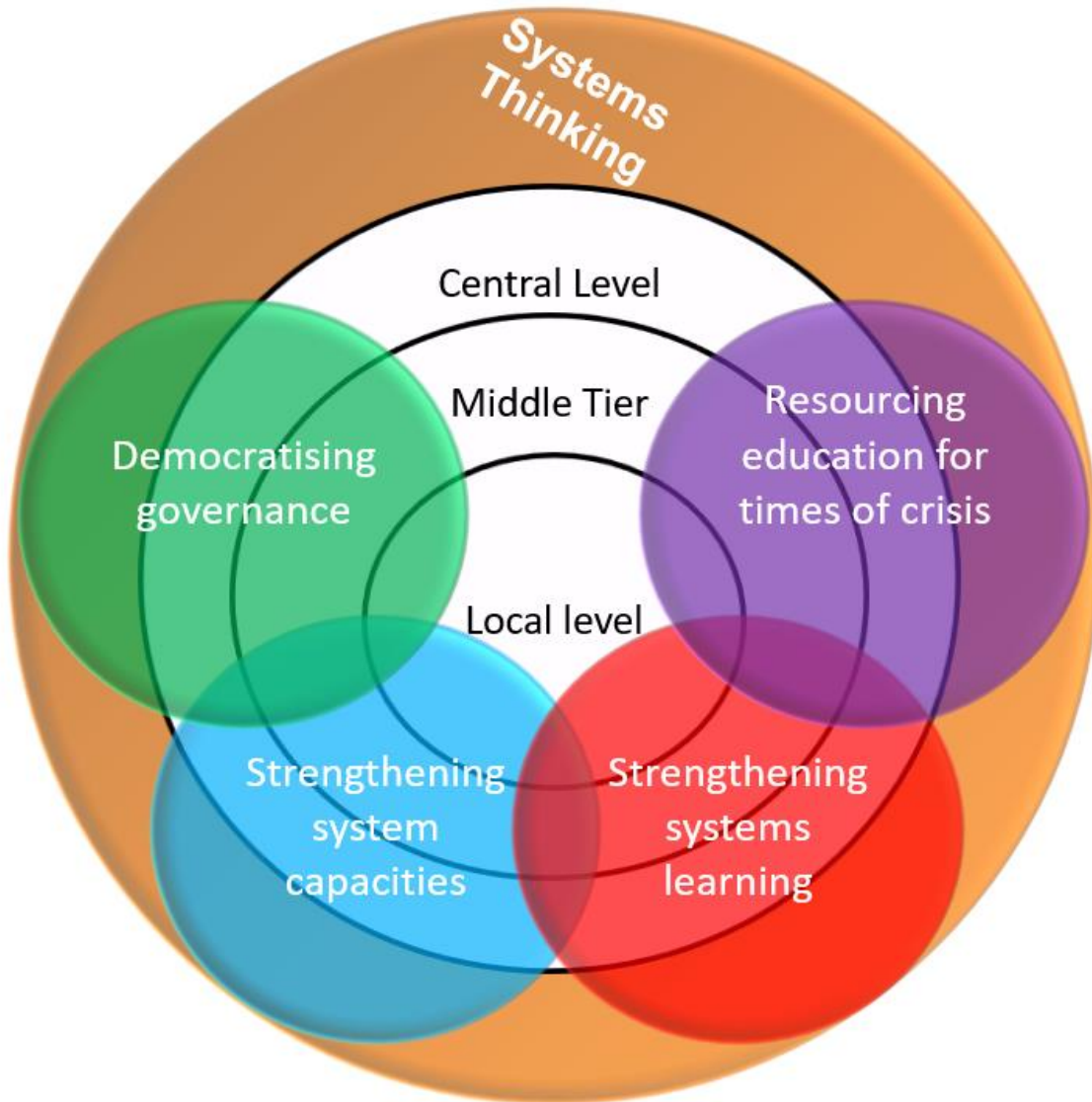


Figure 1. Endogenous systems leadership framework

- The working paper draws on three cases studies commissioned by IIEP-UNESCO to explore Ministry of Education responses to crisis in Burkina Faso, Jordan and Kenya. Findings from the case studies help to illustrate the features of endogenous systems leadership and its potential for support quality, equitable and inclusive education in crises.

1. Introduction

IIEP-UNESCO has been working closely with Ministries of Education (MoEs) in low- and middle-income countries (LMICs) to strengthen capacities to plan for and manage education systems, including in crisis-settings. This has included support in conflict-affected countries, those receiving large numbers of displaced, refugee and migrant learners, and those affected by natural hazards and health emergencies such as Covid-19.

To inform these activities, IIEP-UNESCO commissioned three country case studies in Burkina Faso (Ndabananiye et al. 2021), Jordan (Arnot & Seeger 2021) and Kenya (Gichuhi & Kalista 2022) to identify enabling and constraining factors for MoEs' leadership of education in times of crisis. As part of this work, IIEP developed a framework which focuses on individual, organisational and institutional capacities for managing crises (Arnot & Seeger 2021, p12). For the present paper, IIEP has commissioned the Centre for Comparative and International Research in Education (CIRE) at the University of Bristol, UK, to provide a critical commentary on the case studies, consider these in relation to the wider literature on leading education provision in times of crisis, and develop heuristics for future research and partnerships. This working paper draws on emerging theoretical understandings of educational leadership and governance alongside evidence on service provision during crises to propose **a systems leadership perspective**¹ on educational leadership and governance for inclusive and equitable quality education in LMICs.

This paper aims to inform policy dialogue between government actors and other key stakeholders, as well as ongoing research, partnership, and capacity development activities involving IIEP and others. The main research question guiding the study is as follows:

What are the opportunities for Ministries of Education to exercise leadership in the provision of inclusive and equitable quality education for all in times of crisis?

This inquiry is supported by the sub-questions:

- ***How do different internal and external governance structures and mechanisms enable or constrain MoE leadership in crises?***
- ***How can multi-stakeholder partnerships support MoEs in exercising leadership in crises?***

Implicit in these questions is a concern for what we might term '**endogenous leadership**', which derives from a particular national context and reflects local values, knowledge, practices, institutions, and agency in dealing with international partners. As such, we are concerned with the endogenous leadership of education provision in contexts marked by the involvement of multiple international partners which have a remit to support, but also to respect and not override, local authority and decision-making. This is consistent with commitments established at the UN's World Humanitarian Summit that international actors should "Reinforce, [and] not replace, national and local systems" (UNGA 2016).

¹ See Glossary for an explanation of this and other subject-specific terms in bold.

While acknowledging the key role of MoEs in education service delivery during crises, this working paper draws on recent work on systems leadership and UNESCO's *Futures of Education Initiative* (International Commission on the Futures of Education [ICFE] 2021), to argue for a view of educational leadership which extends beyond traditional bureaucratic boundaries. Leadership is best conceived as a practice rather than a position: it is a process of social influence which emerges through the relationships and interactions of diverse stakeholder groups, including those without positional authority within a civil service hierarchy (Uhl-Bien 2006; Harris et al. 2021). The UN's International Commission on the Futures of Education also highlights these distributed, social aspects of educational leadership:

“As a social project, education involves many different actors in its governance and stewardship. Diverse voices and perspectives need to be integrated in policies and decision-making processes. The current trend towards greater and more diversified non-state involvement in education policy, provision and monitoring is an expression of an increasing demand for voice, transparency, and accountability in education as a public matter. The involvement of teachers, youth movements, community-based groups, trusts, non-governmental organizations, enterprises, professional associations, philanthropists, religious institutions, and social movements can strengthen equity, quality and relevance of education.” (ICFE 2021, p13)

Research in LMICs demonstrates the value of broad stakeholder engagement in processes of consultation and evaluation as a means of strengthening decision-making and accountability in education (Tikly & Barrett 2011; Mitchell 2017; UNESCO 2017; Tangonyire 2019). In line with these understandings, this paper takes an extended view of educational leadership, and regards the democratisation of educational leadership and governance as instrumentally as well as intrinsically valuable.

Study design

This working paper draws on the work of IIEP-UNESCO, including three commissioned case studies (Ndabananiye et al. 2021; Arnot & Seeger 2021; Gichuhi & Kalista 2022) which explore MoEs' leadership of education provision during crises. The case studies were developed to strengthen the research evidence base on educational leadership during crises, and to inform future partnership and capacity development activities for MoEs and other stakeholders, in order to enhance national leadership of the planning and management of education in crisis contexts. The case studies address questions similar to this working paper with respect to MoEs' leadership of education provision in partnership with international actors (see above). Interviews with high-level stakeholders and desk-based reviews were undertaken in three national contexts – Burkina Faso, Jordan and Kenya – each of which has received international aid, support and intervention over many years, and experienced different forms of 'crisis' involving the participation of international humanitarian and development actors.

The development of this working paper started with an examination and open coding of draft (pre-publication) versions of the case studies. Alongside this, we reviewed theoretical work on educational leadership, and conducted an original review of empirical research published over the last decade on government responses to crises in LMICs. The review made use of Scopus and other academic databases, and outputs from Research on Improving Systems of Education (RISE) and related initiatives. Collaborative engagement with this evidence within the team, and collaborative memoing, was used to inductively and iteratively develop a synthesising framework (outlined in Section 2). Draft versions of this framework were shared with IIEP-UNESCO and others working in this field to support further refinement.

Education and crisis: a complex systems perspective

There is growing recognition that maintaining and improving conditions in formal education requires attention to systems and to system strengthening. It is important to be clear about what we mean by referring to education as a complex system as this understanding has implications for how we conceive of the nature of endogenous leadership during times of crisis. In this section, we set out our understanding of education systems as complex systems. Complexity theory has attracted increasing attention for understanding social policy from organisations ranging from the Organisation for Economic Cooperation and Development (OECD) (Mason 2014; Snyder 2013; Burns & Köster 2016) to UNESCO (Morin 1999; ICFE 2021) and has been particularly influential in health systems research. It has begun to have an influence on the way that education policy and education systems are conceptualised (Mason 2008, 2014; Snyder 2013).

On the one hand, conceiving of education as a complex system is to acknowledge the complexities of how education systems are constituted including the existence of various sub-sectors responsible for delivering formal and informal education and training but also multiple specialised functions including planning and policy, teacher education, curriculum, assessment and finance. Education systems are also shaped in complex ways by the motives and actions of different stakeholder groups and interests in society, which sometimes reflect conflicting views concerning education priorities, including the ways in which crises should be managed.

Changing global policy agendas contribute to the complexities involved in leading education systems. Under the Millennium Development Goals (MDGs), the major focus for policy makers in LMICs was on expanding access to education, particularly for girls. For the SDGs, system expansion remains a major challenge, and the shift to a focus on quality alongside access places new complex demands on education systems. While increasing access can be achieved through building new classrooms, employing more teachers and deploying additional resources, improving educational quality depends upon the complex interaction of numerous factors as illustrated in the Figure 1 (below) based on research in sub-Saharan Africa (Tikly & Barrett 2013). A good quality, inclusive education is the result of an enabling policy environment (including adequate finance, relevant curricula and assessment regimes, human resource development, etc.); an enabling school environment (including adequately prepared teachers, appropriate pedagogy, language of instruction, textbooks written at the

cognitive level of the learner, etc.); and, an enabling community environment (including, for example, adequate nutrition and parental support for learning), and the coherence of action and actors working across these spaces (Tikly & Barrett 2013).

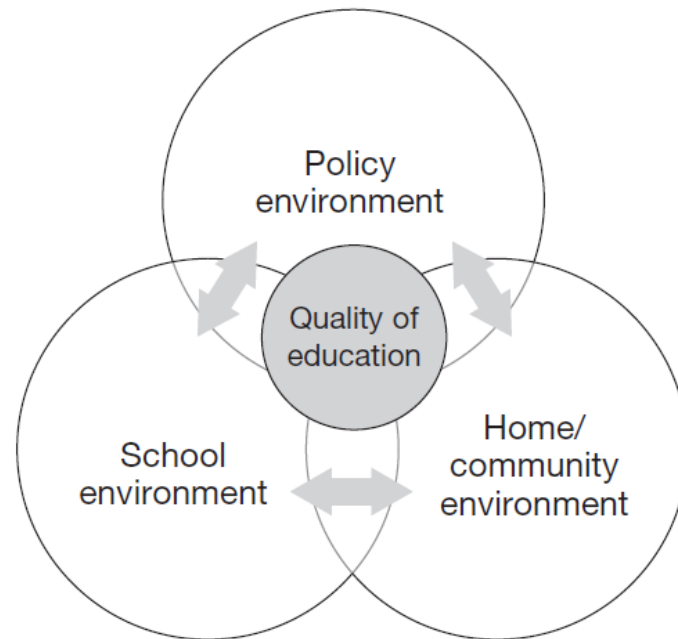


Figure 1. Interactive elements which affect the quality of education

Characteristics of complex systems

Complexity is also reflected in the observed behaviour of education systems, i.e. the extent to which education systems demonstrate the general characteristics of complex systems². These can be summarised as follows:

A complex system cannot be explained simply by breaking it down into its component parts because these parts are interdependent. The elements of a social system, such as education, include both institutions and sets of relationships which interact to produce systemic behaviour (Cairney 2012). Understanding the capacity of an education system to deal with crisis cannot be explained by focusing on its individual elements in isolation (such as teacher training, the curriculum, assessment, or pedagogy). Rather, it requires systems thinking, i.e. attention to how these elements combine to affect educational access and quality for different groups.

Complex systems are self-organising and difficult to predict. They exhibit ‘non-linear’ dynamics produced by feedback loops in which different forms of energy or action may be dampened or amplified, either preserving equilibrium in the system (negative feedback) or destabilising it (positive feedback). The Covid-19 crisis can be used to illustrate the effects

² For a fuller discussion of the nature of complex social systems such as education on which this analysis draws, see, for example, Cairney 2012; Walby 2009; Byrne & Callaghan 2014; Tikly 2020; Andrews et al. 2013; Davies 2004; Mason 2014, Snyder 2013).

of positive and negative feedback loops on education systems. The exponential growth of Covid-19 in communities is an example of positive feedback loops in operation. Governments around the world have responded with measures aimed at mitigating the risk of infection, which in the case of education often involved periods of school closure and a switch to home learning (Srivastava et al. 2021). To the extent that this limited the spread of the virus, it is an example of negative feedback loops. However, the effects of the pandemic and of policy responses are difficult to predict. In many cases, the loss of face-to-face learning in schools has exacerbated the ongoing 'learning crisis', and there is scant evidence as yet concerning the effectiveness of different government strategies to support out-of-school learning. Such uncertainties are characteristic of complex systems. As will be discussed below, the availability and good use of different kinds of data along with the ability to plan flexibly are important attributes of systems leadership.

Complex systems give rise to 'wicked problems' i.e. problems that are hard to define and generally resistant to an agreed solution (Rittel & Webber 1973; Head 2015). Improving the quality, relevance, equity and outcomes of education in LMICs (often described as facing a 'learning crisis'), is a classic example of a wicked problem, which lies at the heart of global and regional policy agendas³. Simultaneously dealing with multiple, overlapping crises further exacerbates and gives rise to further wicked problems. The role of leadership in facing these challenges is to create the conditions for new patterns to emerge (e.g. through increased levels of communication and interaction).

Complex systems exhibit 'emergence'. The properties of a complex system (including its propensity for crises) emerges from interactions between its internal elements and the wider environment (below). As such, change is constantly emergent, multi-directional and multi-causal, which contributes to its unpredictability. Policy actors, practitioners and other stakeholder groups can affect system change but their actions (including their ability to respond to crises) are shaped by conditions within the system itself, such as the opportunities to participate in decision-making and collaborative problem-solving. Similarly, the availability of these opportunities is shaped by wider inequalities which might have the effect of privileging the voice and agency of certain actors more than others. As we further discuss below, this requires system leaders to pay attention to the conditions at a local level that have the potential to inhibit or to facilitate meaningful collaboration.

Large actions can have small effects, and vice versa. There is abundant evidence of large-scale system reforms having negligible effects on learning outcomes (see for example, Schleicher 2018; Fullan 2004, 2016; Hargreaves & Shirley 2009), particularly where this is undertaken in a top-down way that is not sensitive to the diverse contexts in which schools operate, the capacity of the system to deliver change, the resources required at a local level, and the need to secure the ownership of key stakeholders such as teachers who are expected to implement change. Conversely, where reforms *are* able to mobilise the professional

³ Divergent views on the value of education result in different framings of the learning crisis (e.g. rights-based, human capital based, sustainability-oriented perspectives) and understandings of the phenomenon. As such, it is difficult to agree solutions to the crisis (e.g. increased accountability measures, redistributing resources for equality of opportunity, or increasing attention on the affective aspects of education).

capacities of practitioners, stimulate innovation and provide the resource required to respond to local needs as well as engage the energy, skills and agency of parents and other stakeholders in the community, there is the potential for very positive effects on learning outcomes (see for example, Fullan 2005; Mason 2014; Snyder 2013; Hargreaves & Shirley 2009).

Complex systems are particularly sensitive to initial conditions that produce a long-term momentum or 'path dependence'. Education systems have been described as 'sticky', or slow to change (World Bank 2017). For example, many enduring features of education systems in LMICs can be traced back to colonial times where they were designed to cater for elites, based on European ideas, languages and organisation structures (Harber 2017; Tikly 2020). Similarly, it has proved difficult to change the path dependency of education systems from an orientation towards increasing access under the old Millennium Development Goals regime, towards improving learning outcomes, as required by Sustainable Development Goal 4 (Pritchett 2013).

Complex systems demonstrate extended periods of regularity punctuated by short bursts of change. Change occurs when systems reach 'tipping points'. These might include processes of incremental change that build up to produce a dramatic change in policy. 'Big bang' type policy reforms are one example of this. Some forms of crisis in education, such as growing public pressure to address the learning crisis, for example, might eventually lead to large scale re-orientation of policy and practice in education. Tipping points might also be reached through more immediate and dramatic crises such as military conflict or the outbreak of a disease such as Covid-19 which has led to the closure of schools and a move to online learning. In this case, reaching a tipping point in the crisis might lead to chaos, i.e. a situation in which, although certain elements of a system are likely to persist, there is no longer a discernible pattern or order in the way that some parts of the system operate. In such contexts, the task of system leaders is to restore equilibrium.

Complex systems emerge and develop within a 'fitness landscape' that is provided by their interactions with other systems. Systems such as education operate within an environment composed of other systems, in relation to which they co-evolve. These include social systems such as the economy, polity and civil society in which education is situated as well as the natural systems that comprise the natural world. Education is affected by and in turn affects system dynamics in other social systems. For example, inequalities based on ethnicity, class and gender, which have their origins in wider power relationships within the economy, polity and civil society and which may be exacerbated by crises of different kinds, are reflected in unequal educational opportunities and outcomes. Education may serve to reproduce these inequalities or, conversely, may provide one means for overcoming them through providing access to skills, competencies and capabilities that can contribute to more sustainable and socially just livelihoods within peaceful and democratic societies.

In this section we have argued the importance of recognising education systems as complex systems, in terms of the unpredictable and non-linear interactions of their various elements. We have used conceptual resources developed in the context of complexity theory to offer insights on how change can occur in complex systems characterised by interdependency

and emergence, which can help us understand the possibilities for endogenous leadership in crisis situations.

Responding to crises

In the section that follows we outline the key elements of a system leadership approach and show its value in responding to crises in ways that can foster quality, inclusion and equity in education. First, however, it is important to spend some time with the notion of crisis itself, given its increasing impact on education systems around the world and its importance to IIEP-UNESCO's work with MOEs. Violent conflict, displacement, fragility, natural hazards, climate emergencies, and pandemics such as Covid-19 are all described as 'crises' and feature in the case studies reviewed for this paper. The number of forcibly displaced people has doubled in the past decade to its highest-ever recorded figures, exceeding 79.5 million, or more than 1% of humanity (UNCHR 2020). Eighty percent of displaced people are in states or territories affected by acute insecurity and/or malnutrition, and more than three quarters of refugees are in situations of long-term displacement (ibid.). Armed conflict is also increasing, with the number of people living in proximity to conflict more than doubling since 2007 (Corral 2020). Climate-related disasters and emergencies are also increasing. These crises disproportionately affect people living in poverty and historically marginalised groups. From a complex systems perspective, the impact of crisis on the most vulnerable can be explained by the ways in which crises interact with, and often reinforce, what Sylvia Walby (2015) calls 'regimes of inequality' (complex social systems such as patriarchy, racism and capitalist accumulation that generate inequalities between individuals and groups). The interactions between crisis and regimes of inequality can augment path dependencies that entrench inequities (Walby 2015). Education planning that is sensitive and responsive to conflict and crisis is therefore crucial, as is planning that learns from and seeks to benefit those most affected by crisis.

As argued above, a complex systems perspective can improve understandings of crisis in education, since it is attuned to the ways in which actions big and small can have unintended and unpredictable effects. However, a reductive application of this approach risks an ahistorical reading of a given crisis as a moment of chaos whose causes and effects are unknowable. Such an approach does little to redress and can even reinforce conflict dynamics (Novelli et al. 2014; Hajir et al., 2021). Education in emergencies research provides alternatives in terms of conflict-sensitive educational planning (ODI 2020; Shanks et al. forthcoming) and historically-informed political economy analysis, including via the 4Rs framework (Novelli et al. 2019). The **triple nexus framing** calls for tighter coordination and dialogue across humanitarian, development and peacebuilding sectors, and reinforces this need to understand crisis and its causes and effects holistically across complex systems (Caparini & Reagan 2019; Centre on International Cooperation 2019). In doing so, it is necessary to incorporate the perspectives, understandings, actions, resilience and resistance of local actors most affected by crisis, who are often directly involved in ensuring that education, care and psychosocial support continue during, or soon after, serious educational disruptions (e.g. Rohwerde 2015). In extending opportunities for dialogue,

creativity and innovation, the systems leadership perspective described below proposes an appropriately collaborative, multi-stakeholder approach to education in crises.

2. Endogenous systems leadership framework

This section outlines the key elements of the endogenous systems leadership framework. It is based on a critical review of theoretical work in the field of systems leadership (Burns & Köster 2016; Dreier et al. 2019; Fullan & Gallagher 2020; Harris et al. 2021), evidence from three IIEP-UNESCO case studies (Ndabananiye et al. 2021; Arnot & Seeger 2021; Gichuhi & Kalista 2022), and empirical research over the past decade with a special emphasis on evidence from LMICs. The value of a systems leadership approach for this paper is that, through its emphasis on the distributed nature of leadership, the need for systems thinking and adaptive problem solving, it is well suited for dealing with the complexities of leading education provision in times of crisis.

It is important to stress that systems leadership is an emerging field and several limitations must be acknowledged. Firstly, research on systems leadership derives primarily from high income countries (particularly the USA), so it is necessary to take a critical perspective with respect to the assumptions and values underpinning this approach. Specifically, our take on systems leadership is an endogenous one, i.e. a view of systems leadership as situated in the cultures, contexts and realities of LMICs, as reflected in the case study countries. Secondly, systems leadership has been proposed as a means of managing change in complex systems rather than responding to crises specifically, although this is not the first time such an approach has been applied to crises (e.g. Dreier et al. 2019), and in developing the framework, we have focused on those aspects most suited to dealing with crises.

Endogenous systems leadership is a means of supporting the distribution of leadership across the local, middle and central tiers of complex education systems in low- and middle-income countries affected by crisis; in ways that respect the values, knowledge, practices and agency of actors in these contexts, which are characterised by the involvement of multiple international partners with a remit to support, and an obligation to respect and not override, local authority and decision-making.

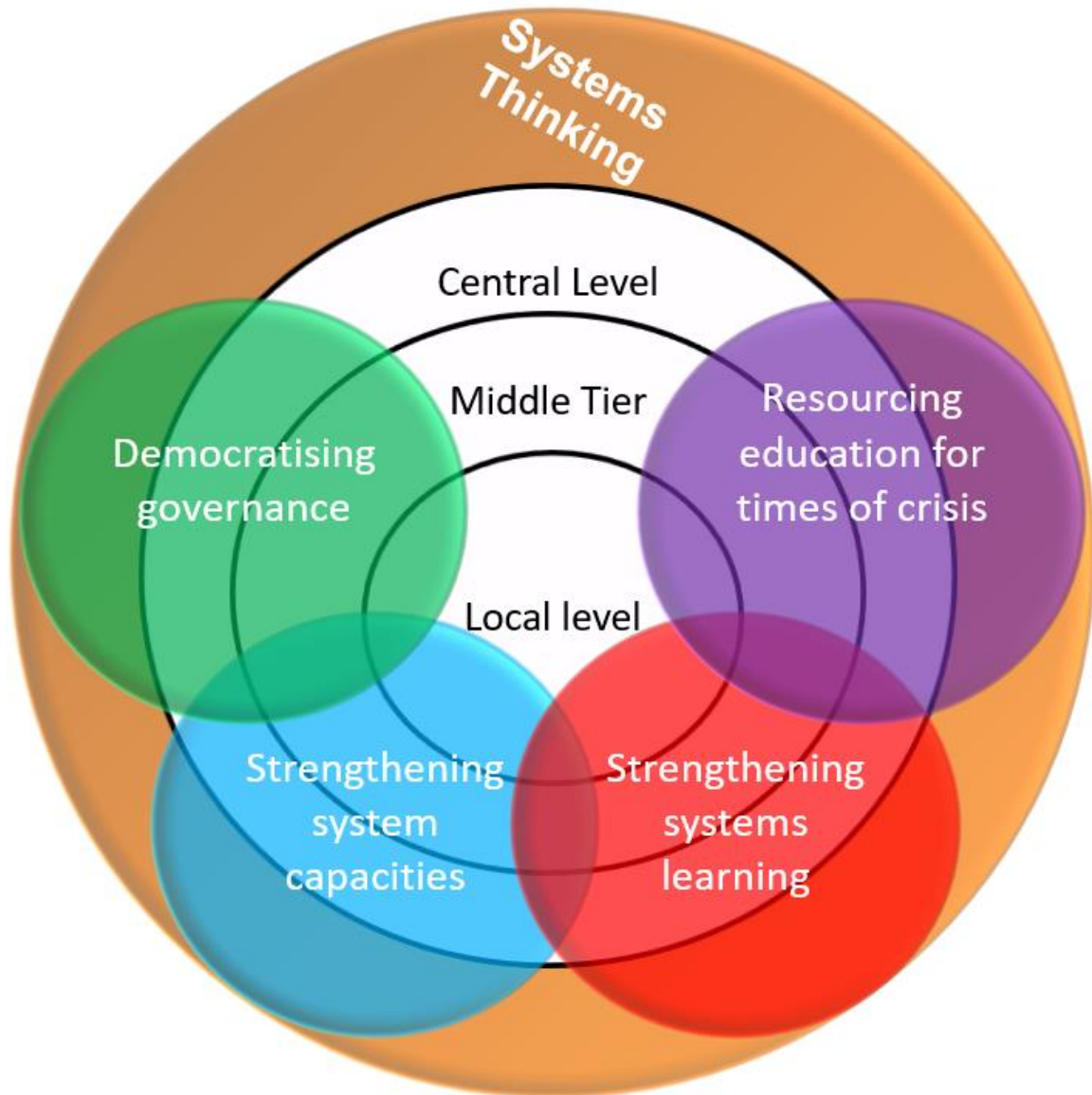


Figure 2. Endogenous systems leadership framework

The key elements of this framework are presented in Figure 2. The framework is built around an ecological model of formal education systems: teaching and learning occurs at the local level through interactions between students, teachers, parents and others in the community; the middle tier refers to actors at the district, regional or provincial level who work in “intermediary bodies...that operate between the school and the central policymaking level” (Childress et al. 2020, p11); the central level refers to actors in the Ministry of Education and other national level bodies. The following key elements of endogenous systems leadership are illustrated in relation to the ecological model:

- **Systems thinking** is a perspective which recognises the complexity of education systems (in terms of the non-linear and unpredictable interactions of their various elements) and seeks to understand the workings of the system as a whole. The framework highlights the importance of developing *shared commitments and*

visions; joined up policy and action; and coherence between national interests and donor agendas.

- **Democratising education governance** involves *engaging stakeholders at all levels* in order to mobilise capacities which are widely distributed across different tiers, including in those without positional authority. It also requires intentional efforts to recognise and overcome existing inequalities through *equity-oriented evidence decision-making*.
- **Strengthening system capacities at all levels.** Extending the scope for endogenous leadership in responding to crises in complex education systems requires developing new, untested practices and improvised solutions which cannot be centrally mandated. This requires *an enabling environment for flexibility and innovation*, particularly at the local and middle tiers, and ensuring *multi-directional information-sharing* across these levels.
- **Strengthening learning systems** requires *context-relevant information systems* which are oriented towards the experiences and outcomes of marginalised groups, and *adaptive approaches to problem solving*.
- **Resourcing education for times of crisis** requires *bridging the funding gap, ensuring coherence between national and international priorities*, and matching resources to need at the middle tier and local level.

Although these elements are conceptually distinct they are interrelated and oriented towards a vision for the leadership of education which is consistent with global policy commitments (SDG4) and those of UN agencies (UNHCR 2019; INEE 2021).

2.1 Systems thinking

The idea of ‘systems thinking’ was proposed by Senge (2012) as a means of understanding and leading change within complex systems, by promoting actors’ awareness of the workings of the system as a whole, and developing coherence across different elements.

Shared commitments and vision

An aspect of systems thinking which is reflected in the IIEP case studies is the emphasis given to **creating a shared vision and political buy-in for strategies** aimed at improving the quality of education and managing crises. Aid-dependent governments in LMICs are “adept at passing rules and creating institutions that look good on paper, but are in practice entirely cosmetic” (Green 2016, p93). Moving beyond the purely cosmetic is reliant on establishing areas of alignment in the interests and agendas of diverse groups. The case studies provide examples of this – for example, the Jordanian case study depicts a Ministry prioritising political buy-in for a new strategy aimed at improving education quality in general, and for initiatives which target the needs of Syrian refugees who were admitted to the system in large numbers (Arnot & Seeger 2021); the Kenyan case study shows political leaders’ endorsement of a national approach for tackling Covid-19, including vocal support and participation in a drive to increase educational enrolment and retention (the ‘Operation Come to School’ campaign); while the Burkina Faso government had some success in mobilising popular support around the National Strategy for Education in Emergencies.

A key insight from systems thinking is that shared commitments and vision cannot be achieved through top-down imposition. A shared vision “must evolve through the dynamic interaction of organisational members and leaders” (Fullan 1993, p.28). We return to this point below.

Joined-up policy and action

Systems thinking is demonstrated in the case studies through MoEs’ efforts to **join up various aspects of policy**, to ensure coherence (Pritchett 2013). For example, in Burkina Faso, efforts to prepare learners for dealing with crises involved simultaneous modifications to curricula, pedagogical approaches, and teachers’ continuing professional development. In Jordan, the MoE sought to ensure alignment between short-term policies aimed at integrating large numbers of refugees, and longer-term strategic plans for improving the quality of education. In Kenya, the government had some success in developing a coherent policy response to Covid-19 across different government departments. A barrier to endogenous leadership of education during crises identified in the Burkina Faso case study was the lack of integration between structures for education in emergency and national development planning. A proposed solution to this was strengthening support for the Technical Secretariat for Education in Emergencies (ST-ESU) within the MoE as a basis for mainstreaming responses to crisis through all areas of policy.

Coherence between national interests and donor agendas

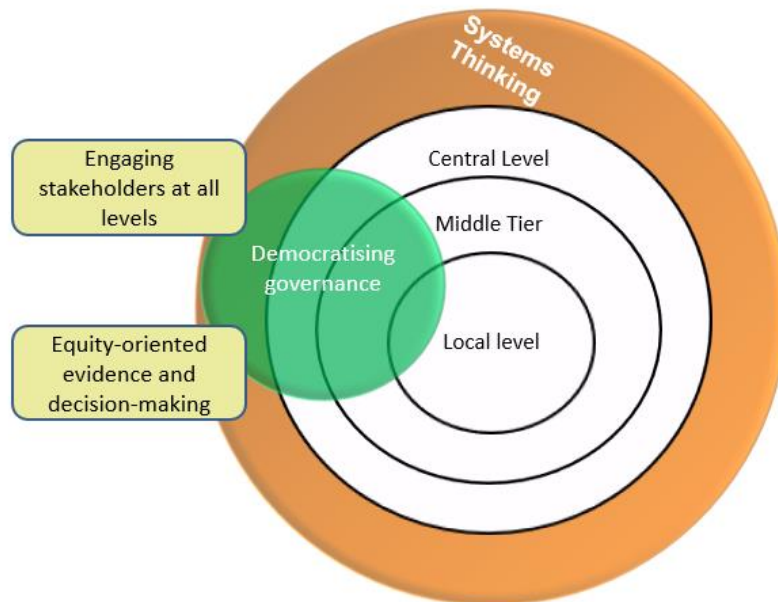
Alignment between international agencies and endogenous institutions and agendas is a key element of the “new way of working”, which seeks to address the gaps between the three silos of humanitarian, development, and peacebuilding to offer more coherent and joined-up responses to crisis, including support to education systems (UNGA 2016; Centre on International Cooperation 2019). Studies suggest that the three silos which the triple nexus strives to harmonise are particularly difficult to dismantle (Caparini & Reagan 2019), with evidence of “information hoarding” between competing agencies (Centre on International Cooperation 2019, p.44), and a lack of integration between externally-collected data and national systems. As INEE (2021) notes:

“Education data in crisis contexts are typically collected by humanitarian partners and are not systematically included in national education management information systems (EMIS), which renders children in crisis contexts invisible in national planning and budgeting.” (p.26)

The IIEP case studies evidence efforts to provide coherence across donor initiatives and government. For example, in Burkina Faso “the existence of a solid partnership framework” for coordinating responses to crisis provides “favourable conditions for the exercise of [MoE] leadership” (p.1). However, as noted above, the ST-ESU itself is said to lack the resources and technical capacities to coordinate action. The case studies also provide numerous examples of international actors bypassing endogenous systems (discussed in 2.3, below).

2.2 Democratising education governance

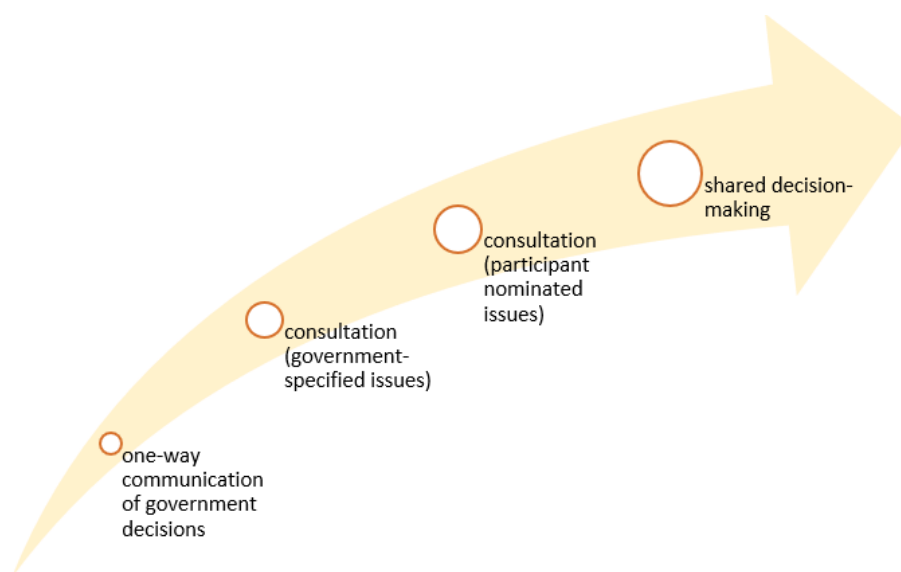
Convening diverse stakeholder groups to collaboratively explore challenges is crucial for leading change in complex systems. Key elements of democratising governance identified in the framework is the engagement of stakeholders within and across each tier of the system, and ensuring equity-oriented decision-making.



Engaging stakeholders at different levels

It is the emphasis given to working across traditional boundaries – occupational, geographical, generational – which distinguishes systems leadership from other approaches, and makes it particularly appropriate for “complex, multi-stakeholder environments, such as public services” (Bolden 2020, p1). Systems leadership highlights the importance of **mobilising capacities which are widely distributed across different stakeholder groups at different tiers of the system** – e.g. central, middle and local levels (Childress et al. 2020, Al-Fadala et al 2021), and including those without formal leadership roles. This includes professional and civil society organisations, parent associations, religious groups, those working at the humanitarian-development-peace nexus and others who may exert an influence on education, even if indirectly. This reflects an understanding that leadership is a collective, social process, rather than a position. While the MoE has superordinate status within the civil service bureaucracy, “no single entity has authority over the entire system” (Dreier et al. 2019). Establishing spaces and channels for communication across professional and hierarchical boundaries is necessary for the multi-directional sharing of evidence and information, which is a requirement for horizontal, bottom-up as well as top-down accountability, and coordinating action within complex systems (Burns & Köster 2016; Honig & Pritchett 2019).

Opening participative spaces for dialogue between diverse stakeholder groups creates “opportunities, moments and channels where citizens can act to potentially affect policies, discourses, decisions and relationships which affect their lives and interests” (Gaventa 2005, p11). Such spaces should be “minimally distorted by power relations” (Wals 2019, p62), which is not something that can be wished into reality, given the authoritarian cultures which often prevail in education systems in LMICs (Harber 2017), and power asymmetries between international and national-level actors (Tota 2014; Menashy 2019; Menashy & Zakharia 2022). As such, a critical approach to fostering equitable participation is needed, and various conceptual tools⁴ have been developed for examining power within participative spaces, to understand “what is possible within them, and who may enter, with which identities, discourses and interests” (Gaventa 2006, p26). For the purposes of this paper, participative spaces can be conceived in terms of the extent to which they empower diverse stakeholder groups to inform educational debates and decision-making.



Towards the left, spaces exist for the one-way transmission of government directives. Right of this, they support two-way or multi-directional communications; and beyond this, spaces may serve a consultative or even a shared decision-making function. Crucially, evidence from this review suggests that *each* of these functions is important for the endogenous leadership of education during crises.

All three IIEP studies identify spaces for convening diverse stakeholder groups at the country level, however the influence of such groups is limited by internal power dynamics as well as the actions of international actors. For example, the Kenyan case study (Gichuhi & Kalista 2022) reports that the Education Development Partners Coordination Group (EDPCG) “comprises more than 60 members including a range of government representatives, donors and development agencies, teachers’ organizations, civil society organizations, and private education providers” (p22). The Troika Plus, a subset of this group, includes

⁴ For example, see the powercube <https://www.powercube.net/>

representatives from the MoE and multilateral partners, and it is only these stakeholders who are directly involved in decision-making. The lower-level stakeholders, including teachers and CSO representatives, are merely informed of decisions, which was seen as a hindrance to establishing a shared vision and commitments. The report notes:

“It was felt that the MoE could further strengthen coordination by providing opportunities for EDPCG members to propose items for discussion and participate more in decision-making processes, for example around financing. Most of the decisions around financing are made at the level of Troika Plus or higher within the MoE, and EDPCG members are subsequently informed; but some felt that giving EDPCG members a more consultative role [might] encourage partners to be more engaged and supportive, and align themselves better with Ministry priorities.” (p28)

Beyond occasional involvement in local committees and top-down consultations on policy documents, the IIEP case studies do not provide specific evidence of locally-appropriate strategies for convening diverse stakeholder groups. The general lack of dialogue and broader participation suggests significant scope for democratising education governance. Convening diverse stakeholder groups in ways that support endogenous leadership requires locally appropriate strategies. For example, in Tigray, Ethiopia “*gim gima*” is a forum for convening diverse educational stakeholders for the purpose of information-sharing, mutual learning and multi-directional accountability (Mitchell 2017). *Gim gima* is an endogenous practice which combines Marxist-Leninist and traditional Tigrayan principles. Elsewhere, beyond the field of education, there are other examples of endogenous approaches to convening diverse stakeholders. For example, international deliberations around responses to the climate crisis have employed “*talanoa*”, a dialogic inquiry approach rooted in Pacific Island village leadership practices of open dialogue among various community members for the purposes of collective decision making (Farrelly & Nabobo-Baba 2014; Sprague 2019). This Pacific Island dialogic method gained global prominence when Fiji chaired COP23 in Bonn, Germany in 2017 where it was foregrounded as a way to bring together diverse stakeholders to agree commitments toward global climate change (COP23).

Equity-oriented evidence and decision-making

One rationale for democratising educational governance is that the various constituents of a complex system perceive and experience it differently depending on their positions, perspectives, values and responsibilities. Since no single group has absolute knowledge of the system, “to gain a broader overview [it is necessary] to pool knowledge, insights and data from many sources” (Dreier et al. 2020, p14). The intention here is to learn about the system itself, and the challenges it presents, based on insights from different perspectives.

As noted previously, and as we have witnessed globally during the Covid-19 pandemic, crises tend to exacerbate pre-existing inequalities (e.g. Walby 2015). For this reason, in gathering evidence from different parts of the system it is important to intentionally seek out representatives from historically marginalised groups, such as those affected by poverty, ethnic minorities, women, people with disabilities, indigenous peoples and those living in informal urban and remote rural areas, and to consider how crisis may differently affect

these groups. This is not only a means of central decision-makers better understanding the effects of crises, but of bringing marginalised groups into solutions that work for them, via the design and delivery of alternative provision (Agbaire 2018; Bolden 2020). The inclusion of diverse perspectives is “essential to generating a collective understanding of the system [and] developing effective strategies for action” (Dreier et al. 2019, p15).

Research conducted in the context of Covid-19 demonstrates the benefits of an explicitly equity-focused approach to stakeholder engagement. For example, national educational responses to Covid-19 in Ethiopia included radio lessons and awareness-raising campaigns across various media, and an MoE planning document states that: “Vulnerable and disadvantaged children are being given *special emphasis* during this time since with crisis like Covid 19, they will be the most affected” (MoE 2020, p4, our italics). However, research suggests that this “special emphasis” did not translate into effective strategies to support the most vulnerable learners at the local level, including girls, children with disabilities, and those living in rural areas (Yorke et al. 2021). The researchers conclude:

“Better data and evidence to identify and respond to the evolving and “hidden” needs of different groups of students is required. Greater efforts to include local level stakeholders in the design of strategies could help ensure they are more closely aligned with local needs.” (ibid.)

The example above illustrates how the aspirations of equity-oriented national-level policies can be undermined by a lack of engagement with local actors and marginalised groups.

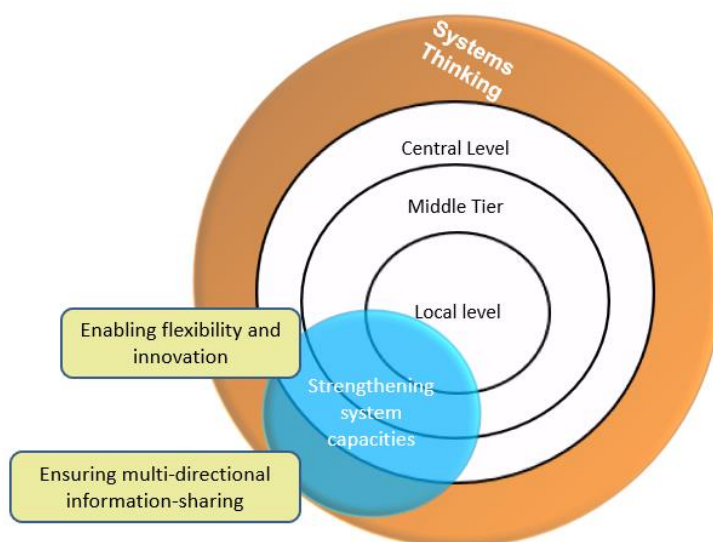
Crises can present powerful actors with opportunities to bypass customary democratic scrutiny to further their agendas in ways that undermine commitments to an equitable quality education. For example, in India the Covid-19 pandemic:

“was seen by the state as an opportunity to take forward the neoliberal agenda of digitalising education, despite huge asymmetries in terms of technological access. The push to institutionalise and legitimize digital learning was achieved through its inclusion in the National Education Policy, 2020 brought in during the pandemic with limited opportunity for discussions in the Indian Parliament.” (Batra et al. 2021, p23)

The lack of consideration given to children from disadvantaged backgrounds in policy decisions led to a steep decline in access to education for these groups, who were effectively “pushed out of the system of learning” (ibid., p23).

2.3 Strengthening system capacities

Extending the scope for endogenous leadership in responding to crises in complex education systems requires developing new, untested practices and improvised solutions which cannot be centrally mandated. This requires an enabling environment for innovation, particularly at the local and middle tiers, and ensuring multi-directional information-sharing between these levels.



The local level: Enabling flexibility and innovation

Due to their high-level focus, the IIEP case studies provide limited evidence about the leadership at the local level. However, research on education in emergencies highlights the responsiveness and ingenuity of teachers, parents and community groups in organising and providing education, care and psycho-social support despite considerable odds in situations of crisis (e.g. Rohwerder 2015; Bengtsson et al. 2020; Al-Fadala et al. 2021).

Systems leadership *enables* rather than *hinders* such efforts. In his analysis of educational bureaucracies, Hoy (2003) distinguishes between hindering structures which “constrain and even punish subordinates for deviance rather than reward unusual and productive practices” (ibid., p88); and enabling structures, which support the kind of flexibility and innovation necessary in responding to crises (see Table 1).

Table 1. Contrasting characteristics of enabling and hindering structures

Characteristics of hindering structures	Characteristics of enabling structures
View problems as obstacles	View problems as opportunities
Produce mistrust	Foster trust
Demand consensus	Value differences
Punish mistakes	Learn from mistakes
Fear the unexpected	Anticipate the unexpected
Frustrate problem solving	Facilitate problem solving
Promote control and compliance	Enable cooperation
Bound to the status quo	Encourage innovation
Rigid	Flexible

Source: Hoy 2003, p92

Research in Rwanda during the Covid-19 pandemic demonstrates the need for school-level flexibility and innovation to mitigate the effects of crisis (Al-Fadala et al. 2021). In this context, successful efforts to ensure continuity of learning and reduce dropout over periods of school closure involved headteachers mobilising local community groups, organising outreach activities, and ensuring differentiated support for the most vulnerable learners. Importantly, the 13 successful case studies schools in this study developed idiosyncratic approaches to meet the needs of their communities.

The middle tier: Mediating between Ministries and schools

Outside crisis-specific contexts, research over the last decade has increasingly recognised middle-tier leadership as vital for maintaining and improving education quality within complex systems, with a key role in providing instructional leadership, supporting teachers' professional learning, and supporting monitoring and accountability systems (Honig 2012; Thessin & Louis 2019; Childress et al. 2020).

The IIEP case studies demonstrate the importance of leadership in the middle tier during crises, for example in terms of developing contextually-relevant responses to national policy directives. With regard to the national Covid-19 response in Kenya, "Multiple respondents [...] stressed the importance of [...] ensuring contextualized approaches that respond to the differing needs of different counties" (Gichuhi & Kalista 2022, p.31).

Despite this critical mediating role, the IIEP case studies provide numerous examples of international actors closing down opportunities for endogenous leadership by bypassing or undermining leadership in the middle tier. For example, in Jordan the decision by donors to defund school supervisors led to serious disruption at the school-level and "left field directorates without a key conduit of information [to and] from schools". The study notes:

"Supervisors are clearly a critical joint in the arm of the MoE; from central level to the schools they serve. During crises their importance is only enhanced, and during critical times of transition (into and out from emergency) they must be seen as essential education staff." (Arnot & Seeger 2021, p30)

Elsewhere in the case study it is reported that:

"interviewees at [field directorate] level reported that [international] partners would revert to the central MoE requesting direction on how to allocate resources, and would sometimes go directly to the schools without first stopping to consult with [them] to expedite processes. This cut out offices and staff who have close contact with schools and would have been best placed to identify those in the most need of partner intervention. Field directorates reported that [some] schools received resources that they did not need while some of the neediest schools ended up with nothing." (ibid., p27)

As this evidence illustrates, there is a need to acknowledge leadership in the middle tier as integral to the provision of equitable quality education. This entails "a shift from viewing those in the middle tier as top-down 'deliverers' of services to utilising them as change agents...[for] school improvement" (Childress et al. 2020, p11).

The central level: Ensuring multi-directional information-sharing

We have alluded already to the importance of systems thinking for a coherent, joined-up policy response across governmental departments. The same applies within the civil service bureaucracy of which the MOE is the coordinating body. The IIEP case studies consistently highlight gaps in communication systems, even in relation to the top-down communication of policy directives. For example,

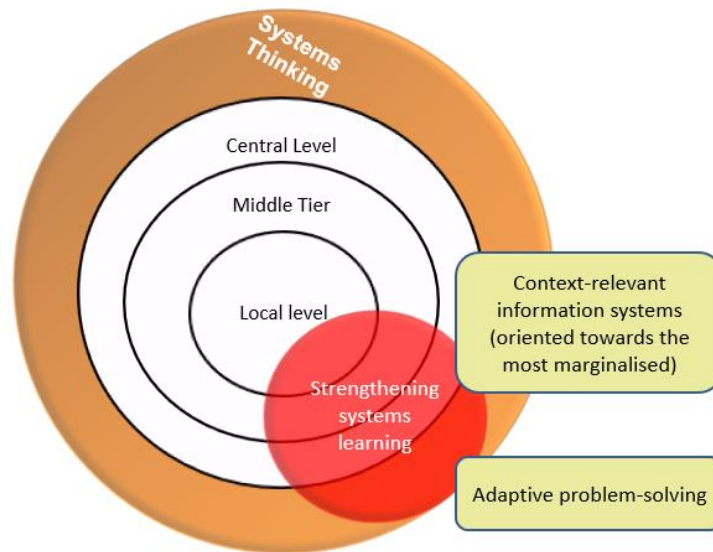
“There was almost unanimous agreement that the principal challenge in Kenya is not a lack of sound policies, but rather their dissemination and implementation – whether for reasons of capacity (both human and financial) or prioritization. Humanitarian and development partners in many cases support the development of ambitious policies, either financially or technically (or both), through to their launch, but the MoE then struggles to communicate and implement them down to ground level.” (*Kenya IIEP case study*, Gichuhi & Kalista 2022, p27)

“at the local level, few community actors and elected officials are well informed about the contents of the [National Strategy for Education in Emergencies], and many of those responsible for decentralised structures have not sufficiently taken ownership of it.” (*Burkina Faso IIEP case study*, Ndabananiye et al. 2021)

There are similar findings from systems research on the Covid-19 response in Ethiopia (Yorke et al 2021), where the traditional “cascade” approach to communicating instructions from the top, to middle, to local tiers resulted in schools not receiving the information and support they needed for an effective response. Significantly, this study found that information-sharing was taking place horizontally amongst key stakeholders at each tier of the system (e.g. between donors and MoE officials, between regional and local government officials), but a lack of communication *between* these tiers resulted in divergent understandings about realities within the system: stakeholders at each level held “different views about the challenges [...] the pandemic presented and what was needed to respond” (ibid.). This highlights the need for multi-directional communications and information-sharing as a precondition for systems learning (below).

2.4 Strengthening systems learning

Learning emerges from multi-directional interaction among stakeholder groups within a complex system. Evidence from education in crises indicates the importance of context-relevant information systems which are oriented to understanding the experiences and outcomes of the most marginalised, and adaptive approaches to problem-solving.



Establishing context relevant information systems (oriented towards the most marginalised)

We have referred already to the importance of positive feedback oriented towards increasing equity and quality. **Endogenous leadership of equitable, inclusive, quality education requires that key decision-makers have access to relevant evidence.** In many cases, EMIS in LMICs is oriented towards monitoring young people’s *access* to education, rather than educational quality (Tikly 2020). Establishing relevant quality targets and indicators is an iterative, emergent and contextually situated process which, in line with the foregoing analysis, involves a commitment to broad participation in processes of dialogue, action and learning, oriented towards the experiences of historically marginalised groups.

For example, the Jordan case study draws on national-level data disaggregated by nationality to reveal stark disparities in enrolment between Syrian refugees and Jordanian nationals, with 3.8% of secondary school age Jordanians out-of-school, compared to 43.2% Syrians (Arnot & Seeger, p16). This data provides valuable evidence of macro-level inequalities, but does not help to explain or redress them. By contrast, research in the student voice tradition elicits Syrian refugees’ perspectives on their experiences in school (Salem 2018, 2021). Research in this area has demonstrated that ethnic Syrians can experience social segregation in school, a more restricted curriculum, and widespread bullying and harassment from peers and even teachers:

‘The teachers shame and demean us. . . they spit on us.’ Fahd, male, 16

‘To reach a better state of well-being, I would like to be in a school where they aren’t always angry at us, where the teachers don’t hit us or yell at us.’ Oday, male, 15

‘They always curse at us. They say, ‘get out of my face’, ‘you all smell bad.’ Roula, female, 15 (Salem 2021, p15)

Leadership of inclusive, good quality education requires establishing and monitoring standards with respect to the experiences of marginalised groups, beyond enrolment

targets and learning outcomes. There is evidence from LMICs that the participation of students and other school-level actors in processes of school self-evaluation can support efforts to improve the quality of provision (Mitchell 2017; Tangonyire 2019). However, the practice of listening to and learning from students and parents is not accepted universally (Adzahlie-Mensah 2014; Harber 2017), and requires the endogenous development of culturally acceptable strategies, and an external policy environment which enables rather than hinders adaptation based on school-level preferences.

Establishing contextually-relevant goals and accountability measures entails a mixture of centralised and decentralised decision-making. Pritchett (2013) proposes a shift from so-called “spider” models of educational governance in LMICs which monitor compliance with central directives (with minimal attention to learning), to “starfish” models with a limited number of centrally-defined performance-based accountability measures, and structures to promote bottom-up accountability to local communities (p9). In line with the argument so far, such a model increases the scope for endogenous leadership by creating an enabling environment for local decision-making and innovation.

Adaptive approaches to problem solving

One formal proposal for developing locally-relevant solutions is problem-driven iterative adaptation (PDIA) (Andrews et al. 2012). In line with the analysis so far, PDIA proceeds from a recognition that solutions to complex educational problems in LMICs must be developed endogenously, rather than imported from elsewhere. The four basic elements of PDIA are as follows:

1. Focuses on addressing “locally nominated and defined problems”
2. Authorises local innovation and experimentation to address these problems (e.g. enabling structures, see above)
3. Supports rapid learning from experimentation (tight feedback loops)
4. Actively engages diverse stakeholder groups “to ensure that reforms are viable, legitimate, relevant, and supportable” (ibid., p1)

The PDIA approach is consistent with the key elements of systems leadership outlined so far. Taking an equity-focused approach to systems learning is a means of identifying endogenous challenges requiring innovation, or a break from the status quo. Table 2 contrasts PDIA with dominant approaches to donor-driven education reform.

Mainstream development approaches	Problem Driven Iterative Adaptation
Addresses externally-identified problems	Addresses locally identified challenges
Top-down reform – implementation follows a centrally-developed script	Enabling environment for local experimentation and positive deviance
Compliance-driven monitoring	Tight feedback loops from problem-driven experimentation
Scale up through top-down directives	Scale up by sharing feasible solutions through organisations and communities of practice

Adapted by the authors, from Andrews et al. 2012, p20

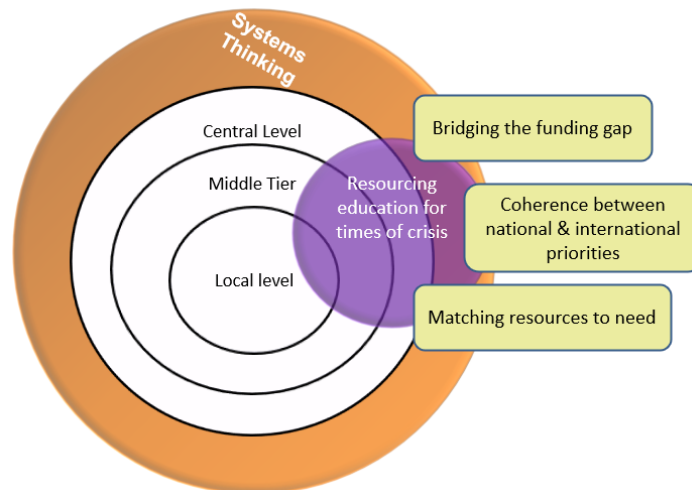
The PDIA approach summarised above was proposed in the context of everyday system dysfunction, where it may be possible to identify a limited number of national-level priorities. Additional work is needed to establish the feasibility of this approach in times of crisis. However, there is some emerging evidence which suggests the viability of such an approach, given sufficient funding and other enabling conditions. For example, Al-Fadala et al. (2021) provide an early report on a systems leadership project conducted in Rwanda in the context of Covid-19. The Rwanda Learning Partnership (RLP)⁵ is a collaboration between ministry officials, school leaders and three international organisations for the purpose of strengthening the evidence base on equity-oriented systems leadership in the context of Covid-19 (Al-Fadala et al 2021). The RLP illustrates multiple aspects of endogenous systems leadership and adaptive approaches to problem solving outlined in this paper.

First, the partnership addresses locally-nominated and defined challenges through a collaborative inquiry involving MOE officials and school leaders, who co-produced the research questions and were actively involved in its implementation. Relevant actors from across the middle tier and local levels were also involved, including district education officers, teachers, students and caregivers. Second, the partnership provided an enabling environment for experimentation and multiple innovations. Third, it included tight feedback loops, with rapid learning promoted through “ongoing dynamic dialogue around emerging findings to influence decision-making” (ibid., p11). At this stage a comprehensive account of the RLP is not available, but the initial report from this project suggests the relevance of this approach for the endogenous development of contextually-appropriate, equity-oriented solutions to nationally-identified challenges in education.

2.5 Resourcing education for times of crisis

The foregoing analysis indicates the need to ensure adequate resourcing for all key elements of the system; alignment between the resources and responsibilities for an equitable, inclusive, quality education at the local level; and an equity-oriented, redistributive approach towards provision for historically marginalised groups (Novelli et al. 2019). The above calls for systems thinking, democratising education governance, strengthening systems learning, and the other elements outlined above. Moreover, endogenous leadership of these processes requires that international donors and triple nexus actors are informed by the perspectives, priorities and experiences of actors at each level of the system, including the local and middle tiers.

⁵ The Rwanda Learning Partnership is a collaboration between the Education Commission, Education Development Trust, WISE, the Rwanda Basic Education Board and school-level actors (see Al-Fadala et al. 2021).



Bridging the funding gap

Resourcing for quality and equitable education is a pivotal issue. Education in LMICs is often chronically underfunded, including from domestic revenue sources, which account for the majority of education revenue, and international sources, which are needed to meet missing revenue needs. The rise in domestic spending on education in LMICs is largely due to general improvements in domestic resource mobilisation achieved through improved taxation (Steer & Smith 2015). This has allowed for a greater share of GDP to be directed towards education, with an average spend of 4.6% of GDP in LMICs, which still falls short of the 5.5% required to meet the education SDGs. The same study finds that domestic education funding is often disproportionately skewed towards the later stages of formal education, which tend to benefit the most socioeconomically advantaged learners (ibid; Ilie & Rose 2018). In other words, the increase in domestic revenue has not led to a greater emphasis on education, or to more equitable funding decisions.

These domestic patterns in education financing are confounded by an overall decline in international aid to education, which has fallen from 13% of allocable Overseas Development Assistance in 2002 to 10% in 2017. In order to achieve the SDG4 goals, estimates call for spending to rise from USD 1.2 trillion annually to USD 3 trillion (Education Cannot Wait [ECW] 2017) so declining international spending and limited funding prioritisation domestically challenge possibilities for change towards equitable, inclusive and quality educational processes and outcomes. Education also receives a minimal share of only 2% of all funding allocated towards humanitarian need (ECW 2017). The Covid-19 pandemic has introduced increased financing needs in order to support learners most affected by interruptions to education and led to budgets for education being further reduced, creating a funding gap estimated at close to USD 200 billion (Save our Future 2020).

Coherence between national and international priorities

Despite advancements in coordination within the triple nexus, funding remains an area of challenge. A recent report notes that “funding and financing tools, instruments, policies and approaches have not yet had time to adapt to this new policy agenda,” (Poole & Culpert,

2019 p 5). Similarly, it has been argued that funding mechanisms and timelines are not commensurate with the longer-term approach advocated by the nexus model (Caparini & Reagan, 2019), which is particularly important for integrating peacebuilding (Shanks et al., forthcoming). A recent INEE (2021) study finds “mixed levels of understanding and engagement with humanitarian-development coherence in the education sector,” (p.9) but reports that “many donors have improved the flexibility of their funding across the humanitarian-development divide in crisis contexts,” (ibid., p 36). An example of this is the establishment of multi-year resilience programmes (MYRPs) which support flexibility in funding for systems in protracted crisis as well as emergency responses, such as the MYRP in Palestine (ECW 2021). In relation to the above, a condition for endogenous leadership of education in crises is that such agreements are led by domestic priorities and institutions.

Matching resources to need

Addressing domestic priorities in times of crises requires a nuanced understanding of the needs of the diverse constituents of complex education systems. Monitoring and coordination at the central and middle tiers are particularly important for ensuring the equitable and efficient use of resources. For example, the Kenyan case study found that the absence of a well-established central coordination structure for crises management “contributed to the duplication of activities, including distribution of resources [...], in certain areas” (Gichuhi & Kalista 2022, p.27). In Burkina Faso, the transfer of resources to decentralised structures strengthened coordination and crisis response (Ndabananiye et al. 2021). Similarly, in bypassing middle-tier decision-makers in Jordan, international partners missed opportunities to deploy resources equitably and efficiently, with some schools “[receiving] resources that they did not need while some of the neediest schools ended up with nothing” (Arnot & Seeger 2021, p27).

Across the IIEP case studies there is evidence that matching resources to need requires increasing the agency for resource management at the local level. For example, an overly centralised approach to resource distribution in Kenya led to delays and inefficiencies.

“Some respondents felt that, given the well-established relationships across the different levels of government, counties and schools could have been entrusted with more resources to confront the pandemic directly. Others indicated that leadership at all levels, including school management, could be better empowered with training and financial resources to play a more proactive role in crisis response.” (Gichuhi & Kalista 2022, p.31)

From an endogenous systems leadership perspective, matching resourcing to need requires multi-directional information-sharing between system actors, and enabling actors most familiar with conditions on the ground to take an active role in resourcing decisions.

3. Conclusion

In exploring *the opportunities for Ministries of Education in LMICs to exercise leadership in the provision of inclusive and equitable quality education for all in times of crisis*, this paper develops the case for an endogenous systems leadership perspective, and outlines the key elements of this. As we have argued, such an approach reflects the democratic and human rights-based principles of the UN and other international agencies, as well as the direction of travel for global policy debates and agreements into the 2020s (UNGA 2016; ICFE 2021; INEE 2021). Aside from these normative commitments, another strong rationale for pursuing such an approach is the considerable evidence that leadership and governance for equitable and inclusive quality education within complex systems *requires* a socially distributed approach to leadership and accountability which extends beyond traditional bureaucratic norms (e.g. Pritchett 2013; Burns & Köster 2016; Childress et al. 2020).

Based on the evidence reviewed in this paper, we have proposed five the key elements of an endogenous system leadership perspective: *systems thinking; democratising education governance; strengthening system capability at the local, middle and central levels; strengthening learning systems; and resourcing education for times of crisis*. Our review suggests that endogenous systems leadership may be strengthened through interventions in these areas, and that each element is a potential entry point for future research, policy engagement and capacity strengthening work.

As noted above, there is a need to extend the research evidence base on the leadership of equitable and inclusive quality education in crises. We hope this working paper will inform future dialogue and decision-making in relevant policy, practitioner and research communities.

Glossary

4Rs framework	An analytical approach and a model of reflective thinking developed by Novelli et al. (2019) that considers four factors – recognition, redistribution, representation and reconciliation – as critical dimensions for peacebuilding and social justice in any given context.
Agency	The (human) capacity to consciously and purposively influence one’s life as well as the course and outcomes of events through one’s (reflective and creative) actions. It is a contextually or socially mediated phenomenon.
Co-evolve	To engage in a process whereby co-existing elements reciprocally adapt to changes in one another.
Complex systems	Systems that consist of many different components with multiple interactions and divergent levels of interface among the elements, and between them and the environment or context, such that relationships are non-linear, circumstances are multifaceted and behaviours as well as outcomes are difficult to predict.
Crisis	An event or a situation (such as violent conflicts, natural hazards or disease outbreak) characterised by intense negative occurrences that present a threat of danger or risk of harm to individuals, groups or populations and often requires immediate problem-solving response.
Endogenous	Originating from within a given national or social context and reflecting its normative values, philosophies, understandings, practices and institutions.
Endogenous systems leadership	A means of supporting the distribution of leadership across the local, middle and central tiers of complex education systems in low- and middle-income countries affected by crisis; in ways that respect the values, knowledge, practices and agency of actors in these contexts, which are characterised by the involvement of multiple international partners with a remit to support, and an obligation to respect and not override, local authority and decision-making.
Fitness landscape	The nature of the environment in terms of the existence of factors that either facilitate or hinder the emergence and development of systems. The term originates from evolutionary biology.
Incremental change	The product of a series of small, gradual alterations made to the components or activities of a system.

Local tier/level	Consisting of actors and stakeholders (parents, educators, students and community groups, for example) at the grassroots level of the system.
Low- and Middle-Income Countries (LMICs)	Countries that are so categorised using the 2021 World Bank's global benchmark of an annual Gross National Income (GNI) per capita that ranges between \$1,046 or less and \$12, 695.
Middle tier	Comprising mid-level actors and stakeholders (as in districts, counties or provinces, for example) who mediate between the top and local tiers of the system.
Path dependence	The tendency for decisions, processes and outcomes in a system to depend on, develop from or be impacted by the past structures, characteristics and histories of the system.
System	A group of interrelated and often interdependent elements, operating within a given context and forming a recognisable whole. It is typically recognised and defined by its structure, objectives and functions.
Systems leadership	A collective and contextualised process requiring a combination of competences, capacities and capabilities to initiate, support and sustain system-level change.
Systems thinking	A holistic approach to working and making sense of situations by looking at the relationships and interactions among the different constituent elements or components of a system. It is a useful approach to understanding and addressing the intricacies of complex systems.
Top tier/Central level	Consisting of the highest-ranking actors or stakeholders (such as Ministries, for example) in the organisational structure or hierarchy of a system, who typically oversee high-level coordination, decision-making and policymaking.
Triple nexus	An operational framework that focuses on the links between humanitarian, development and peacebuilding sectors and actors (see INEE 2021).

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