

DEVELOPING LOCAL LEARNING ECOSYSTEMS IN QATAR TO ADVANCE EQUITY, INCLUSION AND SOCIAL COHESION



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FOREWORD

The COVID-19 pandemic has magnified the need for systemic change in education, and dramatized how a broader engagement of society in learning experiences could have great potential. As millions of students were prevented from accessing school (some for very long periods), the role of other stakeholders in facilitating or providing informal learning became more evident. Could those actors have a more intentional and structured involvement in the education process? How would that benefit learners?

Two years ago, when WISE launched the research project “Local Learning Ecosystems: Emerging Models”, in partnership with the Innovation Unit, we asked ourselves how the models of learning ecosystems featured in the report could evolve as a significant new driver in education on a large scale. Since then, WISE has observed enormous growth in appetite for the concept, including in Qatar where we are based.

While the 2019 research provided the conceptual framework and analyzed nine case studies from various parts of the world, this new project focuses on the opportunities and challenges in developing learning ecosystems in Qatar. Rather than solely mapping the rich landscape of formal and non-formal education stakeholders in the country, our team invited those stakeholders to envision the most suitable model(s) for Qatar’s local needs.

This action-research approach involved, in addition to conventional data collection tools (interviews and surveys), active iterative conversations with stakeholders, such as consulting with global experts, workshops with organization leaders in Qatar, feedback sessions with the Ministry of Education and higher education; and design thinking sessions with college students. With this approach, WISE aims not only to present recommendations to advance equity, inclusion and social cohesion in Qatar’s education system, but also to ignite the collaboration in civil society that can bring such recommendations to life.

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EXECUTIVE SUMMARY

CHAPTER ONE

The educational experiences of a young person growing up occur across multiple, varied learning environments. Humans are born learning and continue to learn throughout their lives through every interaction and experience. These experiences shape our knowledge, skills and attributes, our self-efficacy, sense of belonging and wellbeing, and begin within our families, communities and neighbourhoods. They continue through the more structured settings of K-12, higher education and beyond, through extracurricular and informal experiences with athletics and the arts, with museums and other cultural institutions, parks, online, and through employment. The broader networks of support, experience and influence, in addition to school, play a seminal role in shaping who we become, and our aspirations and ambitions.

Not every young person, however, has the opportunity to access such a full breadth of learning experiences, within and outside school. In Qatar there is a growing impetus to understand the potential role and value of 'learning ecosystems' in expanding opportunities for youth learning, improving equity, inclusion and social cohesion. The notion of a learning ecosystem recognises that education and learning, and the provision of support for young people more generally, is a collaborative endeavor. A broad diversity of actors and stakeholders has an important role to play and should be proactively involved.

It's also increasingly well understood that transformational change which improves learning outcomes for all youth can't be achieved through smart policies or well-designed programmes alone. Change requires a collective effort among community members and multi-stakeholder collaboration that are deeply rooted in context. This has become especially apparent during the Covid-19 pandemic when it has been necessary to mobilise assets, partners and allies across communities to support learning in new ways. In this unique environment the concept of a learning ecosystem has taken on a heightened global relevance.

This research aims to better understand the potential of the learning ecosystems concept in Qatar, focussing on five core areas:

1. Understanding the expression of the values and goals of equity, inclusion and cohesion in education.
2. Specific educational practices that advance these goals, such as innovative pedagogies, teaching and learning practices, in both formal and informal learning.
3. How collaboration and partnership working between different organisations is pursued in Qatar, the nature of collaborations, and the motivations and incentives that providers have to collaborate.
4. Understanding forms of local leadership, and the systemic structures and processes which incentivise or hinder innovation and collaboration.
5. The use of technology, particularly how the remote learning experience during the Covid-19 pandemic has changed teaching and learning, and the adoption of new practices.

The study was conducted through a participatory action research approach, encompassing surveys, interviews and co-designed workshops with stakeholders, including learners, in Qatar. Approximately 150 local stakeholders (as well as a selection of global experts) were engaged in the process; the findings speak to their insights, perspectives and hopes for the future. Those young learners we collaborated with spoke of their desire for purpose, for fairness, for their voices to be heard, to be successful, and to be able to make change in the areas that they are passionate about.

Summary of Main Findings

Qatar has made significant progress in improving its education system, driving up learning participation and investing in the skills of its current and future workforce, including through high quality higher education and vocational training. Strong leadership prioritises education for national development, and investments have been made in a wide diversity of innovative learning assets, spaces and opportunities through both formal and informal learning. Ongoing structural challenges, however, are perpetuating inequalities and holding back the country's economic and human capital potential.

Challenges include unequal distribution of, and access to, assets and resources, low or concentrated levels of collaboration and practice sharing between providers, and lack of coordination capacity and appropriate incentives at a systems level.

These challenges require a multi-layered “whole system” response to improve equity and inclusion, and help the country achieve its national development goals. This is where the growth of “learning ecosystems”, building alignment and purposeful collaboration across institutions and sectors, could add significant value.

Values and goals of equity, cohesion, inclusion and resilience

These priorities are perceived through various different lenses across government schools, private schools and informal learning providers in Qatar. Including through religious, national and internationalist values, and the lens of 21st century skills. Intercultural values, faith, and thematic focus areas can help create alignment and develop common languages and trust between different organisations, for example related to the Qatar National Vision 2030, Sustainability, STEM/STEAM, or the World Cup. Values and skills are being promoted through a range of teaching and learning practices and strategies in schools, through extracurricular activities and campaigns, and intercultural exchanges.

Innovative practices, pedagogies, and teaching and learning strategies

There is a diversity of innovative practices that promote equity, inclusion and cohesion across the education system, including in instructional practices and methods, and many innovative schools and new types of learning spaces (such as mobile labs, and satellite learning hubs). Innovation, however, appears concentrated in a small number of schools, networks, and communities of practice. A wide breadth of learning opportunities is also available through the informal learning sector and extracurricular activities, however private and government schools do not take advantage of these opportunities equally. With regards to workforce readiness, recognising prior learning and expanding skills certification could improve participation, including through portable credentials and personalised pathways. Improved professional development opportunities for teachers and educators is also needed to support their capabilities and confidence around new practices.

Collaboration and Partnership Working

Despite significant opportunities for partnerships and collaboration, there is a lack of knowledge across the system about these and how to access them, and overall an appetite for more collaboration amongst school leaders and educators. Typically, small-scale collaborations arise related to specific topics or for a specific purpose, for example between schools where there are curriculum similarities. Launching and sustaining collaborations is challenging in Qatar, with government schools particularly constrained, which needs to be addressed. There is also a need to grow professional confidence around collaboration, for example through setting clear standards and expectations, and investing in leadership development.

System leadership, coordination, enabling conditions for collaboration

Developing local leadership and systems expertise is key for innovation and collaboration in education, and more capacity for partnership working (and innovation) is needed, both centrally and within schools, with the necessary incentives and structures in place at a systemic level. A systemic effort is also needed to codify innovative practices, and improve coordination capacity eg. via an intermediary entity or broker. The role of NGOs and civil society organisations (CSOs) is underdeveloped and should be further explored in relation to education and expanded.

Remote learning and technology during Covid-19; harnessing system-level gains

Research participants identified a number of potential longer term gains from the experience of remote learning during the Covid-19 pandemic. Notable changes which have relevance for the development of learning ecosystems included:

- Improved learning content; both the quality of online content and new resources
- Development of new technical infrastructure and communications systems to support learning
- Increased variety of opportunities for teacher professional development
- New opportunities for parental engagement
- Improved teacher capabilities around innovation and change
- Improved collaboration opportunities with external partners
- Increase in school freedoms and the decentralisation of some responsibilities

Main Recommendations

These findings were tested through workshops with local stakeholders, as well as with the Research Advisory Board, resulting in the following main recommendations from this research study. The recommendations frame actions that could be taken by specific organisations, and at a multi sectoral level, to support the growth of learning ecosystems toward equitable and more inclusive learning over time.

Recommendation 1: Carry out in depth mapping of the existing learning ecosystem and learning assets across Qatar, as part of developing a comprehensive knowledge bank of learning and skills opportunities on offer.



Recommendation 2: Create greater alignment to shared goals, values and priorities for youth learning among various providers of learning. Include the core values of equitable and inclusive learning.



Recommendation 3: Explore further the use of inclusive co-design practices to support organisations and stakeholders to develop shared and co-owned visions and goals, around which collaboration can be developed and deepened.



Recommendation 4: Invest continually in, and support the development of inclusive and equitable practices, in both formal and informal education, with a focus on connecting and amplifying the vast array of practice existing across the system.



Recommendation 5: Strengthen the network infrastructure for collaboration and practice sharing, particularly among government and private schools, including the role of partnership brokers.



Recommendation 6: Invest in the interpersonal skills and capacities needed for collaboration and partnership working.



Recommendation 7: Develop strategies, practices and tools to increase connections among schools, informal learning providers, higher education, businesses and industry.



Recommendation 8: Improve data generation, knowledge and information sharing, and communications across the system.



Recommendation 9: Invest in advocacy, media platforms and storytelling as culture change tools.



Recommendation 10: Review systems level incentives and structures that enable or hinder innovation and collaboration.



Recommendation 11: Expand educational leadership across government, to strengthen policy making and implementation.



Recommendation 12: Increase institutional capacities for innovation and systems thinking to support the development of learning ecosystems.



CHAPTER TWO

What if every city had a learning ecosystem?

This provocation was posed in an article by Remake Learning, a network of people and organisations committed to supporting equitable youth learning in Pittsburgh, PA, in the United States. Remake Learning reflected on their city-wide experience of mobilising resources across the community during the Covid-19 pandemic to help cope with the sudden disruption of schooling, across the region, and meet the needs of learners at a time of crisis. The article describes the collective capacity to leverage established relationships and connections among people and organisations to provide, for example, wifi and digital devices for learners. The networked community launched virtual field trips to museums and parks and developed resources to help schools and teachers provide learning to keep young people engaged and motivated whilst at home.

The lateral relationships and connections, and collaborative dynamics built over a decade, helped the city to be more resilient, more agile, and to activate resources more effectively in the face of the pandemic. As the authors note, the goal was to “use the strengths of the whole community to support youth learning.

These relationships, collaborations and partnerships have not emerged overnight, but have been crafted over a decade of cumulative and mutually reinforcing activities. These were initiated by people in the community who came together to discuss core topics and issues of concern, with the goal of making decisions for collective action. In the early days, the Grable Foundation convened an interdisciplinary group of educators and practitioners from the region’s schools, museums, libraries, early learning centers, and out-of-school program sites to think afresh about 21st century teaching and learning. This informal working group began meeting regularly, exchanging ideas, and collaborating on new initiatives. The network now involves thousands of educators from over 600 organisations coming together to collaborate on opportunities of mutual interest to support youth. Strong connections and alignment has been created among formal learning, informal learning, and employment opportunities.

Today, Remake Learning is one of the best known examples of a community-led learning network globally, reaching over 30,000 young people every year, and helping meet community and city priorities for equitable learning and skills development. Recently, as the language and practice of learning ecosystems has gained momentum internationally, Remake Learning has adopted this identity. Gregg Behr, Grable Foundation’s Executive Director, has called on the administration of US President Joe Biden to set up a national commission on learning ecosystems. As Mr. Behr commented, “Building back better in a post-pandemic United States will require federal investments not only in schools, but in ‘learning ecosystems’ that leverage and connect the assets of entire communities.”

Learning ecosystems, the need and case for change

The educational experiences of a young person growing up occur across multiple, varied learning environments. Humans are born learning and continue to learn throughout their lives through every interaction and experience. These experiences shape our knowledge, skills and attributes, our self-efficacy, sense of belonging and wellbeing, and begin within our families, communities and neighbourhoods. They continue through the more structured settings of K-12, higher education and beyond, through extracurricular and informal experiences with athletics and the arts, with museums and other cultural institutions, parks, online, and through employment. The broader networks of support, experience and influence, in addition to school, play a seminal role in shaping who we become, and our aspirations and ambitions.

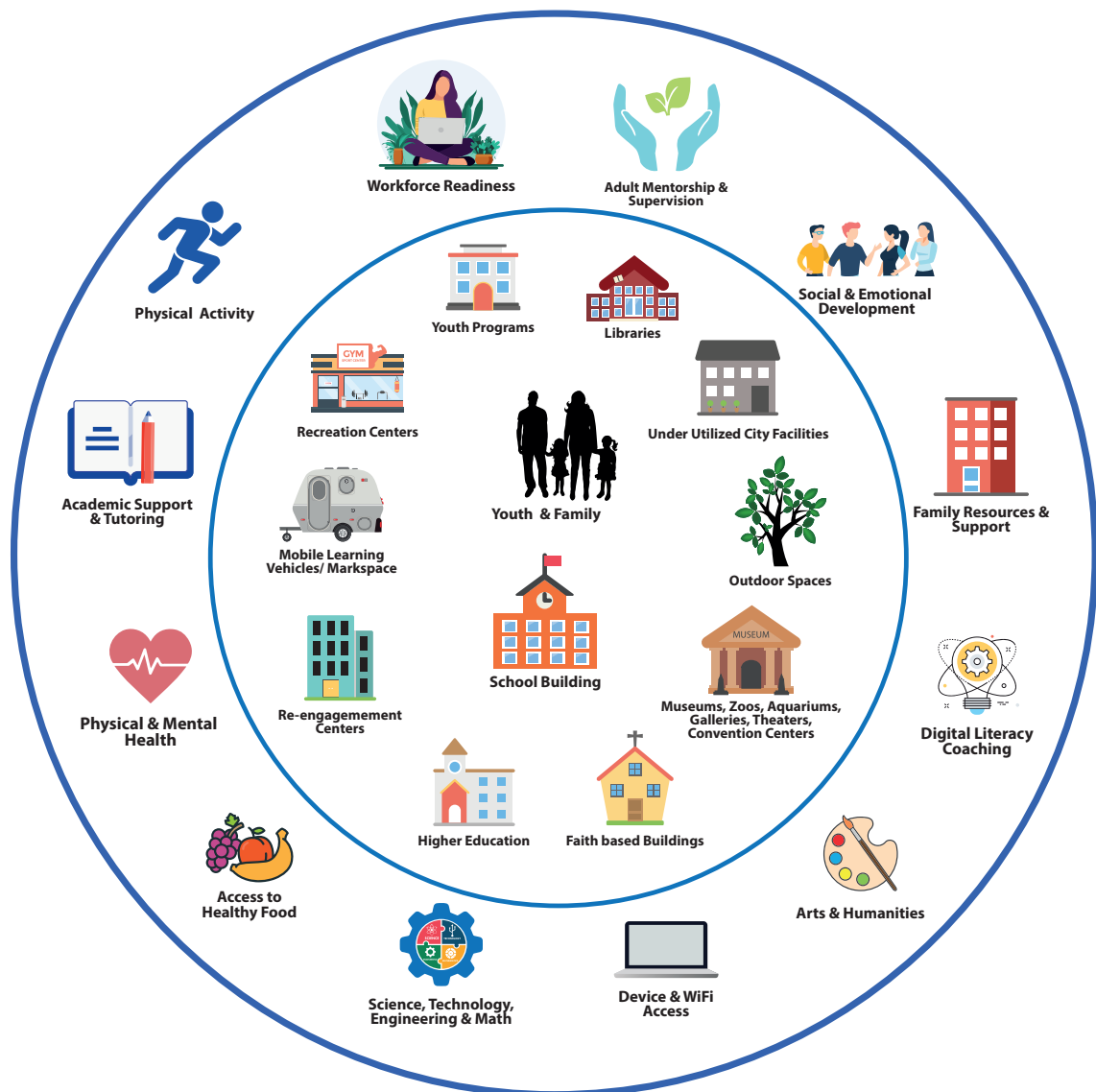
Not every young person, however, has the opportunity to access a breadth of learning experiences, within and outside of school. It is increasingly well understood that the equity gap in education starts with experience gaps, and that these correlate often with the neighbourhoods where young people live and the amenities and resources available to them. Informal learning experiences outside of school

that build knowledge, skills, networks and socio-cultural capital are important in helping young people explore and find their passions, ignite their motivation to learn, understand and navigate the places and communities where they live, and develop their capacities to contribute to a thriving world.

The learning ecosystem idea recognises that education and learning and providing support for young people more generally, is a collaborative endeavor; a broad diversity of actors and stakeholders have an important role to play and should be proactively involved and valued. As noted in Big Change's Reimagining Education Together report, "Education is Everyone's Business". This collective responsibility should be an impetus to create places where more young people feel that their future matters.

Figure 1

Visualising a learning ecosystem, from the National League of Cities.



National league of cities

See taxonomy of learning providers in Appendix 1

In 2019, WISE set out to examine and understand the potential of emerging models of local learning ecosystems around the world, and concluded that they present an important phenomenon for the future of education. The report *Local Learning Ecosystems: Emerging Models* defined a learning ecosystem as “diverse combinations of providers - schools, businesses, community organisations, government agencies - creating new learning opportunities and pathways to success.”

This research aims to better understand the potential of a learning ecosystem specific to the national context of Qatar. The research seeks to identify what needs the local ecosystem could meet, what value it would create, and how it could help the country meet its priorities for human, economic, ecological and social development. The research offers learnings for educators, stakeholders and policy makers in Qatar who are interested in this important concept, and also for global partners interested in applying the concept in their own communities or contexts.

Learning Ecosystems in Qatar

The Qatar National Vision 2030 (QNV), launched in 2008, sets out an ambitious vision for the country’s human, social, economic and environment development, with education at the core of these four pillars. The aim of QNV 2030 is to transform Qatar into “an advanced society capable of sustaining its development and providing a high standard of living for its people.” It addresses five major challenges facing Qatar:

- Modernisation and preservation of traditions
- The needs of the current generation and of future generations
- Managed growth and uncontrolled expansion
- The size and quality of the expatriate labour force and the selected path of development
- Economic growth, social development, and environmental management

Education across all phases of life is considered a central aspect of social and economic development in Qatar. There have been significant investments in educational institutions, including innovative new ‘demonstrator’ schools, the development of Education City offering a thriving higher education environment with both home grown and international universities, and informal learning institutions such as Qatar Museums and Qatar National Library.

The evolution of Qatar’s education system is a story of significant national progress, but also ongoing structural challenges that have held back its economic and human capital potential. Qatar is ranked 29th on the World Economic Forum’s *Global Competitiveness Index* (2019), which measures how well countries perform on a range of factors that contribute to economic productivity. Qatar is ranked the eighth best country for ICT adoption, and leads the world in percentage of the adult population that uses the internet. It is also recognised as among the best in the world for investing in the skills of its current and future workforce, including through high quality higher education and vocational training, skilled graduates, availability of skilled workers, critical thinking in teaching, and good pupil-to-teacher ratios. As noted in the World Bank report *Maximising the Contribution of Education in Diversifying Qatar’s Economy* (2017), one of the strongest assets for engaging in education reform is the existence in Qatar of many schools that are functioning at a level comparable to that of the most successful schools worldwide, and of established models of successful innovation.

Moreover, Qatar has made significant and rapid strides in driving up participation in learning. For example, from 2006 to 2012, the proportion of children not learning at the primary level dropped from 82 percent to 42 percent, while youth not learning declined from 73 to 52 percent. This, in addition to wider government measures, has contributed to a very high employment rate and zero youth unemployment, on which Qatar notably exceeds other high income countries, according to the World Bank’s Human Capital Index.

Nevertheless, significant challenges remain. Despite the progress made, Qatar still has a high percentage of people not meeting basic learning levels, especially in comparison to other high income countries. Its overall performance on human capital, according to the World Bank, is higher than the average for the Middle East and North Africa region, but lower than the average for high income countries. It struggles in particular with 'learning poverty', with 35 percent of ten year olds not able to read and understand a simple text by the end of primary school. This is significantly higher than the average for its income group (14 percent). It ranks 109th in the education subset indicator within the United Nations' Human Development Index (2020), which is defined as an average of mean years of schooling (of adults) and expected years of schooling (of children).

Surveys from Qatar's Ministry of Education also show clear attainment gaps where data is available, with males significantly lagging behind females, and substantial gaps between secondary government and private school attainment. Discrepancies between government and private schools is supported by principals' and teachers' perceptions about their students' motivation to learn, the quality of extra curricular activities, and the education resources households have to support learning. More data is needed to capture attainment gaps, particularly among different socio-economic groups.

The overall picture, therefore, suggests that there are significant challenges for Qatar to address, but that efforts to tackle them can build on a foundation of progress and investment in increasingly high quality institutions. This reinforces the importance of building leadership across the education system; and increasing communities' and residents' access to and participation in learning.

Building on the data, initial conversations with local stakeholders in Qatar, both formal and informal learning providers and policy makers, a range of priorities and needs surfaced relating to youth learning and development, including:

- Ensuring that the education and learning offer effectively provides the knowledge, skills and attributes that young people need now and for their futures. This includes building up youth confidence, self expression and self-efficacy (agency).
- Addressing the gaps in access to informal and extracurricular learning experiences, inside and outside of school, and particularly inequalities of resource access between government and private schools.
- Learner motivation is currently a key issue, with Qatari males in particular more likely to be disengaged from learning and less likely to pursue higher education opportunities.
- The need for more diverse progression pathways through education and into higher education and employment, including improving skills alignment between the education sector and industry, and the expansion of technical schools.
- The growth in entrepreneurship as a concept and aspiration, with career aspirations expanding beyond the public sector (changing of youth mindsets and ambitions).
- The importance of inclusion in learning, and supporting both Qatari and expat populations to be able to fully participate in society, economically and socially.
- Youth experiences of transience, of friendships, of access to neighbourhood resources and supports. Including resources across the natural and built environment

Qatar's primary challenge in education provision is not financial, but in how available resources are effectively directed and utilized. There are significant ongoing investments in new learning spaces and learning infrastructure, including those related to major national events such as the FIFA World Cup 2022. The challenge is in the inequitable access to learning, structural inequalities, and in actively engaging and enabling youth and adult learners to pursue opportunities. This speaks to both the types of opportunities offered (those experiences that motivate and enable people to access learning), as well as the community conditions (e.g. the structural distribution of opportunities) in which inequalities arise.

The conversation about the development of learning ecosystems therefore sits within a backdrop of significant national growth and change. It is orientated around how the concept can help maximise national learning assets, support the development and spread of new education practices, and create stronger collaborations between organisations built on trust and a common commitment to benefitting more young people. It's important to consider how learning ecosystems can form part of the national development story, and the evolution of practices and processes in line with the aspirations of the Qatar National Vision.

Recent initiatives reflect a strong appetite amongst local stakeholders for the learning ecosystems idea. These include the WISE Doha Learning Days, the establishment of Unesco Learning Cities in Qatar, and exploration of the idea of Cities of Learning at the WISE Summit in 2019. Such initiatives have supported better understandings of existing innovative practices for greater equity, for forms of local collaborations already taking place. They further suggest how the growth of more structured learning ecosystems could better connect organisations, build cultures of trust, and provide spaces for experimentation.

CHAPTER THREE

The concept of a learning 'ecosystem' draws inspiration from broader ecosystemic thinking that emphasises two key features in the evolution of human social organisation:

- The shift from an industrial model characterised by rigid hierarchies, command and control, and high levels of standardisation to a more networked, decentralised and 'distributed' governance that can accommodate the growing complexity of society and its institutions.
- The inherent interconnectedness and interdependence of individuals, communities, organisations and institutions. Similarly to biological ecosystems, social ecosystems involve a diversity of participating actors, synergistic relationships (collaboration), and a complex range of resources and points of influence.

In recent years the concept and practice around learning ecosystems has been growing in interest and prominence in education, skills, lifelong learning and systems design. This growth is seen particularly in localised forms of organising diverse educational resources and assets, and delivering educational services to address opportunity, skills, and achievement gaps, and in improving outcomes for young people. As noted in the introduction, supporting youth learning should be seen as "everyone's business" and a collective social responsibility.

Among the major challenges of this more expansive and multi stakeholder lens are the often siloed and fragmented services and provision at a local level. This inhibits collective action in addressing persistent problems such as inequitable access to quality learning and limited pathways and opportunities for learners to advance. The cultivation of learning ecosystems as living networks of relationships and interconnected activities among multi sectoral organisations, therefore seeks to address this fragmentation. Together over time, strong learning ecosystems can help diverse communities achieve goals, whether social, economic or environmental.

International organisations and networks such as the Global Education Leaders Partnership, Global Education Futures, and The Weaving Lab have made the understanding (and advancement of) learning ecosystems central to their work. Significant research has already resulted in new definitions, typologies and conceptual models of learning ecosystems by drawing on existing innovation ecosystems literature, principles from the field of collective impact, and the development of communities of practice.

This section provides a review of some of the key literature on learning ecosystems. It draws on the literature (primarily grey literature but also academic research) to explore the following:

1. Defining learning ecosystems and their key features
2. Examining what learning ecosystems look like in practice
3. Identifying the key enablers and barriers to developing learning ecosystems
4. Plugging the theory-practice gap by exploring evidence on the strategies, principles and tools that can be used to practically implement a learning ecosystem approach

What are learning ecosystems?

In its recent report synthesizing and drawing together relevant literature and practitioner insight, Global Education Futures (2020) sets out a distinction between traditional 'industrial education' and learning ecosystems:

Figure 2

Global Education Futures (2020) comparison of industrial education and learning ecosystems



The authors define learning ecosystems as “webs of interconnected relationships organising lifelong learning.” They are “diverse, dynamic and evolving, connecting learners and community to foster individual and collective capacity.” According to their framework, there are three key elements that are integral to learning ecosystems. They are:

- **Multifaceted.** Learning ecosystems integrate a range of experiences, networks and communities, stakeholders and levels of governance.
- **Co-created.** Strategic goals, programmes and services are designed and developed by a range of stakeholders working together in a way that is inclusive, diverse and equitable; learner agency is crucial to this.
- **Purposeful.** They are intentional and purpose-driven, promoting agendas such as lifelong learning, equity and equality, economic opportunity and wellbeing.

Multi-stakeholder engagement and collaboration is especially important to ecosystemic approaches. As the authors note, this includes both “first-liner” and “second-liner” institutions. First liner institutions include both formal and informal organisations and networks, such as schools, clubs, museums and communities of learning. Second liner actors tend not to deliver learning directly themselves, but influence the wider context in which learning takes place. These include parents, employers and regulators. Importantly, simple stakeholder interaction isn’t sufficient to be ecosystemic: they must foster intentional, interdependent relationships.

The OECD offers a useful framework for understanding this “ecosystem architecture” which goes beyond systems of learning themselves, and instead describes how a wide variety of actors builds and apply 21st century skills and competencies to solve problems and create shared value.

Figure 3
OECD, Ecosystem Architecture

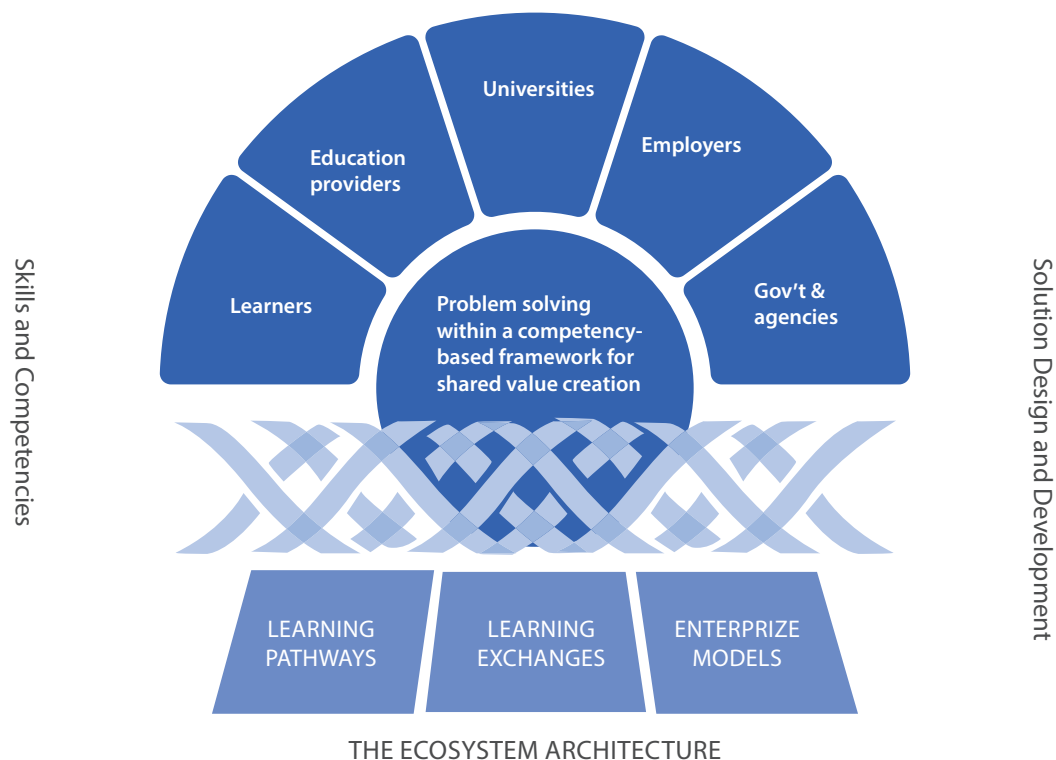


Figure 13: Ecosystem architecture (OECD version)

The literature on “skills ecosystems” likewise situates learning into a wider infrastructure of social and economic development. Finegold (1999) coined the term skills ecosystem when describing the anchors and institutions, and the complex interactions and interdependencies between them that drive local skills. Drawing on the development of the California economy, he points to four requirements of “high skills ecosystems”:

- a catalyst for their start
- continual nourishment
- a supportive host environment
- a high degree of interdependence amongst stakeholders and partners.

Spours and Grainger (2018) build on Finegold’s account but deepen it to include an ecosystem that encompasses working, living and skills development in an inclusive, sustainable and social way. Their “social ecosystem” model is defined as:

“...an evolving place-based, comprehensive social formation focused on the connected worlds of working, living and learning. Social ecosystems are supported by an enabling national state, devolved local state and socially designed digital technologies. They suggest a leading role for horizontal networks and local anchor institutions involving a variety of social partners in the public realm and private sector.

The authors contrast social ecosystems with traditional hierarchical and market-biased “elite ecosystems”.

What do learning ecosystems look like in practice?

Research from the Innovation Unit and WISE identifies four broad categories of learning ecosystems:

- 1. Expanded formal offers.** These work alongside existing curricula and/or outcomes, but look to diversify learner

experiences and outcomes, and bring in new partners. They are often led by a single institution or agency. Examples: Jump Start, Cultural Paths, Swinburne.

- 2. Industry or community led initiatives.**

This is where “second liner” institutions have skills requirements that lead them to develop new learning pathways and opportunities to meet industry needs. They operate outside formal learning systems and therefore have the potential to be disruptive.

- 3. New designs and new platforms.** These ecosystems are intentionally designed and have a high degree of learner agency, which leads to innovative and new ways of organising learning. Examples: LRNG, Cities of Learning UK.

- 4. Responsively dynamic.** This combines a high degree of learner agency with a self-sustaining community of providers working through a distributed form of governance and funding, responding directly to learner demand and economic need. Although this would be an ideal scenario for learning ecosystems, the researchers found no evidence of it in practice.

The nine case studies of emerging models that the research identifies offer a range of qualities that together characterise an ecosystemic approach to learning. These include:

- Diversifying learning resources and pathways for learners
- Activating and sharing resources for learning in new ways from diverse sources
- Being dynamic in composition and porous around the edges
- Supported by helpful infrastructure (including digital technology)
- Comprising formal and informal learning institutions, and tradition and new entrants
- Having distributed governance
- Are learner driven or have learner agency at their heart, and
- Making an attempt to meet twenty-first century challenges in some way, beyond the narrow confines of academic attainment alone.

In a similar vein, in *Leapfrogging Inequality: Remaking Education to Help Young People Thrive* (2018), Winthrop et al. identify four dimensions of local learning ecosystems for educational progress:

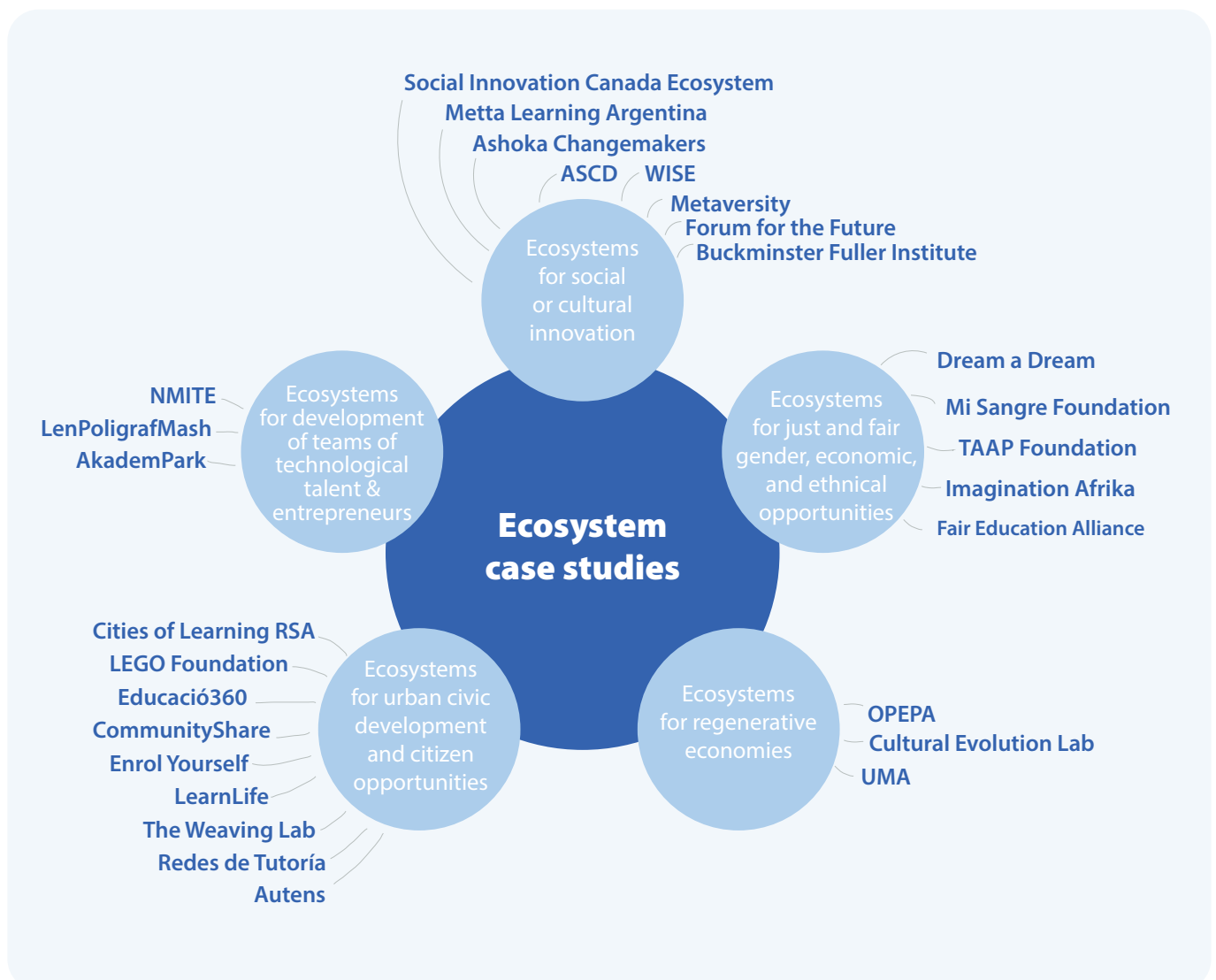
- Innovative teaching and learning, which is increasingly student centered
- Expanded recognition of learning, including personalised credentials to meet learners' individual paths
- Diversifying people and places for learning
- Harnessing technology and data to transform education.

Global Education Futures (2020) offers a typology of ecosystems based on insights from dozens of case studies in their research. These are ecosystems that:

- Create conditions for social or cultural innovation and development
- Create conditions for increased just and fair opportunities in circumstances of gender, economic and ethnic inequality
- Become a layer of urban civic development and expand citizen opportunities for learning and wellbeing
- Support regenerative economies in connection with respective bioregional ecosystems.

Figure 4

Global Education Futures, ecosystem typology



What are the key enablers (and barriers) for ecosystemic approaches?

Cultivating learning ecosystems that are transformative is likely to require conditions that promote systems change. Big Change has developed a framework (which they caveat as a 'work in progress') outlining the key ingredients for successful systems change, drawing on their bank of research and case studies. These features are underpinned by a culture of trust and include:

1. **A unifying mission.** A vision of change or call to action that is bigger than any single organisation, but which allows space for each to make its own.
2. **Representative alliance.** Actively engage with players from diverse disciplines, building on the energy of the willing and grappling with the challenges of sceptics.
3. **Servant leadership.** Leadership in service of change and in service of others, empowering others to be leaders in their own right.
4. **Co-ownership.** Favour action over endorsement; all actors have a purposeful role based on their strengths and assets.
5. **Experimentation and active learning.** Create a disciplined culture of continuous learning, experimentation that continues throughout the journey, not just in the design phase.
6. **Flexible governance.** Long-term stewardship of the vision combined with the flexibility, patience and permission to experiment and evolve.
7. **Networked growth.** Grow through networks aligned by values, supported by communities of practice and scaffolded by shared tools and frameworks.

Global Education Futures (2020) offers a similar framework for enabling factors, divided into four categories:

- **Culture factors** that support the ecosystemic patterns of behaviour and organisation: values, stories and myths, rituals and rhythms, relationship and communication, and norms.
- Rules, protocols, **organisational structures and agreements**, that enable the development of the ecosystem: local contexts, key stakeholders, ecosystem governance models, distributed leadership, agency and personalisation, and feedback loops.
- **Resources:** Funding, space, tools and equipment, technology, teams and people, and skills and capacity
- **Execution methods and practices**, that help execute the project in an ecosystemic way: inclusive planning and design, prototyping, collaboration and co-creation, action oriented research, engaging storytelling.

Practitioners emphasise in particular the importance of flexible funding, collaborative, non-competitive environments, and a shift toward new metrics and long-term visioning. From a programme management perspective, projects that define, measure, analyse and improve metrics of success are also needed.

Building on the contrast between industrial and ecosystem learning, the authors also identify ecosystem leadership as a key enabler, and describe how it departs from traditional educational leadership. Importantly, leaders are not merely those at the top of hierarchies, but can include various actors in an ecosystem. For example, ecosystem leaders can be:

- *Teachers and educators* who facilitate communities of practice to change how learning is delivered
- *Organisational leaders* who work within their sectors to promote a more ecosystem way of working, building bridges with other sectors
- *Young professionals* to cultivate entrepreneurial environments

- *Young people, parents and families* to advocate for and support transformations of their learning institutions and identify resources in their communities
- *Funders* to develop new models of funding and metrics of impact
- *Policymakers* to embrace multi-stakeholder oriented approaches to policy making and focus on the long term.

Research from the OECD underscores the critical importance of developing networked, 'whole system' governance as a key enabler of change. It questions conventional frameworks that conceptualise change which are built on the assumption that "Governments set policy, which then descends in a vertical implementation line through local government, together with implementation / support agencies, through to school principals and into the classroom... such a framework of understanding has become increasingly inadequate. A perennial challenge for policy is that it is notoriously impotent at changing behaviour in teaching and learning. Learning systems extend well beyond schools. Innovation means looking beyond the conventional partners and structures."

This conventional notion is being challenged by growing complexity in education systems. The OECD argues that five key principles now need to be taken into account:

- 1. There is no one right system of governance.**
- 2. A whole-of-system approach is essential,** one that aligns roles and responsibilities across the system, improves efficiency and reduces duplication or conflict.
- 3. Effective governance works through building capacity, open dialogue and stakeholder involvement.** This is underpinned by strategic vision and a clear set of processes.
- 4. The national or local state remains very important for steering education reform,** providing equitable access and outcomes;

developing clear goals and guidelines and providing feedback.

- 5. There is a need to develop key principles for system governance** including building capacity, open dialogue and stakeholder involvement.

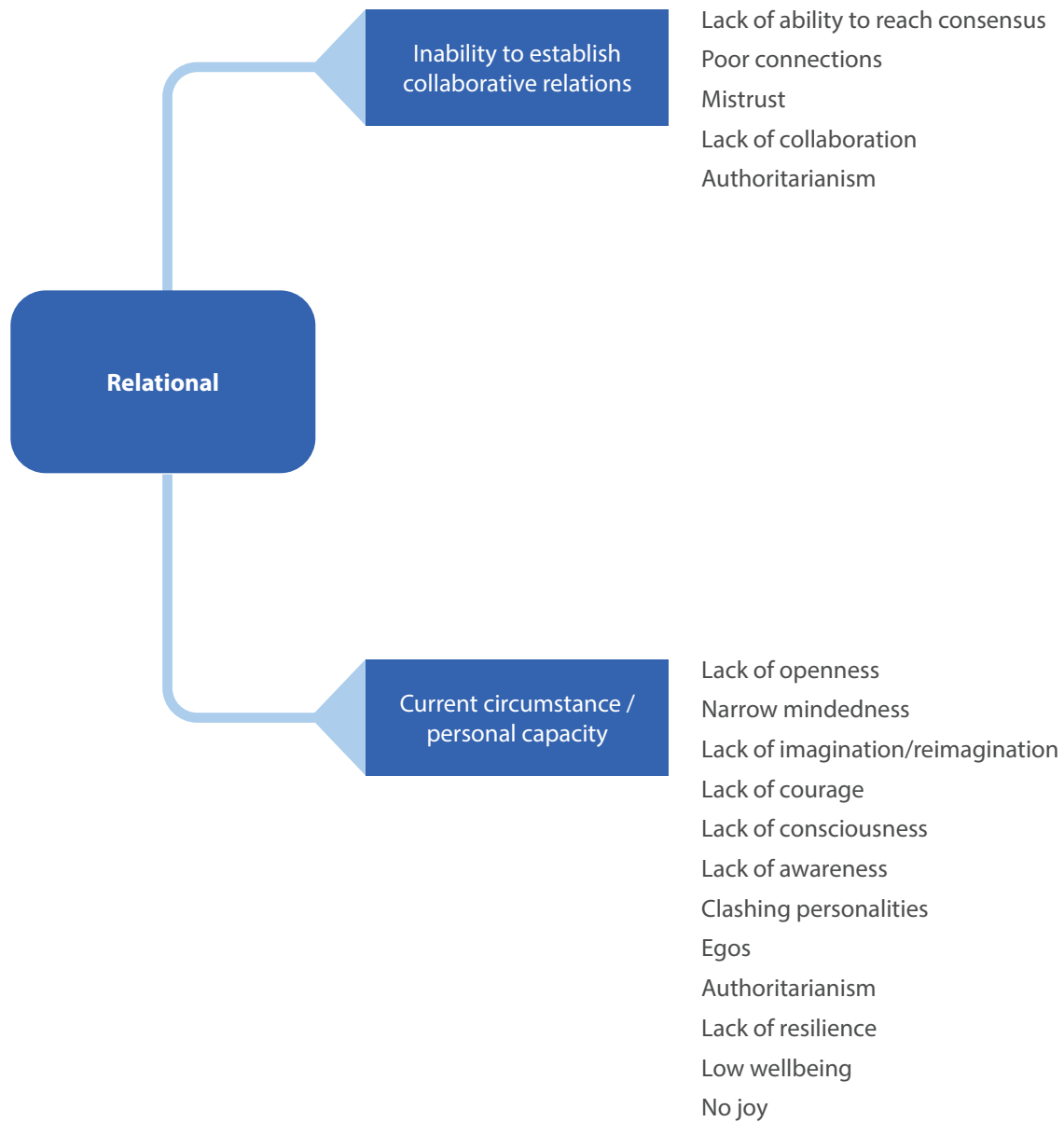
Global Education Futures (2020) also usefully summarises some of the main barriers or hindrances to the development of learning ecosystems, which they divide into two types: Relational and structural (see table).

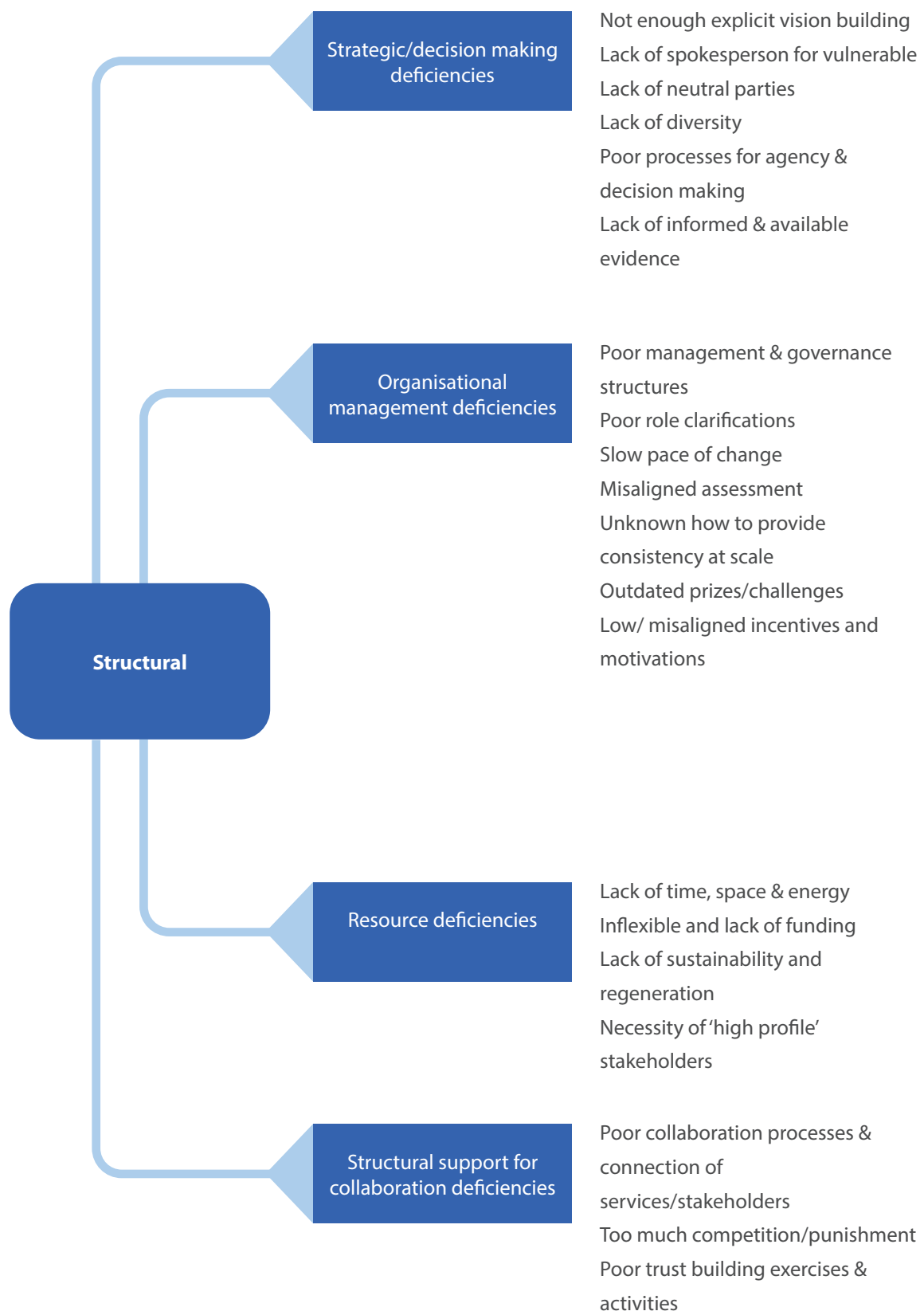
There are also specific barriers that can make it difficult for actors to embrace the sorts of innovations required to support change. Lamprini and Brochler (2018) identify the following in particular, which align closely with the above:

- Negative attitudes, lack of skills, complex technologies or resistance to change
- Holistic acceptance of the innovation by all actors
- A new understanding of schools is required
- Collaboration challenges: a lack of "Addressable Communities" involving stakeholders
- The R&D cycle is broken: practice, research, development, and investment are disconnected
- Language barriers and cultural differences ("consuming" existing knowledge)
- Educational policy moves to different directions than innovation actions.

Figure 5

Barriers and hindrances to learning ecosystems (Global Education Futures, 2020)





How can local ecosystems be effectively implemented in practice?

It is instructive that the Innovation Unit/WISE research found little evidence of the most comprehensive model of a local learning ecosystem in their framework ('responsively dynamic'). This reflects the fact that while growing complexity in society demands more networked and co-created forms of governance, the traditional hierarchical or market-driven models still dominate. Breaking through these entrenched structures is highly challenging. Building learning ecosystems, therefore, is not simply a case of introducing reforms; rather, it needs to be an innovative and disruptive endeavour. And insofar as a learning ecosystem is a living, continuously evolving system, it is important that the process of bringing about the learning ecosystem is not seen as a one-time initiative but rather a continuous, conscious process of evolution.

Whilst pockets of innovation have emerged to promote ecosystemic learning, they have generally been contained to particular projects, organisations, institutions or places. As Lamprini and Brochler (2018) put it, innovation in education tends to be implemented through pilot programmes or isolated activities, which creates "islands of innovation" without significant diffusion. The challenge, therefore, is to turn these "islands of innovation" into high-impact innovation that can be delivered at scale and are sustainable through time.

The literature on *innovation ecosystems* is especially useful in understanding how this can be achieved. It offers the following practical resources:

- **Overarching strategies** for cultivating innovation ecosystems in learning
- **Design principles** for developing strategies or interventions
- **Tools and methods** for the practical application of strategies and design principles.

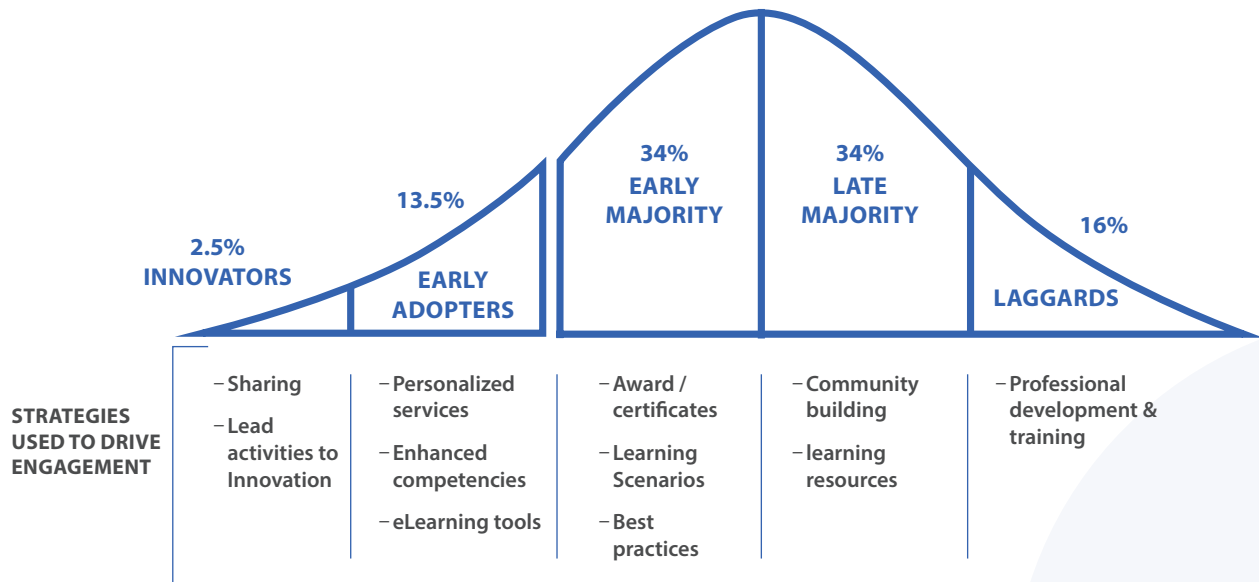
In addition, the literature on learning cities brings a place based dimension to the development of learning ecosystems, involving the mobilisation of local civic infrastructure and networks as well as top down policy to transform policies and practices.

Strategies

The OECD describes the role that learning and innovation ecosystems play in a local context as "turning talents and challenges into opportunities and solutions through the engagement and interaction between learning providers in educational institutions and other settings, employers and enterprises, economic and social agencies, and various civic and community bodies."

Proponents of innovation ecosystems often draw on the work of Everett M. Rogers (1962) to develop their accounts of how innovative practice can be cultivated and spread. The basic premise is that new and transformative practices cannot be spread *en masse* in an instant, but rather follow an "innovation curve" that begins with innovators and early adopters, and then reaches into early and late 'majorities'.

Figure 6
Open Discovery Space Innovation Model



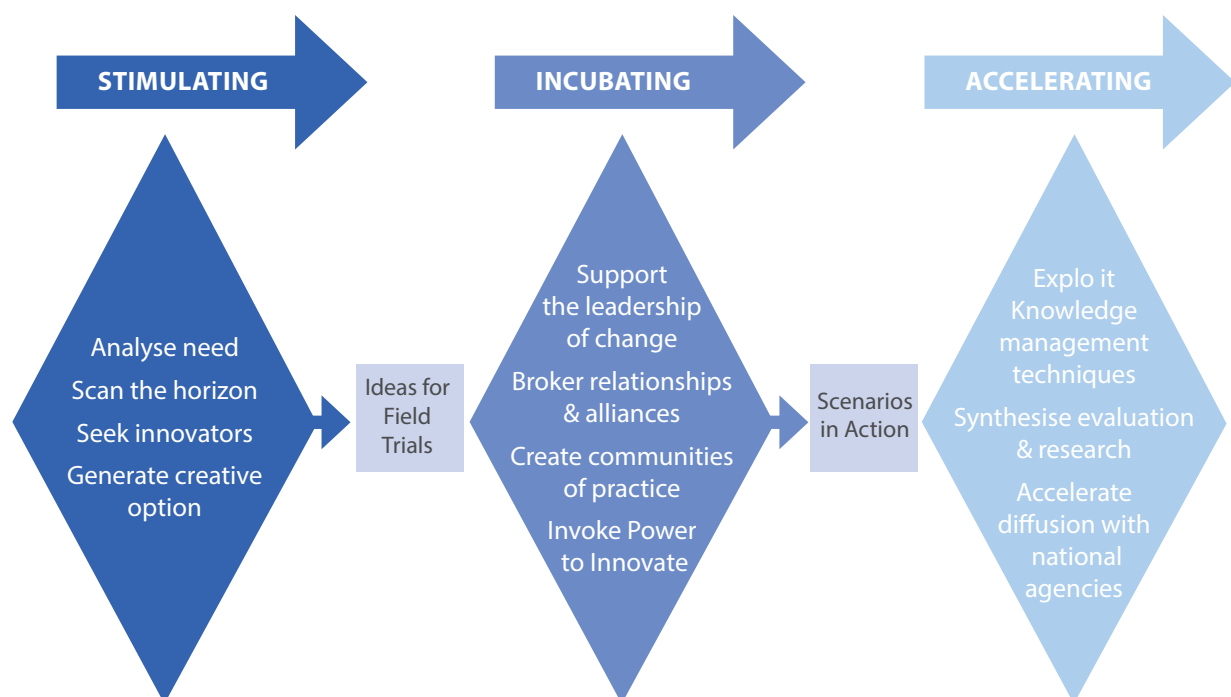
Lamprini and Brochler (2018) draw on practical examples of innovation ecosystems in learning, including the Open Discovery Space (ODS) Innovation Model, to chart a set of strategies for different phases of the innovation curve.

- For the innovators, it means sharing their expertise and giving them leadership positions in developing activities for innovation.
- Early adopters should be offered personalised services to support adoption, the opportunity to develop new competencies and access tools and technologies.
- The early majority are provided with awards to recognise their impact, new learning scenarios and the sharing of good practice.
- The late majority are supported by building communities of practice and tailored learning resources.
- 'Laggards' are able to access professional development and training.

The ODS Innovation Model (Sotiriou et al., 2012) includes a set of strategies along three key phases: Stimulating, incubating, and accelerating. Importantly, it is a model that has been applied, tested and refined in practice. The ODS project was a major European-wide initiative to modernise school education through large-scale implementation of a technology supported innovation in thousands of schools. Through monitoring the intervention, researchers found that:

- The growth in digital maturity was substantial.
- It achieved a gradual growth of connections and networks.
- These communities became important 'nodes' that shared educational content and experiences.
- Initiatives such as ODS added substantial value to schools on a large scale.

Figure 7
ODS Innovation Model



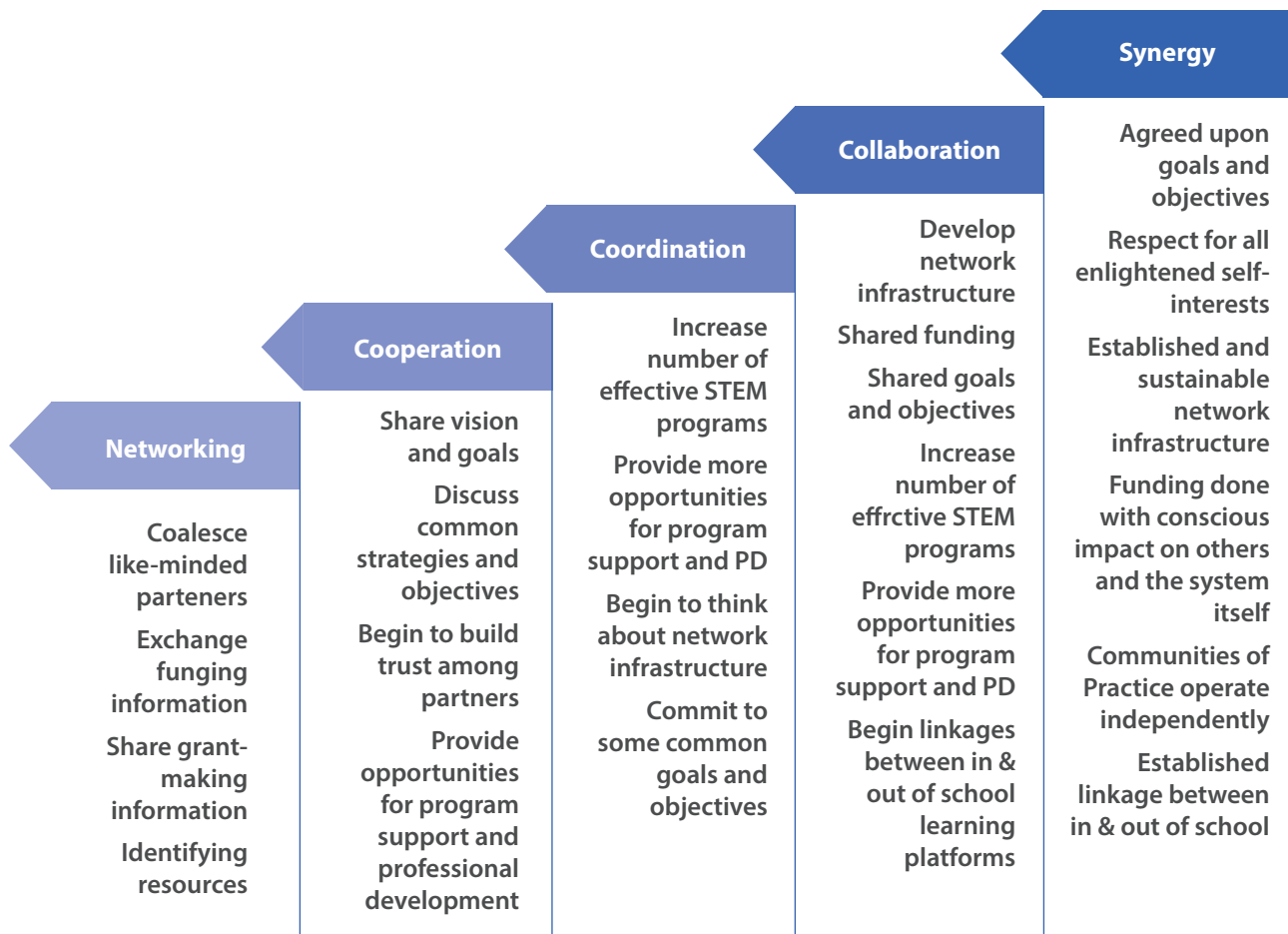
Original ODS Innovation Model (Sotiriou et al., 2012)

STEM Ecosystems is another global initiative that builds on a similar approach focused around building cross-sector communities of practice and involving them in the design of learning ecosystems that connect what students learn in and out of school with real-world learning opportunities, which ultimately lead to STEM related careers and opportunities. They draw on a design-based approach that includes four key components:

- 'Innovation by design': the system
- 'Learning and learning by design': teaching and learning
- 'Collaboration by design': partnerships
- 'Accountability by design': outcomes and metrics.

This feeds into a strategic approach with five key pillars, as outlined below.

Figure 8
STEM Ecosystems development model



Underpinning these strategies is a theory of change or logic model, which clearly outlines the core features of how the interventions will be developed: the key partners, critical attributes, and focus areas.

The STEM Ecosystems approach bears some resemblance to the 'collective impact' model that organisations such as Strive Together have been deploying to promote impactful local learning ecosystems. Collective impact strategies are based on pursuing five key 'conditions of collective impact':

- A common agenda
- Shared measurement
- Mutually reinforcing activities
- Continuous communication
- Backbone support.

Others have also offered useful strategies and frameworks for innovation ecosystems in learning. The Innovation Unit and WISE (2019) presented four steps for moving toward learning ecosystems:

- 1. Hypothesis and visioning**, with a clear account of the conditions required for ecosystems to emerge and the opportunities and barriers to the vision
- 2. Catalysing and initiating**, by understanding and activating the new infrastructure, platforms, resources and forms of governance needed
- 3. Dynamic experimentation**, to allow effective models to emerge through iteration, testing, refinement and a tolerance for risk
- 4. Mainstreaming or sustaining**, to provide established initiatives sustainability: in terms of funding, embedding new roles, creating the capacity to evolve and to achieve impact at scale.

Tom Vander Ark (2020) also offers useful insight into three different types of change models for achieving scaled impact, varying by the extent of transformation.

1. Practice: New practice, product or tools that require minimum behaviour change.

This tends to be simple but high adoption tools that spread fast, such as Google apps in education.

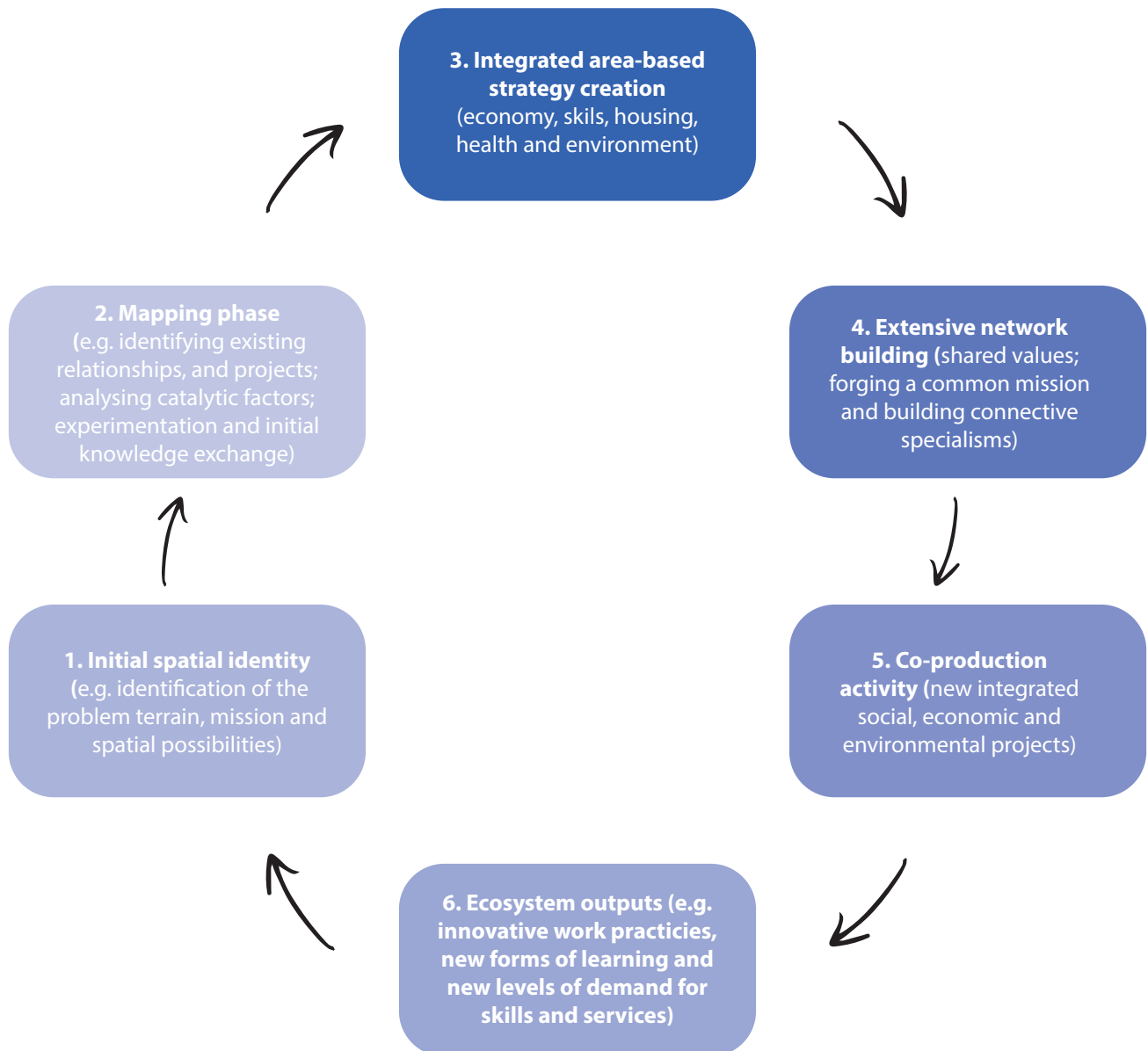
2. Package: An innovation that involves a combination of tools and practices like blended and personalised learning that requires new tools and behaviours.

These packages of innovation are typically developed by teams and networks, and depend on resources, permission and policies, laws, and regulation to be effective.

3. Frame: A new way of framing delivery or a new framework of policies that change the rules of the game. This is where new sets of policies and practices transform the entire 'frame' or conditions of a system.

Although dynamic and to some extent organic, there are some common elements of 'structure' to developing an innovation ecosystem in learning. This includes understanding what the system(s) look like currently; having a vision or plan; understanding the sequence in which innovation can spread; and developing new communities and practices. Hodgson and Spours (2018) 'social ecosystem synergy cycle' is a useful framework for how the various ingredients of an ecosystem can be packaged, sequenced and connected as part of an overall strategy and synergistic process, as illustrated below.

Figure 9
Social Ecosystem Synergy Cycle

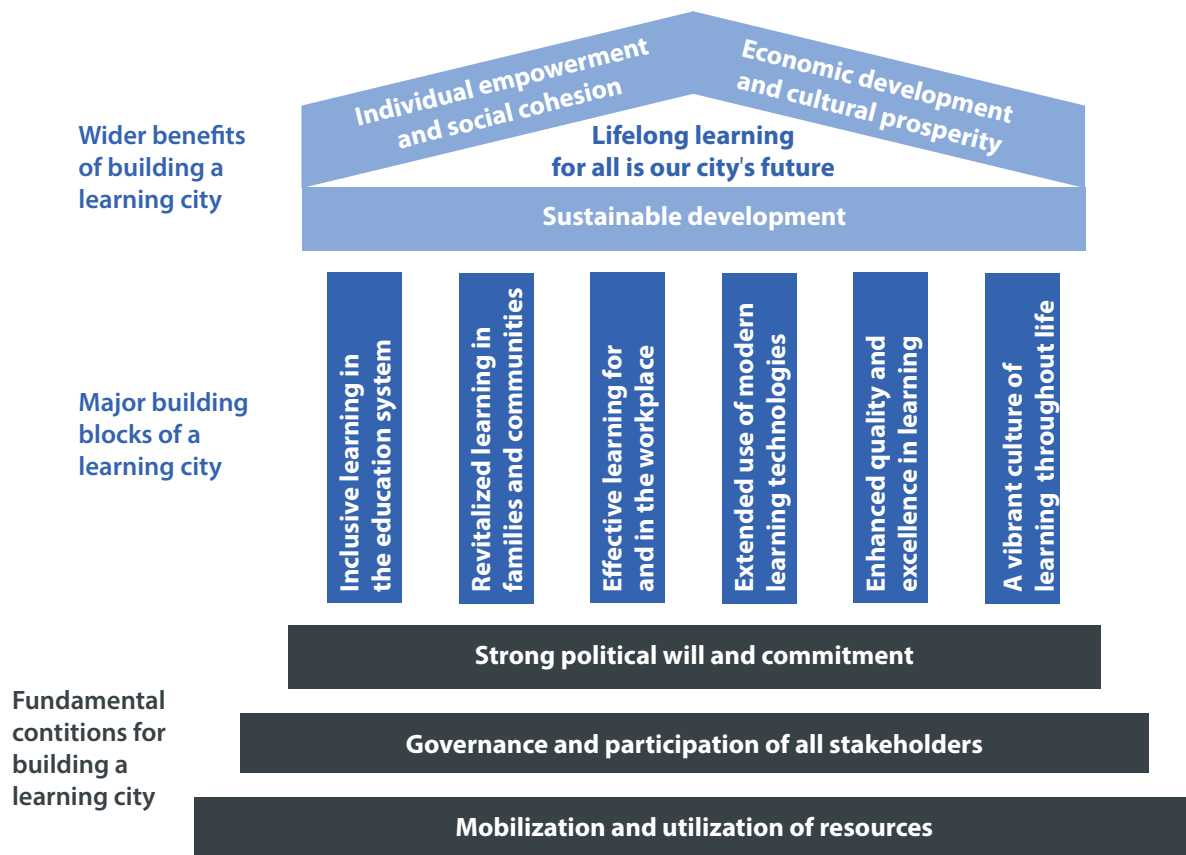


(Hodgon and Spours, 2018)

The Unesco Learning Cities model takes an explicitly place based approach to organising ecosystems of learning innovation. It recognises cities that commit to promoting and embedding lifelong learning across all spheres of life, and to promoting the contribution of learning and education to the sustainability, cultural prosperity and inclusivity of a place through its policy architecture. Unesco offers the following framework to guide the development of Learning Cities.

Figure 10

Unesco: The Framework of the Key Features of Learning Cities



This framework presents a holistic model of change, looking at how a series of foundational conditions plus key building blocks such as learning in communities, families and the workplace leads to social and economic prosperity. Unesco offers the following core Guidelines for Building Learning Cities:

- Develop a plan for becoming a learning city
- Create a coordinated structure involving all stakeholders
- Initiate and maintain the process with celebratory events
- Make sure that learning is accessible to all citizens
- Establish a monitoring and evaluation process to ensure learning city progress
- Ensure sustainable funding.

Within this model, strategic and invested leadership at city or municipality level is central for setting clear aspirations and shared objectives around a commitment to learning. The Learning Cities evaluative methodology also looks to assess and evaluate the prosperity of a place beyond solely economic growth orientated metrics. For example, prioritising adult literacy, gender equality, reducing CO2 emissions, waste management, participation in cultural activities, and citizens' contribution to helping other citizens learn. Alongside more traditional metrics such as unemployment, poverty, and GDP. It thereby recognises the wider value of lifelong learning to social and economic development, as well as the interrelation between social, economic, civic and environmental policy. The Unesco learning cities approach makes a clear connection between design principles and strategic implementation.

Design Principles

Following a strategy (or set of strategies) is important but not sufficient. These strategies need to be implemented in a way that is conducive to the building and development of innovative practices and learning ecosystems. This is why thinking about the 'design principles' of a learning ecosystem, and the values underpinning it, is so important.

The following for example have been identified as important to collective impact practice. They include:

- Design and implement the initiative with priority on equity
- Include community members in the collaborative
- Recruit and co-create with cross-sector partners
- Use data to continuously learn, adapt and improve
- Cultivate leaders with unique system leadership skills
- Focus on programme and system strategies
- Build a culture that fosters relationships, trust, and respect
- Customise for local context.

The wider literature also suggests that it is these types of design principles that distinguish an innovation ecosystem from a mere system. As Nataliya Smorodinskaya and colleagues (2017) argue, what is needed is to foster an environment that "may be seen as an ecosystem meant for co-creation of value through collaboration."

Valerie Hannon and colleagues draw on innovation practice in the market among entrepreneurs to offer a "series of conditions" (or design principles) that can cultivate innovative learning ecosystems. These are:

- An inspiring vision for lifelong and engaged learning, with aims beyond personal wealth and economic competitiveness
- Low barriers of entry for new providers
- Freedom for merger and demerger activity
- Incentivising student-led curriculum development

- Greater transparency for learners about the range of opportunities available
- Coalition building
- Investment in, and encouragement for, disciplined 'innovation zones'.

Implicit within these framings is a recognition that ecosystemic approaches aren't just characterised by new structures or processes, but perhaps more fundamentally by new types of relationships, behaviours and mindsets. This 'cultural' reorientation is key to building innovative learning ecosystems.

A key question is who leads or catalyses the development of an innovation ecosystem. Networks without focal points of leadership and energy can struggle to get things done. This is where the intermediary layer of learning and innovation ecosystems is so crucial. This layer includes intermediary organisations, that bridge each layer of the ecosystem and "build innovation pathways through spaces and networks" - through resources, coaching, technical assistance and leadership (Clayton, 2016, Building innovation ecosystems in education). They also build entry points into the system for other organisations and institutions, reducing barriers, burdens and risks and helping to build up capacity and knowledge diffusion over time.

Tom Vander Ark (2016) identifies intermediaries as playing six key functions:

- **Grants:** local support and guidance for new learning models
- **Incubation:** capital, space, technical assistance and organisational development
- **Convenors:** onboarding organisations and institutions into the ecosystem
- **Catalyst:** trusted organisations service as a bridge for innovators from inspiration to incubation
- **Harbormaster:** ecosystem coordination, advocacy and convening
- **Feedback.**

Vander Ark shares examples of such organisations, including:

- **Strive Together**, which uses collective impact strategies to align local stakeholders in three dozen cities to a common vision of better education
- **Mozilla Hive**, which powers local Learning Networks and Communities around web literacy
- **LRNG**, which drives the Cities of Learning initiative in the USA.

UNICEF also provides a useful articulation of the ways it contributes to innovation ecosystems, playing five key roles:

- **A problem solver** - innovating to come up with solutions to a challenge
- **An enabler** - making innovation easier by providing others with necessary resources
- **Convenor** - Bringing together actors in the innovation ecosystem to share knowledge and resources or partner on innovations
- **Motivator** - Providing incentives to encourage potential problem solvers to innovate
- **Integrator** - Creating processes and platforms that allow partners to work together effectively on an ongoing basis.

Tools and methods for disruption

Embedding the design principles in practice requires innovative tools and methods. While intermediaries play a critical role in connecting actors and providing resources and technical assistance, building effective learning ecosystems sometimes requires a radical departure from the status quo. Such dramatic shifts need to be tested.

As a result, organisations such as Global Education Futures are drawing on Social Labs methodologies to help test the implementation of learning ecosystems at regional scales. The Ecosystem Simulator is one such example, developed by Pavel Luksha and his team.

The model integrates the knowledge of over 20 ecosystemic projects around the world to simulate the development of a regional learning ecosystem. The Weaving Lab is another example of a network that brings together ecosystem leaders across the world to develop their professional and leadership capacities and provide peer guidance.

Education ecosystems that act as “laboratories” to test new practices are characterised by three key features:

- *Shared visioning* to help set the parameters of the ecosystem to be tested
- *Actional prototyping* to conduct tests and simulations of different sizes when introducing innovations
- *Open-source sharing*. Creating portfolios, through the prototyping and experimentation of open-source wisdom and best practices that can be shared throughout and between educational ecosystems.

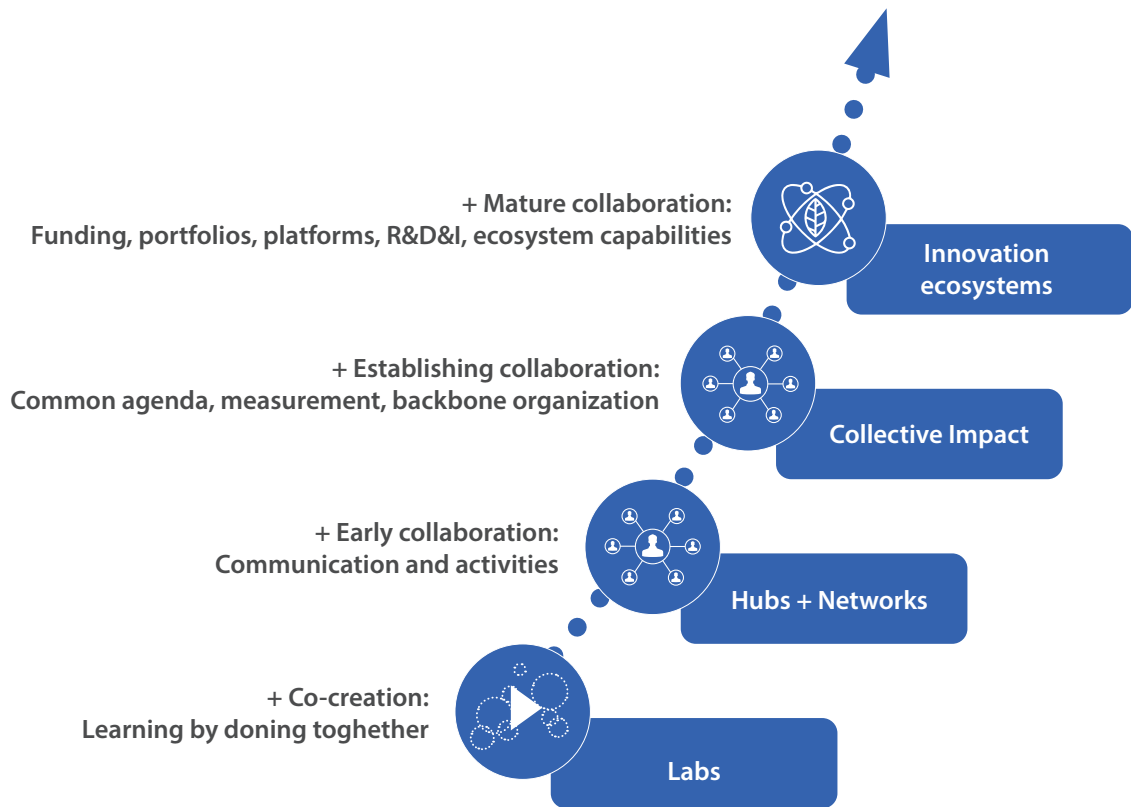
As mentioned earlier, digital platforms can be a powerful force for bringing together the networks, resources and communities necessary to test new approaches, share best practice and apply successful and impactful methods and initiatives.

SITRA in Finland is one of the world’s largest-scale ‘laboratories’ for developing innovative policy and practice to address complex challenges. It is an innovation fund operating through a public foundation under the supervision of the Finnish parliament. It carries out research, trials, experiments, and develops tools for practitioners. Crucially, its work is underpinned by a collection of practical tools and strategies, including ‘labs’ (collaborative networks and collective impact methods) that together help to create an innovation ecosystem. It describes this as a “portfolio” approach to ecosystem development. Its model of change combines the strategies, design principles and tools essential to building innovation and learning ecosystems. This involves a “synthesis of capabilities” as present in the following graphics.

Figure 11

SITRA's approach to building innovation ecosystems

Will labs grow up to become innovation ecosystems ?



SITRA

Figure 12

Sitra's Synthesis of Systems Change Capabilities



Key learnings from the literature review informing research design

The learning ecosystems (and innovation ecosystems) literature describes how organizational and operational processes shape how diverse stakeholders gather and interact to enable deep and purposeful collaboration. The literature identifies core conditions needed for such collaboration, as highlighted at the beginning of this chapter, including the mechanics of living systems of relationships, and interconnected activities among multi sectoral organisations and institutions.

Clearly, transformational change that improves learning outcomes for youth can't be achieved through smart policy or well-designed programmes alone. Meaningful change emerges from collective, multi-stakeholder efforts and collaboration deeply rooted in community and context. Innovation in education, as noted, tends to be implemented through pilot programmes or isolated activities that create "islands of innovation". The ongoing challenge is to devise methods to link islands of practice, generate networks, and bridge institutional divides.

The literature on learning and innovation ecosystems has important implications for this research study's examination of the practicalities of seeding and growing learning ecosystems in a particular local context. The following five key considerations arising from the literature review informed the hypothesis and methodology for this study.

1. Shared vision, values and purpose

The development of a shared vision with leaders who represent a variety of stakeholders in the ecosystem, and a common understanding of values and principles for deep forms of collaboration to arise. In Qatar, this is particularly significant given the diversity of the population, with multiple nationalities holding different values and interpretations of concepts such as equity and inclusion.

2. Practices, strategies, innovations

This involves how vision and values manifest in specific policies, practices, pedagogies, innovations and strategies in education and youth learning, which enable a particular vision or set of values or objectives to be achieved over time.

3. Conditions for

Collaboration Considering how trusting relationships form and flourish among individuals and organisations, and what motivations, incentives, tools and capacities are needed for impactful collaboration to arise, develop and deepen, as well as the obstacles and barriers to collaboration.

4. Local leadership, coordination and governance

The forms of local leadership and coordination needed throughout the system for innovative activities and collaborative opportunities in Qatar. Identifying leadership potential and new types of roles for people and organisations. The role of intermediaries comes across strongly in the learning ecosystems literature, particularly in supporting the necessary structural and cultural reorientation over time.

5. Impact and sustainability

This examines how learning ecosystems are resourced and evaluated, what success looks like and how it's measured, and how impact is understood through a collective rather than an individualised lens.

CHAPTER FOUR

This research study was designed with a mixed methods action research approach, combining qualitative and quantitative analysis with participatory co-design involving local stakeholders and partners in Qatar. For the purpose of this research, the definition of a learning ecosystem offered in the WISE 2019 report *Local Learning Ecosystems: Emerging Models* was expanded as follows.

Learning ecosystems comprise purposeful connections between diverse combinations of providers (schools, cultural organizations, businesses, community organizations as well as government agencies) to create new learning opportunities and pathways to success, which advance greater equity as a result.

The term “purposeful connections” is particularly important in the context of the literature. It indicates the need for shared intent and a unifying philosophy among different kinds of organisations, and a need to consider the relational aspects of developing learning ecosystems. In Qatar, there is a practical interest in how a coalition of multi sectoral partners can offer more effective learning opportunities, and incentivise and motivate youth learning in new ways by adopting a “learning ecosystems” collaborative approach. For this study, youth are broadly defined as from the age of 0-25, with different learning ecosystems with particular thematic foci likely having a specific target age cohort.

Given the strategic importance of national development objectives related to equity and inclusion in education, and economic resilience, we framed the research questions in the following way.

What are the essential elements of effective local learning ecosystems in Qatar that

1. increase access to quality learning and skill development opportunities for young people,
2. promote inclusive and equitable practices, and
3. create a sense of civic identity and social cohesion?

Through the study we looked at specific practices which advance these objectives (pedagogies, innovations, programs, strategies), as well as the systems architecture and structures needed to form purposeful connections among organizations, and to enable practices to become developed and embedded.

Research inquiry areas

The project was structured into research activities which engaged different stakeholders in various aspects of the inquiry process, examining the following core areas guided by the literature review.

1. Values and goals of equity, cohesion, inclusion and resilience as shared goals
2. Specific practices that advance these goals in education, including innovative pedagogies, teaching and learning practices through both formal and informal learning.
3. The nature and quality of collaboration and partnership between organisations in Qatar. How collaborations form, and the motivations and incentives that drive them; Plus identifying opportunities and strategies for stronger partnerships and deepening networks and relationships among providers.
4. Understanding local leadership and the structures, processes and conditions that enable and impede innovation and collaboration;
5. Examining how remote learning and the expansion of education technology during the Covid-19 pandemic has shifted the experience of learning and expectations around learning, and how these have driven the development of new practices

Through data collection we triangulated perspectives from the following core stakeholder groups to develop a rich and multi-layered breadth of insight and learning with the aim of grounding policy and practice according to the needs of young people growing up in Qatar today.

- **Learners:** In a collaboration between WISE and Virginia Commonwealth University Arts Qatar graphic design, we held workshops with learners on their experiences of learning, their views and visions for the future of education, including developing a range of artifacts to express their ideas and perspectives.
- **Educators** (principals and teachers) working in schools and informal learning settings in Qatar
- **Policy leaders and systems experts** in Qatar, including the Ministry of Education
- **Global leaders and experts** involved in developing and coordinating learning ecosystems, including through the establishment of a Research Advisory Board

The research was conducted in partnership with the Ministry of Education of Qatar who provided substantial support with data collection. See Appendix 2 for further information on the project structure, data collection activities, participants, and study limitations.



**FINDINGS: UNDERSTANDING VALUES,
INNOVATION AND COLLABORATION IN
EDUCATION IN QATAR**

CHAPTER FIVE

In partnership with the Ministry of Education, a survey of government and private schools was carried out to gather information about effective and innovative practices, projects and initiatives in education in Qatar that supports equity, inclusion and resilience. **Innovation** for the purpose of this study was described as “getting involved in new practices, pedagogies, methods and initiatives that are different to the usual way of doing things.” **Collaboration** was described as “working with other schools or learning institutions in a way that brings benefits for learners, for teachers, or for the school.”

- 109 schools responded to the survey
- This included 65 government schools and 44 private schools
- Survey respondents included a mix of elementary, middle and high schools

The survey sought to generate insight in six key areas of thematic interest. Five of these areas of interest represent important components of a learning ecosystem, as described in the literature review, while the sixth was developed to explore how schools have responded to Covid-19 to better understand the opportunities and challenges of recent rapid change. These areas were:

- The meaning of **equity and social cohesion** in an educational context and how it is expressed and promoted by schools.
- **Skills and values:** Identifying the future needs of young people growing up in Qatar, and what society and the economy need to cultivate in young people.
- **Innovative practices and pedagogical approaches:** What types of practices and innovations are being developed and implemented.
- **Student motivation:** How learners are being motivated to achieve in an education context and in their communities and in their future careers.

- **Collaboration and partnership working:** How schools collaborate, who they collaborate with, what benefits partnerships bring, and the barriers and obstacles to collaboration.
- **Learnings from Covid 19 and the remote learning experience:** How schools have responded to and adapted to shifts brought about by the pandemic.

The key themes emerging from this analysis are summarised below, mapped against the six areas of interest. This explores common themes and trends, but also points of divergence between government schools and private schools, as well as potential gaps in practice.

Equity and social cohesion

Key points

Schools understand equity and social cohesion as multi-dimensional concepts.

In terms of equity, there is a strong focus on inclusion and widening opportunity, but also a recognition that equity lifts everyone, not only the disadvantaged.

Schools associated social cohesion with tolerance, cross-community engagement and diversity, and developing students as active citizens. This has societal and economic benefits

A range of strategies are used to promote equity and social cohesion. This includes integrating them into school values, missions and policies, embedding them into curriculum and pedagogy, strengthening student councils and community committees, and utilising inter-school competitions.

Government schools and private schools generally understood these concepts in a similar way. However, there was a stronger emphasis by government schools on connecting them to wider notions of social justice and important national and religious values such as kinship.

How equity and social cohesion as concepts are understood

In general, schools understood equity and social cohesion, two separate but related concepts, in an integrated and multi-layered way. There was an emphasis on what they mean for individuals, but also for wider society and the communities in which people live.

“...the importance of equity extends to our society as a whole. In equitable communities, everyone has the opportunity to succeed regardless of their original circumstances.”

“Equity is linked to stronger social cohesion, meaning that individuals connect better and are more compassionate.”

“Equity can also strengthen students’ health and social-emotional development. Additionally, equitable communities are linked to better health and longer average lifespans. Surrounding communities benefit from the equity in schools as well.”

In terms of the individual perspective, there was a strong focus on inclusion and widening opportunity, ensuring that everyone has the right level of support to succeed.

“Equity means making sure every student has the support they need to be successful. Equity in education requires putting systems in place to ensure that every child has an equal chance for success.”

The distinction between equity and equality was recognised. There was therefore an emphasis on the importance of personalising education and support to suit individual circumstances.

Equity was also recognised as something that lifts everyone, not only those from disadvantaged backgrounds. Schools therefore clearly understood that providing additional support to disadvantaged students wasn't a zero-sum game, but something that 'lifts all boats'.



"Equity means creating policies that provide each student with what he/she needs, even if it is not strictly equal to what other students get."

"When schools provide their students with resources that fit individual circumstances, the entire classroom environment improves... schools with the smallest achievement gaps between demographics have the highest overall test scores. This means that when the most disadvantaged student scores improve, students from more privileged backgrounds improve, too."

Schools also took a wider societal lens. For social cohesion in particular, there was a strong emphasis on tolerance, cross-community engagement and celebrating diversity, and valuing individuals regardless of their culture, gender and race. Several schools stated that this is built explicitly into their school values and teaching. Some also saw these values as contributing to tangible benefits in terms of school performance and innovation, and more broadly economic growth.



"Our curriculum promotes social cohesion and inculcates respect for diversity."

"Our mission is to help our students to develop innovative solutions to the problems that face Qatar and the world. To do so, students must learn to collaborate with peers effectively. Thus, our Innovation Center designs challenges that require constructive, equitable, transactional and interculturally aware collaborations."

"It also leads to long-term economic growth. This means that promoting equity in schools can be one of the best and most effective social investments."

Related to this, there was a sense that social cohesion and equity can also help to develop students as active citizens in their local and global communities. The importance of religious values, in particular Islamic values, came out strongly in this respect. There was also a recognition that in order to cultivate this sense of citizenship, it was important for schools to improve access, engage more effectively with students and the wider community, and give them a meaningful voice to influence decisions.



"[Our] focus on diversity and inclusion enables each member of our community to connect to our school community. This is not just an invite: it is a clear message that everyone has access to a seat at the table."

"Outreaching to groups that are not participating in learning is necessary in order to achieve equity and more social inclusion."

Notably, responses from government schools suggested a stronger emphasis from some on the importance of justice to their understanding of equity: i.e. it wasn't just about ensuring that people are supported equally according to their needs, but also that this connects to wider notions of social justice (promoting the public interest of society). They also connected it to important national values, such as kinship. There was also a slightly stronger emphasis from some on the importance of a 'social partnership' with parents in helping to achieve this, and continuous communication between the school and parent.

Approaches and strategies to promoting equity and social cohesion

Schools that were surveyed identified a range of ways in which they are promoting equity and social cohesion. Several mentioned specific school policies to promote equity and cohesion, including:

- Eliminating grade repetition
- Avoiding early tracking and deferring selection

- Managing school choice to avoid segregation and inequities
- Deploying funding strategies that are response to student and school needs
- Ensuring continuous professional development (CPD) for teaching staff, including training teachers in differentiation
- Integrating equity into school values, missions, and ethos
- Development of specific plans for particular groups of students, and scheduling to ensure younger students get more campus time
- Behaviour policies and codes of conduct.

A number of schools also stated that equity and social cohesion were embedded in their curriculum, as well as pedagogies and teaching strategies. This included, for example, designing lessons based on student learning styles, grouping students by shared interest, and assessing student learning using formative assessment approaches.

“...we have now drawn a Global Citizenship Program to be part of our curriculum so that our students are exposed to global issues and reflect upon them. We are proud that this initiative is embedded in our school curriculum and is observed through planning, observations and displays around the school.”

“Our SIS-Learn Active Learning pedagogy based on inclusion, equity, and personalised instruction is trade marked this year. We give high priority to equity and social cohesion.”

“We differentiate the curriculum and our teaching strategies to ensure all students can access learning and offer support and extension for those who need it.”

Specific forms of training and community engagement were also mentioned as important to identifying and tackling biases that impact equity and social cohesion.

“Promoting social cohesion in our school includes citizenship training; promoting a shared sense of belonging; offering opportunities for ethnic and socio-economic mixing and offering opportunities to acquire skills and knowledge that can equip students to be engaged and active citizens.”

“We have trained our community to be able to recognise and address biases in all its forms.”

In terms of cultivating student and community voice and sense of citizenship, several schools pointed to the role of student councils as well as specific committees that bring together students, teachers, and the wider community.

“We have [an] active student council to promote students’ involvement. We have [a] communal welfare team to develop the school from all points of view.”

“We have whole school policies and procedures which are explained and agreed by staff, parents and students at the beginning of the school year with follow up workshops... throughout the year.”

Some schools also engaged in collaborative initiatives and campaigns with other schools to promote equity and social cohesion. They identified engaging in inter-school competitions as an example of activity that contributes to social cohesion. Examples such as Qatar National Day, International Day, and Quran recitation competitions were mentioned. One respondent specifically mentioned the promotion of the UN Sustainable Goals 2030 and the Qatar National Vision 2030 through teaching and learning programmes.

Skills and values

Key points

Schools' understand skills and values as serving two broad purposes: an instrumentalist purpose through measurable economic benefits, and a broad moral and civic purpose that supports social and cultural development.

Instrumental skills and values include 21st century skills and lifelong learning, which are seen as critical to helping young people prepare for a changing world and economy.

Moral character and inter-personal collaboration are seen as equally important, and for many schools are rooted in national, global, and religious traditions.

Government schools placed more emphasis on moral character, national identity, and active citizenship, as well as core social and religious values.

However, economically valuable 21st century non-cognitive skills were mentioned less frequently by government schools, which may imply a key gap that needs to be addressed.

Respondents were asked what type of skills (in addition to knowledge acquisition) are important for young people growing up today. The responses indicated that schools had a sophisticated and multi-layered understanding of skills and values that can be developed through education. These fell into two broad categories:

- Skills and values that serve an instrumental purpose by bringing specific and measurable material benefits to students, communities and the economy
- Skills and values that serve a broader moral and civic purpose that serves the social and cultural development of individuals and society.

Skills and values that serve an instrumental purpose

There was a strong emphasis from schools on 21st century skills and lifelong learning, considered vital for preparing learners to thrive in a fast-changing and globalised economy. This included skills such as: creativity, leadership, and problem-solving. Independence and self-sufficiency were also broadly recognised

as important, in addition to vocational and workplace-ready skills. Again, there was a strong sense here that these skills and values were vital in helping learners prepare for a changing world and economy. In this respect, some schools mentioned the importance of a 'growth mindset'.

"Our objective is holistic development of our students so that they thrive in the global world."

"We have to develop confident, independent learners who are willing to take a risk and are problem solvers."

"We are also ensuring their readiness to the ever changing and innovating world."

Specific learning profiles were also identified as helping to achieve this and to promote learning that "transcends subject disciplines", including the IB Learner Profile and Cambridge Learner Attributes. There was a sense that these types of skills also represented "higher-order skills".

“As educators, we almost stopped depending on the lower level skills, such as memorization and recall. We are trying to help students develop higher-order thinking skills such as applying, analyzing, evaluating.”

Skills and values that serve a moral and civic purpose

A number of schools emphasised the importance of moral character and inter-personal collaboration and engagement as key skills and values. Importantly, they saw these as serving a broader social, community and national purpose. They were also often rooted in national, global and religious traditions. They included respect, honesty, empathy, family values and social responsibility. This emphasis was also reflective of an interest in holistic and whole child development, which meant more than just the acquisition of skills.

“Our school aims at the holistic development of the students by inculcating values that enable them to excel and be proactive and positively contributing global citizens.”

“Our school has moved from a very skill-based, remedial approach to one which seeks to develop the whole child.”

“Our motto is ‘be ambitious’. We develop international-mindedness: respect for other cultures, traditions and societies.”

“Self-confidence, compassion, communication, contributing to global society, religion, cultural sensitivity...”

While there was similarities in perceptions among government and private schools, there were notable differences in emphasis.

In the majority of government school responses there was a very strong emphasis on the

importance of developing moral character, national identity and active citizenship, as well as core social and religious values and behaviour. This included:

- cooperation and trust
- respect and empathy
- moral values, and national and religious values (including honesty, love, modesty)
- citizenship and “brotherhood”
- life values

Twenty-first century or non-cognitive skills, however, were mentioned less frequently by government schools, although “creativity” and “innovation” were commonly identified. The survey responses implied that promotion of non-cognitive skills by government schools was less developed and wide-ranging than their private counterparts. This lack of emphasis on economically valuable skills may be a key gap.

Nevertheless, the stronger orientation of government schools toward building moral character and values in comparison to private schools is a strength in the sense that it creates opportunities for active citizenship and community-based learning and development.

Innovative practices and pedagogical approaches

Key points

Schools deployed a range of innovative pedagogical approaches that were seen as important to holistic development and outcomes-based learning.

These ranged from blended learning, inquiry-based learning, and mastery-based approaches, to practical, real-life application of learning as well as the integration of the Qatar National Vision and UN SDGs into the curriculum.

The potential of data and digital technologies to “disrupt” traditional, linear forms of learning was highlighted.

Schools also emphasised the importance of professional development and collaboration to improve the quality of teaching and pedagogical practices.

The most frequent examples cited of involvement in innovative initiatives were inter-school competitions, clubs, campaigns, and youth leadership initiatives. Some also highlighted internships, externships and involvement in learning labs as vital to applying learning in real-world contexts.

Respondents highlighted a lack of high-quality information about opportunities to participate in innovative initiatives, and the best way to pursue them for their school.

The responses suggest government schools were less likely to participate in innovative programmes; those schools cited fewer examples of innovative approaches to curriculum design.

This highlights the importance of providing more information, opportunities, and resources to help government schools invest in innovative pedagogies and participate in innovative programmes

Innovation through pedagogy

Respondents identified a range of innovative aspects of their schools’ curriculum or pedagogical practices, including learning strategies and methodologies such as:

- blended learning, which combines in-person and online instruction methods
- inquiry-based approaches as an alternative to direct instruction
- mastery approaches, including the Power of Maths, designed to “spark curiosity and excitement and help our students nurture confidence”
- self-guided learning, for example, drawing on the Finnish approach to learning for building 21st century skills and transversal competencies
- innovative practices in STE(A)M, including through partnerships with international universities such as the Massachusetts Institute of Technology, in the United States. The aim is not only to increase knowledge, but also to foster “inquiring minds, logical reasoning, and collaboration skills.”

- dynamic or rhizomatic curriculum, where learning is contextualised and evolves in social contexts, instead of adhering to traditional, hierarchical instructional teaching methods
- related to the above, the importance of the practical application of learning through activities such as co-scholastic clubs, student-led research institutions, project-based learning and 'Mantle of the Expert' methods
- integrated projects and cross-curricula and cross-disciplinary learning, blurring the hard boundaries between subjects and disciplines
- use of smaller classroom sizes and replicating a "university-like atmosphere."
- integration of the Qatari National Vision and UN Sustainable Development Goals into the curriculum.

These alternative strategies were part of a wider set of practices intended to promote learners' holistic development and to prioritise outcome-based learning. Some schools sought to achieve this through a "Buddy Mentors" system where higher achieving students mentor those who need additional assistance.

"Outcome-based education has been implemented which focuses on the holistic development of each child."

The use of data and digital technologies, including to disrupt traditional, linear forms of learning, were frequently mentioned. For example flipped classrooms; the use of digital tools to promote project-based learning in a remote context; gamification: bringing in an open curriculum and MOOCs (limitations of this, including assessment and feedback loops and certification were mentioned); open-source textbooks and smart learning management systems. One respondent mentioned that the quality and use of technology for this was "embarrassingly bad" in many cases, highlighting a gap in existing infrastructure.

Practices to improve the quality of the learning experience were also cited by several schools. This included professional development and collaboration to improve the quality of teaching and pedagogical practices, regular surveys to analyse needs and make improvements, and parental involvement in learning.

One respondent described their school adopting a "layers of innovation" approach that combined a range of the practices described above into an integrated model of learning. This learning model involves 1) assessing using a Mastery based approach, 2) coupling this with positive behaviour interventions and supports, 3) having an Innovation Center and makerspace which enables groups of teachers to use advanced technology and tools to allow students to develop real prototypes to test in real-world problems, 4) a curriculum approach called CRISP (Create, Research, Innovate, Synthesise and Produce) which underpins the overall model.

According to the respondent, this approach has a transformative impact on learning outcomes.

"[These] multiple innovations we have to have a multiplying effect on student achievement... [The] 'layers of innovation' have a cumulative effect and our students routinely gain on average 3 months to 1 year above annual progress."

Despite the range of innovative practice identified, it is also worth noting that some of the respondents stated that there was very little innovation, or that their school was not yet ready for innovative practice.

Involvement in innovative programmes or initiatives

The most frequent examples of innovative initiatives cited by respondents were their schools' participation in inter-school competitions, clubs and campaigns. These were seen as enhancing the curriculum and broadening student development and application of skills and values. A plethora of initiatives were mentioned, including

competitions conducted by the Ministry of Education, The Duke of Edinburgh's Award ("Innovator of the Year"), learning marathons, research competitions, UNICEF initiatives, "challenges" set by international universities, forums global collaboration, and student-led programmes and mentoring initiatives.

Some schools also emphasised the importance of building youth leadership and voice, as well as expanding learner opportunities and experiences through internships, externships and involvement in practical projects and learning "labs". This helped to develop skills and competencies, apply learning in real-world contexts and build a sense of agency.

"We have [a] Youth Leadership Programme [through which] we encourage students to do research, experiments and be part of projects."

"Our students have internships at partner universities, visit research labs and collaborate with various entities. These interactions do make a difference and especially in relation to our third layer of innovation where we attempt to make our projects «real» by engaging entities to provide us with their real challenges. This gives form, tempo, quality and meaning to our students' efforts and sense of agency."

Some schools also cited professional development and training as key routes to promote innovative practices.

As detailed above, several schools also mentioned the use of social media and digital platforms and technologies as key levers for innovative practice.

It is worth noting, however, that several schools also stated that they were not involved in any innovative programmes, some of which may be explained by restrictions due to Covid-19.

Schools' interest in getting involved in programmes they are not currently part of

There were a range of initiatives schools pointed to that they would like to participate in. These included:

- Eco-school and environmental projects, which several schools identified.
- programmes that deployed technologies and IT, including Virtual Reality, robotics and artificial intelligence, coding clubs, and gamification
- educational events and competitions, including those conducted by the Ministry of Education
- partnerships with government departments and NGOs
- cultural exchange programmes
- innovative initiatives for curricula development, such as the FIFA legacy group's Behaviour By Design project.

Several schools stated, however, that there were not any innovative programmes that they were aware of that they would like to get involved with. One respondent linked this to the lack of information about available opportunities. Conversely, another respondent argued that there were too many opportunities to engage and it was challenging to ascertain the value of involvement in initiatives or partnerships. To help with this, the school has set a criteria that helps determine how their interests and missions overlap.

"Very little to no information is ever passed onto our school and this is very frustrating. I have expressed this to the Ministry and asked for more schools to work together, however nothing has happened in 3 years."

"We are currently overwhelmed with [the] number of opportunities... To sort the value of our partnerships, we have developed a set of criteria that helps determine if our Missions overlap."

This points to two key needs: the first, ensure all schools have high-quality information available about opportunities they can participate in, and second, have a process to determine which opportunities are right for a particular school.

As noted previously, survey responses suggested government schools were less likely to participate in innovative programmes. A relatively high proportion of respondents stated that they did not currently participate in innovative initiatives, or that they were not aware of initiatives that they would like to get involved with in the future. Some explicitly stated that they had little awareness of what opportunities were available and would like to participate if there were time and opportunity.

This highlights a clear gap in current practice and potentially reveals inequalities in access to innovative opportunities, with private schools more likely to be aware of or engaged in such initiatives. It should also be noted that where government schools did cite examples of initiatives, common examples included national and government-led programmes and initiatives, as well as contracts with international providers.

These challenges also arose when schools were asked about aspects of their curriculum that were innovative or effective. Several government school respondents cited similar examples to their private school counterparts, including e-learning platforms, national competitions, professional development programmes and pedagogies that emphasised student agency and inquiry, and supported critical thinking and creativity. The depth and breadth of examples used, however, was limited compared to private schools. The latter provided more detailed examples and were more specific about pedagogical approaches, and also had a higher breadth of innovative initiatives that they engaged in or were aware of.

The evidence from the surveys therefore highlights the importance of providing more information, opportunities, resources and support to help government schools invest in innovative pedagogies and participate in innovative programmes and initiatives.

Learner motivation and agency

Key points

Schools deploy a diverse set of strategies for driving student motivation.

Pedagogical practices were frequently cited, including inquiry and activity-based learning, context-based learning and outcomes-based education.

Other key approaches included academic and career counselling, positive reinforcement (such as awards), building partnerships with colleges and universities, and extra-curricular activities, and youth leadership programmes. These were seen to build motivation, expand choice, and promote self-efficacy and passion for learning.

Schools seek to promote student voice and choice through student councils and committees, routine surveys, and Open Door policies. Some schools also integrate student voice into professional development. Pedagogical approaches such as project and inquiry-based learning were also seen as ways to build choice and agency.

Some schools nevertheless stated that the ability to deepen student choice is constrained by curricula and teaching delivery methods.

Government and private school responses were generally similar. There was, however, more frequent mention of student councils and “open door” approaches by government schools. Private schools appear to have a higher breadth of activities, including more support around career counselling and development.

How schools motivate learners

Respondents identified a diverse set of strategies and practices for driving student motivation.

Utilising specific pedagogical practices was commonly cited. This included:

- inquiry-based and student-centred approaches that build curiosity and self-efficacy
- using digital technologies to make learning more interesting
- holistic and outcomes-based education which focuses on the strengths of the child throughout the learning journey.

- activity based learning and practices that promote a “love and innate joy of learning”
- context based learning that empowers students to apply learning to real world contexts, transcending subject disciplines.

“We are constantly trying to push teachers in the direction of adopting constructivist teaching practices that center on creating a sense of agency in students.”

“There is a transformative, authentic, meaningful, engaging, fun, and personalised experience for all... we want to give everybody the opportunity to grow, be successful and be the best they can be, while continuing to develop a love and innate joy of learning.”

“We are driven by ‘big ideas’ rather than subject-specific content...All of our topics and examples inside the classrooms relate to ‘real world’ situations.”

There was also a sense that these approaches to building student motivation were rooted in evidence-based practices:

“It is comprised of a set of research, and evidence-based practices designed to create safe, joyful, and engaging classrooms and school communities for both students and teachers. Our classrooms are learning spaces where all students have a sense of belonging and feel significant.”

Respondents frequently cited academic and career counselling as key tools to build student motivation and help learners prepare the future. This involved a variety of activities and resources, including academic/career counsellors, learning sessions and workshops, and creating engagement opportunities with experts. Some schools also established partnerships with colleges and universities (national and international) to support this.

Schools identified a diverse range of extra-curricular activities, youth leadership programmes, clubs and competitions that they deployed to build student motivation, expand student choice, and promote self-efficacy and passion for learning.

“Students are encouraged to participate in various leadership programmes, cultural activities, sports and games and all co-curricular activities held in school and other external organizations.”

“Our extra curricular activities are tailored to what students want to do and are excited about. Our careers day and careers activities for our older students allows our students to get excited about their future and plan ahead. We find that this makes them more responsible and dedicated.”

“The combination of extra and co-curricular activities that focus on complimentary activities give students choices in pursuing learning activities that are better aligned to their passions.”

Positive reinforcement, including through awards, certificates and participation in competitions, was also frequently mentioned.

This focus on positive reinforcement was complemented with external collaboration and initiatives that invite role models such as experts, professionals and motivational speakers to engage with students through activities including symposiums, career talks and seminars. Other forms of external collaboration included:

- collaborative activities, such as real world learning, and offset visits with external partners to enhance the curriculum
- participation in scientific research and related research activities outside of the classroom
- visits to employers and universities, and collaborations with colleges and universities.
- sports, including inter-school competitions
- providing students with exposure to global organisations, initiatives and experiences.

Promoting student voice and choice

Respondents cited various ways in which they promote student voice and choice.

In terms of student voice, the most frequently cited approach or examples were student councils and committees, and student surveys, including to hear students’ views on teaching and learning. Some pointed to an “Open Door Policy” that allowed students to regularly express their views and provide feedback.

Some respondents also mentioned that strengthening student voice was integrated into professional development of teaching staff, and promoted through teaching and assessment strategies and methods.



"Teachers interview students as part of their ongoing CPD to take their ideas and views."

"We have trained teachers to co-create assessment rubrics with their students for projects to make sure that their voice is included in the design of the project as a way of building a sense of student agency and ownership for their learning."

On the latter point, several respondents indicated that both student choice and voice was promoted through the curriculum and pedagogical practices, such as project-based learning and inquiry-driven learning.



"We are working hard to give our students a voice and to provide more choice and agency in their learning. Our new IPC curriculum promotes this mindset."

"One of the areas where we have put emphasis on student voice/choice is in the introduction of some project-based learning in every term."

"This is a key element in all of our classroom lesson plans and is supported by our Innovation Center principles. These choices can be small (example: essay questions may often have... choices) to larger choices such as their course of studies and their choice of final research project."

"Both our primary and secondary school curriculum is student-led, inquiry driven and the lessons are planned with open questions in mind."

Schools pointed to a number of strategies for promoting choice, including project choice and self-grading, personalised learning plans, course choice, and co-creation of assessment and learning.

Some schools, however, stated that while student choice is promoted it is relatively constrained by curricula and teaching delivery models.



"Curriculum constraints taken into account, students are free to discuss and influence delivery models within reason and are treated individually."

Overall, the breadth of activities cited by private schools was higher than government schools, including more support around career counselling and development, as well as a range of specific strategies to promote student-centred and context-based learning.

Collaboration and partnership working

Survey participants were asked how they collaborate with other schools and informal learning organisations in the community, and what benefits this brings. They also shared reflections on the key barriers to effective collaboration and the types of partnerships that are necessary to build to promote equity and inclusion in education.

Key points

Inter-school competitions, teacher exchanges, and professional development initiatives were the most commonly cited examples of collaboration between schools.

Collaboration occurred most frequently between sister schools (twinning) or schools within a defined school network.

Schools described the key benefits of collaboration as helping to build the confidence, resilience, and skills of learners. They also saw it as a way of promoting social cohesion and helping learners to embrace diversity and global awareness.

Several respondents nevertheless stated that they did not participate in collaborative initiatives. Some others found it very challenging to set up and maintain collaborative initiatives.

Schools identified a range of ways in which they collaborated with community and business organisations, including museums, galleries, colleges and universities, and employers. This included through internships, competitions, research activities, and youth leadership initiatives.

Benefits cited included the value of applying learning in different environments, leading to the development of new cognitive and non-cognitive skills and temperament. This would also broaden learners' horizons and help them prepare for the future.

There are nevertheless barriers that constrain collaboration. School level barriers to collaboration include time, language differences, different curricula among schools, teaching practices, and administrative costs. System level barriers include poor communication of opportunities, lack of a common platform, bureaucratic rules, funding, competition between schools, and lack of clear incentives to collaborate.

Potential solutions to these challenges include government's setting appropriate regulations and policy, and additional funding and capacity to support collaboration. This would include twinning government and private schools, a centralised platform for knowledge sharing, supporting staff to develop collaborative skills through professional development, and forging stronger links with external business and community organisations.

Collaboration with other schools and school networks

The majority of respondents stated that they collaborate with other schools in one or more ways. It is notable that the most frequent collaboration occurs between sister schools (twinning) or others within a clearly defined school network. In addition to school networks within Qatar, many, especially private schools, participated in international school networks. Although this level of collaboration is a strength, the contained nature of it (largely occurring between similar schools) also suggests a need to consider how different types of schools might work together, for example, by pairing high-performing schools with those that need support to improve.

The collaboration between schools took a range of forms. One of the most frequent collaborative activities was participation in inter-school competitions, including in arts, sports, science, and literary events.

“We collaborate with other schools for inter-school competitions. It gives great exposure to the students.”

Another key form of collaboration cited was teacher exchanges and professional development initiatives, which included training programmes, workshops, peer observation, and structured opportunities for sharing practices.

“We took [the] initiative to conduct a professional development program [...] This helped to bring educators together and provide them an opportunity to share their ideas, learn and create a conducive learning atmosphere for the 21st century learners.”

Sharing best practice was identified as a key collaborative activity: supporting both teachers and learners to exchange good practice and learn from each other, including with respect to pedagogical practices. Some schools also noted that this sort of collaboration also helped to embed the QNV 2030 and the UN Sustainable Development Goals into their schools.

Respondents identified a range of benefits to their collaboration with other schools. A key benefit commonly stated was the value of collaboration in building the confidence, resilience and skills of learners.

“Interschool competitions... [give] a platform to our students to showcase their talents, develop [their] confidence, [and improve their] social and interpersonal skills.”

“We believe that this aids children in developing the ability to handle pressure [and build] resilience, persistence, and grit.”

Some respondents saw collaborative activities as a way of promoting social cohesion and helping learners to embrace diversity and global awareness.

“It expands the worldview of the student and her/his ability to accept/respect diversity of thought and opinion.”

Several respondents also explicitly stated that collaborative initiatives helped teachers to develop innovative and effective practices to improve learning.

“We get to see how other schools do things and use some of these ideas and practices to improve our teaching and learning environment.”

“It is extremely beneficial for sharing ideas and learning how to start new programs. I often contact other principals for advice or ideas.”

Despite the range of examples of collaborative activity that were cited, several respondents nevertheless indicated that they did not participate in collaborative initiatives or networks with other schools. Some also mentioned that they found it very challenging to get collaborative initiatives going, with non-school partners being more flexible.

“Impressively, it has been a challenge to work with other schools. We have tried! Partner universities and research labs as well as some businesses are much more flexible.”

Collaboration with informal learning, business and community organisations

Respondents identified various types of external, non-school partners that they engaged and collaborated with. The table below provides an outline of this, including key themes and activity.

Types of partners	Examples of alignment around theme, religion, nationality	Types of activities
<ul style="list-style-type: none"> ■ museums, art galleries, libraries (Qatar Museums, Qatar National Library, etc.) ■ literacy programmes, arts and cultural programmes, eg. Qatar debates ■ partnerships to support SEND Best Buddies ■ business/employers, eg. Qatar Airways, Exxon, Sidra ■ research institutes, eg. Qatar University Scientific Club ■ international/global schemes, eg. Model UN, Eco Schools Farm to School projects ■ colleges and universities, regarding opportunities and broadening horizons 	<ul style="list-style-type: none"> ■ STEM, coding, robotics ■ sports and health ■ cultural and interfaith ■ arts ■ sustainability and global awareness ■ country relevant initiatives if serving a particular population 	<ul style="list-style-type: none"> ■ field trips ■ events and competitions ■ research activities and learning labs ■ internship programmes and externship programmes ■ youth leadership programmes

Some respondents also stated the importance of drawing widely on community resources to support and disseminate learning. A couple of respondents highlighted the value of investing in activity coordinators to support this.

“We utilize all the Qatar community resources in the dissemination of education.”

“Our activity coordinator has this role. Her task is to get in touch with such organisations and take part in research, events or projects/competitions.”

Taking advantage of different learning environments and supporting skills acquisition and ‘temperament’ were recognised as key benefits of collaboration with external partners.

This applied to both teachers and learners.

“Learning can happen in many different learning environments and we can all learn from each other’s.”

“Participation in such events helps students to develop... temperament.”

Some respondents mentioned that another key benefit for learners was that participation in such activities helped to broaden their horizons and prepare them for the future.

“Collaboration... offers fun but informative experiences that [have] the possibility to help students to realise what they want to pursue in the future.”

Nevertheless, some respondents stated that they did not collaborate with external organisations. Another respondent highlighted that the purpose and value of collaboration has to be clear in order for it to be seen as worthwhile by external partners.

“Most places are happy to get involved, however, we have to ensure that there is a real purpose to what they are doing and it’s not just time-wasting.”

Obstacles and barriers to collaboration

Despite the various collaborative initiatives that they were generally involved in, respondents identified important barriers that limit or constrain the potential of collaborative activity. We note two key types of barriers:

- school-level barriers, where school practices or circumstances limit collaboration
- system level barriers, where wider systems, structures and processes make collaboration difficult.

These barriers are outlined in the table below.

School level	System level
time (the richest collaboration occurs at classroom level and it is difficult to find the time to organise collaborative ventures in an already busy schedule)	poor communications, lack of correct and accessible information, lack of centralised information about what is available, late publication of information
language and cultural differences, communication	lack of a common information platform (eg. website/digital platform)
nature of curriculum and scheduling, variations in school calendars and processes	administrative and bureaucratic rules, inflexible policies (lack of autonomy)
difficulty reaching other schools, not enough capacity to do this at a school to school level	overall bureaucracy and approvals requirements
	competition between schools
	lack of quality from partners
	funding
	lack of parental interest
	lack of clear incentives/motivations and benefits to collaborate

Some respondents pointed to potential solutions for tackling these barriers. One proposal was for the Ministry of Education to set appropriate regulations.

“Setting regulations from the MOE for certain schools to have a twinning program with accurate criteria and specified deadlines and outputs.”

Another respondent pointed to the value of adding capacity to support collaborative activity.

“Needs a regional coordinator to bring Principles together, and teachers.”

Better and more efficient communication was also recognised as important. This related not only to better use of technologies and platforms, but also improved communication between schools by overcoming competitive dynamics.

“More communication. Schools being open and supportive rather than competitive. More information given to schools.”

Improving collaboration and partnership working

Building on the above, respondents pointed to a range of potential solutions and opportunities for improving collaboration and partnership working in facilitating inclusive and equitable learning for all students.

A common proposal was for centralised knowledge sharing to make information about opportunities as accessible as possible, underpinned by better communication systems. Some respondents suggested the development of a digital platform to support various organisations and institutions to communicate and collaborate effectively.

“Private schools could create a bank of learning resources and allow all students to access them to promote knowledge.”

Several respondents also highlighted the value of more support from the Ministry of Education and more generally clearer government leadership and policy direction.

“More support from the MOE [is needed].”
“A national inclusion plan is warranted, which would be supported by the government and ministries.”

As part of this, reducing the administrative burden for schools was also mentioned as a way for creating more space for collaboration.

“Less administrative tasks imposed. Review the way deadlines are imposed.”

Some respondents pointed to the importance of creating the right structures for collaboration, underpinned by the right incentives and capacity. This was vital in ensuring that collaborative initiatives were meaningful and sustainable.

“Our work with Universities is seen as a one-off due to our STEM focus. We have had to create the structure to collaborate. It would be beneficial to create a team of educators to establish the practice, procedures, safeguarding practices [...]”

In terms of this capacity for collaboration, the importance of qualified staff and professional development to supporting partnerships for equity and inclusion.

“We would most appreciate it if the schools are provided with qualified... educators, occupational therapists and counsellors to help facilitate and promote inclusive education in a systematic and organized manner.”

Forging significantly stronger links with external organisations was identified as a key priority.

This included, for example, increased integration between schools and businesses, as well as with universities and research institutions.

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"Businesses need to become more integrated with the schools in order to offer work experience opportunities."

"Strong university links worldwide and business links for work experience placements are vital."

However, respondents stressed that collaboration was also vital with a range of organisations and institutions in the community, from social services and training organisations through to local charities and the healthcare sector.

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"There should be more collaboration among educational bodies and social entities. Exchanging knowledge and expertise can foster the learning process."

Some respondents pointed to the potential for developing the curriculum in partnership with other organisations, and using cultural institutions and initiatives as a means for stimulating collaborative activity.

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"The curriculum planning should be in consultation with various organisations."

"The Ministry of Culture and the Ministry of Health [have a] major role in strengthening the curriculum."

On the question of what types of partnerships need to be cultivated to promote equity and inclusion, both government and public schools mentioned the central importance of sharing best practice, greater policy direction from government, more involvement with cultural institutions and forging stronger links between schools and businesses and academic institutions. It is worth noting that government schools in particular emphasised the value of practice sharing between government and private schools, highlighting a key gap but also an opportunity for policy intervention.

Distinctions between government and private schools

Whilst this study didn't set out to provide an appraisal of the different educational systems in Qatar, some important distinctions emerged through the survey responses from government and private schools. These indicate how resources and assets are distributed and leveraged across the educational ecosystem, and how access to opportunities can be enabled or inhibited by freedoms and autonomy.

Government Schools	Private Schools
expression of values around equity and cohesion: national, religious, moral, family	expression of values around equity and cohesion: 'internationalist', global citizen, character
student motivation: extracurricular activities, research with higher education, STEM, school councils	student motivation: careers guidance, speakers, debating and public speaking, trips and visits
less discussion of breadth of pedagogical approaches and variety of teaching strategies in comparison to private schools	wide variety of teaching and learning practices highlighted, including student centered and personalised approaches, and technological innovations
less breadth of partnerships with non- school, community and informal learning organisations	adeptly leverage informal learning resources and international partnerships and networks and resources

In Qatar, there is an abundant diversity of learning assets and resources, particularly informal learning resources, that could be better leveraged across both systems. There is a desire for more collaboration and partnership working, and a particularly strong desire for more private school-government school collaboration. There is an inequality of access to informal learning resources between government and private schools, with the private sector better able to leverage such support.

Participants highlighted a contrast in the cultures of informal learning between government and private schools. Generally, across government schools extracurricular activities are less prevalent and less well understood culturally. Moreover, the promotion

of non-cognitive but valuable skills, and what is often called social-emotional learning, appears less developed and less widespread among government schools.

Some challenges and gaps can be addressed through policy and practice adjustments at a national level. But the surveys make clear that other challenges are more complex and require multi-stakeholder action and collaboration to address them. The development of learning ecosystems could potentially have most impact and add most value in growing innovative practices, strengthening learning and practice sharing, and removing barriers to collaboration and partnership working.

Covid-19: A catalyst for longer term changes?

Gains at a system level that could be harnessed:

- improved learning content, quality online content and new resources
- development of new technical infrastructure and communications systems to support learning
- increased variety of opportunities for teacher professional development
- new opportunities for parental engagement
- improved teacher capabilities around innovation and change
- improved collaboration opportunities with partners
- increase in some school freedoms

This research was conducted during an unprecedented period during the Covid-19 pandemic, which had major implications for how education and learning was delivered. We wanted to examine how educational institutions in Qatar adapted to Covid-19, whether and how they leveraged new technologies and practices for teaching and learning, and for collaboration, as well as the challenges and difficulties that have resulted. We were interested to know whether widespread disruption in the conventional way of doing things had changed behaviours and practices in a significant way, and whether they would result in longer term changes

Through the surveys and interviews we asked participants a series of questions about the effect that the Covid-19 pandemic had had on education in Qatar.

Notable changes that may have a lasting effect

Overall, the move to remote learning created more space for flexibility and innovation around curriculum content and timetabling, and the creation of new teaching and assessment methods. There has been increased adoption of flexible practices for student learning, leading to greater personalisation and inclusion in some cases. There have been more opportunities for teachers to be adaptive, to connect in school learning to out of school interests, and bring informal learning into the student experience. Educators have been creative, setting up campaigns, projects and challenges for students whilst at home.

The generation and adoption of a wider range of teaching resources and materials

has occurred beyond just textbooks. Teachers, educators and parents have been able to access more information, and more varied expertise, to support teaching and learning. Teachers and students' technical competencies and digital fluency has increased, and new methods for teacher training have been developed. Many schools have also found that they have been able to build closer relationships with parents through technology, and engage parents more deeply in their child's learning. These methodologies are likely to continue into the future.

At a system level, there has been an impetus to reduce bureaucracy in government due to the rapid response needed in shifting to remote learning, and schools have been given new freedoms and autonomy. Their lived experience of rapid change during the pandemic appears to have increased risk tolerance; there were early signs of mindset and behaviour changes with educators more open to change, and increasing confidence in deploying new practices potentially to be harnessed in the future. The pandemic has also spurred dialogue between various partners, built new alliances across sectors, increased civic engagement, and sharpened the focus on collective challenges. As seen in many countries, the experience of the pandemic has mobilised new resources and collaboration in unforeseen ways.

It's also important to note that remote learning in Qatar has been a very challenging experience for educators. For those learners least advantaged, it may have exacerbated existing inequalities, and it has been a particularly difficult experience for young children, and those with specific educational and learning needs.

CHAPTER SIX

SPOTLIGHT CASE STUDIES: GROWING
INNOVATION AND COLLABORATION IN
EDUCATION IN QATAR

Through interviews with selected local stakeholders and experts, we looked to better understand the nature of leadership, collaboration and partnership working in Qatar. Semi structured interviews were conducted with a range of stakeholders representing different perspectives across the learning ecosystem to gain insights into deeper or more expansive forms of collaboration that exist in Qatar. Interviewees included practitioners working in organisations that directly deliver formal and informal learning, such as Qatar Museums, Qatar National Library, HBKU, Injaz Qatar, and policy experts who influence government policy, conduct research, provide strategic advice and policy recommendations.

Interviews focussed on three main areas:

- Innovative projects, programs and practices, including how they bring organisations together to design and deliver projects and initiatives
- Enabling conditions for their work, and the incentives needed for collaboration
- Opportunities for developing deeper collaborations, and the main system level challenges that need to be overcome in strengthening the learning ecosystem.

Interviewees were selected based on the following criteria:

- Whether their organisation or initiative is playing a significant role in learning innovation in Qatar
- Whether the organisation or initiative leader was already collaborating with multiple organisations and individuals across the education and skills system to develop and deliver programs
- Ensuring a diverse representation of types of providers of learning, including whether they are contributing to aspects of national, economic and social development.

The following series of spotlight case studies present a snapshot of key organisations that are developing collaborative ecosystems across institutional boundaries in their respective domains, and from which important learning can be drawn.

Case studies are themed to illustrate the importance of the theme as a stimulus and motivator for youth learning, and in orientating collaborations. Effective learning ecosystems often have a strong thematic focus, and the below represent bridging priorities or agendas that create defined opportunities for collaboration.

Qatar Museums

Spotlight Theme: Arts, culture and inclusion

Initiative type: Informal learning



"Qatar Museums perceives itself as an institution with a strong educational mission and has been committed to developing learning opportunities for all audiences, but especially for those with special needs."

Dr. Jelena Trkulja

Organisation Overview

Qatar Museums (QM) brings together six national museums, several cultural spaces and public art in Qatar to expand creative horizons, to help Qatar originate art, culture and heritage experiences from within, and to develop, promote and sustain the cultural sector at the highest standards. Through exhibitions and educational outreach, it nurtures an informal learning culture and offerings, and promotes and expands learning about art and culture in schools. Through its work with schools, Qatar Museums focuses significantly on bridging formal and informal learning through structured activities and collaborations, development of learning resources, as well as on teacher training and professional development.

Key innovations (projects, programmes, practices)

- Promoting Qatari participation in the arts through programs and exhibitions related to topics of local and regional interest
- Developing and establishing an art curriculum for government schools, and developing specific educational programs related to exhibitions
- Nurturing budding artists through workshops and master classes, advancing artists in their formation through the Artist in Residence program at Fire Station
- Delivering teacher training alongside the development of exhibitions, to better prepare teachers to take students to visit museums. Teacher training takes multiple forms including through the Teachers Council (larger network primarily for communications), the Executive Teachers Council (smaller group of more highly engaged teachers), and special training programs in collaboration with external PDT providers. Lesson plans and a variety of other learning tools to be used by teachers in classroom settings are being created for the works of public art, and for the key museum objects. Information and training is offered in English and Arabic.
- Setting up an art teachers cooperative to enable the sharing of practice and expertise; teachers from schools with strong arts programs were initially invited to join, and 'ambassadors' have been identified to play a core role in system learning
- Enabling the participation of children and young people with special educational needs in arts and culture, for example, by setting times of the day when museums are open for specific audiences, and adjusting the experience to take into account accessibility needs related to noise, physical space, and visual impairments, Offering different modalities for accessing programmes and exhibitions such as audio guides, and other toolkits created for specific audiences, including working with specialist centres and organizations on the design of learning programs

- Museum opening hours have also been adjusted to enable labourers and migrant workers to visit after work and on Fridays, to support broad societal participation and inclusion in arts and culture.

Key Insights for developing a learning ecosystem

High quality arts and cultural experiences are an enabler of social inclusion; the ability to express ideas in visual and interactive mediums can create connections and understanding. Engaging, relevant exhibitions plus effective teacher training has made a marked difference for access, inclusion and equity for learners. Bringing together teachers in small, more frequent gatherings with specific purposes, has proved an effective way of engaging teachers, especially in program design and training for exhibitions.

Access to the exhibitions is organized around the school day schedule so that maximum attendance can be achieved within a given space. QM educators have developed learning that can be easily integrated into the existing school curricula by working with those most personally invested: art teachers and teachers of other subjects that benefit from hands-on and object-based learning,.

Despite strong enthusiasm for collaboration obstacles remain, including a lack of specialised art teachers in government schools, a resistance to change, time pressures imposed on teachers and absence of cultural visits as part of the school curriculum. There are persistent, general difficulties in planning and advance scheduling, eg. as in aligning the school program and calendar with exhibitions a year or more in advance as required. In government schools, challenges stem from minimal teacher professional autonomy and decision making in teaching practice, in a context of constantly changing curriculum.

At a system level, practices of teacher recognition do not incentivise collaboration; pervasive lack of professional autonomy accompanies a lack of confidence around curriculum design and partnership. To address the latter, standards to measure and judge quality need to be mandated and applied. Agreement and alignment on curriculum content needs to be generated through conversations among the key institutions and experts in each of the subject matter areas.

HBKU Makers Majlis

Spotlight Theme: faith, values, and the sustainable development goals

Initiative type: informal learning and higher education



"Maker Majlis is an experiential educational space which enables students to tackle global problems, diagnose local challenges and design collective solutions. It is built on the premise that students are makers, doers, builders and designers as opposed to passive recipients of knowledge."

Dr. Evren Tok

Organisation Overview

HBKU is a homegrown research and graduate studies university that acts as a catalyst for positive transformation in Qatar and the region while having a global impact. HBKU is committed to actively contributing to achieving the Qatar National Vision 2030 by building and cultivating human capacity. HBKU has developed projects and initiatives to localise the sustainable development goals in Qatar, and use faith-based activities to promote skills development and social and cultural connection. The Maker Majlis, a platform operating under the College of Islamic Studies (CIS) at HBKU, was established to enable these goals, and for youth to engage in activities supporting the United Nations Sustainable Development Goals. The first Maker Majlis was held in 2019 with a range of workshops, educational programs, and events bringing a faith-based perspective to the SDGs, as outlined below.

Key innovations (projects, programmes, practices)

- Qatar Red Crescent (QRC) simulated a life-like refugee zone. Students explored the zone and learned about various difficulties refugees face in finding places within a refugee camp. Various tents showcased registration processes and health checks,
- as well as other health-related issues with simultaneous guidance from QRC experts.
- SDG Comics & Islamic Science Fiction. This initiative attempted to make the SDGs accessible to citizens around the world through comics, to help educate people about global goals and empower them to create positive and lasting change in their own communities and worldwide.
- Green Makerspace focused on green economy, business and entrepreneurship in Qatar. This two-day event aimed to encourage a more informed understanding of ethics and practices of green economies. A Make-a-thon was held with multidisciplinary groups working together to solve issues relating to waste management, sustainable tourism, environmental awareness and water security.
- Design Post-COVID Normal (DPCN). Moving to virtual engagement, a program was created for youth to get together and discuss how they will contribute to the SDGs for the new normal post pandemic
- Design Post-COVID Humanity: Taaruf, Taawun, Tarahum (DPCH-3T). DPCH-3T is a bilingual program, with students from Qatar and internationally, age 18-25. It presents youth with an educational journey to design a fairer, more inclusive, and sustainable post-COVID humanity, focussing on the

philosophical, spiritual and interdisciplinary dimensions of this new humanity. The journey engages with three key virtues: taaruf, taawun and tarahum (acquaintance, cooperation, and mercifulness).

Key Insights for the development of a learning ecosystem

Faith-based principles and cross cultural values can be a stimulus for the design of inclusive learning experiences which bring people together from diverse backgrounds. Values based conversations and cultural exchange can build cohesion and understanding across lines of difference, and it's important to identify and integrate actionable values that enable students to connect with their own culture and identity. Contextualising values into playful and creative experiences motivates engagement in learning, and using popular culture tools such as comics to influence mindsets and behaviours.

Different stakeholders and providers of learning can achieve greater alignment, synchronicity and collaboration when there are uniting themes. Managing multistakeholder projects through collaborative grants can be challenging, including regarding bureaucracy, and knowledge sharing can be difficult given language barriers. In this regard, bilingualism (Arabic and English) is important for inclusive learning.

INJAZ Qatar

Spotlight Theme: entrepreneurship, life skills, employability
Initiative type: informal learning



“Education takes many shapes and forms, and there are many skills just as important as academic knowledge. Schools are not the only stakeholder that is responsible to do so; it takes a village”

Emad Al Khaja

Organisation Overview

INJAZ Qatar is a member of Junior Achievement Worldwide (JA), the world's largest organization dedicated to educating students about workforce readiness, entrepreneurship and financial literacy through experiential, hands-on programs. INJAZ Qatar partners with the local business community, corporate volunteers and educators to inspire and prepare young people to succeed in the global economy. They offer programs in elementary, middle and high schools, as well as youth centers, colleges and universities across Qatar, with a focus on building life skills and employability skills, bringing real world learning into school settings, developing the notion of entrepreneurship, and connecting business and enterprise with education. INJAZ Qatar has become a key organisation in contributing to broader cultural change in education, building alignment between employers and educators, and bridging the gap between the education sector and the workplace for learners.

Key innovations (projects, programmes, practices)

- There are three main pillars of work: work readiness and employability, financial literacy, and entrepreneurship. Programs are delivered in schools in grade 10 and 11 as extracurricular activities during the school
- day, and designed around a 21st century skills curriculum and entrepreneurial project based activities led by professional volunteers from business and industry. All sectors of the economy are represented, and INJAZ is currently working with 100 schools across Qatar including international schools.
- INJAZ brokers and offers offsite experiences in the workplace, and job shadow days, for school age learners
- INJAZ developed and planned the rollout of a bespoke entrepreneurship and digital literacy program in collaboration with Google and work readiness curriculum in elementary schools. The pilot program was launched in the academic year 2021-22 and is available to all elementary schools in Qatar
- In higher education, INJAZ have developed a job challenge competition working with universities and a sponsoring company. Through the competition a brief for student teams is set, and through working on the brief students develop knowledge, skills and experience related to the industry of the sponsoring company. The winning team receives incubation support and an internship with the sponsoring company.
- Developing bespoke programs with employers and institutions, for example a project related to understanding the financial system developed in partnership with the Qatar Stock Exchange

- Developing bespoke programs with employers and institutions, for example a project related to understanding the financial system developed in partnership with the Qatar Stock Exchange
- Since being founded in 2007, INJAZ Qatar has reached over 100,000 students across most schools and universities, with 90 corporate partners and over 10,000 corporate volunteers

Key Insights for developing a learning ecosystem

Building bridges between the education sector, informal learning providers and employers starts with 1-1 relationships, and getting buy-in and support from the principal, with teacher buy-in also very important. Mindsets around entrepreneurial education are beginning to change as educators become more exposed to what is happening in the region and worldwide, and the Ministry of Education has played a supportive role in communicating the programs to schools and encouraging them to participate. Success stories of aspiring entrepreneurs have enticed and encouraged young people to get involved in INJAZ activities. Profiling and celebrating local entrepreneurs has been important in this storytelling. There is a need to change mindsets through education, and this needs to start in elementary school.

Appreciation events have also been a big motivator for schools teachers and learners to get involved by showcasing, celebrating and

rewarding their achievements. Developing INJAZ ambassadors through financial prizes as well as experiences and certificates and awards support this celebration. Rewards including financial prizes, national recognition and incubation support is a strong motivator for students.

For companies, partnering with the education sector through these types of activities supports the development of a talent pipeline in specific sectors such as business, HR, finance, operations, IT, engineering. One of the biggest challenges faced (particularly when considering future growth) is recruiting volunteers from the corporate sector, given the ambition to expand the horizon of students on all career routes and options available. There is a need to increase volunteer retention rates also. A national campaign is needed around the concept of volunteering in Qatar, to promote a civic sense of volunteerism and giving back.

More generally, the issue of competition between providers and taking credit could serve to undermine the ecosystem effort. A learning ecosystem should be orientated around building cultures of trust and cooperation in a competitive environment.

IbTECHar

Spotlight Theme: STEM, digital technologies, making
Initiative type: informal learning



At Ibtechar there are two fundamental principles that guide our compass in developing any educational experience: Putting knowledge into context and Interconnecting knowledge. So when students leave the experience they can see relevance to their life and how multiple subjects/disciplines are connected, which drives motivation to continue learning and develop new skills.

Nayef Al Ibrahim

Organisation Overview

IbTECHar is a private sector company that provides a range of Ed-Tech services to community organisations, including schools, which contribute to spreading a culture of making and innovation, and the development of the technical and business skills needed to serve the knowledge economy. The company has spearheaded efforts to integrate digital solutions into learning environments working closely with the Ministry of Education, and is leading the way on developing STEM labs and makerspaces in schools, and raising the status and expectations around informal learning. Through a range of innovative projects, IbTECHar is demonstrating how informal learning can be a space for innovation in developing new pedagogical practices which can be incorporated into the school curriculum.

Key innovations (projects, programmes, practices)

- Sanea Bus, a mobile digital fabrication lab and makerspace, introduces school students the fundamentals of making and design thinking. The bus serves as a community learning space, and travels to different communities and sites with the aim of changing parental perceptions of STEM and making, as well as improving student skills and academic outcomes
- Sanea Camp is a seasonal program designed to introduce young people aged 5 to 18 years to new technologies through hands-on workshops. The camp allows participants to explore scientific concepts by engaging in experiential learning activities, and applying these concepts in the real world through field trips to institutions and factories
- Establishing STEM Labs in government schools as flexible classroom stations which don't need a fixed site, with a set of resources and curriculum activities aligned to cross curricular learning objectives. STEM Lab activities are led by facilitators who tend to be graduates who have a background in science, computer science, or engineering. Facilitators are involved in the generation of content as well as direct delivery, bringing subject experts into the school setting
- Running a Maker Competition for high school students, including partnerships with higher education, Qatar Scientific Club, and the Qatar Business Incubation Centre. This provides follow on support for the winners to help prototype their ideas. The learning methods and pedagogy underpinning the competition is aligned to design, technology and challenge based learning in which students are encouraged to solve real world problems.
- The Shell NXplorers program works in partnership with Shell to increase student

interest in STEM and in pursuing STEM-related careers, equipping students with the skills and STEM habits of mind needed for future jobs

Key Insights for developing a learning ecosystem

Teacher buy in has been essential for success so far, and making it easy for teachers to participate by taking away barriers and ensuring alignment to the curriculum. IbTECHar's programmes have helped fill a need for professional development opportunities for teachers in Qatar, and overcome potential barriers to engagement with STEM education based on the existing technical skills of teachers. Teacher advocates have been important for growth and expansion, sharing their experiences and stories with other teachers, for example via alumni Whatsapp groups. Finding talent and equipping talent (facilitators) has also been a key part of the strategy, and creating new roles in schools which motivates youth learning in various ways.

In terms of innovations, the team has focussed on building credibility from the outset through small scale pilots and community based learning, breadth of programmes, spaces, competitions, etc. Making technology freely available to schools reduced another barrier to engagement: the mindsets of parents. The program aims to reach more parents and use the Covid19- pandemic as an opportunity given their involvement in home learning. For students, working with ibTECHar facilitators has also required a mindset change, as often they are used to being relatively passive in the classroom. Through maker education,

however, they are expected to have more agency and take more ownership. These experiences have changed learners' perceptions about what is possible and what they can do.

Working in partnership with the Ministry of Education has been important for growth and development, and more long termism in vision and planning is needed to support entrepreneurial start ups develop and scale new learning programs. This includes with regards to funding, where short term investments can hinder development and growth. The ability to work in an agile way has also been important for growth and learning. In general private sector CSR is an area of potential, sustaining projects, marketing and scaling them needs ongoing investment and support. The focus on STEM skills helps meet national strategic objectives, where existing educators and institutions don't have the capacity and expertise. Considering where and how the private sector is best placed to meet these gaps is key.

Qatar Foundation Higher Education - MultiverCity

Spotlight Theme: higher education and skills

Initiative type: formal learning



مؤسسة قطر
Qatar Foundation

لإطلاق قدرات الإنسان
Unlocking human potential



"The pandemic has been challenging for higher education but it also has served as a unique opportunity to innovate and reimagine its scope and level of ambition. At Qatar Foundation we have been able to design an innovative ecosystem fully embraced for demonstrating that it is possible to more effectively align higher education to societal needs and to the demands and opportunities of the future of work.

Francisco Marmolejo

Organisation Overview

Qatar Foundation's higher education ecosystem is a unique model of seven leading international universities and one homegrown university located in Education City, the largest multi-institutional campus of its kind. The overall vision of QF is to unlock the potential of learners through integrated approaches across QF-based institutions fostering collaboration and innovation, and referred to as MultiverCity. By bringing together world-class education institutions at all stages of education, from kindergarten to doctoral level, along with research entities, incubators, and other organizations, QF's MultiverCity approach is aimed at enabling a highly integrated and flexible ecosystem in which a personalized and relevant learning experience is possible.

Key innovations (projects, programmes, practices)

The higher education strategy at QF is translated into a series of flagship initiatives which pioneer new ways of blending academic and cognitive skills, fostering interdisciplinary learning, and developing skills based on future labour market and societal needs. Whilst also cultivating interest of students into academic careers,

and widening the pipeline to ensure a greater number of learners can access higher education in Qatar.

- NextGen Ed is the Gulf region's first general education program bringing learners from across Education City together, including high-school learners; it accepts credits of all the EC universities
- Qatar Human Capital Manara is Qatar's first evidence-based collaborative source of information for understanding the future of work and guiding skills based training. It is a labour market observatory curating and gathering information on key trends in the market and economy, and connecting with employers to ensure transfer of knowledge and information.
- The Universal Skills Passport is a holistic transcript reflecting a comprehensive view of a learners' profile, skills, and experiences. It aims to establish a framework of standardized assessment tools toward creating curriculum alignment and common understanding around skills for schools and higher education. The aim is also to move toward portable credentials and exploration of microcredentialling for skillsets.

- Collaborative Intelligence is a shared data platform to integrate information and enable improvements, efficiency, and assessment of impact.
- Path4U is an innovative, interdisciplinary and flexible education system enabling learners to experience the best of Education City
- Faculty Excellence Development Program is targeted to identify potential faculty among current and past students and provide mentoring and oversight

Key Insights for developing a learning ecosystem

A range of strategies and methodologies are needed for creating ecosystem alignment among institutions; the implementation of new innovations requires the right capacities and tools. There is an acute need to improve upskilling and ways to facilitate learner progress through higher education. This could be achieved through innovative learning design, the development of standards around portable recognition of skills (certification) to allow people to fully participate in the economy, and the need to establish a national qualifications framework. The development of a universal skills passport will help create alignment among institutions, as well as a common set of standards.

There is a need to create the conditions and incentives for institutions to collaborate more fully, and move beyond their internally focused work. Ensuring the right incentives are in place is critical to this. Financial incentives, certain privileges, organisational KPIs detailed through the contracting and accreditation processes are some examples, as well as accrediting academic programmes based on alignment of

curriculum with the labour market. Research frameworks are another mechanism for supporting collaboration, such as grant calls for collaborative approaches with other institutions. Moving from an individualised to collaborative paradigm requires capacity plus tools (eg. standardized assessment), and effective feedback loops to enable more effective planning for academic programmes

Two core challenges to be addressed are 1) how the educational ecosystem of QF can be expanded and more effectively connected to societal needs in the country, and 2) how to achieve higher levels of coordination and collaboration, as well as foster disruptive innovation among participating institutions while recognizing and supporting the autonomous status and unique culture of each.

Qatar Shell

Spotlight theme: workforce development, sector skills and transferable skills for lifelong learning

Initiative type: work-based learning



“At Qatar Shell we believe it’s vital to play an active role in the education system, partnering with schools and higher education to support workforce development and skills for the future.”

Saleh Al-Marri

Organisation Overview

Qatar Shell is one of the largest international investors in Qatar, and works with Qatar Petroleum across all areas of the oil and gas sector: liquefied natural gas (LNG), gas to liquids (GTL), shipping, exploration and petrochemicals. Shell aims to become the employer of choice for Qataris looking for a career in the energy sector, and has been following an innovative work based training programme with Qatar Petroleum to route high school graduates into industry to perform technical roles, and support Qatari participation in the labor market and develop a skilled workforce. Across the oil and gas industry Qatar Petroleum plays a key coordinating role in supporting workforce competence needs, forecasting future skills needs, facilitating knowledge, practice sharing and alignment between industry and higher education.

Key innovations (projects, programmes, practices)

- The Technical Certification Program (TCP) in partnership with Qatar Petroleum is a vocational training program for high school graduates, and a key route for recruiting Qataris into the industry. The TCP is a blended model, with Qatar Petroleum delivering academic learning through a partnership with The College of the North Atlantic, and work based learning and skill development taking place in industry. The TCP program provides a mix of technical knowledge and skills development. On the job training roadmaps provide learners six months to a year to upskill their knowledge to a basic level; this is followed by further education scholarship culminating with a diploma and degree program as part of career development within Shell. Learners are recruited from 22 schools, particularly the vocational school in Qatar which has a STEM focus.
- Pre TCP. Shell collaborates with Qatar Petroleum and other oil and gas companies to frame a foundation programme for learners prior to starting their vocational learning. The Pre TCP is intended to bring high school graduates' overall skills competencies to the required levels. It has a stronger focus on behaviors and mindsets than technical skills, cultivating initiative, motivation, openness to learn, grit and determination, in addition to key functional knowledge in math, English, basic science and digital skills.
- Qatar Shell works with Qatar Petroleum on sector wide workforce development and training. QP forecasts energy and infrastructure sector needs and brings together companies to discuss workforce development and alignment to higher education curriculum. Together they work on developing and calibrating

standards across the sector, advising higher education institutions which skills should be enhanced in academic programs, and tailoring programmes to learners. Bespoke assessment of learners is provided by assessors.

- Qatar Shell sponsors education initiatives which develop in demand skills in the industry as well as employability skills

Key Insights for developing a learning ecosystem

The flexibility of the Technical Certification Program is proving to be effective for training and workforce development, working closely with higher education. The QP assessor plays a key role supporting the learner's work based and academic experience. Business needs to work more closely with the education sector to increase the diversity of routes into employment and provide a greater breadth of talent to draw upon from the pipeline.

QP plays a coordinating or brokering role at a sector wide level, engaging with energy sectors and higher education in adapting skill needs to programming, and steering the needs relevant for the energy sector. It would be helpful to formally establish a coordinator or broker to focus on motivations and incentives (as well as behaviors and mindsets), among public and private sector stakeholders. Effective brokering could address some of the main barriers to collaboration among sectors, such as lack of knowledge and understanding about what is relevant and needed in different contexts.

It's important to understand context and scale in establishing a learning ecosystem involving industry with other sectors, including the character of the area (urban or rural, geography). Increased intelligence around anticipating skills needs, the kinds of skills transitions needed, and sector skills alignment would be helpful in developing learning ecosystems. And supporting the education sector to focus on more technical or specialist pathways with improvement on learner proficiency in English, math, basic science and digital skills.

Renad Academy

Spotlight theme: special educational needs - educating students, families and the community

Initiative type: formal education

أكاديمية ريناد
Renad Academy
عضو في مؤسسة قطر
Member of Qatar Foundation



"Renad is about providing opportunities that increase success in life for every student"

Sherri Miller

Organisation Overview

Renad Academy was established as a centre for excellence for young people with autism, adapting best global practices and resources for the context, and growing local capacity and expertise in teaching. In Qatar, some 5,000 young people are categorized as having special educational needs and disabilities, or SEND. In recent years provision for such learners has strengthened, with improved diagnostics and an increase in services. Society advocacy organisations supporting educators, learners and parents have grown. Renad Academy's main site in Education City has capacity for 450 students. Renad is establishing satellite sites in mainstream schools around the country. Currently no special educational needs pathway exists for teacher training in Qatar; Renad Academy works with the Education Development Institute to train teachers, and recruits internationally and across the region.

Key innovations (projects, programmes, practices)

- The first satellite site was established at Qatar Academy Sidra, providing a classroom space for learners with special educational needs within a mainstream school setting. Students access both mainstream, and personalized and specialised provision through the day. This integrated approach includes having a dedicated expert in the school who supports learners and

the development of the knowledge and expertise of teachers. .

- Friendship club is a program developed in collaboration with Qatar Academy Sidra in which fifth grade students are trained to understand autism and interact socially with Renad students. Special outings are planned each month for the students to socially engage and have fun together. This both increases Renad students' opportunity to play with mainstream students, and enhances the learning and awareness of the QA Sidra students about people with autism.
- Renad supports efforts to improve the accessibility of the greater community for young people with specific learning needs, such as helping businesses provide access to their learning spaces or field trip locations, working with informal educators and providing bespoke training. Renad works closely with the National Autism Society to provide training to the informal learning sector, including community providers.
- Individual training is available for parents to join their children and observe classroom strategies in action, and learn how they can bring these into their home environment.
- The EarlyBird Programme allows six parents to join a group, oriented around a group discussion and modelling approach, so that parents can build relationships with other parents while learning about their own child. This includes Arabic and mother only groups where appropriate.

- Renad provides training in SEND for Ministry of Education staff, and supports international schools through heads of schools meetings.
- Renad takes a leading role in national campaigns, including autism awareness campaigns working with non profits and other partners, to reduce stigma associated with autism.

Key insights for developing a learning ecosystem

Flexible learning spaces and designs are important for facilitating inclusive learning. Utilizing existing infrastructure can be more cost effective and for scaling practices. Satellite sites are a particularly innovative methodology for growing capacity and expertise in various communities, and making the most of existing resources. Online learning and professional development during Covid-19 has enabled greater connection between practitioners and access to expertise, with video training information and content now accessible from organisations around the world that wasn't previously possible. Grounding practice in rigorous research has been key in developing approaches through which children with autism can find success in academic learning and/or daily living skills.

Online learning sessions have been helpful for parental training and learning at home, with more flexibility so parents can choose when to access sessions. This experience has reinforced the role of parents in a child's learning and

development, and the importance of sharing expertise and knowledge across sectors and communities. Qatar needs civic and social infrastructure to raise community awareness. Building a learning ecosystem could play a key role in this, and help support effective methods for families to understand their children and help them find success.

More broadly at a system level, there are a number of conditions which enable Renad Academy to be innovative as an organization. Similar to other new schools, these include the support of QF, and having the freedom and mandate to experiment. Having a voice and national platform on key issues, and making sure that autism is highlighted and integrated into programming across organisations including community learning has allowed Renad to forge a pathway for improved services for people with autism.

Generation Amazing

Spotlight theme: youth leadership and the inclusive potential of sports

Initiative type: informal learning



generation
amazing



“Where social cohesion and social inclusion meet, that’s the space that Generation Amazing works in. Our vision is to inspire a generation committed to social change through the power of sport.”

Nasser Al Khor

Organisation Overview

Generation Amazing was established in 2010 with the aim of using the power and appeal of football to inspire positive social change in Qatar and globally. Generation Amazing takes a ‘sport for development’ approach to address social issues, teaching principles like gender equality and inclusivity, and life skills like communication, organisation, teamwork and leadership, through sport. The approach follows the UN’s Sustainable Development Goals (SDGs), and core pillars of QNV 2030. The aim is to mobilise a large scale youth movement empowered to make change, promoting social inclusivity, making sure everyone feels safe, accepted and that they belong.

Key innovations (projects, programmes, practices)

- GA Community Clubs, which function as multipurpose ‘hubs’ that address issues around social inclusion and cohesion.
- Exploring gender equality through the design of football activities and games, linked to the SDGs, and teaching the SDGs through games and play. Participation in Generation Amazing activities is 60 percent female, and Generation Amazing started the first girls league in Qatar in 2015.
- They have created a football for development curriculum which can be integrated into schools, and a coaching program for PE teachers to enable them to deliver it. GA currently works with QF Community Development to train a series of master coaches who can train other trainers (PE teachers).
- Working toward formal Generation Amazing certification for coaches, with the ambition to set up a professional development centre in Qatar for training PE teachers
- Offering community coaching training delivered online so that anyone interested in football for development can become a community coach globally.
- Community Engagement program tamreen (drilling) sponsored by Shell, working with the Ministry of Education and Football Association to train young people in schools in promoting the values of the World Cup.
- GA Youth Advocates, a year-long, holistic interactive youth advocacy leadership and capacity building programme for young people who become ambassadors for the World Cup. Youth advocates who have participated in GA training can access internships with the Supreme Committee and FIFA, and attend exclusive festivals and events

- GA Youth Festival is an annual event designed to celebrate 'Football 4 Good', with an emphasis on social development via youth participation and promoting core values (ex. gender equality and social inclusion).
- Generation Amazing has reached some 40,000 students in Qatar through the schools program, and 1000 PE teachers in Qatar have been trained as community coaches.

In Qatar, disadvantage among young people often manifests in ways unlike other countries; it may not be necessarily related to economic disadvantage. Youth leadership driven by sport encourages self expression, can bridge cultural divides and broaden horizons for youth.

Key Insights for developing a learning ecosystem

Sports and particularly football can be a powerful unifier, a universal language which inspires passion, connection and learning through play and games, which can be a strong motivator of learning and personal development.

Social media live chats have been particularly effective for reaching, engaging and motivating young people to participate by connecting them with football stars who can engage directly with youth and their interests. The World Cup has provided a space and a mandate for youth learning, leadership, and advocacy, with the importance of legacy and the socially transformative potential of sport prioritised and embedded from the beginning.

CHAPTER SEVEN

Bringing together insight from the stakeholder interviews with the sentiments expressed by school leaders through the surveys, a number of common threads can be seen across the core areas of research. This chapter summarises these findings.

Values and goals of equity, cohesion, inclusion and resilience

Education practitioners in Qatar expressed these concepts through a variety of lenses relating to religious, national and humanitarian and global values, as well as what is often referred to as 21st century skills. Aspects of the Qatar National Vision, and the UN Sustainable Development Goals, were common frames for interpreting and orientating the expression of these concepts; orienting partnerships and activities around values can help build intercultural understandings and social cohesion, as well as trust.

These concepts and values are being promoted through a range of teaching and learning practices and strategies, in both formal and informal education. These relate to how culture is built within learning settings, how curriculum or programmes are structured, and utilising innovative pedagogical methods to facilitate inclusion. Values are being promoted through a range of extracurricular activities often involving partnerships between schools, and with other external organisations. In addition, school leaders expressed equity through the application of specific school policies related to equity and inclusion, eg. behaviour policy.

The importance of personal relationship building was highlighted, for example via teacher training and cultural exchanges, through developing strong relationships among teachers and students, and with parents. Across all types of learning providers, there is an opportunity and necessity to build greater commitment towards shared goals, for example developing a stronger common language and inter-cultural understandings around

the notions of equity, inclusion, cohesion and resilience, which can support partnership working and the strengthening of purposeful collaborations. Similarly when it comes to skills development and social emotional learning, there is an opportunity to build greater understanding (and practice) particularly in government schools.

Innovative practices, pedagogies, and teaching and learning strategies

Across the educational ecosystem there is a wide diversity of innovative practices which promote equity, inclusion, cohesion and resilience. This includes diversity in instructional practices and methods, such as:

- student voice and choice within curriculum
- personalisation and whole child approaches
- blended learning, inquiry based, active, experiential, practical learning, cross-curricula activities
- mentoring, eg. buddy mentors and careers guidance
- use of digital technologies to support learning and personalise instruction

Innovative practices appear to be concentrated within a small number of schools and learning providers or networks currently, and there is a need for a focussed effort to expand and develop these out across the wider system. Model schools have been established to grow innovative practice, knowledge and capacity; new types of learning spaces are being created to reach more marginalised learners such as satellite sites, labs and hubs. These include organisations co-utilizing different physical spaces, as well as creating new types of learning spaces in or connected to schools, eg. mobile bus, STEM labs, etc.

There is a wide breadth of informal learning opportunities on offer, including extracurricular activities offered and delivered by the private and community sector, often supported by

collaborations (with other schools and external partners). There are a number of common thematic areas of focus for innovative practices and collaborations, for example citizenship and the arts, STEM/STEAM, science research, entrepreneurship, sustainability. The arts and inter-cultural activities were highlighted as particularly important in helping to bridge cultural divides and build social cohesion. As discussed, there is a noticeable differential between government and private schools, including regarding breadth of instructional practices, and in access to informal learning opportunities and resources. There is therefore a need to improve government school access, and ability to develop partnerships, with the informal learning sector.

When it comes to higher education and workforce readiness, Qatar has made a strong effort to align higher education to growth areas of national importance such as STEM, and there are new strategies and practices in development to ensure the relevant skills are generated for the future of the economy. These involve the exploration of skills passports, recognition of prior learning through digital certification to enable better participation of the migrant workforce in the labour market, and portable credentials among institutions.

One of the main barriers to innovation in teaching and learning in Qatar is the limited professional development opportunities available for teachers. Existing opportunities are unequally distributed and accessed. There is a need to better support teacher development, and develop capabilities, skills and professional confidence. Bilingualism, and offering opportunities (and training) in both Arabic and English came through as important for building trust, understanding and inclusivity.

Collaboration and Partnership Working

The research surfaced numerous opportunities for partnership and collaboration across the education ecosystem. As discussed, thematic areas often provide spaces of mutual interest around which collaboration arise. Types of collaboration include:

- collaborative activities, such as real world learning, and offsite visits with external partners to enhance the curriculum, and field trips
- participation in scientific research, and related research activities outside the classroom
- visits to employers and universities, and collaboration with colleges and universities
- sports, including interschool competitions
- bringing in motivational speakers and role models
- global exposure to organisations, initiatives, experiences
- extracurricular clubs or activities with partners
- internships, eg. with industry
- cultural exchange
- competitions, national and interschool
- teacher exchanges, and professional training and development opportunities, including with expert organisation
- ideas and teaching practices exchange to support curriculum development, eg via twinning with another school, visits within groups of schools
- pedagogical networks, eg. IB, sports and cultural programmes

Collaborations are typically small scale, and concentrated within school partnerships or networks that have particular commonalities such as around curriculum or nationality. Collaborative activities were seen as an important way of promoting social cohesion and helping learners to embrace diversity and global awareness. Different types of collaboration emerge for different purposes, with an overall appetite for more collaboration, but the benefits must be clear.

Little collaboration was evident at a systemic level, through national or municipality level networks. Getting a collaboration up and running can be challenging particularly with government schools, constrained by various reasons including administrative. This points to the various types of barriers to collaboration at the school and system level which need to be addressed as outlined in chapter 4. More capacity for partnership working is needed,

with the necessary incentives and structures in place at a systemic level to support them. Collaboration across organisations can be difficult and requires structures, purpose and agreed expectations.

There is a lack of knowledge across the system about opportunities for partnership and collaboration. This in part explains the inequality of access between government and private schools to those opportunities available. Significantly improved information, knowledge sharing and communications is needed. Opportunities also appear more concentrated in urban geographic localities; more effective outreach to remote communities is needed, for example via satellites or the co-utilization of spaces.

Campaigns and events can be helpful strategies for promoting and incentivizing collaboration. It is very important to make involvement in collaborative activity easy for teachers, for example through providing resources and training closely aligned to the curriculum and their areas of expertise. It was suggested that it's important to grow teacher confidence in trying new and innovative practices which could be supported through developing clear standards for quality and expectations for partnerships. Teacher confidence and capability could be complemented and enhanced by creating new roles in schools, such as bringing professionals into the classroom to support learning, and support teachers.

Leadership, coordination, enabling conditions

Related to this, empowering local leadership in cultivating trust and buy-in between educators working in different settings is key. Spending time developing 1-1 personal relationships across organisations was evidently important for developing deep and enduring collaboration, with trusting relationships a key cornerstone of effective collaboration. Mobilising new types of leadership was also mentioned by a number of interviewees, for example developing advocates, champions and ambassadors for new programs, particularly alumni who had participated or been personally invested in

some way. This could be students, parents, teachers, and other community leaders. Parents have a particularly important role to play, considering the role of peers in trust building. Leadership that develops cultures of trust and cooperation came through as an essential aspect of ecosystem development, often with specific leadership practices and behaviours attached.

Qatar has a nascent, growing civil society, with new grassroots organisations forming and an expanding awareness of advocacy and awareness raising activities in building culture and intercultural understanding. Developing the concept of volunteering in Qatar is currently relatively new, as well as raising awareness of conditions such as autism, historically a taboo topic. Creating media platforms, storytelling, role modeling, and appreciation events were examples of strategies for enabling and strengthening civil society and cultivating that wider ecology of support for education.

It was also notable how few NGOs and civil society organisations appear to be operating across the learning ecosystem. Those that do exist have limited reach and longevity. It's likely that the structures and conditions that promote CSO's are embryonic, and without the necessary governance and funding models to grow and sustain them. As noted in Qatar's *Fourth National Human Development Report*, the current socio-economic and cultural environment constrains CSOs, and there is a need to increase their number and broaden their scope of engagement. Many grassroots initiatives, for example, rely on specific government entities or on specific private donors, which makes their mandate often less broad. More research needs to be done to capture what role NGOs currently play, the breadth of their work in education, and how this could be expanded and better supported.

The research highlighted a number of important enabling conditions for innovation, collaboration and partnership working in Qatar. Having a strong political vision and political backing was seen as a major enabler, plus the role of the Ministry of Education in actively supporting innovative initiatives. It was suggested that greater long termism in vision setting and planning is needed (at a


political and policy level), to enable the effective implementation of new initiatives, for practices to become embedded, and for learning to be generated around the effectiveness of new practices.

Having certain freedoms and flexibilities at a school level, for example around timetabling, was essential for responsiveness and adaptability to change, as well as sufficient resources. Having professional autonomy and an explicit mandate (e.g. permission to innovate) was a similar, major enabler of innovation. Educational leadership needs to be facilitated and nurtured so that school leaders, teachers and practitioners have the professional confidence and capability to exercise autonomy. Establishing effective coaching models in education, between educators and leaders, and the development of communities of practice, were suggested as areas for further exploration.

As previously highlighted, more support and capacity for partnership working (and innovation) is needed at a system level, and more effective coordination. A broker of relationships and partnerships, and/or a coordinating entity across sectors such as an intermediary (as highlighted in the literature review), was seen as important for this. There are currently no systemic efforts to codify and integrate innovative practices, an area where the development of stronger learning ecosystems (with intermediary coordination) could add significant value. The lack of knowledge sharing at a system level is compounded by poor quality data, for example labour market information. There is poor implementation and execution of policies, with constant change, and a transience of knowledge and people. The grassroots experience of change has been historically poor, which has led to risk aversion and resistance to change.

Another significant barrier to collaboration and partnership working currently is a lack of positive incentives, and existing incentives that directly promote competition. There is therefore an imperative to consider those

structural mechanisms and conditions that promote collaboration and competition, for example key performance indicators (KPIs), the allocation of resources, eg. through grants, contractual arrangements, and what is visibly celebrated and rewarded at a national level. For purposeful and deeper collaborations, the incentive structures need to change, including what is recognised, celebrated, rewarded and valued. Improved data generation linked to clear standards through which quality and impact can be evidenced and judged are important.



**RECOMMENDATIONS: STRENGTHENING
AND GROWING LEARNING ECOSYSTEMS
IN QATAR WHICH ADVANCE EQUITY**

CHAPTER EIGHT

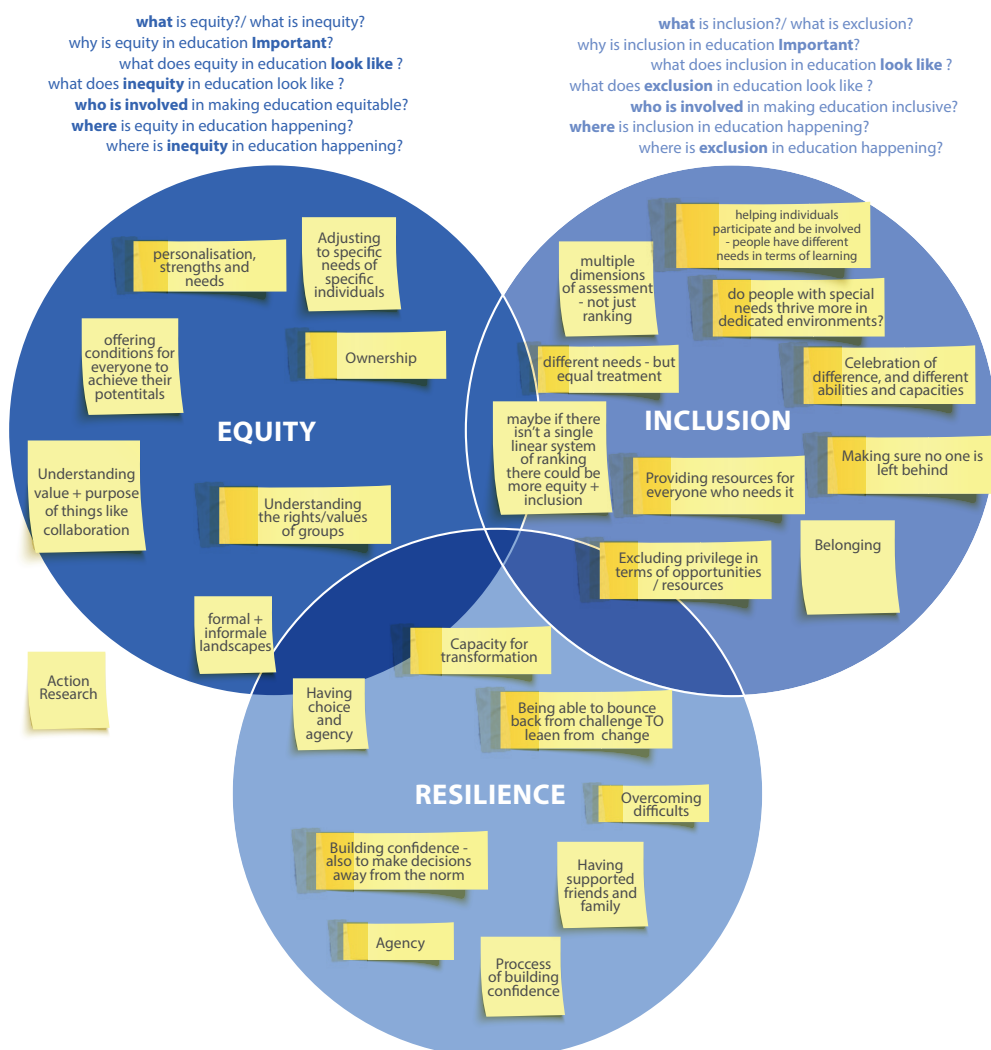
The following recommendations frame actions that could be taken by organisations, and at a multi sectoral level, to support the growth of learning ecosystems toward equitable and more inclusive learning. These changes could be considered part of a long term, ten-year vision and commitment to a learning ecosystems approach to innovation, collaboration and system coordination for collective improvement.

Recommendation 1: Carry out in depth mapping of the existing learning ecosystem and learning assets across Qatar, as part of developing a comprehensive knowledge bank of learning and skills opportunities on offer.

More in depth mapping of the existing learning ecosystem and learning assets should be done as part of developing a comprehensive knowledge bank of learning and skills opportunities available. These could be captured and presented in a visualize, digital format.

WISE organized a workshop with students from VCUArts to explore how they defined and experienced these definitions. Involving different actors, in particular learners, in the development of a common vision is a good step to create alignment around those goals (see below)

Equity, inclusion, resilience: What do these mean to youth growing up in Qatar?



Recommendation 2:

Create greater alignment to shared goals, values and priorities for youth learning among various providers of learning. Include the core values of equitable and inclusive learning.

This recommendation could be achieved through the creation of more spaces and platforms for national conversation, shared learning, and knowledge and practice exchange between institutions and stakeholders. For example regular meetings and events to enable exchange and the building of relationships, and importantly considering Arabic and English languages for all trainings, meetings and events. Cohesion and inclusion could be strengthened across school systems through shared or unifying activities with common underpinning values, and supporting faith based and thematic activities which promote cross cultural values and build trust for collaboration. Tools and frameworks could be developed to support this, particularly to cultivate a shared language between providers, for example via a universal skills framework, or learner graduate profiles.

“

“There is a need for a system-wide conversation around equity and what it means in our context.” --workshop participant

Recommendation 3:

Explore further the use of inclusive co-design practices to support organisations and stakeholders to develop shared and co-owned visions and goals, around which collaboration can be developed and deepened.

Recommendation 4:

Invest continually in, and support the development of inclusive and equitable practices, in both formal and informal education, with a focus on connecting and amplifying the vast array of practice existing across the system.

Within formal education, this could be achieved through continued pedagogical innovation, and the development of practices that support learner agency, motivation, holistic learning (knowledge, skills, values) more uniformly across the system. Plus improving learning from existing innovative model schools and sharing this at a system level, for example related to personalization, student-centered approaches, and family engagement, and considering the future role of more specialised schools (science and technology, military, business) as centres of excellence nationally.

Greater support should be provided to government schools to access external expertise and build a culture of informal learning through embedding activities into their curricula. The provision of information, opportunities and resources should also be reviewed to help government schools invest and participate in innovative programmes and initiatives. Teacher capacity for innovation could be enhanced through improved professional development opportunities, investing in programmes such as those offered by Teach for Qatar, and the Education Development Institute.

Increasing the range of events and activities (supported by external partners) which bring together young people from government and private schools could be considered to improve inclusion and cohesion, as well as increasing private sector support for schools, for example bringing professionals into the classroom, and encouraging and incentivising business to offer real world learning opportunities. Strategies and activities to strengthen parental engagement could also be pursued, capitalising on gains made during the Covid-19 pandemic, and the use of communications technologies. Related, harnessing at a system level the generation and spread of new, quality learning content, new partnerships, and hybrid learning methods and practices developed in response to Covid-19.

With regards to informal and community based learning, innovation in informal learning and extracurricular provision could be actively supported as part of a national strategy. This includes improving the provision of diversity of experiences in various physical settings and localities through sports centres. The informal learning sector should be encouraged to improve access through satellite programs,

mobile sites/spaces, flexi labs, and improving access outside of urban areas or areas where learning institutions are concentrated as a priority. Existing public spaces could be better utilized for learning, as well the sharing of spaces within existing infrastructure and the built environment by different organisations for specific activities.

Business could take a more proactive role in the education system for example through giving regular and structured input and guidance on key skills needed for career readiness, through promoting volunteering amongst employees, offering offsite visits, internships and work experience opportunities to students. Informal learning providers, charities and foundations could also provide volunteering and internship opportunities for students of all ages to develop their skills, and to help build the culture of volunteering and service learning. Further research should be undertaken into the role and breadth of NGO activity in education, with recommendations on how best to expand and support the growth of civil society organisations, as advocated in the Qatar National Development Plan.

Recommendation 5:

Strengthen the network infrastructure for collaboration and practice sharing, particularly among government and private schools, including the role of partnership brokers.

This recommendation could be pursued through more structured and formalised support from the Ministry of Education for the sharing of knowledge and best practice between schools, for example via twinning government and private schools for projects. A forum for principals from government and private schools could meet regularly, and an annual summit for school heads could be organised, as well as increasing interschool competitions and opportunities for collaboration on thematic topics. As mentioned above, creating more spaces for discussion and professional dialogue on educational topics, and the development of new forms of professional learning. Formats could include: seminars,

roundtables, regular panels with education leaders, learning circles on specific topics.

Reducing regulation should be considered to increase autonomy for schools to partner, alongside increasing capacity for coordination within the Ministry of Education to bring principals and school leaders together. A system wide approach to codifying practices and integrating and mainstreaming them should also be pursued.

Recommendation 6:

Invest in the interpersonal skills and capacities needed for collaboration and partnership working.

This could be pursued through support for network development and bringing in new roles - e.g. network coordinators and activity coordinator/partnership broker roles at school or network level. This could be a new role or part of an existing role, and would increase capacity for collaboration and partnership development. Developing clear standards and criteria for innovative programs and partnership working, with clear expectations, would help build teachers professional confidence and capabilities. Business could also play a role in helping to meet educational needs by bringing specific expertise and introducing new skills into schools and youth learning - and improving the culture of volunteering with private sector volunteers who can support educators.

Wider teacher professional learning and development should also be a focus, and increasing competence with innovative practices and collaboration skills. This could include via teacher exchanges and externships, as well as developing effective professional coaching and communities of practice models, and new qualification routes. Investment in systems leadership in education should also be expanded, and in particular programs which cultivate mindsets and behaviours where teachers and school leaders see themselves as working on behalf of the system.

Teach for Qatar for example could have an expanded role in growing the culture and skills for educational leadership. WISE's Empowering Leaders of Learning school leadership development program utilizes a coaching model to support school leaders and leadership teams to increase their skills and competencies as 'leaders of learning'. With increased focus and investment, there is a necessity for enhanced and expanded leadership practice sharing between the public and private sectors

Recommendation 7:

Develop strategies, practices and tools to increase connections among schools, informal learning providers, higher education, businesses and industry.

This could be pursued through a focus on brokering and the establishment of an intermediary entity to build connection and engagement across sectors. Plus an increased national advocacy and encouragement of collective responsibility in education and youth learning, and more support from and for informal learning providers and business to partner with schools (as mentioned above). Consideration of the most appropriate scale for coordination and brokering will be important - for example city, municipality or national level. New methodologies, practices and initiatives such as skills passports, portable credits and credentials, industry led competitions, research frameworks and impact evaluation could be explored and launched to deepen collaboration and alignment between schools, higher education and industry.

Unlocking the currently underutilized CSR potential of the private sector should be a priority. For example, considering businesses' role in providing funding, resources and sponsorship for schools - learning lessons and exploring practices of companies seen as leading in this domain such as Qatar Shell. And encouraging business to sponsor and promote informal learning institutions and providers in delivering programs to schools (which go beyond the traditional set of responsibilities a school has to its stakeholders) supporting the community. Those informal learning providers that are working with schools on tailored programmes could share best practice through new forums, and there should be an increased

focus on the quality (and evaluation) of opportunities to understand and demonstrate value to schools and the wider education system

Recommendation 8:

Improve data generation, knowledge and information sharing, and communications across the system.

This could be achieved through improved communications systems and processes from the Ministry of Education, including the provision of timely information on opportunities, resources and support for schools. As discussed, further research and better documentation of available opportunities should be undertaken, particularly informal learning programs and extracurricular activities. The visibility of these opportunities, and awareness raising, should be improved, for example via one centralised platform accessible to all, and national marketing campaigns. Improved data generation and collection at a system level is also needed to inform policy making and planning - the Government should collect and share more data about schools and students so that other actors can identify opportunities and develop programs to address gaps. The type and depth of data collected should also be expanded.

Recommendation 9:

Invest in advocacy, media and storytelling platforms as culture change tools

Qatar should continue to invest in and support media and storytelling platforms related to education, and campaigns which inspire a culture of learning, led by national leaders. With specific consideration of what is visibly celebrated at a national level in building culture, and through events and celebrations which confer recognition and status. The establishment of national Innovation Awards based on collaborative efforts, led by the Ministry of Education, could be explored, with a focus on equitable and inclusive practices, and celebrating government schools-private schools

partnerships to advance national goals. Plus the continuation of campaigns and activities related to volunteering and service learning in Qatar, building on the World Cup mobilisation efforts.

Recommendation 10:

Review systems level incentives and structures that enable or hinder innovation and collaboration.

Administrative tasks, processes, and regulation by the Ministry of Education which can impede collaborative efforts should be reviewed.

. Policies to support collaboration should be considered, including how more autonomy could be given to schools to establish partnerships, and opportunities for greater curriculum and timetable flexibility which is essential. Setting a common timetable slot amongst clusters of schools for innovative programmes could be considered.

With regards to incentive structures, a review of what is recognised, celebrated and rewarded in education, including financially incentivised, should be undertaken. This could include considering the development of metrics of success for funding, cross institutional KPIs to promote collaboration, changes to contractual obligations and accreditation systems, and developing new funding models based on shared outcomes. For example, match funding models for specific activities could be explored, with a percentage provided by national government and a percentage provided by local partners including business. These kinds of funding partnerships could be established and led by government directly, or by other institutions depending on their priorities and existing working relationships. Charities and foundations should consider ways to create incentives through funding and grants, for example, by tying the continuity of funding to the achievement of expected outcomes.

The devolution of funding could be tested out as part of the review of school autonomy - for example establishing a series of small scale pilots to determine a set amount of funding for schools for specific innovative activities, and evaluating the impact. More sustainable funding

for informal learning provision is also needed, for example longer term partnerships for providers with the Ministry of Education.

Recommendation 11:

Expand educational leadership across government, to strengthen and strengthening policy making and implementation.

In addition to the Ministry of Education, other government ministries in Qatar have a core role in supporting education and youth learning. As policy drivers in the country, they are in a unique position to contribute in many ways to fostering a vibrant ecosystem. These include thematic areas of curriculum development, directing CSR spending, supporting competitions and skills development, brokering partnerships, building bridges between private sector organizations and formal learning organizations, and looking at the role of transport infrastructure in access to learning.

Efforts to develop non-formal education programs across government departments are already in place. For example, Studio 5/6, an initiative of the Ministry of Transport and Communications (MOTC), is a Fab Lab designed to provide young people with a place to fabricate digital technologies, sharpen 21st century learning skills and foster innovation and creativity. Just as MOTC is interested in driving a digital development agenda to support the United Nations Sustainable Development Goals and Qatar's Vision 2030, other ministries likewise have an active role in driving their respective mandates and policies through education. WISE's Empowering Leaders of Learning initiative, as mentioned above, could also provide a foundation and model to be adapted to expand educational leadership across other government ministries and programs, beyond solely supporting leadership development in schools. This knowledge should be disseminated across government entities.

In broadening educational leadership, policy making and implementation could also be strengthened through clearer policy direction, and improved implementation capacity at national level, including by:

- increasing knowledge and skills around change processes and effective implementation, drawing on global best practice eg. from OECD
- adopting greater consultative processes and mechanisms in policy making, and involving the full spectrum of stakeholders including leaders of different learning institutions in policy development
- improving knowledge around impact and evaluation methodologies and practices, data use and literacy; improving organisations' understanding of impact evaluation.

Recommendation 12:

Increase institutional capacities for innovation and systems thinking to support the development of learning ecosystems.

This could be pursued through firstly conducting further research on the best ways to improve structural collaboration in Qatar, to inform the establishment of an intermediary entity, broker, or platform which would support the growth of collaborative learning ecosystems. This intermediary would have dedicated capacity to embed ecosystem approaches, and provide spaces, practices and new methodologies.

Research should include the form and functions most appropriate for Qatar - one clear function would relate to analysis and codification of successful practices and methodologies at a systems level, and the development of tools for spread and adaptation across settings. Another would be around developing systems intelligence (related to recommendation 8), foresight and futures thinking, and data science literacy, with capacity to translate information into actionable intelligence for the entire education system.

Alongside this, a collaborative learning 'hub' could be developed that brings together a range of multidisciplinary actors in Qatar to build the foundations for a learning ecosystem. This would enable the testing of a set of design principles in a live practical environment, and provide proof of concept that this could be established in Qatar successfully. The learning hub would explore the type of partnership and governance model(s) most effective, as well as different metrics of system success to incentivise collaboration and support the development of learning ecosystems. The development of a Curriculum for Ecosystem Building could be undertaken, potentially with other global partners, to give education leaders and innovators the skills, methods and tools they need to embed ecosystem learning into practice. Building personal capacity alongside the collective capacity will be essential for success.

Distilling priorities. What do local stakeholders think?

Through a co-design workshop with local stakeholders, the research findings and initial set of recommendations were presented and discussed. The following priority actions were identified by stakeholders as first steps to develop and strengthen learning ecosystems in Qatar

Short Term (within the next three years)

1. Information and knowledge sharing

We envision significantly improved communication systems and data sharing, and increased marketing and awareness raising of opportunities for schools and for learners. This could be done via a collaborative online platform that is accessible to everyone (a dashboard), sharing a range of information including regarding upcoming events, activities, knowledge resources, stories, guidance booklets for schools.

2. Develop thematic learning ecosystems at a small scale

Creating more forums and spaces for dialogue in education on specific topics, starting with the formation of an initial set of partners who want to connect across sectors to learn from each other and celebrate improved practices (foundations for the learning hub). The network could host an events programme, building on the Doha Learning Days model, and work to establish national conferences and learning spaces to share experiences and develop creative opportunities for professional learning. Over time, parents and learners could be brought into the dialogue, to build social and community capacity. Relevant initial thematic areas of focus could include environment and sustainability, STEM, digital and making, global citizenship, civics.

3. Ministry of Education and other government ministries

It was noted by workshop participants that there is a need for a system-wide conversation around equity and what it means in the Qatari context (leading to effective policy). There was a general view that the Ministry of Education needs to provide more support for the sharing of practice between government and private schools as well as making it easier for schools to collaborate with each other and with external organisations, as highlighted in the recommendations. Teacher professional development is also a key area for improvement with organisations such as Teach for Qatar, the Education Development Institute and WISE well placed to grow their offer and help increase capacity across the system. Other ministries also have a vital role to play in supporting formal and informal learning through using their influence/levers. In this regard, educational leadership across government should be a national priority.

4. Partnership brokerage and intermediaries

Clearly, a missing piece in the national education infrastructure is the role of partnership brokers and intermediaries at a school level, and at a sector or system level. Further research should consider the best way of implementing a partnership broker or activity coordinator model at school level, and look at what is needed at a system level across multiple providers, learning from countries with more mature systems such as Singapore and Finland. With the goal of establishing an intermediary entity to provide effective coordination, innovation capacity, and facilitation across the ecosystem

CHAPTER NINE

— CONCLUSION

Unlocking greater equity for all learners requires a “whole system” response - with more structured forms of collaboration and ecosystem coordination

Through this research and ongoing dialogue with local partners it is clear that the concept of learning ecosystems resonates with local experiences, and there is a clear value in supporting their growth and evolution in Qatar. With a focus on improving the sharing of knowledge and practices through more structured and better supported forms of collaboration, and growing institutional capacities and skills for innovation and partnership working between multi sectoral institutions.

Learning ecosystems could add significant value in helping to overcome a number of the contextual conditions which foster inequalities, and make innovation and

collaboration particularly challenging in Qatar. Including: inequalities in access to knowledge, opportunities and resources, particularly between government and private schools; helping the informal learning sector work with more closely with schools through better designed and coordinated activity; helping to grow civil society collaborations and the wider ecology of support for schools, bridging “islands of innovation” which exist; strengthening local leadership capacity and capabilities; better aligning incentives; and fostering a wider sense of collective responsibility across the public and private sectors. There is also a pressing need for improved system coordination and brokerage, with intermediary organisations currently largely missing from the national infrastructure.

What would be the biggest value add of Learning Ecosystems in Qatar?

- Fostering better collaboration and knowledge sharing between the public and private sectors to close the equity gap
- Leveraging community learning assets and resources (physical and digital) significantly better across the system
- Identifying aligned partners and optimizing existing relationships between organisations

The rapid shift to remote learning during the Covid19- pandemic has accelerated partnerships to support youth learning, enabled new learning innovations (in both methods and content), improved teacher skills and digital fluency, and engaged parents in learning in new ways. It seems an opportune time to advance the conversation about learning ecosystems, and forensically consider what is required to improve equitable learning and future system resilience coming out of the pandemic.

During the co-design workshop with stakeholders we discussed how many of the foundations for learning ecosystems already exist in Qatar - including strong sectoral or thematic based partnerships - and the UNESCO Learning Cities model, which has now been adopted by three municipalities in Qatar, provides a good foregrounding for the growth of thematic or transitions focussed learning ecosystems.

As the learning ecosystems concept has grown globally, there has been expansion into the domains of adult and lifelong learning, and an increased scale of ambition beyond cities and municipalities into broader regions. Which signals increasingly networked ways of working, incorporating all domains of learning including learning in the workplace and intergenerational learning. This could be something for Qatar to consider in the future - the broadening of youth focussed learning ecosystems to support ongoing learning and development across the lifecourse, in all places and contexts, preparing for a mid-term future where older learners will no longer be a small minority.

At the core, it's important to recognise that the development and growth of learning ecosystems is an evolutionary journey towards deepening relationships, practices and shared intent - as demonstrated by Remake Learning. Relationships which often start small through areas of mutual interest, and are enabled and accelerated over time by some of the more complex and larger scale changes outlined in the recommendations. The ambition therefore is to develop a learning ecosystems "methodology" to structure and grow these relationships in small but meaningful ways towards more purposeful, intentional and wide ranging collaborations. Deeper integrations which actively start to address some of the entrenched systemic challenges around inequitable access to opportunity, and skills gaps, which no one organisation or entity can solve alone.

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ABOUT WISE

[WISE](#) was established by [Qatar Foundation](#) in 2009 under the leadership of its Chairperson, Her Highness Sheikha Moza bint Nasser. WISE is an international, multi-sectoral platform for creative, evidence-based thinking, debate, and purposeful action toward building the future of education. Through the biennial summit, collaborative research and a range of on-going programs, WISE is a global reference in new approaches to education.

[The WISE Research series](#), produced in collaboration with experts from around the world, addresses key education issues that are globally relevant and reflect the priorities of the Qatar National Research Strategy. Presenting the latest knowledge, these comprehensive reports examine a range of education challenges faced in diverse contexts around the globe, offering action-oriented recommendations and policy guidance for all education stakeholders. Past WISE Research publications have addressed a wide range of issues including access, quality, financing, teacher training and motivation, school systems leadership, education in conflict areas, entrepreneurship, early-childhood education, twenty first century skills, design thinking, and apprenticeship, among others.

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APPENDIX 1:

DEFINITIONS OF PROVIDERS OF LEARNING

Appendix 1: Definitions of providers of learning

Formal Education Providers: K-12 education providers, schools, colleges, universities, school districts and government administrators.

Informal Learning Providers: youth serving organisations, arts and cultural organisations, libraries, out of school learning programmes, summer learning programmes, community learning organisations, festivals and events, makerspaces, volunteering and community service programmes.

Skills and training providers: trade schools, apprenticeship providers, bootcamps, sector skills bodies, sector specific training programmes, youth employment programmes.

Business, industry and workforce training: employers, business and trade associations, industry associations, CPD providers, HR departments, public workforce system agencies.

Online providers: of both national and international and place specific learning. Youtube, Moocs, local learning networks which signpost opportunities and content, social networks with learning content and network generating opportunities.

This taxonomy was developed by the Urban Institute, USA

APPENDIX 2:

Appendix 2: Research Methods

Research Phases and Data Collection Tools

Research Phase 1: Developing the research question and analytical frame

- **Rapid literature review** looking at existing research and practice on learning ecosystems (and innovation ecosystems) globally, to develop a key set of questions and framing for the research inquiry
- **Local data analysis and insights surfacing** related to education, skills, employment, informal learning and social cohesion and cultural capital via desk based research and exploratory conversations to identify important national trends and develop and understand local context
- Meeting of the **Research Advisory Board** to gain feedback on the literature review, the research approach and the research hypothesis

Research Phase 2: Developing an understanding of the current learning ecosystem (and learning offer), improved practice in formal and informal provision, and local leadership and collaboration approaches.

- **Surveys:** Through surveys of school principals and educators we aimed to gain the broadest range of opinions and perspectives from various people involved in frontline education and learning provision, looking at four key areas: Equity, inclusion and social cohesion; innovative projects, practices and pedagogical approaches; Collaboration; Learnings from remote learning during the Covid-19 pandemic. Surveys were conducted in both Arabic and English.
- **Deep dive case interviews.** Semi structured interviews with key stakeholders across two target groups: Learning providers, practitioners and innovators in Qatar who are developing and delivering innovative learning programs or initiatives; System leaders and experts (Qatar and global), who have knowledge and expertise in learning ecosystem development, multi stakeholder partnership development and collective impact, and systems innovation. Selected interviewees represented various voices and perspectives from across the education and skills system. Looking in more depth at collaboration approaches, opportunities and barriers, and how local leadership manifests
- **Learner engagement** through collaboration with VCUArts Qatar

Research Phase 3: Visioning, developing a blueprint and set of co-designed recommendations

- **Stakeholder workshop:** Co-designed workshop with 20 local partners, some of whom were engaged in interviews. The workshop explored the findings from the research activities, and the aspirations for developing learning ecosystems in Qatar, including discussion of goals, metrics, roles, opportunities and barriers. And how this group could work together in the future
- Meeting of the **Research Advisory Group** to present findings and gain feedback. Specific discussion on implementation opportunities and challenges, and key strategic questions which have arisen for taking the concept forward in Qatar

Through the course of the study we engaged a total of approximately 150 participants. Participants were recruited through desk based research, local and national strategic networks and organizations who provided recommendations, a partnership with the Ministry of Education, and via the team's existing professional networks and connections. Qualitative data, which formed the majority of the study's output, was analysed using thematic and framework analysis methods, to enable the identification of common themes and patterns. Quantitative data gathered was analysed through descriptive methods.

Research Participants

Surveys: school principals (109 schools participated; 65 government schools, 44 private, across all phases)

Interviews: Learning providers, practitioners and innovators in Qatar who are delivering innovative learning programs or initiatives (ten participants)

Interviews: System leaders and experts (Qatar and global), with expertise in multi stakeholder partnership development and systems innovation (ten participants)

Visioning Workshop: Co-designed workshop with 20 local partners (plus learners) to consider aspirations for developing learning ecosystems in Qatar.

Youth Collaboration with VCUArts students (nine participants) who created a range of artefacts to bring ideas to life

Research Advisory Group: Ten members, including Qatari and global experts

Ministry of Education partnership: Supporting survey dissemination, presentation and discussion of initial findings

Study Limitations

Limitations of this study include the recruitment of sufficient participants from across the full educational and learning ecosystem, which limited the degree to which we were able to develop a holistic understanding of existing practices and processes and the challenges and barriers faced by stakeholders. Some of our research engagement relied on participant self-selection. There is therefore a risk of research bias if those actors who are already highly engaged in innovative and collaborative practices are most likely to participate. We aimed to mitigate this through targeted identification of those organisations known to face challenges in this regard.

The quality and depth of insights and data gained from participants may have been limited by the remote nature of the interview and engagement process. Particularly with regard to the participatory workshops, as an important aspect of the project was to build relationships and collaboration between different participants. However, it is also possible that online engagement may have opened up new forums for working together.

As highlighted, this research study is not intended to be a static analysis or appraisal of the education and learning ecosystem, rather the findings should form a knowledge resource and set of tools, recommendations and insights that can be built upon in the future, as a springboard for further work in this area.

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