the Education Commission

Investing in Knowledge Sharing to Advance SDG 4

A report prepared in support of a recommendation of the International Commission on Financing Global Education Opportunity (Education Commission)

Coauthored by the Center for Global Education at Asia Society, Results for Development, Teach For All, The Boston Consulting Group, and World Innovation Summit for Education

Foreword

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A new paradigm in global development is needed to sustain the progress of the last generation.

In the last 30 years, more people have been lifted out of poverty than in any generation in human history. Gaps between rich and poor countries have rapidly narrowed in life expectancy, literacy, and the rights of women. Across the realms of health, education, and poverty reduction, stunning progress has been achieved, with further milestones in sight. It is not an unreasonable hope, if current trends continue, that in 2035 the global child mortality rate will be lower than the US child mortality rate was when my children were born in the 1990s.[1]

However, the conditions that have driven success in global development have changed. The end of the Cold War upended the alignment of interests among many emerging and developed economies, and increasing global competition has made some countries less willing to invest in foreign assistance.

Compounding this trend is the diminishing return on direct monetary investment itself. The massive growth of emerging economies, a true success of the last generation, means the relative impact of an additional dollar of direct assistance is much less than it was previously. For the major developing countries like China, India, Indonesia, and Brazil, where most of the world's poor live, aid flows and private-sector cross-border flows are marginal sources of finance relative to domestic resources.

Within this context, global actors must embrace new forms of collective investment and prioritize the development of human capital.

As the traditional models of foreign assistance fade, stakeholders should focus on the areas that will drive the highest future returns, such as investment in collective resources, including global public goods, particularly those that contribute to the more rapid creation of human capital.

First, as the gap closes between emerging and developed economies, the core challenges countries face also converge, necessitating coordinated investment to find solutions. Issues such as climate change, pandemics, mass migration, and income inequality are relevant to all nations, yet there has been too little investment made to deal collectively with these challenges because no one country can reap all the benefits of any investment it makes. Despite even odds that sometime in this century there will be something comparable to the 1919 flu epidemic that killed 2.5 times as many people as World War I, the World Health Organization (WHO) budget for pandemic flu is less than the salary of the University of Michigan's football coach. This seems manifestly inappropriate, and yet we do not have any settled consensus on how we are going to produce the global public goods needed to address common challenges or fund such solutions. Leaders across sectors must create a unified strategy to drive investment in resources that will help address our common challenges.

A student participates in an activity in the classroom of a Teach For Ghana fellow.

Second, it is now abundantly clear that the returns to well-deployed investments in human capital can be very high. A generation ago at the World Bank, I argued that investment in primary education for girls might well be the highest return investment available in the developing world.[2] Yet too often, spending on health and education is seen as consumption rather than investment. A wide range of studies using randomized controlled trials have confirmed that well-designed educational and health interventions can have very large impacts. It is also clear that the spending itself must be well designed to be effective.

While there are strong links between advances in health and education and a country's economic growth, the link between the level of investment in health and education and corresponding outcomes is highly attenuated, looking both within and across countries. Too often, increased investment serves only to support methods and existing institutions that have been ineffective.

The challenge of increasing investment is at least as much a matter of quality as of quantity. It is the top priority that the international community support approaches that improve the efficacy of resources countries invest in education.

Investment in global knowledge sharing in education is a clear response to these imperatives.

This way of thinking has implications for the global education sector. Funders should consider the most effective means of making collective investments in education—one of which is cross-border knowledge sharing. Also, given the importance of human capital to the broader development agenda, global funders should more highly prioritize investments in education, especially those geared at increasing the quality of educational outcomes. Let us examine each of these in turn.

First, funders and practitioners must unite to make cross-cutting investments in collective resources devoted to improving knowledge sharing in education. Currently, only 3% of official development assistance (ODA) in education

is allocated to producers of global public goods. In comparison, funders in the health sector allocate 21% of ODA to the production of global public goods.[3] Increasing the level of investment in knowledge sharing can help scale effective innovation, coordinate efforts across borders, and empower local education systems.

As detailed in this report, effective knowledge sharing requires investment in three key elements: global public goods, capacity development, and networks. Together, these components create an integrated infrastructure that allows actors to leverage insights from one place to use in another, helping us confront common challenges and accelerate global progress in the education sector.

Second, the model of knowledge sharing presented in this report is aligned with the imperative to invest in human capital. A productive global education sector should focus not merely on the number of students being educated, but also on how well equipped these students are to succeed and contribute to the economy of the future. While it is true that a country's average "years of school" is correlated with economic growth, "learning-adjusted years of schooling" is the most powerful predictor of future economic success.[a] Vast differences in learning still exist globally, even where the level of educational attainment may be similar. For example, students in Singapore attend school only 30% longer than those from Jordan. However, if you compare learning-adjusted years of schooling, students from Singapore attend school effectively 109% longer because of significantly higher learning outcomes.[4]

Investments in global public goods, capacity development, and networks can begin to close these gaps by enabling knowledge sharing across borders and propagating effective practices adapted for national or local contexts. Promoting knowledge sharing in education is one way to develop the human capital needed for success in the next century. In particular, I would emphasize one important type of knowledge sharing, the collection and dissemination of data on country performance. This allows accountability and encourages competition among nations to be at the forefront, thereby spurring progress on a wide range of issues.

This report outlines the path forward for effective knowledge sharing in education.

Based on cross-sector research, discussions with more than 200 global stakeholders, and analysis of the current education landscape, this report provides a compelling case for investing consciously in global knowledge sharing in education. This report sets out a vision for global public goods, capacity development, and networks working together to maximize the impact of global investment in education and accelerate educational outcomes.

In September 2016 at the United Nations (UN) General Assembly, the Education Commission called for increased investment in a global ecosystem for education to promote cross-border learning and sharing. This report elevates that call and sets out a path to turn the recommendation into actions. I hope it mobilizes the funder community to adopt a set of criteria for effective knowledge sharing and to dedicate more funds to this cause. Such investments are required to sustain the success of global development for another generation.

–Lawrence H. Summers

Member of the Education Commission

[a] This approach uses test score ratios from two international assessments, Trends in International Mathematics and Science Study (TIMSS) and the Program for International Student Assessment (PISA), to compare the educational impact of a "year of school" in different countries.

Introduction

In *The Learning Generation: Investing in education for a changing world*, the Education Commission documented the growing crisis in education. By 2030, more than 800 million children and young people will not have the basic skills or qualifications for the modern workforce.[5] Further, at the current rate of progress, it would take until 2100 for all countries to ensure universal primary and secondary education—two generations later than targeted in the Sustainable Development Goals.[6]

As the Commission outlines, to accelerate progress and achieve the vision laid out in *The Learning Generation*, the education sector should invest in a "global 'ecosystem' for education that will promote cross-border learning and sharing of innovations and grow the capacity of leaders and practitioners."[7] By developing the infrastructure needed to share knowledge across borders, best practices and effective innovations can spread to new geographies, and local, national, and regional actors with similar experiences can collaborate in a way that propels everyone forward. This recommendation helps support the Commission's ultimate vision: By sharing knowledge, all countries can accelerate their progress to the rate of the top-performing countries within a generation.

To further deepen the Commission's recommendation, the coauthors of this report set out to define a framework for knowledge sharing that will support the Commission's vision and improve knowledge sharing across borders in education. Drawing upon case studies from other sectors, promising practices from education, and consultations with more than 200 global education stakeholders, this report distills a collective vision for knowledge sharing that could support improved educational outcomes.

Ultimately, this report is intended to help advance progress toward Sustainable Development Goal (SDG) 4 to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."[8]

Our key findings are as follows:

FINDING 1

Effective knowledge sharing in education requires the integration of global public goods, capacity development, and networks

While much attention has recently been focused on the need to invest in global public goods in education, examples from other sectors and findings from interviews highlight the need for integrating investments in global public goods with capacity development and networks. Capacity development, whether undertaken by global, national, or local institutions, is necessary to enable practitioners to adapt and use global public goods effectively.[b] Networks help develop global public goods, ground them in local needs, make them widely available, and facilitate their improvement over time. Networks can also serve as a vehicle to strengthen capacity to use global public goods.

FINDING 2

Key criteria should be followed to ensure the effectiveness of knowledge sharing efforts

While intuitively the sharing of knowledge across borders seems like a valuable exercise, there are many examples of unsuccessful attempts and wasted investment. Drawing upon case studies and research into effective practices, this report presents a set of criteria to guide effective knowledge sharing.

[b] While many types of capacity development are vital in education, this report focuses on the capacity development needed for knowledge sharing, particularly the ability to translate knowledge into practice.

These criteria are intended to provide guidance for investments of time, talent, and financial resources, and can serve as a set of standards by which investments in knowledge sharing can be evaluated.

FINDING 3

More and better investment is needed in knowledge sharing infrastructure

Currently, international investment in knowledge sharing has been limited in education. For example, only 3% of development assistance for education is devoted to global public goods, compared with 21% in the health sector.[9] While other researchers have made a strong case for more investment, better investment is also needed. First, investment time frames must be sufficiently flexible to encompass knowledge sharing activities, which often require long-term, sustainable funding sources. Second, funders should recognize alternate approaches to measuring impact, since many knowledge sharing activities can only reliably demonstrate indirect impact on ultimate educational outcomes.

This report proceeds as follows: First, we present the methodology used to develop these findings. Second, we discuss each finding in detail, supported by evidence from research and the insights from our global consultations. After each finding, we present short case studies, developed through interviews conducted specifically for this report, which demonstrate and support each conclusion. Detailed case studies are presented at the end of the report.

Key elements of knowledge sharing infrastructure

Global public goods
Goods that are non-rivalrous and have positive externalities, such as research, data, tools, and policies that are relevant for education actors

Capacity development
Training and support that build the ability of actors to translate knowledge into practice, including the technical and adaptive skills to access, use, and adapt global public goods

Networks
Individuals and organizations that work together to address a problem, share knowledge, and develop capacity

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Methodology

To build on the Education Commission's initial recommendations, a convening was held in April of 2017 at the Center for Universal Education at the Brookings Institution with representatives from more than 30 global education organizations. The participants discussed the Commission's recommendations and began identifying key opportunities and challenges for the global education sector related to knowledge sharing. Following that convening, the five coauthors of this report volunteered to carry the project forward and develop a more comprehensive vision for knowledge sharing in global education.

Over 18 months, the coauthors developed the findings presented in this report through an extensive consultative process of interviews and working sessions, a review of relevant reports and research, and the analysis of case studies.

In all, more than 200 education leaders were consulted, hailing from 39 countries and 104 distinct global, national, and local organizations, including government actors, bilateral and multilateral funders, United Nations institutions, foundations, private companies, and civil society organizations. A selection of these individuals are acknowledged at the end of the report.

Expert interviews: Interviewees were sourced using a snowball sampling approach, where initial interviewees suggested other education leaders for additional interviews.

Global convenings:

- Private working session at the Center for Universal Education at the Brookings Institution, April 2017 in Washington, DC
- Private working session at the Center for Global Education at Asia Society, September 2017 in New York
- Public panel discussion at the Center for Global Education at Asia Society, September 2017 in New York
- Public panel discussion at the Civil Society Policy Forum, October 2017 in Washington, DC
- Private working session at the World Innovation Summit for Education meeting, November 2017 in Qatar
- Public panel discussion at the Global Partnership for Education Replenishment Conference, February 2018 in Senegal
- Private roundtable discussion at the Global Education and Skills Forum, March 2018 in the United Arab Emirates
- Private roundtable discussion at the Center for Universal Education at the Brookings Institution, May 2018 in Washington, DC

Since the consultative process of interviews and global convenings was conducted over an extended period of time, it allowed for interviewees and convening participants to collectively inform the refinement of the findings.

Additional inputs included:

- Review of global knowledge sharing efforts: Examination of case studies where global public goods, capacity development, and networks have had an impact in education and other sectors
- Review of national education ecosystems: Analysis of the development and current condition of cross-state knowledge sharing within the United States and Indian education ecosystems to identify lessons for the global community
- Benchmarking analysis: Review of multiple foundations' existing principles for investing in educational ventures

Young school children in a classroom in the Philippines. Photo credit: Avel Chuklanov

Findings to improve knowledge sharing in education

Finding 1: Effective knowledge sharing in education requires the integration of global public goods, capacity development, and networks

In this section, we present a framework for knowledge sharing that was developed through our global consultations and through examining successful examples from other sectors. First, we explore successful cases in health and agriculture that demonstrate the importance of a comprehensive approach to knowledge sharing. Second, we apply these learnings to education and present a case for investment in global public goods, capacity development, and networks to drive positive outcomes in education.

Knowledge sharing in agriculture and health

In other sectors, there are examples of global investments in research and knowledge sharing that have produced significant results. Research on the effectiveness of insecticide-treated nets (ITNs) led to their global proliferation, which resulted in an almost 50% drop in malaria deaths from 2000 to 2015.[10] Similarly, estimates suggest vaccination campaigns in developing countries have saved more than 20 million lives since 2001.[11] The economic returns of such investments are also staggering; a 2012 study estimated that an additional $100 million devoted to HIV vaccine research and development would yield a benefit-to-cost ratio of 6:1.[12]

While these are inspiring examples of global knowledge sharing and collaboration, some stakeholders question whether they are transferable to education. There is no equivalent of a vaccine in education—progress requires

supporting changes in human behavior over an extended time period and navigating complex political dynamics. Further, the immense scale and distributed nature of education delivery make knowledge sharing even more complicated—the United Nations Educational, Scientific, and Cultural Organization (UNESCO) estimates that 69 million new teachers will be needed by 2030 to meet Sustainable Development Goal 4 (SDG 4).[13] Despite these challenges, there is still much to learn from other sectors, specifically from examples that highlight more sophisticated systems of knowledge sharing.

In agriculture, comprehensive cross-border knowledge sharing has accelerated global progress. In 1971, transnational research in agriculture was formalized with the creation of the Consultative Group on International Agricultural Research (CGIAR). The CGIAR network conducts scientific research in areas such as plant nutrition and microbial resistance, as well as economic and policy research into market systems, food security, and ecosystem management, and then disseminates its research across borders. The impact has been dramatic. Over a 40-year period, every $1 invested in research by CGIAR has led to $9 worth of additional food production in the developing world.[14]

To drive this effectiveness, CGIAR operates as a network, with 15 research centers and hundreds of national and regional partners. Global public goods, including complex knowledge products such as climate change policies and plans to scale agricultural systems, are developed throughout the network and made available to partners who "transform them into locally relevant products" that meet local needs.[15] For example, CGIAR research "guided the conception, evaluation, and targeting" of a food for education initiative in Bangladesh that served 2.1 million students. The estimated benefit of the program was $248 million, corresponding to an internal rate of return of more than 60%.[16]

CGIAR also invests in capacity development, since the implications of its research for policy and implementation are not always straightforward. Since its inception, 20% of CGIAR's spending has focused on "strengthen[ing] the capacity of national partners through formal and informal training."[17] Approximately 90,000 individuals were trained from 1990 to 2004, and a 2006 Science Council evaluation found "strong and consistent evidence of the effectiveness of CGIAR investments in training and learning."[18]

In health, the sharing of knowledge through networks has supported the acceleration of universal health coverage. The Joint Learning Network for Universal Health Coverage (JLN) is a global network of practitioners and policymakers that enables joint problem solving among a group of more than 30 mostly low-income and middle-income countries pursuing universal health coverage.[19] When JLN members confront shared challenges, they can tap into a network of practitioners to co-develop solutions and access documented approaches that have worked in similar contexts. With access to donor funding, the JLN has been able to maintain a backbone team that facilitates learning among members and captures tacit knowledge into usable global public goods, made accessible to non-members via the JLN's website. For example, the JLN's Data Analytics toolkit helped Ghana's National Health Insurance Authority develop tools to monitor and react to implementation issues during the rollout of a new payment system. More informal sharing is also common. Kenya was able to save time and development costs by using Ghana's "eClaims formats and standards...as a starting point for their own."[20]

When member countries wish to tackle specific challenges but lack the capacity to do so, JLN support teams work to help members sort through the various interventions and tools that could be applied to local projects and priorities. The JLN also helps members access training and on-the-ground support when necessary to ensure successful implementation and sustainable impact.

For example, when the Vietnamese Health Insurance Agency struggled to improve its provider payment system, JLN facilitators provided hands-on training to Vietnamese policymakers, helping them understand the trade-offs associated with various provider payment approaches and arrive at a workable solution.

The JLN's membership has expanded from six countries in 2010 to more than 30 countries today, demonstrating the value that member countries obtain from active participation in the network. A 2013 assessment found that "the vast majority of [network members] reported increased knowledge (93%), using and sharing knowledge at home (85%), and finding increased motivation to pursue reforms (83%)."[21] The level of JLN member engagement has also improved over time. As one stakeholder reflected, "Just listening to the airtime in the steering group meetings, it used to be the World Bank, Rockefeller Foundation, and GIZ. They were talking maybe 85% of the time. Now they don't talk at all."[22] Instead, member countries are the most engaged in dialogue and are in the driver's seat in setting JLN-wide priorities related to universal health coverage.

Knowledge sharing in education

The education sector can learn from these approaches even if it does not replicate them. While consolidated models such as CGIAR and the JLN are compelling, knowledge sharing does not have to be facilitated by one structure or organization.[c] Given the distributed nature of education delivery, knowledge sharing can be driven by many actors that are focused on different local, national, and global priorities.[d] Regardless of the model, similar principles apply. In the cases of CGIAR and the JLN, each combines global public goods, capacity development, and networks to improve knowledge sharing within their sector, elements that are also highly relevant in education.

Global public goods: Global public goods are goods that are non-rivalrous and have positive externalities.[e] In education, they can take the form of research, data, tools, sharing platforms, program design, pedagogy, or model policies.

When effective, global public goods can codify knowledge, enhance transparency around what works, and reduce the duplication of efforts. Global public goods can be produced by a wide range of organizations, including research institutes, governments, international organizations, and on-the-ground implementers. For example, CGIAR's research on agricultural policy is a global public good developed within the research centers in their network.

While many definitions of global public goods focus on goods that are non-excludable and non-rivalrous, the definition in this report is broader. To account for the full potential of knowledge sharing across borders, we include non-rivalrous goods that are currently excludable but could be made public. For example, the "Teaching at the Right Level" methodology developed by Pratham is technically an excludable good, since open access is not guaranteed. However, Pratham has made this methodology available worldwide through the People's Action for Learning Network, leading to its proliferation. Other currently excludable goods, such as proprietary curricula, testing methodologies, program design, and pedagogies, could also be made public with improved accessibility and knowledge sharing infrastructure. Given this potential, currently excludable goods are also included as examples of possible global public goods in this report.

[c] It is a reasonable question for the education sector as to whether there are specific types of networks or organizations, which do not exist today, that are needed to support knowledge sharing. In addition, further investment in existing global institutions may be necessary. This report has not attempted to provide concrete answers to these questions, focusing instead on the roles funders and actors at all levels can play in knowledge sharing.

[d] For simplicity, the term "local" is used to distinguish from "global" throughout this report. Depending on the context, this could include national, provincial, or local actors.

[e] A "non-rivalrous" good can be used by one person without reducing the amount left for others. It can be used again and again at almost no additional cost. "Positive externalities" are the indirect positive benefits that accrue from the use of a global public good (e.g., when one country participates in a common assessment system, other countries benefit from the comparative data).

Capacity development: Capacity development supports the ability of actors to translate knowledge into practice, including building the technical and adaptive skills required to access, use, and adapt global public goods. Capacity development can focus on individuals (e.g., principals, teachers, or policymakers), organizations (e.g., a school or ministry of education), or systems (e.g., school districts or national programs).[23] Done effectively, capacity development provides stakeholders with knowledge, skills, resources, and incentives to use public goods, which in turn enables the implementation of effective practices.
For this report, we refer to capacity development specifically as it relates to knowledge sharing—for example, CGIAR's effort to train national organizations to utilize agricultural research.

Networks: Networks are individuals and organizations working together to address a problem, share knowledge, and develop capacity. Networks can serve multiple purposes, including connectivity (e.g., exchanging information), alignment (e.g., creating and sharing a set of ideas, goals, and strategies), or production (e.g., co-creating effective practices, policies, or other outputs). When effective, networks help facilitate the development and sharing of knowledge and capacity. As described above, the JLN is an example of a network that shares knowledge, propagates global public goods, and develops the capacity of its members.

The role of global public goods in knowledge sharing

There has been significant recent attention paid to the need for global public goods in education. In a 2018 policy paper, the Global Education Monitoring (GEM) Report concluded, "Global public goods in education… are in short supply, poorly funded, and rarely coordinated."[24] Building on prior scholarship, the report argues that common data, research, and networks are needed to bring a comparative approach to the global challenge of education.[f]

Similarly, the World Bank's World Development Report 2018 analyzed the impact of one type of global public good, common global and regional data sources, in driving change in education. When relevant and actionable, the report argues, "Information on student learning and school performance…fosters healthier political engagement and better service delivery."[25] However, their analysis reveals significant gaps in the availability of reading and mathematics achievement scores, especially for children outside of high-income countries. Less than 50% of low-income countries have reported reading or math scores for any grade level since 2000. Without data to evaluate progress, knowledge sharing—and ultimately progress in improving educational outcomes—is inhibited. Addressing this challenge presents a significant opportunity for funders of global education. As the World Development Report concludes, "A high-leverage entry point for international actors is to fund better information that will make domestic spending [on education] more effective."[26]

[f] As described in the next section, this report separates networks from global public goods. The GEM Report's definition is built on the work of the International Task Force on Global Public Goods as presented in, "Meeting Global Challenges: International Cooperation in the National Interest."

Students carry out a science experiment under the supervision of their teacher, a Teach First fellow, at the Mulberry School For Girls in East London.

When present, global public goods can make a dramatic impact. The OECD's Program for International Student Assessment (PISA), administered since 2000, has resulted in significant country-led efforts to improve education. Since its inception, half of OECD countries participating in PISA have undertaken reform efforts spurred by a desire to improve their national results reflected in the assessment.[27] Since PISA is an internationally comparable data source, the long-term impact of the reforms can now be tracked using PISA as a benchmark to supplement national assessments.

A recent UNESCO study further supports the case for common data sources. In a detailed analysis, the paper quantifies the value of additional information provided by effectively tracking SDG 4 indicators. The report concludes that investing in comprehensive data collection, including additional learning assessments and household surveys, could result in an average country-level savings of $143 million per year, for an investment of only $1.4 million.[28] While these returns are theoretical, based on the efficiency gains possible through improved information, the point they underline is clear—investment in common data sources can be enormously valuable.

While the case for global public goods is strong, in most situations, global public goods alone are not enough to drive progress. They must be integrated with capacity development and networks to be most effective. PISA may provide a common data source, but capacity development is required to support national actors to implement the assessment program, interpret the data, and determine appropriate policy interventions or reforms. As PISA expands to additional countries through its "PISA for Development" program, it is also creating a broader network that will increase its reach and potential impact. Partner countries work with PISA to refine the

assessment (thereby improving the global public good itself) and also work with other members to "benefit from opportunities for peer-to-peer exchanges."[29] [g]

Similarly, while the UNESCO estimate above is focused on potential savings from common data sources, the report recognizes that in many cases "there is no need to develop new sources of data but to invest in improving and expanding current methods."[30] The report also emphasizes that a global strategy for data must include "technical assistance and capacity development."[31] In other words, the impact of the investment would come not only from the global public good itself, but also from the development of capacity within countries to collect, analyze, and disseminate data effectively.

The examples above focus on one type of global public good, common data sources, since a large amount of research has been devoted to this area. However, our consultations highlighted the need for capacity development and networks to support many types of global public goods. Capacity development can help practitioners contextualize, implement, and improve global public goods. Networks can help provide an engaged user community for the development and use of global public goods, so interventions are responsive to local needs, easily accessible, and continually refined over time. In the next section, we augment the examples above with information gathered through our consultations, and explore these interactions further.

The role of capacity development in knowledge sharing

While many types of capacity development are vital in education, this report focuses on the capacity development needed for knowledge sharing, particularly the ability to translate knowledge into practice.

The education sector has historically suffered from inadequate emphasis on enabling end users to effectively employ research, data, and tools. As the introduction to a recent Brookings Institution report highlighted, "While continued investments in data creation and management are necessary, the ultimate value of information is not in its production, but its use."[32]

In our consultations, there was strong agreement that capacity development efforts and global public goods should not be thought of independently, but must go hand in hand in order to advance learning outcomes. As one stakeholder reflected, "We made a substantial investment in tools and knowledge products, but did not have an engaged user base...and the tools and products sat in the ether having very little impact…it is fair to say that this investment was wasted."[33] While this quote reflects a worst-case scenario, there was strong consensus that capacity development is essential to unlocking the value of global public goods.

A compelling example of the importance of capacity development, as it relates to knowledge sharing, comes from the Out-of-School Children Initiative (OOSCI). The initiative is supported by UNICEF and the UNESCO Institute for Statistics (UIS) and works with national education ministries across 90 countries to identify out-of-school children, determine why they are not in school, and get them into school. The OOSCI has created a common methodology for measuring the number of out-of-school children that combines information from household surveys and education management information systems (EMIS), as well as a situational analysis to identify barriers that keep children out of school.[34] The initiative prepares country-level actors to implement this methodology through statistician trainings, while also running advocacy workshops to prepare leaders to manage change and promote the use of the survey.

[g] PISA is an example of an "excludable" good, referenced above. Countries must apply to join PISA and contribute to the cost of the assessment to participate in the decision making process around its development (fees are proportional to the size of each country's economy). A low fee option covering only technical assistance is also available for those countries that want to administer the assessment without participating in its development. While technically PISA is not purely "public," it functions as a public good for many countries. Organizations with similar models must strike a balance between securing sustainable resources and providing broad access, including among countries with the least means.

While it is too early to determine the long-term impact of the program, a formative evaluation in 2017 found that the "OOSCI was effective in cultivating a critical mass of national stakeholders who are ready to support the shift from targeted community interventions to an effective systemic approach."[35] By combining a global public good with capacity development, UNICEF and UIS aim to equip country-level actors to ensure that "every last child [can] go to school and learn."[36]

The role of networks in knowledge sharing

When discussing the current state of sharing knowledge across borders, a common issue we heard from stakeholders was that organizations are investing in global public goods without complementary investment in ways to make them accessible, relevant, and useful to local communities, and effective catalysts of change. Purposeful networks are one complement that can help make investments in global public goods more effective in achieving impact.

First, the recent GEM policy paper, "Fulfilling our collective responsibility: Financing public goods in education," highlights the role of networks in promoting peer learning and the accessibility of knowledge. In fact, the authors classify networks themselves as global public goods. According to the policy paper, networks drive effective knowledge sharing "through meetings, focused discussions (supported by expert papers or joint comparative assessments of education systems), experience sharing, formal training sessions, and high-quality technical support."[37]

While our consultations led to a different classification of networks (as a complement to global public goods rather than as global public goods themselves), our conclusion is the same: Networks play a "key role in overcoming constraints" to knowledge sharing.[38]

Students engaging in the Experiential Learning Lab at the 2017 WISE Summit in Qatar, where a roundtable for this report was also held.

Moreover, networks can help make knowledge sharing more relevant for local and national actors. The Abdul Latif Jameel Poverty Action Lab (J-PAL), a leading network of researchers working to reduce poverty, embraces the philosophy that "for data and research to be influential, it must address local priorities and be accessible to decision-makers."[39] The J-PAL model showcases this philosophy in action. J-PAL researchers collaborate with local partners to run research studies on effective interventions and then disseminate these studies through the network. For example, J-PAL collaborated with International Child Support (ICS) in Kenya to pioneer the Girls' Scholarship Program. Together, the organizations used randomized controlled trials (RCTs) to assess how the scholarship program affected learning outcomes, ultimately demonstrating that the program increased the achievement of girls by 0.19 standard deviations.[40] Once evidence like this is established, J-PAL uses its extensive network of 168 professors from 54 universities across six regions to share research results, conduct training and policy outreach, and support other local actors in implementing evidence-based interventions with fidelity.[41] To date, more than 300 million people have been impacted by J-PAL's research-based interventions.[42] In this way, the J-PAL network helps to advance research, a global public good, while ensuring it is locally developed and contextually relevant.

Finally, the personal connections forged through networks also help catalyze change once knowledge is shared. The Center for Universal Education at the Brookings Institution recently highlighted the research of Everett Rogers in their report Millions Learning, stating, "Most individuals evaluate an innovation, not on the basis of scientific research by experts, but through the subjective evaluations of near-peers who have adopted the innovation."[43]

In the 14 case studies Millions Learning presented, there was a common theme, "once key decision-makers saw an intervention's results firsthand, the program or policy was expanded.[44] Without peer-to-peer connections enabled by networks, many effective innovations would not be seen, let alone adopted and scaled more broadly.

An integrated infrastructure

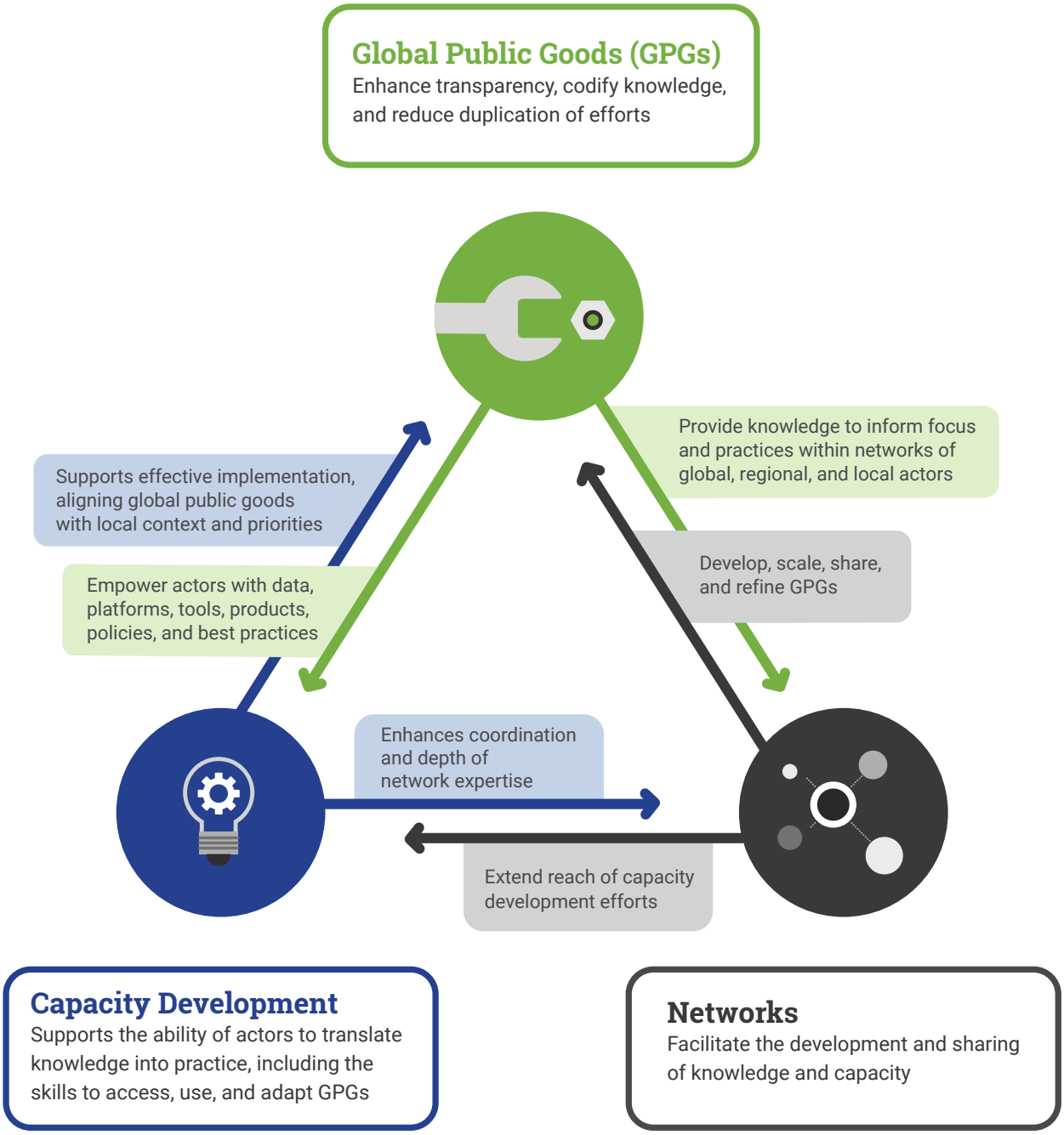
Building on these examples, we developed a framework for understanding how successful knowledge sharing can occur in education and refined it through an iterative process, using the methodology described earlier in the report. The result is an integrated model of global public goods, capacity development, and networks that is mutually reinforcing. Together, these three elements make up the "infrastructure" that drives global knowledge sharing.

While we refer to this infrastructure as "global," it includes any transnational knowledge sharing. The key goal is to support knowledge sharing across borders so localized progress does not remain purely local. Below, the case study of Chalo Parho Barho (CPB) demonstrates how this knowledge sharing infrastructure can work in practice.

Finding 1 Summary

While much attention has been focused on the need for global public goods to support knowledge sharing in education, a more integrated approach is required. Investments in global public goods require complementary investment in capacity development efforts and networks to maximize impact.

An integrated model for knowledge sharing



Students at a CPB accelerated learning camp in Pakistan.

CASE STUDY

Chalo Parho Barho (CPB): Tracing the impact of global knowledge sharing infrastructure on a local actor

Inspired by Pratham's Read India program, Idara-e-Taleem-o-Aagahi (ITA) launched Chalo Parho Barho ("Let's Read and Grow") in Pakistan in 2011. The mission of the program is to re-integrate students who have dropped out of school, enroll children of school-going age who have never enrolled, and prevent at-risk students from dropping out due to learning gaps.[h] Structured as an intensive, short-term learning camp, CPB identifies student candidates ages 6 to 12 via internationally comparable achievement tests used across the People's Action for Learning (PAL) Network.[i]

The program uses curriculum and teaching methodologies developed by Pratham, adapted to fit local context, and has shown strong results. At the end of the program, 83% of the out-of-school children are successfully enrolled and re-integrated through school admissions tests into the appropriate grade, and 100% of at-risk students stay in school with improved learning outcomes.[45]

[h] CPB is a program of a national organization, Idara-e-Taleem-o-Aagahi (ITA), which works to address inequalities in educational opportunities in Pakistan. While CPB is implemented and managed by ITA, for simplicity we will reference primarily CPB in this case study.

[i] PAL Network is an international community of local and national organizations in 14 countries with a mission to develop and spread an international standard for citizen-led, household-based learning assessments for children.

The impact of global knowledge sharing on CPB

ITA's CPB program has been successful in part due to the impact of global knowledge sharing infrastructure on the program's development and growth.

By making use of a global public good, complemented by capacity development and shared data via networks, CPB increased its impact in Pakistan while expending fewer resources than would have been required to develop the program independently. Furthermore, as it matured, CPB was able to contribute to global knowledge sharing by passing along their own insights and innovations to Pratham and PAL Network. This increased the effectiveness of the underlying methodology and eased the pilot development process for actors in other countries.

Global Public Goods

CPB accessed pre-developed program design, pedagogy, and curriculum materials from Pratham and adapted them to fit the local cultural context, curriculum standards, and required student learning outcomes. This ensured proven, high-quality resources were available to support the program without incurring the costs to create them independently

Capacity Development

CPB benefited from training conducted by Pratham representatives, who came in person to train CPB in all aspects of program management and pedagogy

CPB continues to amplify the impact of this capacity development by training teachers locally and extending the reach of Pratham's proven methodologies

Networks

As a member of PAL Network, CPB can access internationally comparable data sources to track their own progress and participate in learning workshops on effective methodology and the development of teaching materials

PAL Network is also a platform for CPB to share its learnings from developing and implementing the program with other countries seeking to do the same

Student in the classroom of a Teach First fellow at Filton Avenue Primary School in Bristol, UK.

Finding 2: Key criteria should be followed to ensure the effectiveness of knowledge sharing efforts

Merely increasing the amount of investment in global public goods, capacity development, and networks is not enough to yield results. Even if an integrated approach is taken, knowledge sharing can be unsuccessful for a host of reasons: The level of investment may be insufficient, a global public good may not match the needs of end users, or a network may lack shared goals. Throughout our consultations, stakeholders called for a common understanding of what contributes to "effectiveness" to guide action on the part of both funders and implementers.

To begin defining "effective knowledge sharing," we developed criteria to guide investments in knowledge sharing generally, as well as criteria for effective global public goods, capacity development, and networks. The initial criteria were drafted based on established literature and case examples shared in interviews, and then refined through consultations with global education leaders to capture the collective wisdom of the field. Notably, we drew heavily upon the United Nations Development Programme's work on capacity development,[46] the research of Santiago Rincón-Gallardo on effective networks,[47] and the Carnegie Foundation's work on Networked Improvement Communities.[48] We hope these criteria are a starting point for dialogue and discussion.

This set of criteria is intended to provide guidance to a range of actors working in education on how best to make investments of time, talent, and financial resources in knowledge sharing, as well as provide a set of standards by which investments in knowledge sharing can be evaluated. The case studies of the Education Workforce Initiative and the Moving Minds Alliance below help to demonstrate how these criteria can be used to strengthen the effectiveness of knowledge sharing in two different focus areas.

Criteria for effective knowledge sharing

Factors that increase the likelihood of success

1. Effective knowledge sharing investments...

a. Integrate global public goods, capacity development efforts, and networks to create sustained impact
b. Leverage what already exists before creating something new
c. Build on a clear understanding of how knowledge sharing will accelerate progress in the relevant context
d. Are made with a time frame and amount of investment sufficient to achieve and sustain the desired outcomes

2. Impactful global public goods...

a. Reflect the input of end users
b. Are designed with a specific theory of change, informed by an understanding of existing evidence, that articulates how the global public good will support local and/or national progress

3. Catalytic capacity development...

a. Results from sustained rather than one-off engagement
b. Equips actors with relevant technical capabilities, change management skills, and incentives to support sustainable change
c. Reaches all levels of the organization or system needed to support sustainable change, including both technical and political actors
d. Focuses on building the resilience of systems and institutions

4. Purposeful networks...

a. Have a shared mission to address a specific problem
b. Understand how the network will shape the behavior of network participants, as well as the role of the network and its members in addressing a problem
c. Set shared, measurable goals
d. Align on a common data approach for measuring impact and sharing progress
e. Have a backbone team to facilitate productive sharing, codify learning, and coordinate efforts
f. Engage stakeholders outside of the network that could inhibit or enable progress

Finding 2 Summary

Through existing research and the collective wisdom of the field, we have generated an emerging set of criteria that can guide effective investment in knowledge sharing. While following these criteria may not ensure success in all situations, they can serve as a reference to help both funders and implementers avoid common pitfalls and increase their chances of spurring successful knowledge sharing efforts.

CASE STUDY

Education Workforce Initiative (EWI): Promoting knowledge sharing to transform the education workforce

Launched by the Education Commission in November 2017, the Education Workforce Initiative (EWI) aims to catalyze action in response to *The Learning Generation's* recommendation to expand, strengthen, and diversify the education workforce.

Ultimately, EWI's vision is to create an education workforce that has the resources, knowledge, and capacity required to meet the changing needs of students and society. This requires broadening the education workforce to enable teachers to spend more time teaching, professionalizing additional roles within the education workforce, innovating to address challenges in the teacher life cycle, and strengthening leadership at all levels.

To achieve this vision, EWI is working toward two key outputs:

1. An Education Workforce Report (EWR) to include a review of recent evidence, lessons from other sectors, and in-depth examples of effective approaches
2. A series of country-specific proposals to be co-developed with policymakers and research partners in three countries, who will help sustain the reforms in the longer term

Through these two elements, the initiative aims to build local and international capacity in this critical area of education.[49]

A teacher helps a student study at a school in Sierra Leone, one of the countries creating a proposal with EWI. Photo credit: Giacomo Pirozzi

Applying the criteria for effective knowledge sharing

In conjunction with EWI, we sought to identify the current state of knowledge sharing related to education workforce development and apply the criteria above for future investments of time and resources.[j]

First, EWI's approach **integrates a global public good and capacity development** [Criterion 1a]. The EWR is a public good that can be used by actors globally to enhance local approaches to education workforce reform. EWI is integrating this public good with capacity development efforts at the country level.

By working closely with three countries to develop policy proposals based on the EWR, EWI is simultaneously helping to build capacity and setting up proof points for the practices it is seeking to disseminate. In this way, EWI's efforts to develop a public good and build local capacity are mutually reinforcing.

Second, this approach ensures that the public good **reflects the input of end users** [Criterion 2a]. EWI has engaged national stakeholders in its work (including unions, ministries of labor, and ministries of education) to ensure adaptation to the country context and to facilitate future implementation of its policy recommendations.

EWI identified two areas of focus to improve its long-term impact as the initiative continues, based on the criteria for effective knowledge sharing.

First, EWI is working on how to **sustain its desired outcomes** once the report and its policy proposals are completed [Criterion 1d]. While EWI plans to leverage its High Level Steering Group to propagate its messages after the initiative's backbone team disperses, EWI is also evaluating other options. For example, EWI could build on its initial work with three countries to **develop a broader network of country-level** stakeholders committed to re-thinking the education workforce holistically [Criterion 4].

Finally, EWI is conscious that its scope currently does not support countries with the implementation of policy proposals. As a result, it is considering ways to **sustain capacity development** by seeking more funding or transferring ownership to a regional partner [Criterion 3a].

[j] See the full case study at the end of this report for the landscape assessment related to education workforce reform.

CASE STUDY

Moving Minds Alliance: Improving knowledge sharing to support Early Childhood Development (ECD) in emergencies

Officially launched in 2018, the Moving Minds Alliance is a group formed by funders hoping to support the "re-building of resilience among the youngest refugees."[k] The members aim to amplify their overall impact by sharing knowledge within the network and with practitioners, increasing collective expertise, and advocating for greater awareness and investment in activities to support young children and families in crises worldwide.

The Moving Minds Alliance has two self-described, programmatic priorities:

1. **Strengthening practice:** Supporting the development of practical tools and resources, enhancing capacity, and enabling more effective ways of working
2. **Mobilizing support:** Researching and advocating for policies and financing that enable sustainable delivery of quality programs and services at scale

[k] The Moving Minds Alliance uses the term "refugee" broadly to encompass persons in refugee-like situations, regardless of their legal status. The population of concern includes young children and families who are forced to flee their homes and communities due to armed conflict, generalized violence, natural disaster, or environmental degradation, and who seek safety and protection either within their own countries or across international borders. Moving Minds also seeks to support young children in communities affected by displacement, such as host populations (from the 2018 Moving Minds Alliance "Overview Brochure," adapted from definitions in UNHCR Global Trends 2017).

Young Syrian children learn through play at Plan International Jordan early childhood care and development center in Azraq refugee camp. Source: Plan International

Applying the criteria for effective knowledge sharing

The Moving Minds Alliance has very intentionally started to **engage stakeholders outside of its network** of members and grantees in order to improve its effectiveness [Criterion 4f]. Since ECD is a multisectoral issue, this criterion is especially vital. Moving Minds stakeholders participated in the revision of the Child Protection Minimum Standards, the development of the Nurturing Care Framework, and the development of the *2019 Global Education Monitoring Report*, which will have a focus on issues of displacement and migration.

Additionally, Moving Minds involves external stakeholders in its own work. Its meetings have included representatives from beyond the traditional ECD world, including experts in economics, migration policy, and humanitarian response.

Moving Minds **understands its unique role as a network of private funders** and its ability to leverage this role to create change [Criterion 4b]. First, Moving Minds is aware that it may never be able to fund the largest-scale interventions. Instead, the alliance will focus on joint investment and advocacy to raise the profile of ECD and fund pilots that could potentially be scaled by larger funders. Second, Moving Minds is integrating implementation organizations into its network to align its work with the needs and experiences of practitioners on the ground and further facilitate knowledge sharing.

These partners are invited to join working groups and attend regular meetings, and in the future they may be included within the governance structure. In this way, Moving Minds aims to use its influence as a funder group to further knowledge sharing among practitioners and accelerate progress in the field of ECD in emergencies.

As Moving Minds continues its work supporting ECD in emergencies, it is mindful of the principle of avoiding duplication and **leveraging what exists before investing in new solutions** [Criterion 1b]. As one external stakeholder advised, "There is the tendency to try to make the next beautiful resource, but it often already exists in some form."[50] One of the goals of its working group on strengthening practice is to survey the existing resources available and determine if they should be augmented or adapted for use in crisis contexts. The full case study at the end of this report presents an initial analysis of this resource landscape.

A student poses with a globe in the classroom of a Teach First Denmark fellow.

Finding 3: More and better investment is needed in knowledge sharing infrastructure

Other researchers have made the case that additional investment is needed to fund knowledge sharing in education. In their background paper for the Education Commission, Schäferhoff et al. (2016) conducted a thorough analysis of spending on global public goods related to education. They recommend an immediate doubling of support for global public goods, from 3% ($242 million in 2013) to 6% of development assistance for education to fund improvements in education data, research, and standardization. This would still fall well short of the 21% spent on global public goods in the health sector ($4.7 billion in 2013). As the authors conclude, "There is a serious underinvestment in [global public goods] for education, and institutional arrangements to provide these goods remain fragmented and thin at the global level."[51]

However, while more financial investment may be needed, a better approach to funding is also required. As argued in a recent GEM policy paper, "…in many ways the total volume of aid to education may not need to change, as long as scattered, country-specific efforts are re-allocated to serve regional priorities and benefit more countries at the same time."[52] Shifting a proportion of existing investments toward cross-border knowledge sharing has the potential to accomplish this goal.

Two examples of investments in improving knowledge sharing

The two groups below have shown a strong commitment to advancing knowledge sharing and represent promising models of cross-border collaboration.

Building Evidence in Education (BE^2)

BE^2 is a donor working group representing more than 30 institutions, with a steering committee composed of the UK Department for International Development (DFID), the United States Agency for International Development (USAID), the World Bank Group, and the United Nations (with UNICEF and UNESCO alternating as members). Its focus is on enhancing the quality and use of research and evidence in donor decision-making. Through in-person and virtual meetings, research mapping, publications, and interest groups, BE^2 coordinates the research agendas of its members, facilitates knowledge sharing among them, and aims to set higher standards for the use of evidence in education.

Efforts like those of BE^2 are an important complement to the knowledge sharing infrastructure described in this report. While this report focuses on the means through which knowledge is shared, the quality of the knowledge being shared is equally vital. Tools, such as BE^2's guidelines for quality research presented in "Assessing the Strength of Evidence in the Education Sector," can be used by organizations to help ensure that the body of evidence in education is high quality. For example, this guidance note provided the basis for USAID's more detailed quality standards, which are used by USAID missions and partners around the world.[53]

Like any global public good, tools should be integrated with capacity development. In this instance, the World Bank, a member of BE^2, has trained reporters in developing countries on how to incorporate quality evidence into their reporting, with a focus on education, early childhood development, water and sanitation, and health. By providing both remote and in-person trainings, the program aims to increase the likelihood that credible research is propagated and acted upon.[54]

Global Partnership for Education: Knowledge and Innovation Exchange (KIX)

Recognizing that effective knowledge and innovation sharing is core to advancing SDG 4, the Global Partnership for Education (GPE) is launching the Knowledge and Innovation Exchange (KIX), designed to engage 67 developing countries in knowledge generation, innovation, and capacity strengthening. KIX is a single mechanism that uses a two-pronged approach: a shared learning platform (Learning Exchange) and investments in global public goods (Knowledge and Innovation Funding).

The Learning Exchange will be a knowledge hub with both digital and offline channels to support knowledge exchange and utilization as well as partner-driven networks. Knowledge and Innovation Funding will support the creation of evidence and evaluation tools, the piloting of innovations, and capacity building for developing countries. Nearly a quarter of the overall funds will go toward the Learning Exchange, which aims to magnify the impact of the Knowledge and Innovation Funding by serving as a curated collection of global public goods for GPE partner countries.[55]

In addition to the criteria for effectiveness noted above, our consultations highlighted two high-priority areas for improving funding for knowledge sharing. First, investment time frames must be sufficiently flexible to encompass knowledge sharing activities, which often require long-term, sustainable funding sources. Second, funders should recognize alternate approaches to measuring impact, since many knowledge sharing activities can only reliably demonstrate indirect impact on ultimate educational outcomes.

First, time horizons for investment in knowledge sharing must be sufficient. The 2017–2018 Global Education Monitoring Report concluded that investment in knowledge sharing, especially global public goods, has been too limited partially because of the time frame. "The increasing focus on short-term results," authors argue, "distorts financing decisions" and inhibits investment in global public goods which require a longer time horizon.[56] In fact, a 2010 analysis found the mean length of an education project funded via official development assistance was only 613 days from start to finish.[57] Given this emphasis on short-term funding, it is no surprise that there has been underinvestment in global public goods and longer-term efforts at knowledge sharing.

More qualitatively, our consultations revealed that frequently the majority of donor funding is focused on investments in programs that can achieve immediate results, and minimal funding is allocated to sharing results once they are achieved.[58] A promising shift in this paradigm can be seen in The MacArthur Foundation's recent 100&Change grant to Sesame Workshop and International Rescue Committee (IRC). The grant funds the implementation of Early Childhood Development programs for displaced families in the Syrian response region and explicitly reserves funding for the replication of the program by other organizations.

As one key stakeholder reflected, "The success of the grant will depend enormously on a large network of partners. We want to make the materials available and usable by all, standardize the interventions, and be embraced by others."[59]

Second, more flexible approaches to impact measurement must be taken to adequately assess investments in knowledge sharing. In our consultations, many funders expressed that measuring the return of a knowledge sharing investment (e.g., running a leadership development network) is different and often more challenging than measuring a direct-to-student activity (e.g., providing a textbook to a student). Many infrastructure investments fall in an "indirect" category of activity and therefore can be very challenging to measure in order to showcase impact.

However, challenges in measuring impact should not be equated with lack of impact. As one global philanthropy expressed, "We fund the backbones, networks, and activities that can't be explicitly measured, so that local and smaller philanthropies who have more stringent requirements can build on this foundation to improve local education outcomes at a faster pace."[60]

To measure the impact of infrastructure investments, the funders we interviewed often look to a number of proxies in lieu of directly attributable metrics. Some funders measure the demand for the services of knowledge sharing organizations. Others measure the qualitative contribution of knowledge sharing (e.g., through surveys, reports, or evaluations) to local practitioners who achieve direct impact.[61] The JLN, referenced earlier, uses a variety of measures to track its effectiveness, since the impact of its knowledge sharing is distributed globally among a variety of national actors. These methods include comprehensive member surveys, facilitation feedback

forms, analysis of member country use and adaptation of knowledge products, qualitative impact stories, and case studies.[62] The case study on Omidyar Network presents an example of a measurement and funding approach that allows for strategic investments in knowledge sharing.

Finding 3 Summary

More and better investment is needed in the elements of knowledge sharing infrastructure. Funders of knowledge sharing must recognize that inherently longer time horizons and more indirect impact metrics should not disqualify sustained investment in these activities. As examples from other sectors show, investments in knowledge sharing can yield significant long-term results. In the short term, this means funders in education may need to adjust their investment strategies to more highly prioritize knowledge sharing.

Student in the classroom of a Teach First fellow at Filton Avenue Primary School in Bristol, UK.

Primary school students at a school in South Africa that is funded by Omidyar Network and is a member of Global Schools Forum.

CASE STUDY

Omidyar Network: Investing in knowledge sharing to promote sector change

Founded in 2004, Omidyar Network is a philanthropic investment firm that seeks to "catalyze economic and social change" with a focus on creating impact at scale. Omidyar Network invests in both for-profit and non-profit organizations across a handful of sectors, such as financial services, property rights, and education, with the goal of creating broad-scale change within these sectors. In the education sector, Omidyar Network is motivated by a desire to increase equity and opportunity for individuals, families, and communities.

Strategically investing in knowledge sharing infrastructure

Within education, Omidyar Network invests in two ways to support the sector as a whole: investing directly in frontline innovation and investing in sector infrastructure, often related to knowledge sharing. By combining these types of investments and deploying both for-profit and non-profit dollars, Omidyar Network seeks to accelerate sector change. Two of Omidyar Network's education subsector focus areas, innovative school models (ISM) and education technology (EdTech), highlight how this strategy works in practice.

	Innovative School Models	EdTech
Investing in innovation	As some families look for education solutions outside of public schools, Omidyar Network invests in innovative school models that aim to dramatically improve learning outcomes. In Africa, it funds operators of affordable private school models and supports pilots of public-private partnerships in education—two examples of innovative schooling	Omidyar Network invests in scalable, technology-enabled solutions that aim to help teachers do their best work and help students realize their potential. In Brazil, one example is funding EdTech companies and non-profit organizations that are supporting the implementation of a new national curriculum
Investing in knowledge sharing	Omidyar Network was an initial seed funder for Global Schools Forum (GSF), an international network of non-governmental schools. The network facilitates knowledge sharing and problem solving across similar schools globally, with the aim of improving the performance and long-term success of member schools and allowing similar models to spread to other geographies	Since EdTech is an emerging sector in Brazil, Omidyar Network is currently commissioning a research report on the characteristics of effective EdTech ecosystems to help inform policymakers, influence broader priorities for the sector, and catalyze further investment
Combined sector impact	Supported by GSF, affordable private schools can learn from one another, share data, and advance the sector as a whole	By pairing investment in innovative EdTech with actionable research on conducive ecosystems, Omidyar Network endeavors to enable broader change in Brazilian education

A more flexible approach to measurement and funding

Omidyar Network's approach to measurement and funding is reflective of its sector strategy. First, Omidyar Network measures the impact of its investees on multiple levels: the direct impact of the organization on end beneficiaries and the broader impact of the organization on the sector.

This allows Omidyar Network to prioritize sector change, since some investments, like those in knowledge sharing, may have less impact on end beneficiaries but significant impact on the sector. Second, Omidyar Network is cognizant that actors providing key infrastructure need the flexibility and autonomy to effectively support the changing needs of a sector. As a result, Omidyar Network's default position is to fund general operating expenditures.

A young boy pays attention to the lesson being taught in a Teach For Romania classroom.

Conclusion

In 2016, *The Learning Generation* called for the international community to invest in a global education ecosystem that could "promote cross-border learning and sharing of innovations and grow the capacity of leaders and practitioners."[63] This report supports that call by advancing a more robust vision for effective global knowledge sharing. In order to increase their effectiveness, global, national, and local actors should embrace the following findings as outlined in this report:

1. Knowledge sharing should integrate global public goods, capacity development, and networks

2. Key criteria should be followed to ensure the effectiveness of knowledge sharing efforts

3. More and better investment is needed to fund knowledge sharing infrastructure

All education actors have a role to play in hastening the spread of effective practices and accelerating progress toward the vision of *The Learning Generation* and the objectives of SDG 4. We hope this report provides insights and tools to help both funders and practitioners advance knowledge sharing across borders.

Case studies

In addition to the findings and short case studies presented above, we have developed a series of detailed case studies that illustrate how this model of knowledge sharing can be applied. Each of the four case studies analyzes the role of knowledge sharing from the perspective of a different type of education stakeholder: a local actor, a global initiative, a funder group, and an individual funder.

1. **A local actor accessing global knowledge in order to address a specific problem**: Chalo Parho Barho (CPB) is a program developed by Idara-e-Taleem-o-Aagahi (ITA), which leverages global knowledge sharing to improve learning outcomes in Pakistan
2. **A global initiative seeking to impact a particular topic**: The Education Workforce Initiative (EWI) is an initiative of the Education Commission with the goal of transforming the global education workforce
3. **A funder group aiming to coordinate efforts to accelerate progress in an investment area**: The Moving Minds Alliance is an emerging network focused on coordinating action to improve Early Childhood Development in emergency situations
4. **A funder investing strategically in knowledge sharing:** Omidyar Network is a philanthropic investment firm that prioritizes sector-level impact, including investments in knowledge sharing infrastructure

These case studies are designed to demonstrate the application of the framework and criteria presented in this report and also provide positive evidence of how improved knowledge sharing can generate impact. Each case provides a brief background on the actor, the relevance of knowledge sharing to their objectives, and an assessment of their alignment with the criteria for effective knowledge sharing.

The case studies for the Education Workforce Initiative and the Moving Minds Alliance also include a "landscape assessment" of knowledge sharing infrastructure related to their respective areas of focus. In this analysis, we partnered with each organization, as well as experts in the field, to identify relevant global public goods, capacity development efforts, and networks related to each topic area and then developed "Key findings" and "Recommendations" to help guide the organizations' future activities and investments.[1]

[1] In this analysis, we noted the presence or absence of knowledge sharing infrastructure based on what was relevant and publicly available. It was beyond the scope of these case studies to judge the quality or effectiveness of this infrastructure.

Primary school students in South Africa engaged in a personalized learning program.

Students at a CPB camp in Pakistan.

Chalo Parho Barho (CPB)

Case study overview

This case study illustrates how a local actor can advance and extend its impact by leveraging and contributing to global knowledge sharing.

The case study includes three components:

- Background and overview of Chalo Parho Barho (CPB)
- A retrospective discussion of how the CPB program benefited from global knowledge sharing
- An assessment of CPB's alignment with the criteria for effective knowledge sharing

Background

Inspired by the success of Pratham's Read India program, Chalo Parho Barho, which translates to "Let's Read and Grow," was first piloted in Pakistan in 2011 by Idara-e-Taleem-o-Aagahi (ITA), the Center of Education and Consciousness. CPB's mission is to re-integrate students who have dropped out of school, enroll children of school-going age who never have enrolled, and prevent at-risk students from dropping out due to learning gaps.[m] Since CPB's initial launch, the program has grown to serve all four provinces of Pakistan. The newest expansion, to the province of Khyber Pakhtunkhwa, is expected to open 1,500 additional locations across two districts and to serve more than 60,000 students in only 18 months.[n]

[m] CPB is a program of a national organization, Idara-e-Taleem-o-Aagahi (ITA), which works to address inequalities in educational opportunities in Pakistan. While CPB is implemented and managed by ITA, for simplicity we will primarily reference CPB in this case study.

[n] The newest expansion is being supported by Ilm Ideas 2, a program funded by UK aid.

Structured as an intensive, short-term learning camp, CPB targets children in school (grades 3 through 5) and out-of-school children (ages 6 through 12) who have dropped out or were never enrolled. Roughly 25% of the students in the program are in school and deemed "at risk" of leaving school due to falling behind, while 75% are not currently enrolled in any school. Leveraging data from the internationally administered Annual Status of Education Report (ASER),[o] CPB first identifies the regions and districts that may benefit from its program through national and provincial comparisons of student performance data. Then, CPB locally administers a diagnostic test in literacy and basic mathematics, adapted from ASER, to assess which specific children are good candidates for its program.

Once identified, the students selected spend three hours every day for 45 to 50 working days at a camp hosted in a local school or community space. They are separated into small groups by learning level rather than age, based on their initial assessment. Each group is led by a teacher specially trained by CPB in the Combined Activities for Maximized Learning (CAMaL)[p] and Teaching at the Right Level (TaRL)[q] methodologies. Students are tested at 15, 30, and 45 days to closely track their progress. At the end of the program, 83% of the out-of-school children are successfully enrolled and re-integrated through school admissions tests into the appropriate grade, and 100% of at-risk students stay in school with improved learning outcomes.[64]

CPB is committed to demonstrating the impact of the program and uses consistent data gathering methods at the beginning, middle, and end of their program, including employing third-party researchers to ensure objectivity and accuracy. As a result of this approach, CPB was able to show that the initial pilot drove significant improvement: 40% of out-of-school children were reading sentences in Urdu by the end of the program versus a baseline of 0%, and similar improvements were observed in English and arithmetic.[65]

Tracing the impact of global knowledge sharing on CPB

CPB's success is due in part to its ability to effectively utilize aspects of knowledge sharing infrastructure. By tapping into existing public goods and contextualizing them to local needs, strengthening its programming through available networks, and taking advantage of capacity building resources, the program was able to both accelerate its growth and have a more pronounced impact on its students.

TAPPING INTO GLOBAL PUBLIC GOODS

Perhaps the most tangible example of the impact of global knowledge sharing on CPB is the role of global public goods in the design and launch of the program. CPB's founders worked with Pratham to adapt teaching materials from Pratham's CAMaL and TaRL curricula as the foundation for its program, which had already been developed in Urdu. Holding the methodologies constant, CPB made subtle wording changes, such as replacing references to the Indian holidays of Holi and Diwali with more locally relevant

[o] The Annual Status of Education Report (ASER) is a citizen-led assessment fielded across 14 countries worldwide. It follows a methodology developed by Pratham and now harnessed by the People's Action for Learning Network (PAL Network), which supports the use of large data sets from citizen-led assessments (CLAs) and advocates for a broader mission to bring learning and measurement to the center of educational policy and practice in order to address the global learning crisis.

[p] CAMaL (Combined Activities for Maximized Learning) is a teaching methodology created by Pratham, covering reading, writing, and basic arithmetic. Students in CAMaL programs learn through structured activities in small groups and work toward specific learning goals.

[q] TaRL (Teaching at the Right Level) is a teaching methodology developed by Pratham that uses a baseline assessment to group children by learning level rather than age in order to enhance learning outcomes. The TaRL method is not used within schools, but is instead recommended in short-term learning camps, after which students are re-tested and re-grouped to reflect their progress.

celebrations like Eid.[66] The curriculum has also been translated into Sindhi, another widely spoken Pakistani language, and was benchmarked to Pakistan's national curriculum standards to ensure alignment with required student learning outcomes.[67] These changes allow students to engage with materials that resonate with their own language and culture while still benefiting from proven educational techniques.[68]

By leveraging existing materials with proven effectiveness, CPB not only was assured of the quality and alignment of the curriculum, but also saved time and resources that would have been spent developing an equivalent array of materials and methods independently. If not for its access to Pratham's resources and a commitment by both to co-create adapted materials for the local context, CPB would have had to hire long-term specialists to develop the course content, textbooks, and workbooks, as well as to determine appropriate pedagogy for unenrolled and at-risk youth.[69]

PARTICIPATING IN PURPOSEFUL NETWORKS

The People's Action for Learning (PAL) Network has played a significant role in CPB's ongoing success and has allowed CPB to share its learning with others. PAL Network is an international community of local and national organizations in 14 countries with a mission to develop and spread an international standard for citizen-led, household-based learning assessments for children, known by various local names, such as ASER, UWEZO, MIA, and Jangandoo.[r] PAL Network supports its members in effectively administering the assessments and helps share data across borders. While originally focused on assessment, PAL Network is expanding their mandate from "assessment to action," holding learning workshops on CAMaL methodology and the local adaptation of proven pedagogy.

PAL Network also allows CPB to share its own insights and data with other members of the network on an ongoing basis, further amplifying CPB's own impact. CPB's learnings from their growth in Pakistan are now being leveraged by other organizations to support the development of similar programs around the world, including pilot programs in Mexico, Mozambique, Kenya, and Senegal.[70]

DEVELOPING CATALYTIC CAPACITY

CPB also benefited from in-person training and guidance from Pratham, which helped develop capacity to access global public goods. The in-person training in Pakistan covered all aspects of administering the program, from initial setup to materials usage to managing a classroom.

A focus on training still plays a crucial role in CPB's program structure. Pratham continues to provide ongoing, updated trainings to CPB via PAL Network, integrating innovations and insights from partner countries. CPB, itself, continues to train teachers in CAMaL methodology in every province and district, multiplying the original impact of the trainers from Pratham who came during CPB's initial pilot.

Additionally, CPB has invested in long-term capacity building by working to integrate their accelerated learning methodology into Pakistan's provincial Departments of Education strategy, to ensure that more resources will be devoted to supporting this effective learning intervention on an ongoing basis.

Criteria for effective knowledge sharing

CPB's success scaling and growing is a testament to the impact of effective knowledge sharing, in accordance with the criteria proposed in this report.

[r] This initiative was first launched in India in 2005. ASER means "impact" in Hindustani and also stands for the Annual Status of Education Report. ASER has grown organically and spread across other countries over the period of a decade, leading to the formation of PAL Network in 2015.

Students engaged in an activity at a CPB camp in Pakistan.

Below, we highlight some of the strongest areas of alignment with the criteria for effective knowledge sharing and a potential area of focus as the program continues to mature.

AREAS OF ALIGNMENT

Effective knowledge sharing investments leverage what already exists before creating something new [Criterion 1b]

CPB made use of numerous existing resources when launching and scaling the program. From the basic program design and curriculum to ongoing tracking and evaluation metrics, CPB has minimized its expenditure without compromising the realization of its mission. By leveraging what already exists, the program was able to operate with a higher level of efficiency than would otherwise have been possible.

Furthermore, by extending the reach of the CAMaL and TaRL methodologies, CPB is maximizing the impact of interventions that have already been proven. By adopting the ASER assessment methodology, CPB also enhances the value of the database for every participant who utilizes the data by adding additional information to the common foundation.

Finally, by choosing to utilize the ASER methodology for gathering data on learning, CPB is able to track its impact in a way that is comparable across borders. This enables more effective benchmarking, which in turn contributes to a virtuous cycle of improvement among its peer organizations.

Impactful global public goods reflect the input of end users [Criterion 2a]

CPB invested the time to adapt materials from Pratham to suit the local cultural context and curriculum standards. With sensitivity to the context of the

local culture, CPB was able to harness the strength of a shared global resource while authentically engaging local youth. CPB worked directly with Pratham to refine and update the materials, ensuring that the core components and pedagogical philosophy were maintained while making the necessary changes to allow local students to engage and learn effectively.

Catalytic capacity development results from sustained rather than one-off engagement [Criterion 3a] and equips actors with relevant technical capabilities, change management skills, and incentives to support sustainable change [Criterion 3b]

CPB's engagement with Pratham and ongoing investment in teacher training reflect an understanding of the benefits of sustained capacity development. By investing in training as a foundational component of the program, CPB was able to build on Pratham's success in India and meaningfully expand its own capacity to improve student outcomes. The training from Pratham was crucial to the success of the original pilot of CPB, and the additional, ongoing support from PAL Network continues to sustain and enhance the success of the program.[72]

The subsequent training of local teachers by CPB reflects the powerful impact that transnational training and capacity building can have. In addition to training CPB teachers on the Pratham methodology and materials, the Pratham staff also taught the CPB team how to replicate the training experience itself, for new local teachers. This initial investment to date has translated to a total of more than 4,000 teachers trained in the well-proven Pratham CAMaL and TaRL techniques across Pakistan.

Finally, CPB's partnership and engagement with the provincial Departments of Education are crucial investments in the long-term sustainability of the program. By proactively developing long-term partners

Students engaged in an activity at a CPB camp in Pakistan.

and resources, CBP is ensuring that its successful learning intervention will continue to have an impact in Pakistan well into the future.

Purposeful networks align on a common data approach for measuring impact and sharing progress [Criterion 4d]
By aligning itself with PAL Network and the ASER system, CPB was able to both benefit from and contribute to a common data and learning approach. As a result, CPB can be more targeted in selecting areas to deploy its pilot program because it has comparable data for decision-making. Furthermore, the shared measurement methodology allows CPB to track its own performance against international norms on an ongoing basis.

CPB's participation in PAL Network also allows it to share its own progress across borders. CPB is currently the most developed extension of the Pratham program outside of India, and frequently engages with PAL Network to share learnings and best practices about scaling with other countries that are replicating the program.[73] Over time, this allows the Pratham methodology to reach more students and to become more effective with every new iteration.

AREAS FOR INCREASED FOCUS

Impactful global public goods reflect the input of end users [Criterion 2a]
Looking ahead, CPB is working to further customize its programming to additional contexts, even within Pakistan. In Khyber Pakhtunkhwa, its newest province, it has worked to adapt its curriculum and approach to engage the local population and suit the unique linguistic and cultural context of the region. In addition to its typical approach, the team has also relied more heavily on local volunteers to coordinate and manage the program, empowering members of the local community to shape and direct the program to best suit the region's needs.[74]

Additionally, CPB is in the early stages of adapting their programming for use in emergency situations, which requires adjusting the traditional learning camp structure. CPB has already made strides toward this goal and is in the early stages of developing a program pilot. To ensure the approach is appropriately adapted, CPB will engage the broader humanitarian community and experts in childhood development in emergency contexts to co-develop the new initiative.[75]

Conclusion

Cross-border knowledge sharing is one of several factors that has contributed to CPB's successful launch and scaling in Pakistan. This case clearly demonstrates the value of effective global public goods and the importance of global networks and capacity building to support the utilization of those public goods.

By making use of the resources and opportunities available, CPB was able to increase its impact in Pakistan while expending fewer resources than would have been required to develop the program independently. This is a testament to the value of knowledge sharing: The students impacted by CPB are direct beneficiaries of the investments made in developing and effectively sharing ideas and public goods across national borders.

Furthermore, this case demonstrates how investments in knowledge sharing can create a virtuous cycle that amplifies impact. As it matured, CPB was able to contribute to global knowledge sharing by passing along its own insights and innovations to Pratham and PAL Network, increasing the effectiveness of the methodology and easing the pilot development process for other actors. This case study highlights not only how local actors can benefit from the fruits of robust knowledge sharing, but also how they can strengthen global knowledge sharing to the benefit of other local actors.

Members of EWI's High Level Steering Group: (from top to bottom) Theo Sowa, Vice Chair; Susan Hopgood, Vice Chair; Ju-Ho Lee, Chair; Liesbet Steer, Director of the Education Commission. Photo credit: Lana Wong/Education Commission

the Education Commission

Education Workforce Initiative

Case study overview

This case study analyzes how the framework and criteria for effective knowledge sharing can be applied to a global initiatives' work and the larger ecosystem in which it operates.

The case study includes three components:

- Background and overview of the Education Workforce Initiative (EWI)
- A landscape analysis of knowledge sharing related to education workforce reform and corresponding recommendations for further investment
- An assessment of EWI's alignment with the criteria for effective knowledge sharing

Through these components, this case will analyze how the knowledge sharing framework and criteria can be used practically to identify target areas for investment and to assess and improve an initiative's own practices related to knowledge sharing.

Background

Launched in November 2017, the Education Workforce Initiative (EWI) aims to catalyze thinking in response to *The Learning Generation's* recommendation to expand, strengthen, and diversify the education workforce. EWI is led by a High Level Steering Group (HLSG) of international experts and supported by a backbone team of professionals to coordinate and guide the initiative's work.

Ultimately, EWI's vision is to create an education workforce that has the resources required to meet the changing needs of students and society. This will require broadening the education workforce to enable teachers to spend more time teaching, professionalizing additional roles within the education workforce, innovating to address challenges in the teacher life cycle, and strengthening leadership at all levels.

Notably, EWI's vision takes an expansive view of the education workforce itself. In addition to teachers, the education workforce should include those who lead and support teachers and promote student welfare at all levels. These roles may encompass support staff, pedagogic advisors and trainers, community education workers, technology and administrative staff, and school, district, and policy leaders.

To achieve this vision, EWI is working toward two key outputs:

1. An Education Workforce Report (EWR) to inform education workforce reform. This will include a review of recent evidence, lessons from other sectors, and in-depth examples of how effective education workforce reform or innovative approaches have been implemented.
2. A series of country-specific proposals for education workforce reform. These will be co-developed with policymakers in three countries, in collaboration with local research partners and other actors, including government officials, who will help sustain the reforms in the long term.[76]

In conjunction, these programs will allow EWI to both disseminate best practices in education workforce reform and develop proof points that can be shared and adapted to other country contexts.

Defining the education workforce landscape

As presented in this report, effective knowledge sharing requires actors to identify and leverage existing public goods, capacity development, and networks and then build on this infrastructure to close gaps that exist in knowledge sharing.

In conjunction with EWI leadership, we sought to identify the current state of knowledge sharing infrastructure related to education workforce development. A clear understanding of this landscape can help EWI define its priorities and determine strategic additions to knowledge sharing infrastructure that will drive further improvement in the education workforce. Below, we outline three key findings related to knowledge sharing in the area of education workforce development and three corresponding recommendations to enhance this infrastructure and its impact.

KEY FINDING ONE

The majority of knowledge sharing is focused on teaching roles and traditional conceptions of education, rather than on the wider education workforce

Significant resources have been invested in creating infrastructure related to the teaching profession and traditional classroom-based models. The UNESCO Institute for Statistics (UIS) and the Committee of Experts on the Application of the Recommendations concerning Teachers (CEART) collect, analyze, and publish data supporting cross-border comparisons of teaching quality, pupil-teacher ratios, and teacher qualifications. The International Labour Organization (ILO) and UNESCO have helped align many stakeholders on the rights, responsibilities, and standards for teachers through their Recommendation concerning the Status of Teachers. Many networks are also thematically focused on teachers, including the UNESCO's International Task Force on Teachers, Education International, the Teachers Alliance of the Varkey Foundation, and Teach For All.

Missing from this landscape are robust infrastructure elements related to other vital roles in the education workforce.[s] The important focus on teachers tends to crowd out discussion of how the education workforce as a whole could be more effective.

This may include expanding the scope of professionals engaged in education delivery, including school leaders, district leaders, pedagogical experts, and student welfare specialists. Further, comparable data and standards related to these roles are lacking, and no global or regional actor identified in this landscaping has a mission focused on reimagining the education workforce as a whole (including potential non-teaching roles, the structure of the workforce, or the use of technology to complement professionals). As a result, system-level reform efforts are more challenging, as local actors do not have access to the necessary data, standards, tools, and other global public goods needed to support more comprehensive reform efforts.

KEY FINDING TWO

While pockets of strong infrastructure exist, data, tools, and best practices are incomplete or not always shared among local actors

While some progress has been made to capture common data and create common standards, these key elements of infrastructure lack comprehensiveness, often excluding countries or regions where implementation of these practices could be most beneficial. The UIS and CEART data mentioned above are not available for all countries, especially those that lack the resources to reliably collect data or use collection methods that are incompatible with global frameworks and data standards. To date, only 68 countries have adopted the UIS standards. In this instance, the global public goods that UIS and CEART provide are inaccessible to some local actors because needed capacity development, such as training in data collection methods, is yet to take place.

Similarly, best practice sharing among actors may not always occur—particularly on topics unrelated to teaching roles. There are few publicly available examples of innovative reform programs that collect data, share results, or codify learnings for use by others. This may be due to initiatives lacking the resources needed to measure outcomes and codify findings to share with other actors. Additional funding and networks could help ensure that the best practices and tools that do exist are effectively propagated.

KEY FINDING THREE

Knowledge sharing infrastructure related to system-level solutions is underdeveloped and vital for the future success of the field

Driving change at the system or national level requires a multidimensional approach—integrating policy, training programs, incentives, data systems, and more. A successful approach should encompass all of these elements, rather than propagating best practices for each element in isolation. However, our landscape analysis found few organizations devoted to system-level transformation of the education workforce. While public goods exist related to education workforce development at the school level, there has been little work done to develop and share system-level solutions to education workforce reform. Further investment in global public goods, especially research, related to holistic approaches to education workforce transformation is necessary.

Similarly, capacity development efforts tend not to include mechanisms to strengthen system-level capacity for change. The Global Partnership for Education (GPE) funds education sector plans, and UNESCO supports ad hoc projects to develop capacity in individual countries, such as Improving Teacher Support and Participation in Local Education Groups. However, few actors develop national capacity for system-level reform.

[s] A notable exception is the Early Childhood Workforce Initiative (ECWI). ECWI connects stakeholders conducting research and policy development to a broad range of actors in the early childhood education workforce, including home visitors, preschool staff, and community health workers. ECWI is one example of an initiative taking a more holistic view of workforce issues.

In part this is due to a limited understanding of the factors that drive the success or failure of education workforce reform at the national level. Investment is needed to conduct research into these effective practices as well as to increase system-level capacity for reform once best practices are more fully defined.

Finally, there may be a role for a network of country-level stakeholders committed to re-thinking the education workforce holistically. EWI's initial work with three countries could ultimately develop into a broader network for knowledge sharing.

As a result of these gaps, reform efforts generally lead to incremental change rather than system-level transformations in the education workforce.

Recommendations

Based on this landscape analysis, we propose three key recommendations that actors should prioritize to improve knowledge sharing related to education workforce development:

Key Findings	Recommendations
The majority of knowledge sharing infrastructure is focused on teaching roles and traditional conceptions of education, rather than on the wider education workforce	Consider funding global public goods, networks, and capacity development efforts that promote reimagining the education workforce, including leadership and support roles Create advocacy campaigns for a professional education workforce across key roles
While pockets of strong infrastructure exist, data, tools, and best practices are incomplete or not always shared among local actors	Increase data collection for all key education workforce roles and create tools to help ministries plan and manage the workforce more broadly Create global/regional networks for reform that cover the full set of relevant stakeholders and promote capacity development efforts
Knowledge sharing related to system-level solutions is underdeveloped and vital for the future success of the field	Invest in research related to system-level solutions and prioritize efforts to increase system-level capacity for reform

While development in all three areas is needed, EWI itself is focused on the first and third priorities. First, EWI is conducting significant research and sharing best practices related to expanding the scope of the education workforce. This effort considers all of the roles necessary for education delivery and seeks to professionalize these roles. Ultimately, EWI hopes to "re-think the education workforce as a set of teams centered on the student and her learning and wellbeing."[77] As our analysis shows, infrastructure supporting non-teaching roles is a significant gap area that EWI's thought leadership can begin to fill.

Second, in working directly with three countries on overarching education workforce reform, EWI is helping define and propagate system-level solutions. Working with country governments, EWI will co-develop initiatives grounded in research and tailored to the local context. When these reforms are implemented, EWI plans to share lessons from the reforms globally, so they can be replicated in other geographies.

Criteria for effective knowledge sharing

As EWI begins building the knowledge sharing infrastructure defined above, the criteria proposed earlier in this report offer guidance on how to do this effectively. Working with the coauthors, EWI prepared a self-assessment of its program based on the criteria for effective knowledge sharing. The goal of this effort was to highlight the key areas where EWI exemplifies these criteria as well as define future areas of focus as the initiative matures. Below we highlight three areas of alignment and two focus areas for EWI going forward.

AREAS OF ALIGNMENT

Effective knowledge sharing investments integrate global public goods, capacity development efforts, and networks to create sustained impact [Criterion 1a]

EWI's approach has the potential to be effective because it combines two key elements of knowledge sharing infrastructure. First, the Education Workforce Report (EWR) is a public good that can be used by actors globally to enhance local approaches to education workforce reform. EWI is integrating this public good with capacity development efforts at the country level. By working closely with three countries to develop policy proposals based on the EWR, EWI is simultaneously helping to build capacity and setting up proof points for the practices they are seeking to disseminate. In this way, EWI's efforts to develop a public good and build local capacity are mutually reinforcing.

Impactful global public goods reflect the input of end users [Criterion 2a]

EWI has engaged national-level stakeholders in its work to ensure adaptation to local context and to facilitate future implementation of policy recommendations. The national policy proposals will be co-created with national stakeholders and will vary based upon local priorities.

Catalytic capacity development equips actors with relevant technical capabilities, change management skills, and incentives to support sustainable change [Criterion 3b]

By working with in-country stakeholders to develop policy proposals, EWI increases local actors' capacity to leverage the forthcoming Education Workforce Report as a guide to policy development. In addition, EWI connects diverse stakeholders (e.g., unions, ministries of labor, and ministries of education) and helps them collaborate, thereby increasing system-level capacity for reform.

AREAS FOR INCREASED FOCUS

As its work continues, EWI wants to ensure the long-term sustainability of its initiative. This involves prioritizing two criteria:

Effective knowledge sharing investments are made with a time frame and amount of investment sufficient to achieve and sustain the desired outcomes [Criterion 1d]

First, EWI's latest timeline is sufficient to complete the Education Workforce Report and design its three country policy proposals. However, EWI's funding may not be sufficient to support its backbone team in the promotion and dissemination of the Education Workforce Report after it has been released, which may limit the reach of this work. To address this gap, EWI is developing a marketing plan for the Education Workforce Report itself (including cost estimates based on team size, duration, and planned activities). Once key details are outlined, EWI will pursue additional funding, if needed, to ensure the successful launch and dissemination of the report. It will also seek to leverage members of the HLSG, who can serve as key influencers in spreading the messages of the report, even after the backbone team has disbanded. Additional options need to be explored to ensure the initiative's long-term sustainability.

Catalytic capacity development results from sustained rather than one-off engagement [Criterion 3a]

Second, EWI is conscious that its scope currently does not support countries with implementation of policy proposals, so there is a risk that these proposals may not be fully realized. While EWI is working closely with local actors and enabling their ownership of key policies, successful capacity development requires ongoing engagement. Given the constraints of funding, EWI must consider innovative ways to ensure the longevity and sustainability of its work.

EWI is considering several options to support this long-term sustainability. First, EWI must identify key stakeholders at the country level, ensure their buy-in, and effectively transfer ownership of key implementation plans. Second, if more support is deemed necessary, EWI can seek additional funding to assist partners in implementation. Finally, to build momentum for in-country reform, EWI can encourage other funders and actors to support long-term reform efforts, potentially transferring ownership to a regional partner.

Conclusion

As this case demonstrates, the model of knowledge sharing presented in this report has clear practical import for education initiatives. By conducting a landscape analysis of the current global public goods, capacity development, and networks related to education workforce reform, EWI has been able to more clearly define its priorities and its future contribution to the space. Second, by applying the criteria for effective knowledge sharing internally, EWI can improve the efficacy of its own programs and ensure its findings are propagated and shared in the long term.

Young Syrian children learn through play at Plan International Jordan early childhood care and development center in Azraq refugee camp. Source: Plan International

MOVING MINDS ALLIANCE

Case study overview

This case study illustrates how the model of effective knowledge sharing presented in this report can be applied to a group of funders focused on an urgent issue.

The case study includes three components:

- Background and overview of the Moving Minds Alliance, a funder group and network focused on Early Childhood Development (ECD) for young children affected by crisis and displacement
- A landscape analysis of the knowledge sharing infrastructure related to ECD in emergency and crisis situations and corresponding recommendations for further infrastructure investment
- An assessment of the Moving Minds Alliance's alignment with the criteria for effective knowledge sharing

Through these components, this case will demonstrate how the model of knowledge sharing in this report can be used practically to identify target areas for investment within a field and to assess a group of funders' contributions to knowledge sharing.

Background

Officially launched in June of 2018, the Moving Minds Alliance is a group initiated by likeminded funders hoping to support the "re-building of resilience among the youngest refugees."[t] Its founding members include the Bernard van Leer Foundation, Comic Relief, the ELMA Philanthropies, the Jacobs Foundation, the Open Society Foundations, and the Vitol Foundation. While all of these funders are already deeply involved in ECD and humanitarian and migration issues, they came together as the Moving Minds Alliance in an attempt to amplify their collective impact and improve their effectiveness. As one member reflected, "As part of a funders' group we can punch above our weight and assert a more powerful collective voice."[78]

The alliance hopes to increase members' expertise, share knowledge within the network of funders as well as directly with practitioners, and invest in activities to deliver a lasting positive impact on young children and families caught up in crises worldwide. Moving Minds' programmatic priorities fall into two key categories: "strengthening practice" and "mobilizing support."

Strengthening practice: Moving Minds plans to support the development and/or adaptation of standards, tools, and resources to enable implementers in the field to more effectively deliver ECD-related interventions to refugee families. Their focus is not only on the tools and resources themselves, but also on ensuring uptake in the field.

Mobilizing support: Moving Minds' advocacy agenda has two key focus areas. First, they hope to make ECD interventions a standard part of any humanitarian response. This includes raising the profile of ECD in humanitarian proposals, needs assessments, and implementation. Second, Moving Minds is also targeting the policies of refugee host countries to ensure that ECD for refugee and displaced populations is integrated into national policy and that services are appropriately tailored to this vulnerable population.

Through their focus on knowledge sharing and their twofold programmatic agenda, Moving Minds hopes to "scale up coverage, quality, and financing of support for young children and families affected by crisis and displacement."[79]

Defining the knowledge sharing landscape related to ECD in emergency and crisis situations

Working with the Moving Minds Alliance, key experts, and on-the-ground practitioners, we sought to identify and provide a general overview of the elements of knowledge sharing infrastructure that currently exist related to ECD in emergencies and recommend potential focus areas for further development.

Since ECD is an issue that crosses sectors, we analyzed the global public goods, capacity development, and networks related to health, nutrition, child protection, and education. We also surveyed the landscape of knowledge sharing related to ECD in development and non-development settings, in addition to infrastructure specifically targeted to ECD in humanitarian settings.

KEY FINDING ONE

Knowledge sharing related to ECD in emergencies is often siloed across different sectors, preventing necessary coordination and depth of focus

There is a wealth of global public goods that touch on elements important to ECD in emergency situations. Extensive standards, programs, measurement frameworks, tools, and guidance notes exist to support education, nutrition, child protection, and health in humanitarian situations. These tools are sector specific and aligned to the "cluster system" introduced by the UN Emergency Relief Coordinator and Inter-Agency Standing Committee (IASC) to transform humanitarian responses beginning in 2006. Since ECD cuts across sectors, it is often overlooked or approached in a piecemeal way. In addition, since funding is solicited and coordinated at a cluster level, many proposals and needs assessments leave early childhood out entirely. A 2016 survey of active humanitarian response plans revealed that only one-third of plans included interventions specifically designed for young children.[80] As a result, ECD in humanitarian contexts is consistently underfunded, underprioritized, and not holistic. As one stakeholder noted, "Even in developed countries, segregation of ECD services is common. In emergency settings, this segregation is exacerbated."[81]

[1] The Moving Minds Alliance uses the term "refugee" broadly to encompass persons in refugee-like situations, regardless of their legal status. The population of concern includes young children and families who are forced to flee their homes and communities due to armed conflict, generalized violence, natural disaster, or environmental degradation, and who seek safety and protection either within their own countries or across international borders. Moving Minds also seeks to support young children in communities affected by displacement, such as host populations (from the 2018 Moving Minds Alliance "Overview Brochure," adapted from definitions in UNHCR Global Trends 2017).

This sectoral division of ECD is highly consequential because it prevents coordinated approaches and inhibits effectiveness. While rigorous evidence of effective practices for ECD in emergencies is limited (a theme discussed below), the practitioners we interviewed highlighted strong anecdotal evidence of the "complementarity of multisector intervention." A high-level humanitarian leader working in the crisis in Syria stated, "If you have a nutrition program for malnourished children, it will have some effectiveness. If you have a stimulation program,[u] you will also have some success. Combined, you multiply the effectiveness significantly—the length of recovery is much shorter, and the rate of recidivism is much lower."[82]

When resources do exist to support ECD in emergencies, they are sometimes inaccessible. Our landscape analysis did not identify any single platform that curated research, knowledge, standards, and tools related to ECD in emergencies across all the relevant sectors. While the Inter-Agency Network for Education in Emergencies (INEE) has a "task team" dedicated to this purpose, it is currently awaiting a relaunch. Similarly, the ECD Action Network's (ECDAN) Knowledge Hub might serve as a platform in the future, but it is currently under development. Since ECD requires multisectoral coordination, there is a strong need for compilation and curation of resources across sectors to facilitate easier access.

KEY FINDING TWO

Capacity development efforts related to training and building expertise in ECD are urgently needed

Despite extensive research suggesting the importance of ECD in emergency settings, there has been a lack of training and capacity development to translate these findings into action in the field. Stakeholders highlighted the urgent need for additional training of humanitarian workers to increase their ECD expertise as well as funding to support this work.

There are two factors that additional training could mitigate. First, some stakeholders highlighted a continuing misperception that since young children are very resilient, they are at lower risk in emergency situations. In fact, while young children are indeed resilient, they are also at the most risk for long-term impacts of stress and trauma. A 2016 report by Theirworld concluded that young children are "particularly vulnerable in these contexts and risk not only physical harm, but also psychological trauma and insufficient social, emotional, and cognitive development."[83] While extensive research exists documenting these risks, the findings have not been effectively communicated to relevant stakeholders nor translated to the work of on-the-ground practitioners. One humanitarian leader reflected, "There is a lot of preaching to the choir for those who believe in the importance of ECD in emergencies. We need to be making arguments more broadly and in unison."[84] Effective training on the ground could build more capacity among humanitarian workers who do not currently recognize the importance of ECD in their work.

Second, because of inadequate training, interventions that may have critically important but longer-term impact may take a back seat to seemingly more urgent concerns. As another stakeholder explained, "If there is an earthquake—most humanitarian workers do not immediately think, 'I need to engage with parents to help them be responsive caregivers and ensure children develop necessary coping mechanisms."[85] Even if ECD-specific standards were drafted, further training and development would be needed to drive adoption. "When you present guidelines without building expertise," another practitioner reflected, "the guidelines are just perceived as an additional workload that few will implement."[86] Effective capacity development and training can empower humanitarian workers to integrate ECD best practices into their existing workflow, so that effective ECD interventions can be implemented across sectors and critical support can be provided to young children and families.

[u] Stimulation programs are a crucial intervention in ECD that support psychosocial development through physical and other sensory stimulation, such as touching, playing with, and speaking to children. Further discussion of the value of stimulation programs can be found in the UNICEF Report, "Early Childhood Development: The key to a full and productive life," https://www.unicef.org/dprk/ecd.pdf.

KEY FINDING THREE

Coordinated measurement and a stronger evidence base of effective ECD interventions in emergencies are needed

The need for ECD in crisis and emergency situations is clear. Currently, there is robust evidence highlighting the long-term negative impact of stress and trauma on early childhood development. However, there is not a similar evidence base as to what effectively mitigates these impacts in emergency contexts. A recent survey of research identified only four studies from 2000 to 2017 documenting the impact of ECD interventions in humanitarian settings.[87] As one stakeholder noted, there is no "hard rigorous data that looks at models that work and don't work and why."[88] The impact of this gap is significant. Those practitioners who recognize the importance of ECD in emergencies "hunger for technical knowledge" on the most effective interventions.

Further, a lack of well-researched interventions may hurt the case for organizations as they advocate for prioritization and funding. Investment is needed to develop robust measurement tools to document the impact of ECD interventions and propagate these resources throughout the humanitarian community. A recent investment by the MacArthur Foundation is focused on this gap and discussed in more detail below.

Recommendations

Given these gaps, knowledge sharing related to ECD in emergency and crisis situations should be augmented to enhance and improve the effectiveness of ECD interventions across even the most challenging of contexts. Below is a series of preliminary recommendations aligned to each finding:

Key Findings	Recommendations
Knowledge sharing related to ECD in emergencies is often siloed within sectors, preventing necessary coordination and an integrated response to the needs of young children	Align on a platform for sharing cross-sectoral resources and public goods specifically for ECD in emergencies Strengthen the interaction of networks across sectors (e.g., health, nutrition, education, and childhood protection) Consider investing in ECD-specific humanitarian standards and tools that cut across humanitarian response clusters[v]
Capacity development efforts related to training and building expertise in ECD are urgently needed	Invest in the training of humanitarian workers on the findings and implications of existing ECD research and effective interventions Increase funding for ECD-related capacity development efforts
Coordinated measurement and a stronger evidence base of effective ECD interventions in emergencies are needed	Create common measurement and evaluation systems for ECD in emergency situations Begin documenting effective ECD interventions, promote unbranded programs, and propagate them through networks and platforms

[v] In our conversations with stakeholders, there were divergent opinions about how best to tackle the siloed and diffuse nature of resources related to ECD in emergencies. Some advocated that due to political and practical considerations, ECD advocates should work within the existing humanitarian cluster system. As such, they suggest highlighting the ECD-related aspects of each discipline and bringing these to prominence within each cluster. Others suggested creating entirely new resources specific to ECD in crisis, and advocating for a separate "ECD cluster" in humanitarian response situations. Given the immense importance of the topic, they argued, ECD needs its own coordinating organization within a humanitarian crisis, otherwise investment will continue to be insufficient and ECD will continue to be under-prioritized.

While much work needs to be done to mitigate these gaps, the Moving Minds Alliance and other groups have already begun to make contributions to improved knowledge sharing.

First, the Moving Minds Alliance is focused heavily on the first priority area—developing cross-sectoral global public goods. Its "Strengthening Practice" working group is identifying the tools and resources that exist across sectors to augment or adapt them to ECD in crisis situations. For example, the recently launched "Nurturing Care Framework" by WHO, UNICEF, ECDAN, and the World Bank is one cross-sector tool that Moving Minds has identified as having the potential to be adapted to fit emergency contexts.

In the area of capacity building, several networks are beginning to coordinate action to raise awareness and increase capacity development related to ECD in emergencies. For example, INEE is coordinating its next convening with the annual meeting of The Alliance for Child Protection in Humanitarian Action.[w] The coordination of these two networks, one focused on education and one on child protection, is a first step toward integrating responses across sectors and building capacity more holistically.

Finally, significant work has begun to bring common measurement systems and a more robust evidence base to ECD in emergency and crisis situations. As part of the MacArthur Foundation's 100&Change grant to Sesame Workshop and International Rescue Committee (IRC), New York University's Global TIES for Children[x] is conducting extensive evaluation to measure and document their approach to ECD in the Syrian crisis. The goal is to develop proven, low-cost interventions that can be deployed in other areas around the world beyond the original target area of the grant.

Criteria for effective knowledge sharing

An explicit goal of the Moving Minds Alliance is to promote knowledge sharing amongst its members and in the field more generally. As a result, it is not surprising that the approach Moving Minds has taken happens to embody many of the criteria for effective knowledge sharing presented in this report. Below are three key criteria that the Moving Minds Alliance exemplifies and one area of increased focus as its work continues.

AREAS OF ALIGNMENT

Purposeful networks engage stakeholders outside of the network that could inhibit or enable progress [Criterion 4f]
The Moving Minds Alliance has very intentionally started to engage stakeholders outside of its network of members and grantees in order to improve its effectiveness. Since ECD is a multisectoral issue, this criterion is especially vital. First, Moving Minds has sought out partnerships with diverse stakeholders to provide input and contributions to related efforts. Moving Minds stakeholders participated in the revision of the Child Protection Minimum Standards, the development of the Nurturing Care Framework, and the development of the 2019 Global Education Monitoring Report, which will have a focus on issues of displacement and migration.

Additionally, Moving Minds involves external stakeholders in its own work. Meetings have included representatives from beyond the traditional ECD world, including experts in economics, migration policy, and humanitarian response. Similarly, the Moving Minds Alliance's advocacy working group will engage practitioners across sectors to target all stakeholders that have an impact on ECD. Finally, the alliance is actively exploring how to include the voices of refugee families themselves as part of its efforts. By including these diverse stakeholders directly in the work of the alliance, Moving Minds hopes to advance knowledge sharing in the field more broadly.

[w] Moving Minds is contributing to this effort by serving on the planning committee.

[x] Global TIES stands for "Transforming Intervention Effectiveness and Scale."

Purposeful networks understand how the network will shape the behavior of network participants, as well as the role of the network and its members in addressing a problem [Criterion 4b]

Moving Minds understands its unique role as a group of private funders and its ability to leverage this role to create change. First, Moving Minds is aware that it may never be able to fund the largest-scale interventions. Instead, it will focus on joint investment and advocacy to raise the profile of ECD and fund pilots that could be potentially scaled by larger funders.

Moving Minds is also engaging partner organizations beyond the foundation world. While initiated as a group of funders, Moving Minds is integrating implementation organizations into the network. These partners are invited to join working groups, attend regular meetings, and in the future may be included within the governance structure.

AREAS FOR INCREASED FOCUS

Effective knowledge sharing investments leverage what already exists before creating something new [Criterion 1b]

As Moving Minds continues its work supporting ECD in emergencies, it is mindful of the principle of avoiding duplication and leveraging what exists before investing in new solutions. As one external stakeholder advised, "There is the tendency to try to make the next beautiful resource, but it often already exists in some form."[89]

One of the goals of the working group on strengthening practice is to survey the existing resources available and determine if they should be augmented or adapted for use in crisis contexts.

As a funder group, the alliance also can encourage implementing organizations to avoid redundancy and leverage interventions that have already been developed. Interviews revealed several cautionary tales about humanitarian organizations creating redundant programs because of issues of competition and branding. As a funder group, Moving Minds is in a position to encourage the sharing and reuse of materials, as well as the development of unbranded resources and tools.

Conclusion

As an emerging network, the Moving Minds Alliance both exemplifies and can benefit from the model of knowledge sharing presented in this report. By assessing the current knowledge sharing infrastructure related to ECD in emergency and crisis situations, Moving Minds can better prioritize its investments and advocacy work. Further, as highlighted above, Moving Minds has embraced many of the criteria for effective knowledge sharing to improve coordination and maximize impact on an urgent issue.

A secondary school student in Uganda engaging in a science experiment. The school is a member of Global Schools Forum.

OMIDYAR NETWORK

Case study overview

This case study illustrates how the criteria for effective knowledge sharing can be applied to a specific funder and its investment strategy.

The case study includes three components:

- Background and overview of Omidyar Network
- A description of Omidyar Network's education sector investment strategy and how it relates to knowledge sharing
- An assessment of Omidyar Network's alignment with the criteria for effective knowledge sharing

Through these components, this case study will analyze how the criteria for effective knowledge sharing can improve the overall impact of a funder's investments and help the funder advance knowledge sharing within the overall education ecosystem. By outlining Omidyar Network's strategy and its rationale for embracing this approach, we hope other funders and funder groups will consider adopting the criteria for effective knowledge sharing when making investments.

Background

Founded in 2004, Omidyar Network is a philanthropic investment firm that seeks to "catalyze economic and social change" with a focus on creating impact at scale. In pursuing this mission, Omidyar Network takes a unique approach in both the type of funding it deploys and the strategic focus of its investments.

Unlike many social impact funders, Omidyar Network deploys capital in a broad range of ways, from commercial investments that achieve market returns to grant funding for non-profit organizations. Omidyar Network takes what it calls a "problem first, tool second" approach, prioritizing solutions to problems regardless of whether the operator is for-profit or non-profit. As a result, Omidyar Network invests flexibly across this returns' continuum.[90]

Driving Omidyar Network's deployment of capital is its sector-level approach. Omidyar Network invests across a handful of sectors, such as financial services, property rights, and education, with the goal of creating broad-scale change within these sectors. Omidyar Network measures the impact of its investees on two levels: the direct impact of the organization on end beneficiaries and the broader impact of the organization on the sector. The reason for this bifurcated approach is twofold.

First, Omidyar Network recognizes that the success of any single company or initiative is not only determined by the strength of its model or the ingenuity of its ideas, but also by the market conditions in which it operates. Therefore, Omidyar Network supports both operating organizations (for-profit and non-profit), who provide direct support and services, as well as market-level actors that may not directly provide services but create infrastructure and support for the entire sector. This includes ecosystem-level investments in "research, policy, advocacy, capacity development, networks, associations, etc." Through this strategy, Omidyar Network hopes to spur innovation and "drive the sector forward."[91]

Second, while infrastructure investments can help to accelerate progress for the operating organizations Omidyar Network supports and others in the field, Omidyar Network also recognizes that "our investees will never solve all problems or reach all people."[92] By supporting investments in the broader ecosystem, Omidyar Network increases the likelihood that promising models can be adapted and scaled in other countries and regions, thereby creating further sector impact.

An example of this approach comes from the field of microfinance. Omidyar Network was an early investor in many microfinance institutions (MFIs) in the developing world through both debt and equity funds. Most MFIs receive funding from the United States and Europe, but lend in the local currencies of the countries in which they operate—thereby exposing themselves to significant currency risk. To address this problem, Omidyar Network seeded and helped scale MFX—a company that offers currency hedging to MFIs and now other social entrepreneurs. This was a core piece of sector infrastructure missing from the market that was required for direct operators to succeed.[93] By filling this gap, Omidyar Network complemented its investments in MFIs and increased its impact on the field. It also helped enable other innovators to expand MFI models to new geographies. In its first decade, approximately 50% of the organizations supported by Omidyar Network were sector players who are not direct operators but support the overall sector ecosystem.[94]

Omidyar Network's education sector strategy

Omidyar Network describes its work in the education sector as motivated by a desire to increase equity and opportunity through education for individuals, families, and communities, so all people can contribute and thrive in a changing world. Beginning in 2013, Omidyar Network spent the first two and a half years of its work experimenting across education in the developing world to identify investments that could have a significant positive impact toward this end. Ultimately, Omidyar Network established three subsector focus areas, specifically for low-income and emerging markets:

1. **Innovative school models (ISMs)**—quality, affordable, innovative whole school models and public-private partnerships
2. **Education technology (EdTech)**—technology that enables impact at scale for teachers, families, and students

3. **Connected skilling**—workforce development that creates high returns for students (e.g., training directly aligned to future employment opportunities or accreditations that can lead to employment)

Within these focus areas, Omidyar Network's education strategy uses a similar investment model as described above. Omidyar Network seeks to catalyze change in the sector by investing in innovations that can help accelerate the field and by funding infrastructure that can support the sector as a whole. By combining these two approaches, Omidyar Network seeks to accelerate sector change.

In the case of the education sector, much of the core infrastructure needed is related to the elements of knowledge sharing outlined in this report. Since education is heavily dependent on a strong knowledge base and human capital, public goods, capacity development, and networks are especially relevant to support any investment in these areas. In the case of Omidyar Network, it combines investment in individual education organizations with support for public goods and networks in an attempt to shift momentum within the sector as a whole and help propagate proven practices.

First, in the area of ISM, Omidyar Network has pursued a strategy of investing in both new school models and a network to support them. Omidyar Network was an early funder of affordable private school models in Africa. To complement these investments, Omidyar Network was an initial seed funder of Global Schools Forum (GSF), an international network of non-government schools devoted to high-quality education for low- to middle-income families. Through annual forums, toolkits, webinars, an online platform, and common metrics, the network facilitates knowledge sharing and problem solving across similar schools globally, with the aim of improving the performance and long-term success of member schools and allowing similar models to be piloted in other geographies.

By combining these two investments, Omidyar Network hopes to "accelerate the affordable private school space by creating a network for global best practice sharing that is deeply informed by learnings from school operators on the ground and proven by exemplary innovators."[95]

Similarly, in Brazil, Omidyar Network is exploring EdTech investments in direct operators and foundational public goods to accelerate the sector. In 2017, the Brazilian government adopted new national learning standards, the Base Nacional Comum Curricular (BNCC). Since districts, schools, and teachers must adapt to meet the demands of these new standards, Omidyar Network views this moment as an opportunity to leverage new technologies to enable adoption of the standards and increase the quality of instruction. Working jointly with a local Brazilian partner, the Lemann Foundation, Omidyar Network is investing in companies, non-profit organizations, and other initiatives that support the implementation of BNCC and advance educational outcomes across Brazil. Since EdTech is an emerging sector in Brazil, Omidyar Network is also commissioning a research report on the characteristics of effective EdTech ecosystems. If successful, this research, a form of public good, could help inform policymakers, influence priorities for the sector as a whole, and catalyze additional investment from other funders. By pairing investment in innovative EdTech with actionable research on conducive ecosystems, Omidyar Network endeavors to enable broader change in Brazilian education.

While Omidyar Network's education strategy is still emerging, these examples demonstrate the potential complementarity of direct investment and investment in knowledge sharing. By embracing both types of investments as equally necessary to achieve results, Omidyar Network hopes to enhance its overall impact and more effectively contribute to advancing student learning outcomes in the developing world.

Criteria for effective knowledge sharing

Omidyar Network's education sector strategy is largely aligned with the criteria for effective knowledge sharing presented in this report. Below are key areas of alignment and a potential future area of focus for Omidyar Network.

AREAS OF ALIGNMENT

Effective knowledge sharing investments build on a clear understanding of how knowledge sharing will accelerate progress in the relevant context [Criterion 1c]

Omidyar Network invests in sector infrastructure with the goal of creating the foundations necessary for a sector to grow and innovative practices to spread. The criterion above is a precondition for determining the appropriate type of infrastructure to target for investment. In the case of Innovative School Models (ISMs), a network like Global Schools Forum (GSF) is needed to raise the global profile of these new models, share data to test their impact, and propagate best practices among operators. Omidyar Network's investment in GSF was rooted in an understanding of the knowledge sharing elements required to accelerate progress in this emerging field—an understanding stemming from Omidyar Network's direct investments in affordable private schools.

Effective knowledge sharing investments are made with a time frame and amount of investment sufficient to achieve and sustain the desired outcomes [Criterion 1d]

The case of Omidyar Network offers an interesting corollary to the criterion of sufficient investment. Not only should the time frame and amount of funding be sufficient, but the "type" of investment also should be appropriate for the desired outcomes. Omidyar Network is cognizant that actors providing key infrastructure need the flexibility and autonomy to drive impact in a sector. For example, GSF, in establishing a global network for new school models, had to adapt to an emerging field and prioritize the activities that would have the greatest impact on its members and the propagation of their models.

To facilitate this, Omidyar Network provided unrestricted grant funding to give GSF the necessary flexibility to adapt in an emerging field. Overall, Omidyar Network's default position is to fund general operating expenditures.

AREAS FOR INCREASED FOCUS

Purposeful networks understand how the network will shape the behavior of network participants, as well as the role of the network and its members in addressing a problem [Criterion 4b]

As its education sector strategy matures and its portfolio grows, Omidyar Network hopes to further share knowledge across its education portfolio and support further regional and global learning. In a recent stakeholder survey, education investees highlighted a desire to learn from other organizations in the portfolio and from Omidyar Network staff who work across multiple regions.

At a regional level, Omidyar Network has convened its portfolio for a number of years. For example, the firm has annually held "Omidyar Network Baraza" to bring together all Africa-based or Africa-focused organizations to discuss and share learning about topics such as leadership and entrepreneurism. It also holds a similar event, "Omidyar Network Haat," for its India-based portfolio companies. Omidyar Network's education initiative anticipates holding similar convenings focused exclusively on its education portfolio. In doing so, Omidyar Network will use its role as a global funder to promote knowledge sharing across borders among the members of its investee network.

Conclusion

While Omidyar Network's investment and education sector strategies preceded the work of this report, aspects of its approach demonstrate how the criteria for effective knowledge sharing can be incorporated in an investment agenda. Omidyar Network aims to maximize its impact by prioritizing the infrastructure needed within emerging sectors and applying an investment strategy that exemplifies many of the findings outlined in this report.

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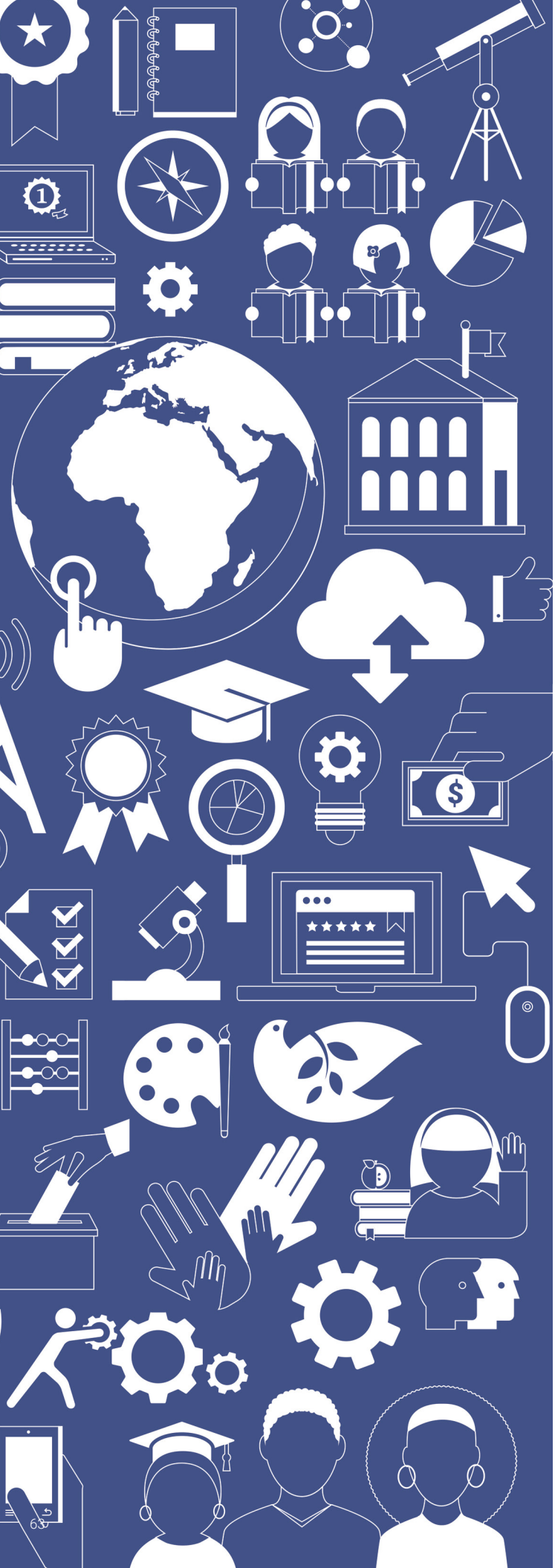

About the Education Commission and the Coauthors

the Education Commission

The International Commission on Financing Global Education Opportunity (Education Commission) is a global initiative encouraging greater progress on meeting Sustainable Development Goal 4 (SDG 4)—ensuring inclusive and quality education and promoting lifelong learning for all. The Commission is helping to create a pathway for reform and increased investment in education by mobilizing strong evidence and analysis while engaging with world leaders, policymakers, and researchers. The Commission was co-convened in 2015 by the Prime Minister of Norway, the Presidents of Malawi, Indonesia, and Chile, and the Director-General of UNESCO. The Commission is chaired by the United Nations Special Envoy for Global Education Gordon Brown and supported by 26 high-level Commissioners, including former heads of state and government, government ministers, Nobel Laureates, and leaders in the fields of education, business, economics, development, health, and security. For more information, visit: *http://www.educationcommission.org*.

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an initiative of مؤسسة قطر Qatar Foundation

Qatar Foundation, under the leadership of its Chairperson, Her Highness Sheikha Moza bint Nasser, established the World Innovation Summit for Education (WISE) in 2009. WISE is an international, multi-sectoral platform for creative thinking, debate, and purposeful action that has established itself as a global reference in new approaches to education. Through its range of events, including the biennial summit in Doha, its research, and a range of ongoing programs, WISE actively promotes innovation and participates in creating the future of education through collaboration. For more information, visit: *www.wise-qatar.org*.

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A Global Network

Teach For All is a global network of 48 independent, locally led and governed partner organizations that seek to develop collective leadership to ensure all children can fulfill their potential. Each network partner recruits and develops promising future leaders to teach in their nations' under-resourced schools and communities and, with this foundation, to work with others inside and outside education to ensure all children can shape a better future for themselves and all of us. Teach For All's global organization works to increase the network's impact by capturing and spreading learning, facilitating connections among partners, accessing global resources, and fostering the leadership development of partner staff, teachers, and alumni. For more information, visit: *www.teachforall.org*.

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This paper was prepared to advance the recommendations of the International Commission on Financing Global Education Opportunity and its report, *The Learning Generation: Investing in education for a changing world*. The views and opinions in this working paper are those of the author(s) and are not endorsed by the Education Commission or its members.

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