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OPEN EDUCATION STRATEGY

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INTRODUCTION

Open educational resources (OER) offer a promising solution to the perennial challenge of delivering high levels of student learning at lower cost. But OER offer much more than just cost savings. Well-designed, customizable, openly licensed materials can engage students and energize educators in ways that enable more responsive teaching and better learning. Our foundation's goal has always been to make such materials broadly and equitably available in order to expand and equalize access to knowledge and high-quality educational opportunities.

BACKGROUND

The Hewlett Foundation began supporting OER in 2002, and early efforts were geared toward an initial goal of seeing the use of OER develop and spread. We created legal and technical infrastructure, including tools to make OER easier to find. We worked to strengthen key institutions within the budding OER field, while backing advocacy efforts to unlock OER funding at the state and national levels. Further, we championed the development of guidelines and standards to improve the discovery, interoperability, and accessibility of OER.

By its 10th anniversary, the OER field had grown significantly and gained international support. Since OER was still not widely used in classrooms, however, the foundation shifted its grantmaking to promote the use of OER to address specific challenges. At the K–12 level, we helped districts move towards using openly licensed instructional materials to align with the newly released Common Core State Standards. At the higher education level, we addressed the steeply rising costs of college textbooks — which led students either to go without or to borrow class materials — by coupling support for the development of open textbooks for high-enrollment courses and even entire degree programs along with a variety of efforts to promote faculty adoption of openly licensed textbooks.

Today nearly one third of classroom teachers in the United States use OER to supplement their core materials, and college faculty are increasingly turning to open materials, often for core courses. While such progress is encouraging, OER have a long way to go to before becoming the presumptive classroom materials used in classrooms to improve learning *and* provide equitable access. Globally, the Hewlett Foundation has actively explored opportunities to grow OER in developing countries. A series of grants made in partnership with community libraries studied OER for early literacy instruction, demonstrating their value for young learners, which led us to explore strategies to engage local publishers and national governments in OER production. We also supported OER policies and content development in postsecondary institutions. With the approval of the UNESCO OER Recommendation

in 2019[1], a significant milestone for the field, 193 countries are now exploring OER policies and reporting annual progress.

Altogether, our OER investments over the last two decades have taught us fundamental lessons about what is needed to support and sustain effective teaching and learning with OER.

- **In higher education, cost savings are a compelling reason to adopt OER, but continued growth depends on demonstrating benefits for learning.** The emergence of OER helped solve the critical problem of rising textbook costs, both directly and indirectly through OER's influence on publishers. But as publishers compete away the price advantage of OER, continued use of OER by educators and institutions will depend on a widely shared body of evidence showing the impact on student learning outcomes.

- **In the K–12 education setting, standards-aligned OER are necessary, but without supporting tools and services, they are insufficient to deliver improved student outcomes.** Currently, few educators who use OER-based curricula understand that these materials are OER or use the open license to its full potential.[2] Teachers require professional support to learn how to take full advantage of the flexibility that OER affords in service of student learning.[3]

- **Research is needed to more deeply understand when and how open pedagogy and practices lead to improved student learning and engagement.** Research capacity in the field has grown over the last decade, yet we still do not know how open licensing of materials changes teaching practices or what effective open educational practices look like in different contexts and communities. To address questions such as these, new research is needed to examine pedagogy more deeply and ensure that the growing knowledge base reaches educators and policymakers.

- **Institutional capacity building is necessary to enable and sustain open resources and practices.** In higher education settings, overloaded faculty cannot be expected to manage the additional

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[1] Approval of the OER Recommendation represents a significant recognition of the concept of OER and its potential in education by governments around the world. Adoption of the Recommendation opens a way for open education advocates and organizations to work with governments on implementation of OER.

[2] Seaman, J. E., & Seaman, J. (2019). *What we teach: K-12 School Curriculum, 2019*. Initial findings.

[3] The 2018 Mathematica report on EL Education's Teacher Potential Project highlighted how high-quality OER paired with aligned professional support could improve teacher practice and student achievement. Choi, J., Richman, S., & Dolfin, S. (2018), *Sustaining Effective Teacher Practice: The Impact of the EL Education Language Arts Curriculum and Professional Development on Teachers' Instruction*. Retrieved from: *https://www.mathematica.org/our-publications-and-findings/publications/sustaining-effective-teacher-practice-the-impact-of-the-el-education-language-arts-curriculum*

burden required to create and adapt OER without assistance. Enabling OER adoption and use requires collaboration among faculty, librarians, and instructional designers, while coordinating and structuring this work calls for financial, political, and social support from the institution. At the K–12 level, absent strong district leadership, successful adoption of OER with appropriate support for teachers is unlikely. Building institutional capacity is thus critical for the success and sustainability of OER initiatives.

- **OER-friendly policies can spearhead changes in the field.** Policy advocacy has generated federal and state funding as well as global policy change. Almost half the states in the U.S. have considered OER legislation in the past few years, and this trend is accelerating. At the global level, in 2019 UNESCO adopted the OER Recommendation. These policy commitments will need ongoing support to create a sustainable infrastructure for OER.

- **New business models are necessary to propel and sustain the growth of OER developers and publishers.** Without growth capital, OER developers and publishers may never reach minimum viable scale; they will either go out of business or remain undercapitalized niche players with little capacity to reach the mainstream. Some organizations have made significant headway in the last few years, but have yet to solve the problem of sustaining openly licensed content absent philanthropic or government investment. Finding new funding models and partnerships capable of securing the financial stability of OER producers is an imperative need for the field.

- **Networks must evolve to serve the needs of diverse communities of educators and learners.** Networks that comprise individuals, organizations, institutions, and governments are critical for the OER field to remain healthy and continue maturing. While such networks are growing, the field still struggles with issues of inclusion.

- **Equity matters.** The malign influence of inequities in education has been persistent. Done poorly, OER can exacerbate these inequities, enabling well-resourced institutions and communities to take advantage of new opportunities in ways poorly resourced institutions and communities cannot. But attended to properly, OER can be a powerful tool to rectify inequities, not only by making high-quality materials available but by giving educators the power to make these materials culturally relevant and thus more effective.

OUR GRANTMAKING STRATEGY

The long-term success of OER depends on decisionmakers adopting OER because these materials enable teachers to innovate and flexibly adapt instruction to better serve their students' learning needs. Research shows that the content of educational materials alone does not drive student learning outcomes. Therefore, promoting OER merely as a replacement for traditional materials taught in traditional ways would not be a particularly meaningful strategy.

> The goal of our Open Education strategy is to strengthen every student's learning experiences by the effective use of open educational resources and practices.

This goal statement reflects a systemic approach to implementing OER that incorporates both resources and practice. The goal includes supporting educators and students with the necessary training, tools, and services needed for the effective use of OER. Integral to this approach is attending to inequities in educational opportunities beyond mere access to openly licensed materials; these materials can be used to level up *every* student's learning experiences and outcomes.

OUR STRATEGIC PRIORITIES

Our work has three main priorities: developing pedagogy, practice, and content; building capacity for educational institutions to integrate and implement OER; and developing an inclusive, responsive field.

1. Develop effective pedagogy and practice along with content.

Organizations and institutions that distribute and use OER must think beyond adoption to develop plans and tools for using these materials to improve pedagogy. We want to focus on OER content that is accompanied by or can be integrated with tools and services that use it to promote better learning among all students. This goal means prioritizing programs that co-develop materials and professional learning support, and finding partners that create culturally and linguistically responsive OER and support services. We also aid in research that adds to a coherent body of evidence about teaching and learning with OER — identifying which practices improve learning outcomes, for which students, and under what circumstances.

2. Build capacity for schools, districts, and higher education institutions to integrate and implement OER.

Public schools, which together constitute the "mainstream" in education, face a number of bureaucratic obstacles when it comes to accessing, adapting, and using OER. Their freedom and flexibility are affected or limited by preexisting relationships with vendors, procurement policies, and contract provisions related to professional development, as well as various other administrative realities. Overcoming such obstacles requires intentional focus and strong partnerships with organizations that can help school districts and higher education institutions build capacity for OER efforts. In the K–12 context, for instance, we would like to work with school districts both to aid OER procurement and to help design and implement professional learning activities that advance their use. Our work with colleges will focus on encouraging institutional support for new content and courses, faculty

development, and research on student learning outcomes. Identifying supportive state policies and removing existing barriers to adoption and implementation must also be part of these efforts.

3. Develop an inclusive field that is responsive to diverse educators and learners.

While the field of OER is growing, it is not as diverse or inclusive as it could or should be. As the field expands and evolves in communities around the world, a new generation of leaders is coming together. To make room for these new voices and perspectives, we intentionally orient our global portfolio and field building toward organizations with leadership in regions outside North America and Europe. We hope to build a diverse network of OER researchers by maintaining a concerted focus on pedagogy and practice in different communities. We also will foster connections that support and track progress in countries working to implement UNESCO's OER Recommendation.

OPEN EDUCATION SUBSTRATEGIES

To make these strategic priorities concrete, we divide our grants among three lines of work: promoting more effective use of openly licensed content, tools and services; helping educational systems implement and sustain open education policies and practices; and supporting a diverse and inclusive global field. The first two categories are closely related, together accounting for approximately 75% of our grant dollars.

1. Educators use openly licensed content, tools, and services to serve different learners more effectively.

We need to make sure that teachers understand how to take advantage of the flexibility of openly licensed resources and are equipped with the knowledge and tools to customize materials for different students. To help attain this goal, OER must be designed to be responsive for every learner. Thus, we couple support for diverse teams of educators creating content with support for complementary, evidence-based teaching and learning practices that emphasize principles of equity and inclusive design. A robust research agenda will demonstrate how OER and related practices can be used to meet different learners' needs.

Curriculum and teacher support. We prioritize the design and study of whole-course curricula with accompanying support for educators (e.g., core materials, supplemental lessons, assessments, and teacher development options). We back programs that simultaneously develop openly licensed content, boost teacher practice, and reflect principles of equity and inclusion. We also seek to partner with groups focused on developing materials that are responsive to cultural and linguistic differences, as well as different learning abilities.

Research on effective use. When teachers experiment with new approaches or adapt materials for different learners, we need to understand if and how these changes impact student learning. Our grantees reflect partnerships among curriculum development teams, educators, and researchers to

document what happens in classrooms, namely the interactions between teachers and students, and the way these interactions affect student learning and engagement. This research provides practical guidance to educators by allowing them to understand which methods are working best for which students. Further, the research shapes the iterative design and improvement of instructional programs, and models the true benefits of OER.

Ensuring the financial health and viability of developers. OER publishers and service providers are now finding success in the market but are still looking for sustainable business models that can meet market demand without ongoing philanthropic investment. This need sometimes requires that we underwrite and incentivize new OER delivery models and partnerships. It also requires strong emphasis on educational policies that facilitate shifts in government and institutional procurement practices on a sustained basis, which is addressed by our work with systems.

2. K-12 districts and postsecondary institutions implement and sustain open educational resources, practices, and policies.

We are aware that our success may hinge to some extent on upending or revising existing educational processes, so we must work with leaders to overcome bureaucratic obstacles. Implementing and sustaining OER depends on policy decisions surrounding several issues: the adoption and procurement of materials, incentives for educators to use and share materials, and teachers' access to appropriate professional learning opportunities. Collaborating on these issues with systems leaders is essential to our ability to implement OER within and across schools; recognizing that different geographical contexts greatly alter options for OER adoption and use, we will pursue partnerships with systems primarily in the North American context.

K–12 education. We aim to develop new partnerships with a small number of districts that are committed to using OER, where we can learn about systemwide policies for adoption and effective implementation. For instance, we might aid in OER procurement, or help design and implement professional learning activities that advance the use of these new materials. As with Hewlett's K–12 Teaching and Learning Strategy, we plan to distill key lessons from this work into a "playbook" that can be adapted and employed by other districts. We will leverage these lessons through existing networks where educators can share practices about adopting and employing OER as part of coherent instructional systems.

Postsecondary education. Our work in the postsecondary context builds on our partnerships with state-level systems, for example in California and Maryland, and province-level systems outside of the U.S., such as British Columbia. To ensure that OER reach a diverse array of postsecondary institutions, we pursue partnerships with highly visible systems and schools that teach historically underserved students (e.g., community colleges, HBCUs, tribal colleges). We build OER capacity in higher education through organizations that arrange and facilitate convenings and provide technical assistance to help colleges and universities coordinate open education policy and practices with other types of initiatives.

We also directly cultivate OER pedagogy by supporting organizations that offer coaching and other aids to help faculty improve instructional practices.

Communications and advocacy. Our communications and advocacy work engages decisionmakers on larger questions about what stronger teaching and learning should look like, what kinds of tools are needed to promote it, and where OER fits in these plans. We also help grantees with their messaging, media relations, and other needs as they arise.

3. A diverse and inclusive global field shares open content, practices, and resources.

Mindful that momentum in the field is global in nature, we need to engage a diverse set of educators, scholars, and policymakers. Our field-building efforts include lines of work focused on increasing grantee collaboration; promoting diversity, equity, and inclusion; building research capacity; and attracting new funding.

Grantee collaboration. We work with a number of organizations that arrange global and regional convenings for networking and knowledge sharing. Now that we have the UNESCO OER Recommendation, it is important that a strong coalition of organizations — including leadership from the Global South — actively support ministries of education in building capacity to fulfill its terms.

Diversity, equity, and inclusion. To build long-lasting capacity to sustain effective use of OER, we identify local leaders around the world who are working on open educational policies, learning materials, and research. We also provide organizational effectiveness grants to improve practices around diversity, equity, and inclusion so that grantees are better equipped to meet the needs of more educators and students.

Research capacity. We continue to build research capacity by supporting graduate students and faculty mentoring networks that bring new researchers into the field and launch additional areas of scholarship. The networks also provide a setting to learn about and share different cultural perspectives and methodological approaches.

Recruiting new funders. We look for opportunities to attract and partner with other funders. Ideally, our hope is to find partners willing to make open educational resources, practices, policies, and research direct strategic priorities. We also engage funders who support aspects of open education as an element of their portfolios.

MAPPING OUR PROGRESS

Some of the work under these substrategies is new to this team, whereas other aspects build on efforts we have supported for some time. Table I below offers a quick glance at the investments that are

longstanding, those that are new to this latest iteration of our OER strategy, and those that are slowly winding down.

<div align="center">Table I</div>

Continuing	New	Wind Down
Develop openly licensed course materials, tools, and supports that enable effective pedagogy and use of OER **Support the sustainability and financial health of OER developers and service providers** **Support and study OER implementation through partnerships with higher education institutions and systems in North America** **Share new knowledge and practices through networks of schools, districts, and states** **Hone messaging to build and defend policies and practices that promote and spread awareness and use of OER** **Build research capacity** **Develop strategic partnerships with funders**	Prioritize designing for equity and inclusion in open-licensed course materials, tools, and supports Build evidence base to examine how OER and practices can enable deeper learning outcomes in the U.S. and internationally Support and study OER implementation through partnerships with K–12 districts in the U.S. Engage diversity of people, institutions, and organizations to lead and participate in the field	Develop pedagogy-agnostic platforms and tools Support stand-alone research projects that do not inform a coordinated research agenda Provide open-ended assistance for large-scale networks

These investments will be accompanied by a learning agenda, allowing us to determine whether our efforts are making progress and adjust if they are not. That agenda includes both implementation markers and formal evaluations.

Implementation markers work as a tool for monitoring whether and to what extent we are making concrete progress toward our goals. They also explicitly call out and focus attention on contextual factors that may accelerate or inhibit progress. As the field's direction becomes clear, we expect these factors to be refined and augmented. However, a few factors we anticipate monitoring include the number and diversity of rigorous studies on teaching and learning with OER, the number of large districts that adopt OER with aligned professional development, and the number of countries implementing policies and practices informed by the UNESCO OER Recommendation.

We also have an evaluation plan that includes **formative research** to inform near-term goals and activities and a **summative evaluation** to synthesize lessons learned over time. On the formative side, we anticipate three lines of inquiry to provide evidence about how open educational resources and practices are being used and supported currently, for example: *Are there systematic differences in who is successfully engaging with OER, and, if so, why? How are K-12 districts and postsecondary institutions adopting policies that foster the procurement and effective use of OER, and how are they supporting teachers and students? How well are existing OER networks serving the needs of key stakeholders?*

Our summative evaluation plan, by contrast, lays the groundwork for a later, larger assessment of progress within and across substrategies. It includes important questions about the strategy as a whole: *To what extent and how well does our funded work align with what we set out to accomplish? Are we making progress toward our intended outcomes? Are the assumptions we made about* how *change will happen being borne out? What social, political, and contextual factors have facilitated or inhibited progress?*

CONCLUSION

Nearly two decades of patient work have clearly demonstrated OER's role in democratizing knowledge and empowering learners around the world. We have worked diligently in that time to address pressing problems in education and have successfully shown that OER can break into the mainstream. Openly licensed materials have never been more widely used than they are today -- from community libraries in Ethiopia to middle schools in Detroit and universities around the world. But the field is at a turning point. We know OER works in mainstream education, and now we need to show how can OER change education for the better. Can OER reduce the stratification in learning outcomes that has long challenged our education system? Can OER be integrated into established bureaucracies and compete in a sustainable way with the established for-profit textbook industry? These are the types of questions our strategy now seeks to answer.