

OPENING UP EDUCATION

The Collective Advancement
of Education through Open Technology,
Open Content, and Open Knowledge



edited by
Toru Iiyoshi and M.S. Vijay Kumar

Foreword by
John Seely Brown

Opening Up Education

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For more than a century, The Carnegie Foundation for the Advancement of Teaching has been dedicated to promoting the profession of teaching and the improvement of teaching and learning in the nation's colleges and schools. The Foundation has demonstrated that the role of educational leaders is to define the impact of education on students intellectually, practically and morally, and to develop new ideas and tools to foster positive change.

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HIGHLIGHTS FROM

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THROUGH OPEN TECHNOLOGY,
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A PUBLICATION OF



THE CARNEGIE FOUNDATION
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“By making educational assets free, open and accessible,
the open education movement is beginning to radically
change the ecology and economics of education.”

–Toru Iiyoshi and M.S. Vijay Kumar

Introduction

Education's history is one of expansion and innovation, continuously increasing the number of people educated while also growing the number of ways *in which* they are educated. In other words, the history of education is a narrative of opening up education.

Over the last few decades, new technologies such as the personal computer, interactive multimedia and the Internet have continued to extend educational opportunity; but unfortunately, too many educational innovations have remained in isolated and closed domains, rarely shared across classrooms or disciplines. Thus, educators have found it difficult to advance their pedagogical practice and knowledge as a community.

In response, an emerging open education movement in higher education and beyond is now transforming the landscape. By making educational assets free, open and accessible, the movement is beginning to radically change the ecology and economics of education. This can be seen in the upsurge of publicly shared course websites and lecture videos from colleges and universities. Institutions have also formed consortia to co-develop open-source educational technologies, creating new models of collaboration for the production and distribution of educational resources. Additionally, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and other international agencies are sponsoring forums to actively explore the viability of open solutions to address large-scale educational reform. As a consequence, countries are beginning to grapple with how the movement can bring vitality and relevance to curricula, and are rethinking their educational infrastructure to better support open education.

Despite the growing interest in and availability of these educational tools and resources, opportunities to improve teaching and learning—from a single classroom, to creating the educational capacity for nation building—are still being missed. *Opening Up Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge* addresses the gap between technological capability and intellectual capacity. The book shares the contributors' visions and offers recommendations to “open up” education in ways that can dramatically advance learning and teaching.

A Thought-Provoking Book for Educators

The 30 reflective and generative essays in *Opening Up Education*, by prominent leaders and thinkers, address the central question: How can open educational tools, resources and knowledge of practice improve the quality of education? The contributors reflect on current and past open education initiatives and offer critical analyses. They explore—from the viewpoint of faculty, researchers, academic technology experts, administrators, directors of major open education projects, and program officers and scholars from granting and research foundations—what challenges need to be addressed, what opportunities should be seized, and what potential synergies can be realized for a better future for education.

Opening Up Education vigorously investigates and actively considers the impact of open education on the micro and macro levels of education practices. It issues a wake-up call to the educational community to not under-explore the potential of open education for reinventing and energizing education, and it creates a structure for future work.

The Open Education Summit

In September 2006, the Open Education Summit was convened at The Carnegie Foundation for the Advancement of Teaching in Stanford, California. The Summit brought together the book's contributors to explore and articulate their visions for open education, and to discuss emerging issues in this rapidly growing area.

A key open education tenet the editors emphasized at the Summit was *education can be improved by making educational assets visible and accessible and by harnessing the collective wisdom of a community of practice and reflection*. With this tenet in mind, the authors participated in an exercise where they critically reviewed and reflected on the open education movement. To help establish coherence within and across the book's sections, the authors were also asked to consider the following dimensions:

- The implications and educational value of open education initiatives;
- The micro and macro factors that might accelerate open education initiatives towards making a larger impact on education;
- The means and mechanisms to effectively develop and share educational innovations and pedagogical knowledge.

The Recommendations in Brief

To help accelerate the advancement of effective teaching and learning beyond the mere free dissemination of educational tools and resources, the editors of *Opening Up Education* offer recommendations to learners, practitioners, educational researchers and planners so that they may proactively construct new learning environments that take advantage of open education, better prepare for open education's unintended consequences, and help shape a collective agenda for open education's future.

Investigate the Transformative Potential and Ecological Transitions

While open education efforts have largely been confined to attempting to improve what educators already do, the editors encourage readers to consider approaches that transcend traditional practices, organizations, disciplines and audiences. They argue that current and future energies should be directed toward addressing opportunities that may recast the role of the university and formal education in light of an open world, such as blended and boundary-less learning environments that combine the physical and virtual, integrating conventional pedagogical methods with innovative network-based learning.

As the idea and practice of open education expands, it becomes increasingly critical to undertake systematic and systemic studies to better understand and clarify how the traditional roles of educator and educational institution should be redefined in order to be more effective in a learning environment empowered by technology-facilitated open education.

Change Education's Culture and Policy

Higher education places a high premium on originality, whereas adapting or improving another's educational materials is rarely understood to be a creative or valuable contribution. Thus, while scholars are expected to build on the work of others in their disciplinary research, teaching is largely treated as a private, highly territorial enterprise.

“OPEN EDUCATION DEMANDS A FRESH PERSPECTIVE ON RESOURCES AND RELATIONSHIPS.”

Open education demands a fresh perspective on resources and relationships. A significant first step towards creating new education models is to build receptivity to open resources at many levels through effective professional and leadership development. To transform teaching and student learning, educational institutions need to allocate resources towards building faculty and student capacity in the use of open educational tools and resources.

RECASTING TRADITIONAL ROLES

- Does open education shed new light on the persistent, hard problems of education with respect to access and quality, and perhaps offer new solutions?
- Does it provide a fresh look at the practice of education, necessitated by the flatness and fortunes expected of the new global dynamics of mobility and emerging economies?
- What new pathways does open education offer to improve education as a whole?

Make Open Education Solutions Sustainable

While the sustainability of individual open education initiatives is certainly an issue, educators need to address the larger impact open education will have on their ability to bring sustainable solutions to the challenges facing institutions—as well as to themselves and society at large. With this more expansive perspective in mind, the editors identified three critical dimensions that open education efforts need to address: (1) programmatic and technical integration; (2) synthesis and synergy; and (3) governance.

Programmatic and Technical Integration

Education establishments must discuss and integrate open education initiatives into their missions; if open education efforts are not tightly integrated with educational program priorities and delivery infrastructure (technical and organizational), they will be marginalized and their value under-realized.

Synthesis and Synergy

The early stages of the open education movement witnessed the launch of several open initiatives around the world, focusing on different educational audiences and programs. Now at a point of maturation, the movement would benefit from a focus on synthesis and synergy, rather than separation. Foundations and sponsoring agencies can advance the sustainability of open education by directing support for multi-institutional initiatives and targeting resources for investigating organizational and business models for sustainability and growth.

Governance

Governance is one of the most important areas affecting the sustainability of open education initiatives. It can advance coherence and efficiencies in the movement, but is challenged by two significant and defining open education characteristics; namely the *collectivity* of the movement, and the *widely distributed nature* of the movement. Issues related to locus of control, authority, and boundary agreements; as well as the processes for sharing, decision-making, resource allocation, and even certification need to be examined.

Make Practice and Knowledge Visible and Shareable

Open education adds another dimensionality to the scholarship of teaching and learning by facilitating community inquiry and discourse, making diverse pedagogical know-how visible and transferable in intellectually engaging ways. However, in order to realize this promise and catch up to the burgeoning availability of open educational goods, educators and institutions need to build their intellectual and technical capacity to create and share quality educational knowledge, and transform “tacit knowledge” into “commonly usable knowledge.”

Build the Commons through the Collectivity Culture

The systemic nature of change requires that the synergy among open education efforts and other education initiatives be explored so that locally-created educational assets can be harvested, accumulated and distributed in a manner that is reusable in different local contexts. By employing powerful multimedia, data mining and analysis, knowledge management, and social and semantic network technologies, open education could help people around the world find and use appropriate educational tools, resources and knowledge of practice that advances their local learning and teaching. Ideally, this will enable learners and educators to contribute back to an ever-growing global knowledge-base of open education, thereby leading to a spiral of educational transformation efforts.

Fostering the collectivity culture and harnessing its power will require the creation of conditions favorable to the spawning and sharing of new ideas and models. This will require policies and practices that reward openness, as well as support programs for monitoring diversity and quality.

An Invitation to Educators & Institutions

The palpable open education movement that is afoot presents the opportunity to redefine, rethink and rearticulate educational practice. It offers the mechanisms needed to harvest, accumulate and distribute locally created educational assets and pedagogical innovations in order to advance teaching and learning globally. The editors of *Opening Up Education* urge learners, practitioners, educational researchers and planners to connect the open education movement to the ongoing educational improvements and transformation efforts at their institutions and organizations.

Through the support of The Carnegie Foundation for the Advancement of Teaching, an electronic version of this book will be openly available under a Creative Commons license on The MIT Press website at www.mitpress.mit.edu.

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