The World Is Open

In this epic effort, Dr. Bonk takes the technologies, the opportunities, the future, and even the past of distance education and synthesizes it into a comprehensible landscape. He gives us a window from which we can see it all. Masterful.

—ELIZABETH GAINES, vice president, OLC

“Network technology has proven to be a great social leveler and on-ramp to redistributed educational resources and its implications for lifting educational opportunity for students and educators to collaborate, learn, and educate will grow exponentially as well. This book captures the true potential of technology and open and shared content to eliminate the educational divide. For this reason, The World Is Open is required reading for all participants in the world’s ongoing, technology-led education revolution.”

—SCOTT MCNEALY, chairman and co-founder, Sun Microsystems and founder, Curriki.org

“Dr. Bonk has brought together the key ideas underlying this wave of disruption in an engaging and provocative format. Read Bonk and be changed.”

—MARTIN DOUGIAMAS, founder and lead developer of Moodle; executive director of Moodle Pty. Ltd.

“As everyone now knows, thanks to Thomas Friedman, the world is flat. And now, thanks to Curtis Bonk, we know that the world of learning is open. Anyone with Internet access can now connect to the world’s best universities, museums, and research centers. Professor Bonk chronicles this profound shift in the global landscape. He gives us a window from which we can see it all. Masterful!”

—ELLIOT SOLOWAY, Arthur F. Thurnau Professor, University of Michigan and co-founder of Edutopia magazine and edutopia.org

“In this important work, Curtis Bonk explores ten key trends that together make up the WE-ALL-LEARN framework for understanding the potential of technology’s impact on learning in the 21st century. Web Searching in the World of e-Books E-Learning and Blended Learning Availability of Open Source and Free Software Leveraged Resources and OpenCourseWare Learning Object Repositories and Portals Learner Participation in Open Information Communities Electronic Collaboration Alternate Reality Learning Real-Time Mobility and Portability Networks of Personalized Learning

In addition, this important resource contains compelling interviews that capture the diverse global nature of the open educational landscape from those who are creating new learning technologies as well as those who are using them to learn and teach in new ways. Using the dynamic ‘WE-ALL-LEARN’ model, learners, educators, executives, administrators, instructors, and parents can tap into the power of Web technology and unleash a world of information.”

—ELLIOT SOLOWAY, Arthur F. Thurnau Professor, University of Michigan and co-founder of Edutopia magazine and edutopia.org
More Praise for The World Is Open

“If you wonder how schools will evolve in the information-rich Internet Age—if you’d like to ‘see’ what that looks like—this book will show you. Dr. Bonk provides compelling examples of twenty-first century education, and his stories will leave you wondering why we aren’t doing more to ensure that online and blended learning opportunities are available to every student. Picking up on Friedman’s theory regarding the democratization of the workforce, Dr. Bonk explains the ramifications for learning in a globally connected world. This book paints almost endless possibilities in a world where we can now connect young and old across time, culture, language, and geography. It will leave you wanting to open doors for students everywhere.”

—Julie Young, president and CEO, Florida Virtual School

“Taking his inspiration from Thomas Friedman’s The World is Flat, Professor Bonk’s book The World is Open: How Web Technology is Revolutionizing Education, is a personal account, written in an unabashedly post-modern stream-of-consciousness style, of how the Web of Learning has changed him and is transforming the world. Like Friedman he writes from the American experience but draws global implications. This is a book that all involved in eLearning should dip into for inspiration.”

—Sir John Daniel, president and CEO, Commonwealth of Learning

“It has become a truism to say that the world in which we live is changing rapidly. The task now at hand is to understand the trends and harness their power. In no area is this more important than in education, where we must meet the challenge of a high-quality education for all the citizens of the world. And in Professor Bonk’s new book, The World Is Open, he provides a powerful tool to help us meet that challenge. He argues that because of the Web ‘anyone can learn anything from anyone at anytime.’ But his work extends beyond this basic premise. He defines and documents the specific trends that are influencing how and where learning takes place so that they can be put to use by a wide range of audiences. This important book helps us deliver the education revolution.”

—Gaston Caperton, president, The College Board

“Curt Bonk has captured the essence of the wondrous digital empowerment practices and philosophies in today’s highly networked world. From his book, you will learn that educational technology entrepreneurship is a splendid kind of virus to be infected with.”

—Paul Kim, chief technology officer, Stanford University School of Education

“We have an educational economy of information abundance confronting an educational delivery system that was built for a time of information scarcity. Bonk outlines a practical and comprehensive road map for navigating the explosion of open educational resources and how they can be used to prepare ourselves and our students for a lifetime of learning and discovery.”

—Lev Gonick, vice president, Information Technology Services; chief information officer, Case Western Reserve University
“In the age of ‘fingertip knowledge,’ curiosity is the key to learning. Curtis Bonk’s The World is Open book provides a powerful perspective of how we organizations and individuals can harness the power of global knowledge and content to drive performance and learning.”

—Elliott Masie, chair, The Learning Consortium at The Masie Center

“Curtis Bonk opens our eyes to the world of open education, where learning can take place anytime, anywhere we have access. This book is filled with powerful stories that paint a new picture of what learning can become if we understand the potentials of this new Web. It’s a must read for educators, and, more importantly, for learners.”

—Will Richardson, co-founder, Powerful Learning Practice, and author, Blogs, Wikis, Podcasts, and other Powerful Web Tools for Classrooms as well as the highly popular edublog, Weblogged

“The World Is Open is such an inspiring story for the twenty-first century. The subject matter is especially important to me because I use online learning technology to learn and to teach. I love how the stories of people using technology to learn make the book so relevant. Not only is each story inspiring and motivational, but they are also practical, providing many ways for readers to open their own world of learning.”

—Adora Svitak, 11-year-old teacher, author, speaker

“Technology has historically been an appendage to education because it has not been integral to the mission of dispensing information. Dr. Bonk provides a glimpse into the future of learning, in which technology plays a central role by fostering an egalitarian knowledge frenzy where learning is open and unconstrained by classes and schedules. Bonk exploits Web 2.0 technology to make a quite compelling case.”

—David Jonassen, distinguished professor, Educational Psychology and Learning Technologies, University of Missouri

“Professor Bonk’s insightful book provides a panoptic and inspiring rendering of our new era of pervasive access to learning resources and social networks for open education. What a fun read!”

—Roy Pea, professor of Learning Sciences and Education, Stanford University and director, Stanford Center for Innovations in Learning

“Online learning is an important innovation that expands opportunities for students through improving access to new pathways. The World is Open brings new ideas, provides deep insight, and encourages a new way of thinking about education. The book also provides key strategies, resources, and tools for e-learning that will help administrators, teachers, parents, and students globally.”

—Susan Patrick, president and CEO, International Association for K-12 Online Learning (iNACOL)

“A very interesting read, that is equally applicable to educators, trainers, learners, managers, strategists as well as technology specialists. We are at the brink of educational evolution and the ten trends of WE-ALL-LEARN provide a framework of how we can
embrace this evolution. Education is no longer a luxury but a human right—we are all
learners and WE-ALL-LEARN. The world is open and it is now time to embrace that
openness for the benefit of society. This book is a must have for all, that has real life
examples with technologies that are available now.”

—Stefano Ghazzali, CMALT, FHEA, FRSA, program development manager,
Manchester Business School, University of Manchester

“The World is Open gets to the heart of the way ten key technologies are changing the
way the world learns and making a flatter world possible. Dr. Bonk offers a new and
exciting way to look at the transformation of education from the classroom to an open
world of learning technology. Because it is accessible and readable, The World is Open
will appeal to a wide range of audiences from educators to business leaders. I’m glad to see
that the power of social networking in education is recognized for the transformative
power that it will bring.”

—Shirish Nadkarni, CEO and co-founder, Livemocha

“Curt offers an insightful and perceptive view of the technological trends that are
converging to transform learning to become more global, collaborative, personalized,
empowering, ubiquitous, and open. Filled with enlightening and inspiring real-life stories
from those successfully using these emerging technologies, this book on open learning
trends will be an eye opener and useful guide for many!”

—Gary H. Marks, executive director and founder, Association for the Advancement of Computing in Education (AACE)

“Openness may be the previously missing ingredient that finally enables meaningful
educational reform by increasing transparency, affordability, local control, and account-
ability. In this timely volume, Bonk provides a wonderfully readable look at where
openness is taking education, what it means for learning, and what should excite or
concern us about the future.”

—David Wiley, associate professor, Brigham Young University;
chief openness officer, Flat World Knowledge; and founder and board chair,
Open High School of Utah

“A riveting guide to the future of learning and education. This book should be
compulsory reading for all who seek to understand the driving forces of this century.”

—Joon Mo Kwon, CEO, Nexon Corp

“Those who know Curt are used to insightful advice and predictions delivered in an
innovative style. The World is Open: How Web Technology Is Revolutionizing Education
does not disappoint! It is a chance to relive much of recent history of technology-
enhanced learning but then discover innovative ideas to take forward within a practical
framework. All this is enhanced with stories and examples presented in a way that
cannot fail to enthuse all those who read them to find their place in the new world of
open learning.”

—Nigel Banister, chief global officer and CEO, MBS Worldwide, Manchester Business School
“Virtual worlds, mobile learning, social networking . . . these are just three of the ten key trends that Curtis Bonk has identified in his informative book on the future of learning. Drawing on examples from around the world and through the use of illustrative stories, he brings to life how changing technologies and social trends are impacting learners of all ages.”

—Heidi Fisk, executive director and co-founder, The eLearning Guild

“The current economic crisis is punctuating the shift from an industrial to a global knowledge economy and society. Profound changes in learning are at the heart of this transformation as people and organizations can be plugged into a global, open platform of networked knowledge and intelligence. Read this extraordinary book to understand how.”

—Don Tapscott, chairman, nGenera Insight; adjunct professor, Rotman School of Management, University of Toronto; and author of thirteen books about the new technologies in business and society, most recently Wikinomics and Grown Up Digital

“In this thoughtful new book, Curt Bonk’s research and observations mirror what we in iEARN have seen since 1988. Teaching and learning are being impacted by connective technologies in ways that creative education practitioners discover daily. No longer is information, wisdom, and critical analysis the sole domain of libraries, ‘experts,’ or even teachers in the front of passive students who absorb what they are told. The Internet and other technologies reveal that students, with invaluable teacher facilitation, can learn through interaction with people anywhere in the world, coming to their own critical conclusions, posing new inquiries, and generating amazing intellectual and creative work.

Just as importantly, students are comfortable with change, easily adapting to new technology tools and taking for granted that learning is not just something done during school days, but is a life-long endeavor. An early iEARN pioneer from Argentina noted that ‘No one knows so little that s/he cannot teach another and no one knows so much that s/he cannot learn from the other.’ Professor Bonk’s illustrative stories of how technology can enhance learning confirm that through technology students can go beyond learning about the world to learning with the world.”

—Ed Gragert, executive director, iEARN-USA
The World Is Open
How Web Technology Is Revolutionizing Education

Curtis J. Bonk
This book is dedicated to the memory of Chris Essex (February 19, 1965–April 17, 2007), student, teacher, instructional designer, writer, rocket builder, music lover, podcast partner, colleague, technology guru, and friend to all, who helped show me and countless others the open learning world.
Contents

Introduction to the Open Learning World

1 We All Learn 25

2 To Search and to Scan 55
   Opener #1: Web Searching in the World of E-Books

3 E-Demand Around the Globe 91
   Opener #2: E-Learning and Blended Learning

4 It’s a Free Software World After All 139
   Opener #3: Availability of Open Source and Free Software

5 MIT in Every Home 163
   Opener #4: Leveraged Resources and OpenCourseWare

6 Portals for the People 183
   Opener #5: Learning Object Repositories and Portals

7 Making a Contribution 203
   Opener #6: Learner Participation in Open Information Communities

8 Collaborate or Die! 249
   Opener #7: Electronic Collaboration and Interaction

9 Who Are You? 275
   Opener #8: Alternative Reality Learning
Contents

10 U-Learning? 293
   Opener #9: Real-Time Mobility and Portability

11 Learning at Your Service 327
   Opener #10: Networks of Personalized Learning

12 The Treasures and Traps of This Open Learning World 355

Acknowledgments 409
The Author 415
Endnotes 419
Index 461
Introduction to the Open Learning World

COOL SUMMER DIGS

Our first week in Hope, British Columbia—a small town on the banks of the Fraser River—has been exciting. This area of B.C. is extremely lush and vibrant, covered in vegetation and full of waterways. We have begun work at Welqímex—a once large settlement on a now uninhabited island—where we are currently hacking through dense forest undergrowth to re-establish paths across the site.

I now consider myself proficient with a machete and a hatchet (skills that I didn’t expect to acquire), and I am surprised at how much work precedes an archaeological excavation. We are building trails, clearing deadwood from archaeological features, setting up sieving stations, and even digging and building an outhouse. It’s tiring, but at the end of the day when we turn around and look upon all that has been accomplished, the hard work is immensely gratifying.

Despite being overgrown, the forest is beautiful, and I have observed many wild plants, some of which were used regularly for clothes and food by the Stólō people. On a daily basis, the thirteen of us are the only people on the island. The island is secluded and mostly cut off from the modern day hustle and bustle. With the sun shining through the canopy of the tall cottonwood and maple trees and the birds calling, I can sense an energy in the forest, perhaps from those who once lived there, and it is very spiritual. We work closely with members of the Stólō community, and their stories and guidance help to bring our work alive. In so many words, it is beautiful work in a beautiful place.1
You might be wondering just who this hatchet- and machete-wielding person is. You might also be scratching your head as to why I start this book about a technologically sophisticated and open learning world with a story about outhouses and clearing walking paths from dead and rotting trees. Perhaps this makes you equally curious as to when it was written. Well, the writer’s name is Lily Henry Roberts, and she authored that short reflection on Wednesday, July 2, 2008.\(^2\) As Lily indicated in her story, that July she was located on an island near Hope, British Columbia, a city of some six thousand people less than a hundred miles east of Vancouver. During the academic year, Lily is an undergraduate history major at UCLA and a member of the women’s rugby team. As such, she is perhaps just the sort of hardy person who is meant for a machete-wielding adventure in the thick forests of Canada. But UCLA remains in her hip pocket when she’s up in Canada. You see, Lily is part of the Archaeology Field Program sponsored by UCLA’s Cotsen Institute of Archaeology and run through its International Education Office.

These archaeological dig projects are open to anyone over the age of eighteen, not only UCLA students and alumni. You do not even have to be a college student to participate. While the vast majority of those who enroll are traditional college students, many are not. Even more intriguing, given sufficient time, interest, and money, you or I could sign up for this program. During the summer of 2008, some 138 people were enrolled in it. In recognition of their learning during the program, they each received twelve credits at the end of their digging efforts. These students were engaged in archaeological projects not only in western Canada, but also in Ecuador, Chile, Peru, Panama, Albania, Italy, England, and Catalina Island in the United States.

Lily and many other students and instructors at seven of the UCLA dig locations blogged about their summer adventures. These online diaries help connect them to anyone with Internet access. And through their blogs, those of us who cannot physically be there with them can be armchair Indiana Joneses!\(^3\) Here in Indiana, that sounds mighty appealing.

The Internet is an amazing learning resource. Through one simple online tool—blogging—we are quickly immersed in information related to what archaeologists around the world do for a living. With blogs and
other Internet tools and resources, field school experiences can now be shared and discussed with thousands of people on a daily basis.

The site instructor from UCLA, Dr. Anthony P. Graesch, also posted to the Canadian group’s blog site. He explains that the way in which archaeological research is typically portrayed in television and the movies is often well beyond the actual, more mundane activities of archaeologists. At the same time, he notes that the rich and complex history of the Stó:lō people cannot be found in textbooks. History is embedded in the landscape itself. You must be there and experience it! Blog posts like his spread hope that all of us can learn from shared online experiences. Perhaps it is fitting that he is blogging from Hope!

For those who cannot commit six to ten weeks of their time, student and instructor blogs, program press releases, and embedded pictures serve as brief forays into the history of these First Nation people. Those who have the time and interest, but who wish to travel beyond North American settings, have plenty of options. While Lily and Colleen are in British Columbia, UCLA archaeology graduate student Jamie Aprile is in Albania. Her July 14, 2008 blog post is rich with detail about the excavation and recording activities her team is conducting.

As in the blog about the Canadian summer dig project, the postings from Albania share firsthand experiences of students and instructors as they work the site. In addition to blogging and e-mailing coordinators back at UCLA about their progress, these young archaeologists use technologies such as global positioning systems (GPS) to help them find and record information. Just like Lily, Jamie is quite pleased to be out of the classroom and in the real world. However, that real world is no longer just hers. In the twenty-first century, Web technology has arisen to help learners like Jamie freely share their experiences with people they do not know and will likely never meet. As Jamie’s post divulges, archaeological work is not a holiday for those enrolled but requires much sweat and dedication.

Much of these efforts are the brainchild of UCLA archaeology professor Ran Boytner, codirector of the Chile dig in the Tarapaca Valley where pilot versions of the Archaeology Field Program have been evolving over the past several years. He is accompanied by seventeen students, making Chile the most popular of the summer dig destinations. When he first dreamed up the idea, Boytner expected