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Learning and the Web. Two powerful forces of change converge in a public square. Their dimensions are unpredictable, and many of the outcomes of their convergence will be unintended, but this experiment is not entirely uncontrolled. This group of scholars, hackers, and activists has calculated the likely conditions, wired in all the right connections. When lightning strikes, they'll be ready.

LEARNING, FREEDOM AND THE WEB

Anya Kamenetz

mozilla

Written by:  
**Anya Kamenetz**  
and the participants of  
the Mozilla Festival

mozilla



# **Learning Freedom and the Web**

#### **Acknowledgements:**

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# LEARNING, FREEDOM AND THE WEB

Written by:

**Anya Kamenetz**

and the participants of the  
Mozilla Drumbeat Festival



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# Legend

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## How to use this book:

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This book is made up of various types of content. Refer to this handy guide to discover the types of content you can expect to explore throughout this book.

**Profile:**

Questions and answers from some of the leading minds involved in learning, freedom and the Web.

**Project:**

Profiling the ongoing work from the ideas that emerged at the festival.

**How To:**

Step by step DIY guides exploring interesting ideas around learning, freedom and the Web.

**Session Notes:**

Summarized notes from sessions collected during the festival.

**Blog Content:**

Content from across the Web reflecting on ideas around learning, freedom and the Web.

# Foreword

Mozilla is about the future of the web. But it's also about a certain ethos: an ethos of tinkering, hacking and making. Making things for others to build on. This is a big part of what brought me to Mozilla a few years back. So, when I first started asking: "what can we do beyond Firefox to shape the future of the web?"

I looked around for others with this ethos.

I quickly found them in the world of learning. People tinkering with the academy. Hacking accreditation. Building new tools and paths to help all of us learn. People who looked a lot like Mozillians. Inspired, we decided to do an experiment: gather 400 tinkerers, hackers and makers in Barcelona, half from the world of the web and half from the world of learning, to see what they might build. We called it the Mozilla Learning Freedom and the Web Festival.

We asked Anya Kamenetz – and the participants of the Mozilla Festival – to take a snapshot of this experiment in action. The result is this book and the accompanying web app. Almost a year later, it's amazing to look back at this snapshot. The ideas, inventions and friendships sparked in that Barcelona square are more than we could have hoped for.

Of course, the experiment itself has yielded much more than what you will see in this snapshot. Barcelona helped Mozilla find a clear focus on learning that both typifies and encourages this ethos: helping people learn how to be makers on the web.

Mozilla's Hackasaurus web literacy program, the School of Webcraft, the HiveNYC learning network and the Open Badges platform are all part of this. Learning by making, and learning about making the web, is now something Mozilla is now committed to in a major way.

Even bigger: Barcelona sparked a conversation about how the future of learning and the future of the web are intertwined, and about the role both play in fueling creativity, innovation and common wealth. This is a conversation that is growing as we speak.

Hopefully, this book will help you find an entry point into this conversation. A place to grab hold so you can tinker, hack and make the future of learning in your own way.



– Mark Surman  
Executive Director, Mozilla  
Georgian Bay, August, 2011



# **Learning**

The natural, unstoppable process of acquiring knowledge and mastery. The vast majority of the learning in your life doesn't happen when you're a kid in school. We do it everywhere, all day long, by reading, writing, conversing, tinkering with the world around us, playing around, solving problems, asking questions, and messing up. A teacher can't make you learn, any more than a coach can run a race for you. It's something the learner drives and seeks. We're all teachers and learners.



## The Web

A set of building blocks that anyone can use to invent, build, connect, and bend things in the digital world. Rules, protocols, and languages like TCP/IP, HTML, JavaScript, and more. Like any language, or like the rules of mathematics, they are owned by no one, and available to anyone who wants to create online. Like a set of Legos, they are fixed pieces that can be reassembled into anything you imagine. This system has helped us create wealth, beauty, and human connection of a nature and scale that was barely imaginable 25 years ago. And we've all done it. Everyone. Together.



## **Freedom**

The right to access, remix, copy, and share, generating new ideas from the old. These are the founding freedoms of the digital world—“free” as in “free software.” The web doesn’t function without the ability to look under the hood, get your hands dirty, and fix what doesn’t work. But these kinds of freedoms weren’t born in the 20th century. They are central elements for the flourishing of all intellectual life. And learners, especially, could use a little more freedom.



Learning, Freedom and the Web:

# The Convergence

Barcelona, Fall 2010:

Learning and the Web. Two powerful forces of change converge in a public square. Their dimensions are unpredictable, and many of the outcomes of their convergence will be unintended, but this experiment is not entirely uncontrolled. This group of scholars, hackers, and activists has calculated the likely conditions, wired in all the right connections. When lightning strikes, they'll be ready.

## **Learning: The natural process of acquiring knowledge and mastery.**

As a journalist, I've spent the last three years covering a change in the world of education. Seismic waves are rumbling from the basement of the ivory tower and the schoolhouse down your block. The demand for access to both existing and new models of learning is rising as uncontrollably as the average temperature throughout the globe. Our society faces serious existential threats, and the answers aren't written in books. So there's a growing urgency to shift toward models of learning that foster natural creativity and innovation to produce new knowledge, new answers. Yet the educational ecosystem is edging toward collapse—50 million university students in 2000 will become an estimated 250 million by 2025, even as educational costs rise at two to three times the rate of inflation. An estimated 400 million children around the world have too little access to formal schooling. No government in the world has a plan to fix this.

Meanwhile, informal learning—the kind we do all day every day, as long as our eyes are open and we're not in school—is going through a Cambrian explosion in hackerspaces, libraries, museums, basements and garages. “How-to” is one of the top searches on Google. An entire generation of web geeks is functioning more or less self-taught, because traditional curricula can't keep up with the skills they need.

All of which brings me to the second force, now arcing overhead—an invisible mesh of electrical signals that connect the people in this square not only to each other, but the world.

**The Web: A set of building blocks that anyone can use to invent, build, connect, and bend things in the digital world.**

Twenty-five years ago, computer engineers Tim Berners-Lee and Robert Caillou first introduced their creation: “The World Wide Web was developed to be a pool of human knowledge and human culture, which would allow collaborators in remote sites to share their ideas and all aspects of a common project.” Today, the web’s open and interoperable standards make it possible for 1.75 billion people around the world to build, access, connect, and alter 240 million unique sites, not to mention for millions of people to create and upload 35 hours of video to YouTube, the most popular video site, every minute. The web allows for the creation of wealth, beauty, and human connection on an unprecedented scale.

Yet, as more and more of us live, work, create, socialize, shop, bank, and, yes, learn online, the architects of the web are increasingly drawing the parameters of private and public life, and often for corporate profit or political control rather than public benefit.

The very principle that has made the web so vast and so powerful—the open structure, held in common, that allows anyone to access and contribute—is under threat as never before.

The threat is hydra-headed: zealous enforcement of copyright and intellectual property, governments that stifle dissent by disabling servers or censoring keywords, the increasing trade in personal data, legal and illegal infringements on privacy, and public discourse and private relationships that are increasingly funneled through a very small number of commercial web platforms. The response is to assert freedom.

**Freedom: to access, remix, copy, and share knowledge—basic to learning, and the basis of the web.**

In the stories I've been telling about the future of learning and the web, freedom is the missing link. That's what I started to realize last summer when Philipp Schmidt, of Peer 2 Peer University, put me in touch with Mark Surman, executive director of the Mozilla Foundation. Surman invited me to be a part of the first Mozilla "Learning, Freedom, and the Web" Festival.

Mozilla, as I was then dimly aware, is a giant nonprofit open source software project. Together, thousands of people, employees but mostly volunteers, create Firefox (the second biggest web browser by market share), which is used by 400 million people worldwide. This is open source—a new way of organizing creative work with broad participation, all enabled by transparency. And the work has built a worldwide alliance of people dedicated to keeping a part of the web transparent, held in common, and freely remixable by individuals. Oh yeah—and awesome.

Mitchell Baker, Mozilla's founder and "chief lizard wrangler," never takes a stage without thanking the volunteers that make it all possible. As she explained onstage in Barcelona, "Mozilla is about trying to build a part of the web that allows individuals to move from consumption to creation. We're nonprofit not because it's easy, but because it represents what we're trying to do. The Internet is so important that we believe that part of it should be a public asset."

Their successes in open-source led Mozillians to ask: What else can openness do? Beyond the realm of hackers, programmers and developers, who are our natural allies? Who else believes in openness, innovation, sharing, democracy, participation, and preserving culture as a public asset? And who can be convinced to fight for it?

There are many possible answers to that question: journalists, artists, filmmakers, and political activists, to name but a few. The decision to start by rallying the avant-garde of teachers, scholars, and learners was by no means arbitrary. There is alchemy in the meanings and meetings of Learning, Freedom, and the Web:

Learning x Freedom	Web x Learning	Freedom x Web	Learning x Freedom x Web
Learning happens naturally when individuals pursue their passions among peers and guides. Restrictions on learning—red tape, time, place, cost, or others—should be minimized so more people around the world are free to join together to face hard problems and learn new things in new ways.	The web can lower barriers, cut costs, blow open access to knowledge. It enables—and demands—new models of teaching, learning, assessment, and accreditation.	The public, open, participatory, transparent, remixable nature of the web has been integral to its growth and must be revealed, defended, celebrated. If it's not open all the way down, it's not the web.	Learning will be more agile, more active, more participatory, more like the web. The web will strengthen its public mission and its place in human history. Everyone gets to invent his or her own end to the story.

# If it's not open all the way down, it's not the web.

These overlapping definitions set forth ideals have yet to be fully realized or safely established. Which is fortunate, because working and creating together is, generally speaking, the best way to form relationships, to build communities, and, yes, to learn.

So here's the Mozilla Festival formula for catching lightning: throw together educators and techies, both committed to innovation in the public interest; guzzle coffee, snarf tapas, chat, and make friends; but also, actually make stuff using open-source technology. The goal is to develop new tools and practices that can supplement, optimize, and/or replace the traditional trappings of the education system, from diplomas and textbooks to lectures and lesson plans—the better to serve learners' needs.

And amidst the code sprints, why not brainstorm a wish list, too: What tools remain to be developed to allow learners of all ages to form the questions, find or create the answers, build skills, and participate in communities? What allies and teams need to form to make these things happen?

Finally, if successful, the manifesto of two days becomes the manifest of a much longer voyage: A call for all those who care to spread webcraft literacy, to play with technology, to learn by making stuff together, to keep the web free by making it ourselves, to shape society through more democratic design, to pull learning out of the 15th or 19th century and into the 21st, to find strength in diversity, and to think critically about—and tell joyful stories about—all this doing and building and learning and making and sharing, all the better to get more people involved.

So lightning struck the clock tower, two worldviews faced each other in a public square, and “Learning, Freedom and the Web” was born. Or, in the opening-night words of Mark Surman, as he shouted over the crowd, cheeks shining with sweat, in the high, echoey atrium of Barcelona’s Museum of Contemporary Art: “The future of the web and future of learning are intertwining. People here are creating that future.”

I came to Barcelona to witness this experiment. I left as a participant. I hope that reading this will make you want to participate, too. ×

**“chaordic”**  
(Wikipedia: “a system of governance [that is] a harmonious coexistence of chaos and order.”)

**“Collabtastic!”**  
(from a Festival participant evaluation)









How To:

# Create Your Own Festival

Purpose: start solving problems together and build a broader movement for change.

---

**Difficulty:**

Easy! No, wait, DIFFICULT. No, wait, Easy!

**Who:**

40 to 1,000 people with different skills and interests, including group facilitators. A mix of idea people and hands-on people, seasoned leaders and eager beginners. The 2010 Learning, Freedom and the Web Festival featured 430 participants, including 40 volunteers, from 40 countries and 30+ participating organizations.

---

**Time:**

9 months to plan; 2 days to pull off.

**Materials:**

Space (for example: the contemporary art and design museums, plaza and surrounding cafes, restaurants, and tapas bars of Barcelona's Raval district). Whiteboards. Laptops. Markers. Post-it notes. Wi-Fi. Coffee. Pastries. Wine.

1

**Step 1**

Identify broad themes of shared, vital concern for all participants, i.e. Learning, Freedom, and the Web.





## 2

### Step 2

Invite "space wranglers" to host spaces or "tents" relating to one, two, or three of the main themes. Each should be dedicated to prototyping, designing, and building solutions.





# 3

## Step 3

Adopt Allen Gunn ("Gunner's") model for group facilitation, informed by the civil-disobedience training of the Ruckus Society and other left-wing organizing and consensus-based models. Gunner says:

### Step 3a

"A bunch of people sitting and listening to one person talk is one step below a crime against humanity." Minimize plenary sessions to "take the head off the event."

### Step 3b

"Focus on respect" for all participants, volunteers, and organizers. "If you are the most knowledgeable your job is to do the most listening."

## Step 3c

"Focus on jargon" to make the dialogue as accessible as possible. Make translation available when participants speak different languages.

## Step 3d

"Love-bomb" participants whenever appropriate with clapping and cheering. Conversely, make one person, not someone with direct logistical responsibility, a designated "lightning rod" for complaints so negative energy is channeled constructively.



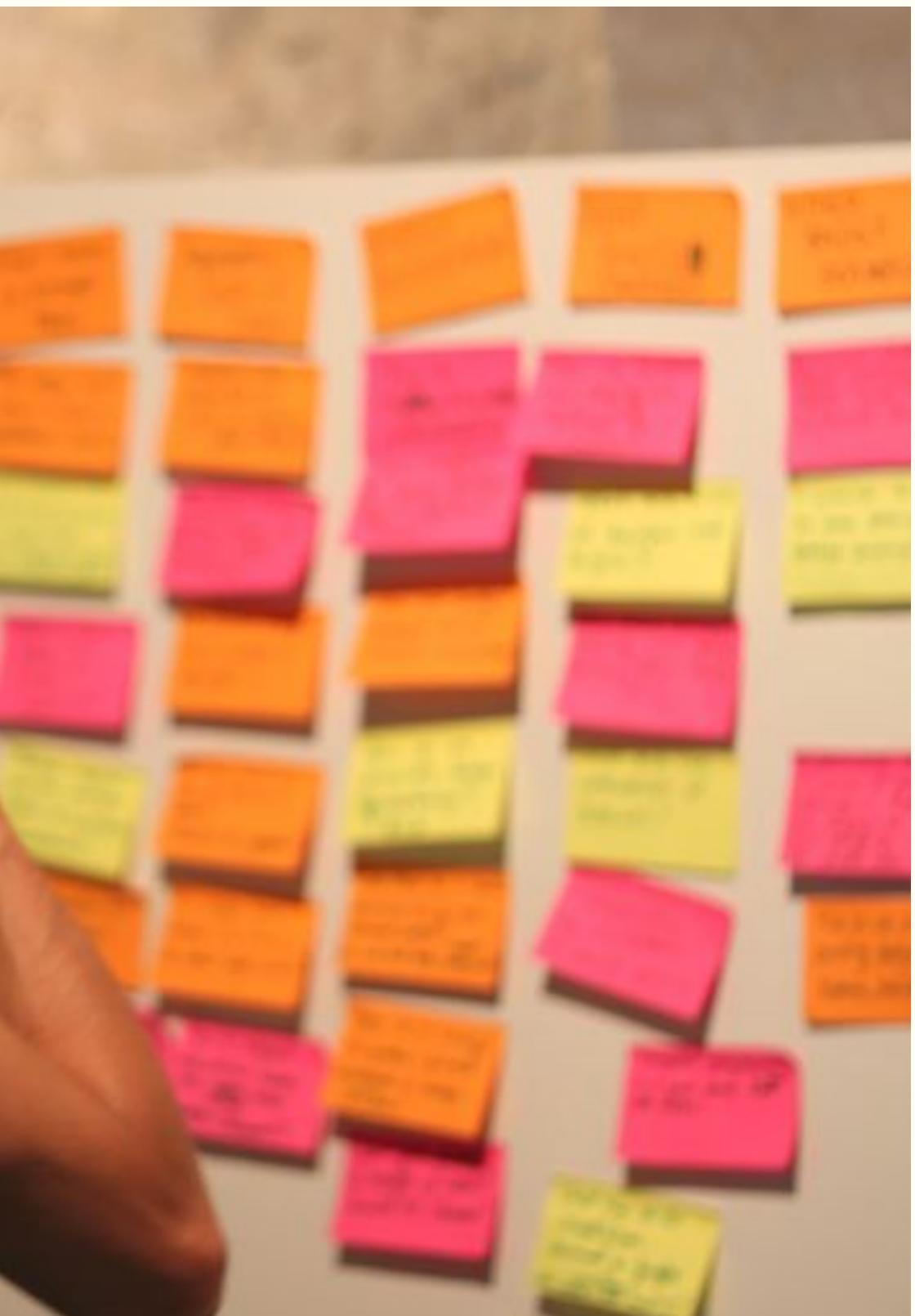


## 4

### Step 4

For scheduling, draw on free-form "bar camps" and "unconferences" popular in the web community. Include open sessions with agendas defined by participants. Make the schedule an updatable-in-real-time wiki and/or eraseable whiteboard.





# 5

## Step 5

Give each space a deadline to present progress to the group by the end of the festival—creative is good! Support those who want to join a team or continue working on a project, and publicize their efforts.





6

Step 6  
Celebrate and  
document!







# By the Numbers

---

## Participants

---

**430**  
participants

**30+**  
participating  
organizations

**40**  
countries  
represented

---

## Media

---

**13**  
stories published in  
the traditional press

**Too many**  
blog posts, tweets, pics, and  
videos to properly count

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## Team

---

**40**  
volunteers

**240 +**  
hours of volunteer  
work on site

**6**  
people on the  
core staff

---

## Evaluation

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**113**  
evaluations  
submitted

**4.28**  
On a 1-5 scale  
(disappointing-  
to-awesome), the  
Festival earned an  
average score of  
4.28

**85.62%**  
We can safely say  
the Festival was  
at least 85.62%  
awesome!





## How you'll know when you succeeded:

feedback from participants, such as:

- **Chechar:**

chess todavía en estado de shock cultural y admiración profunda... y eso que apenas he tenido tiempo de pisarlo. mañana, a tope :-)

I'm still in a state of culture shock and profound admiration... And I still haven't had time to take the first step. Tomorrow, the toe :-)

- **JeremiePat:**

Cette première journée a été bien dense et bien épuisante (exhausting)... par contre, j'ai toujours du mal à comprendre le but de tous ça !

The first day was really dense & really exhausting; I'm still at a loss to understand the point of all this!

- Too many good sessions but I have only one corporeal presence #humancloning

- **kwissoker:**

RT @sveinns: I didn't realise the magnitude of what was happening here. I am officially awestruck, and in utter information overload.

- **en hastac:**

Yes!!! <3 RT @li\_ar: What did you learn yesterday? I've learnt hackers care about education. Does education care about hackers?

- Want MOAR! Don't make me wait for a full year before the next one!

- artists + technology + academics = awesome. We practice brain sharing and collaborative hacking.

- Very intense, enlightening, awesome  
It's brilliant to see the connections made between different worlds

- ADHD (in a good way!)

- Do it again! Go forth and prosper. This is such a better model for collaboration and networking compared with conferencing

- Inspiring in a practical way. Not airy-fairy theories and ideas but real things you can do to affect change.

- A FRIGGIN GOOD START

SECTION ONE

# LEARNING X FREEDOM

## Learning x Freedom

Learning happens naturally when individuals pursue their passions among peers and guides. Restrictions on learning—red tape, time, place, cost, or others—should be minimized so more people around the world are free to join together to face hard problems and learn new things in new ways.

### In this Section:

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#### **Storming the Academy**

"Joyful insurgency" tactics for creating open, tech-aware learning inside the academy.

Page 80

#### **Learning Everywhere**

Informal learning leaps the walls of the classroom and shows up in libraries, parks, museums—wherever we are.



**“Virtually every feature of traditional formal education was created between 1850 and 1919 to support the Industrial Age. The whole basis of assessment is the standard deviation, the invention of Francis Galton! A eugenicist who believed the English poor should be sterilized! We’re stuck with Henry Ford’s assembly line from kindergarten through grad school! But our world has changed! With the Internet we don’t need the same kind of hierarchical structures.”**



– Cathy Davidson, Festival Keynote  
Learn more about the work Davidson is  
doing with HASTAC in her profile on  
page 64



# Storming the Academy

“Joyful insurgency” tactics for creating open, tech-aware learning inside the academy.

*WHAT ROLE* will traditional educational institutions play in the future of learning? As we call for change, it’s easy to dwell on their limitations, or to brush past them altogether in the eagerness to hack shiny, new alternatives.

This would be a fatal error. As we swing out over uncharted territory, learners continue to need institutions, just as institutions need learners.

At the very least, traditional institutions convene communities of people who love learning—and sign many of their paychecks. The existing schooling infrastructure from kindergarten to state university is a crucial public asset to leverage toward the future of open learning. For a thousand years, at least some learning has taken place inside formal institutions, and it might benefit the future of learning to figure out how free and open learning might emerge from that history. Plus, the best institutions maintain an anarchic and decentralized structure that allows for all kinds of research and innovation to take place—like the early stages of the Internet, for one. Why not take advantage of them to innovate learning itself?

“Although our universities, colleges and traditionally run schools are outdated and in desperate need of change, they are still institutions of learning, innovation and stimulation. We, the educators and web nerds who make up “Learning, Freedom and the Web,” aren’t looking to destroy the infrastructure we have in place, we’re looking to change how that infrastructure is used. I’m thinking about the innovation that comes from the FREE and OPEN learning within these institutions, like Marie Curie having access to a lab, or, to use an example which both pisses me off and also changed the world, Mark Zuckerberg being inspired by his social surroundings to come up with Facebook. We are going to need that space for our learning revolution.”

Laura Hilliger of the Knight Digital Media Center wrote in response to a draft of this work:  
<http://multimedia.journalism.berkeley.edu/people/LauraHilliger/>



# “What? The greatest revolution in how humans create and share knowledge, how they read and write, how they communicate and interact in all human history—and there’s no space there for the human and social sciences?”

Making that space is the work, in part, of Cathy Davidson and her network of edge-seeking scholars.

“In 2002, I was at a national meeting of directors of humanities institutes around the country and one after another said that the humanities and social sciences were “antithetical to the Information Age,” Davidson explains. “What? The greatest revolution in how humans create and share knowledge, how they read and write, how they communicate and interact in all human history—and there’s no space there for the human and social sciences?”

One other person in the room, David Theo Goldberg, who directs the system-wide University of California Humanities Research Institute, agreed. We stepped out of the meeting and created HASTAC.

Davidson is famous—sometimes notorious—for her experiments in both pedagogy and research, many of which have the effect of dethroning herself as a teacher that presides at the front of a classroom. For example, she uses “contract grading,” by which students commit to a certain level of work in a class and are also responsible for evaluating peers’ work.

Davidson and members of FutureClass, her “collaborative independent study,” including seven students from Duke University and one from University of North Carolina at Chapel Hill, held court in a tent on the square at the Festival, running it as cross between a graduate seminar and a dorm-room bull session. With sessions such as “Storming the Gradebook” and “Storming the Syllabus,” her team brought a sense of what she likes to call Joyful insurgency into the hallowed traditions of the academy.

HASTAC  
[Humanities,  
Arts, Science  
and Technology  
Advanced  
Collaboratory).  
Pronounced  
“haystack”: it is  
an international  
network of  
educators and  
digital visionaries  
committed to  
the creative  
development  
and critical  
understanding of  
new technologies  
in life, learning, and  
society]





## Session Notes: Storming the Cloud/Crowd

One recurring concern for future learners is how to remake the traditional classroom into a more participatory, lively place. One “Storming the Academy” conversation focused on this topic:

Activity Leader: Anne Balsamo, University of Southern California

An interactive, collaborative performance and tag cloud activity designed to explore the ethics of the crowd, cross-disciplinary collaboration, and minority expression.

Tools: index cards, pens, large sheets of paper, a couple of helpers, a crowd.

Technology is about the way cultures are made. Cultures of the moment, cultures of the future, tinkering ("ways of the hand"). Each member of the audience selects three words that best describe their experience with collaboration. They then pair with someone they don't know, share their three words, and together pick ONE word that describes a quality of collaboration across difference they feel is important. The sociality reality check!

Words from the crowd:

Serendipity, discomfort, introduction, open, confusion, engagement, empathy, and respect.

Imagine an app where what is privileged is the minority voice, not the loud, crowd voice. What about the inverse, or privileging the fringe voice?

The open web isn't always a level playing field. There are hierarchies and assumptions encoded in the technology (i.e. in a tag cloud) Curation and collection can reiterate dominant opinion.

Balsamo and some FutureClass participants are working on developing tech tools to run better class discussions, like the Classroom Attention Barometer, to allow for real time feedback.



## Session Notes: 21st Century Literacies

---

If our ideal future state is to help our students be the best possible participants in the free and open web, then what literacies are most important for reaching that goal? What resources are best for understanding and mastering each literacy? What methods are best for teaching/learning?

### **Attention:**

What are the new ways that we pay attention in a digital era? How do we need to change our concepts and practices of attention for a new era? How do we learn and practice new forms of attention in a digital age?

### **Participation:**

How do we encourage meaningful interaction and participation? What is its purpose on a cultural, social, or civic level?

### **Collaboration:**

Collaboration can simply reconfirm consensus, acting more as peer pressure than a lever to truly original thinking. HASTAC has cultivated the methodology of "collaboration by difference" to inspire meaningful ways of working together.

### **Network Awareness:**

How we both thrive as creative individuals and understand our contribution within a network of others? How do you gain a sense of what that extended network is and what it can do?

### **Global Consciousness:**

How does the World Wide Web change our responsibilities in and to the world we live in?

### **Civic Responsibility:**

How can we be good citizens of the Internet when we are off line, working towards real goals in our communities and using the community practices of sharing, customizing, and contributing online towards responsible civic action off line?

### **Design:**

How is information conveyed differently, effectively, and beautifully in diverse digital forms? How do we understand and practice the elements of good design as part of our communication and interactive practices?

### **Narrative, Storytelling:**

How do narrative elements shape the information we wish to convey, helping it to have force in a world of competing information?

**Procedural Literacy:**

What are the new tactics and strategies of interactive games, where the multimedia narrative forms changes because of our success or failure?

**Critical Consumption of Information:**

Without a filter (editors, experts, and professionals), much information on the Internet can be inaccurate, deceptive, or inadequate. How do we learn to be critical? What are the standards of credibility?

**Digital Divides, Digital Participation:**

What divisions still remain in digital culture? Who is included and who excluded? How do basic aspects of economics and culture dictate not only who participates in the digital age but how we participate?

**Ethics:**

What are the new moral imperatives of our interconnected age?

**Advocacy:**

How do we turn collaborative, procedural thinking on line into activism in the real world?

**Preservation:**

What are the requirements for preserving the digital world we are creating? Paper lasts. Platforms change.

**Sustainability:**

What are the metrics for sustainability in a world where we live on more kilowatts than ever before? How do we protect the environment in a plugged-in era?

**Learning, Unlearning, and Relearning:**

Alvin Toffler has said that, in the rapidly changing world of the 21st century, the most important skill anyone can have is the ability to stop in one's tracks, see what isn't working, and then find ways to unlearn old patterns and relearn how to learn.



A photograph of a person from the side, sitting at a light-colored wooden table. They are wearing a dark long-sleeved shirt and dark trousers. On the table in front of them is an open laptop. The person is looking down at the screen with a thoughtful expression. The background is a textured, light-colored wall.

We're going from an industrial age to  
a digital one/ These ages are nothing  
compared to how long people have lived/  
It's a flicker/ What really has changed in  
the grand scheme of things?/ It looks to  
me more like we're returning to what has  
been cultivated as human faculties for  
millions of years before the industrial  
revolution/ tribal communicative/  
collaborative even if not cooperative/  
we can't help but learn peer to peer it's  
automatic and to say that's not  
happening is a huge fallacy/ I question  
that we're seeing anything new/ we  
might be seeing something extremely old/  
We're disconnected partly because the  
Ethnosphere is deterioriating/ Things  
that are deep down inside of us might be  
coming out again/ they are terrifying but  
have always been there/





Profile:

## Cathy Davidson

No one at the Festival could have missed Cathy Davidson and her FutureClass students, holding a heady nonstop seminar in the white tent next to the Hackbus on the square. Davidson, the founder of HASTAC (The Humanities, Arts, Science, and Technology Advanced Collaborative), nominated to Obama's National Council on the Humanities, and author of the forthcoming book "Now You See It: How the Brain Science of Attention Will Transform the Way We Live, Work, and Learn." Davidson has been called "one of the most famous, prolific, and hated academics in the world."

**What is your background and why are you interested in the free sharing and reuse of knowledge?**

As a kid, I was math all the way. I assumed I'd go into artificial intelligence and was very excited by computational philology. But there were no women at all in that field and I wanted to support myself so I began to indulge my love of writing and veered into English. But I've always written about information technologies and how they change our interactions.

**What would you say is your main motivation for working on free and open education?**

We're only beginning to imagine what structures we need to educate students for the 21st century. There are many lessons from open web development that need to be transferred to traditional education.

**How does HASTAC work? How many people are participating? What kinds of projects are they working on? What are the goals?**

HASTAC is a network of networks. We're about 4,800 strong now, including nearly 200 undergraduate and graduate students (HASTAC Scholars) from over 70 institutions. We are dedicated to three interconnected goals: creative development of new media and new tools; thinking critically about the role of technology in society, education, and social life; and participatory forms of learning.

**What do you think is the relationship between free software and open education? Why is it that so many people who are interested in one, are working on building the other?**

If you believe that the best way to develop software is for free, collaboratively, and led by community interests, then you have to question a form of industrial education that is based almost entirely on credentialing, on certifying, on one person granting a degree of excellence to another, rather than in the ways we, collaboratively, demonstrate excellence by performing well.

**What are the main obstacles standing in the way of an entirely affordable, accessible, high-quality, and open world of higher education? Are they technological, social, matters of government policy or the conduct and structure of institutions?**

Tradition dies hard. Once you establish a hierarchy of what counts as the pinnacle of excellence (with Oxford and Cambridge in England, Harvard in the U.S., Tokyo University in Japan) it is hard for those who have profited within that system of hierarchy to admit that reputation is not always equal to excellence, that esteem does not necessarily lead to innovation. So institutional resistance, deeply nestled within the class system and reward systems, would top the list. There are also billions of dollars resting in the current system, so there is much resistance to major change.

**Do you think institutions (like Duke, for example) will largely adapt to the new reality or will educational innovators have to find workarounds?**

Every educational innovator strives for major change while also figuring out the workarounds.

**Why did you bring eight students to Mozilla's "Learning, Freedom and the Web" Festival?**

For HASTAC to have a tent here underscores how many of us in the academy are looking for a new way. We want to be able to show that "thinking" is an activity and that "interaction" can occur with notecards and markers as well as on a computer. We want to be inspired by open universities and open sources of knowledge to push the transformations in higher education and we know there are lessons in excellence to learn from the highest forms of collaborative research and work.

**Anything else you'd like to say about the future of education? What will education look like in 2020?**

If we do not take stock of the systems of education, K-12 and 12-20, we will not be able to prepare for the future. We need to rethink how we test, how we measure ability and disability, the different ways we can combine talents and collaborate.

I believe that we will have very different forms of testing by 2020, that disciplines will be more merged, that school will be more project-based and more integrated into communities, with less separation of town and gown, of the theoretical and the practical. ✕

**“We are dedicated to three interconnected goals: creative development of new media and new tools; thinking critically about the role of technology in society, education, and social life; and participatory forms of learning.”**

One of Davidson's FutureClass students came away with her own ideas and questions. Jade Davis is a doctoral student in Communication Studies at UNC Chapel Hill. Her research areas of interest focus primarily on issue of identity and how identity is performed and engaged by diasporic populations in digitally mediated spaces. Currently, her focus is on global black populations.

 **Jade Davis: Learning, Freedom and the Web**

by Jade Davis | November 8, 2010

I arrived with one question: How do you imagine the involvement of traditional forms of higher education in the future of Freedom, Learning and the Web? I actually had responses from everyone I spoke with other than “but how are we going to credential” which is not something that has happened yet in academic settings.

Most people there were in agreement that the approach to learning and spaces of learning needs to be more holistic. However, people were still unwilling to completely let go of some of the ideals of industrialized education. They are just re-imagining them and making them more flexible. I would have to do more reflecting and exploring to determine if I think that is a good thing or a bad thing. 

[http://jaded.web.  
unc.edu/](http://jaded.web.unc.edu/)

After the fest, Cathy Davidson reflected:

## Learn Intellectual Property By Doing It

by Cathy Davidson | November 10, 2010

The Mozilla mode of learning is doing. Have a problem managing attention? Work on an app for it. Trying to wrangle a 200-person classroom into small affinity groups? Create a tool that facilitates it. Want to authenticate who is writing a productive or a trollish comment or contribute great code but with bad spyware embedded in it? Create a badge system that credentializes not by your degree but by what and how you have contributed to the open web in the past. Want to make all video machine readable, able to grab supplementary material, instantly subtitled into any language you wish? There's an app for that, too. What about us, here at FutureClass, the collaborative independent study tutorial I'm guiding at Duke, and newly returned from an exhilarating and eye-opening Learning, Freedom and the Web Festival in Barcelona? We've been set the challenge to complete some work on the prototype of a classroom attention device that everyone talked about, that one student firestarted with a stunningly subtle idea, and that another, working with a friend not in the class, actually developed independently into an app. Now the Mozilla developers have pledged to help us bring this to full fruition.

That's a fabulous learning experience by any estimation, but the HASTAC way is to not just create new technologies but to think critically about those technologies—what they mean, how they apply to society or to individual rights and aspirations. It is also important to transform creating and critiquing into pedagogical practice. So I would say that the “development phase” we are in now, post the exhilarations of the Festival, is the truly humbling part of this program. 





How To:

# Contract Grading

**Purpose:** A method of grading that allows students to determine their own learning goals, while incorporating peer learning and peer assessment, and removing the teacher as the sole point of authority.

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**Difficulty:**  
Medium

**Time:**  
3 months

**Who:**  
Many learners,  
1 facilitator

## Step 1:

Lay out all the requirements of a course: assignments, class participation, blogging, etc.

## Step 2:

Successful completion of all course requirements is an automatic A. Students who have other obligations during the term and don't need an A can choose to do less work to earn a B or C grade.

## Step 3:

Have students sign contracts committing to a particular grade, with consequences spelled out. No matter what level of grade contracted for, missing assignments or unsatisfactory completion lead to automatic grade penalties.

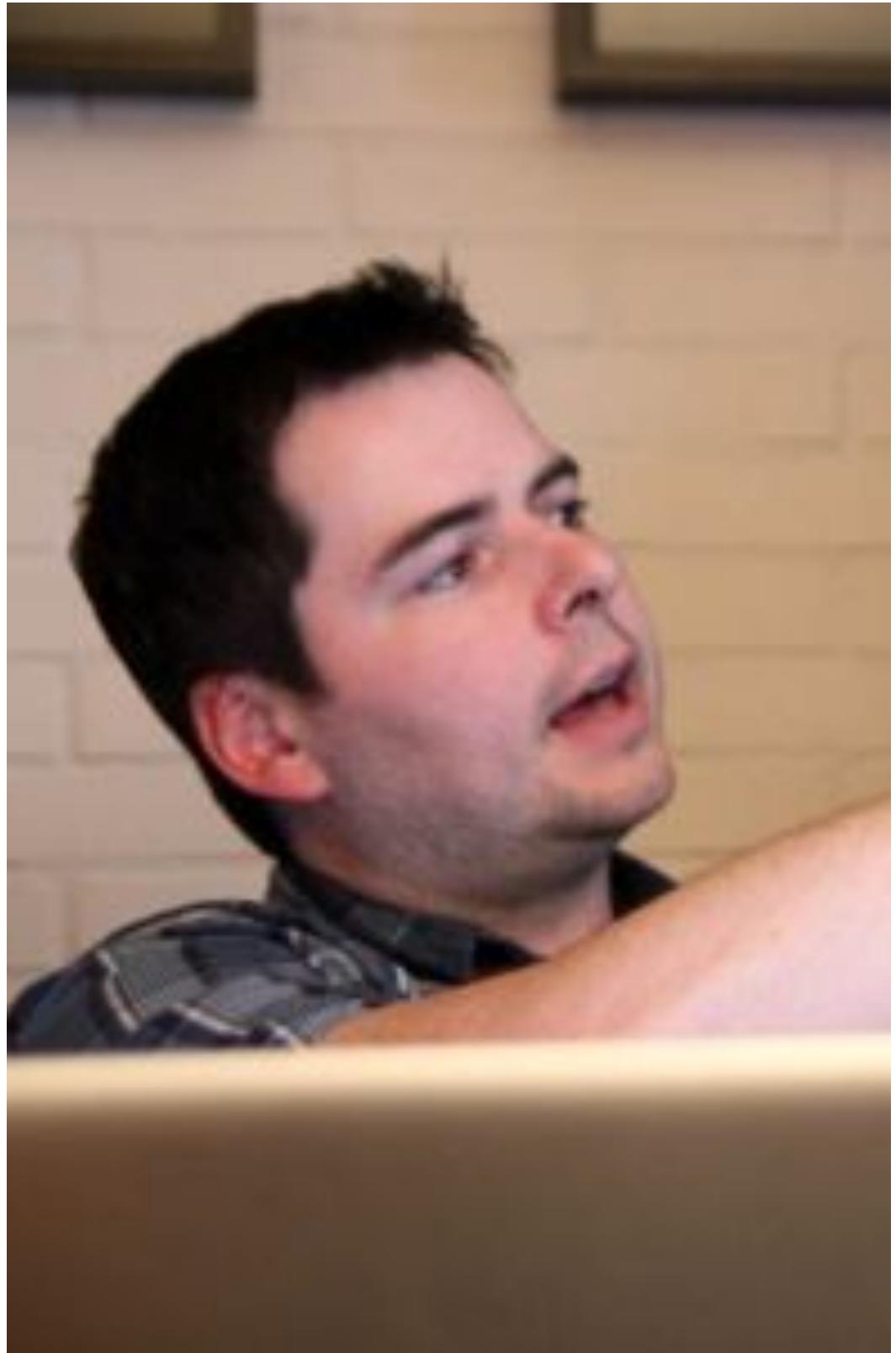
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## Step 4:

Each week, have two student leaders make specific reading and production (writing or multimedia) assignments, read assignments, and assess the students' contributions, setting (and discussing) what constitutes satisfactory work and also working to improve contributions if they are not satisfactory.

## Step 5:

The next week, those two student leaders are back in the class, producing work that the next two student leaders read, assess, give feedback on.





Profile:

# David Humphrey

As a professor at Seneca College in Toronto and an “educational liaison” for Mozilla, David Humphrey helps beginning programming students learn by participating in Mozilla and their open-source software development. This means he’s living the complexities of learning, freedom, and the web like few others. “It’s not that my students are the smartest in the world; it’s that I believe they can do great things. I put them in an environment where they can see others doing it, and they do,” he says. At the Festival, he spent most of his time up on the third floor, sequestered in the Video Lab, making one of the most productive collaborations at the fest happen.

**What is your background and why are you interested in open education, free sharing and reuse of knowledge?**

I am a professor specializing in software development, and in particular Mozilla and the open web. I’m interested in open education and the free sharing of knowledge from a philosophical point of view.

**Can you describe Seneca’s work with the Mozilla Foundation? What kinds of projects are they working on? What are the goals?**

I have been an active contributor to the Mozilla project for six years, and have brought hundreds of students with me into Mozilla. I teach students how to work on something as large and complicated as Firefox, and also how to cope in a community like Mozilla. My students work on everything Mozilla does. I try to let students work on (and discover) their passions through Mozilla versus having them all work in one area.

**How do you assess work within a collaborative setting such as building open source software? How do you ready students to work independently on real-world projects and to seek help?**

I grade things like blog posts, bugzilla involvement, IRC [chat room] involvement, etc. And instead of just marking the finished product, I grade the process as much or more. In open source, the code evolves little bit by little bit, and if you’re willing to mark that slow evolution on a regular basis, it’s pretty easy to do assessments.

I throw students into a real project before they are ready, then teach them the skills they need as they need them. If I just taught them the theory of open source, they would never have the need for much of it. But by having them engage early, they are hungry for knowledge, introductions to people, etc.

Also, I use my personal connections at Mozilla to find mentors and get people to help my students. The reason this works in an ongoing way is that I also get my students to help these people. It has to be two-way or the open source community will tire quickly.

**What do you think is the relationship between free, and/or open-source software and open education? Why is it that so many people who are interested in one, are working on building the other?**

Open source is built on community, and in particular, on communities of people who help each other. They teach each other, help each other fix things, extend each other's work. Every one of us working on a project like Mozilla is dependent on others to help us understand things in the code that we don't know. The free exchange of knowledge is how open source works, and how the Internet works. It's natural that people who do this all day long will become interested in teaching and education, since much of their work is about engaging new contributors and helping existing ones. The key to succeeding here is to make your students look like new contributors—then the open source community knows what to do with them.

**What would you tell other colleges that are interested in incorporating programs like those at Seneca?**

You have to become an active member in an open source community for this to work. Unless you have connections and knowledge yourself, you can't do this.

**What are the main obstacles standing in the way of an entirely free and open world of education? Are they technological, social, matters of government policy or the conduct and structure of institutions?**

The institutional approach to education is dehumanizing in its desire to deal with grades versus people. I am heavily influenced by the ideas of Ivan Illich here, and believe that open source in the classroom is one way to step outside (literally) the institution and into a world of real people and real collaboration.

When all our work for students is canned, and when everything is rated in terms of grades, we miss so much of the richness of real learning, which relies on failure, trial and error, getting to know people, and reaching for things you didn't think were possible.

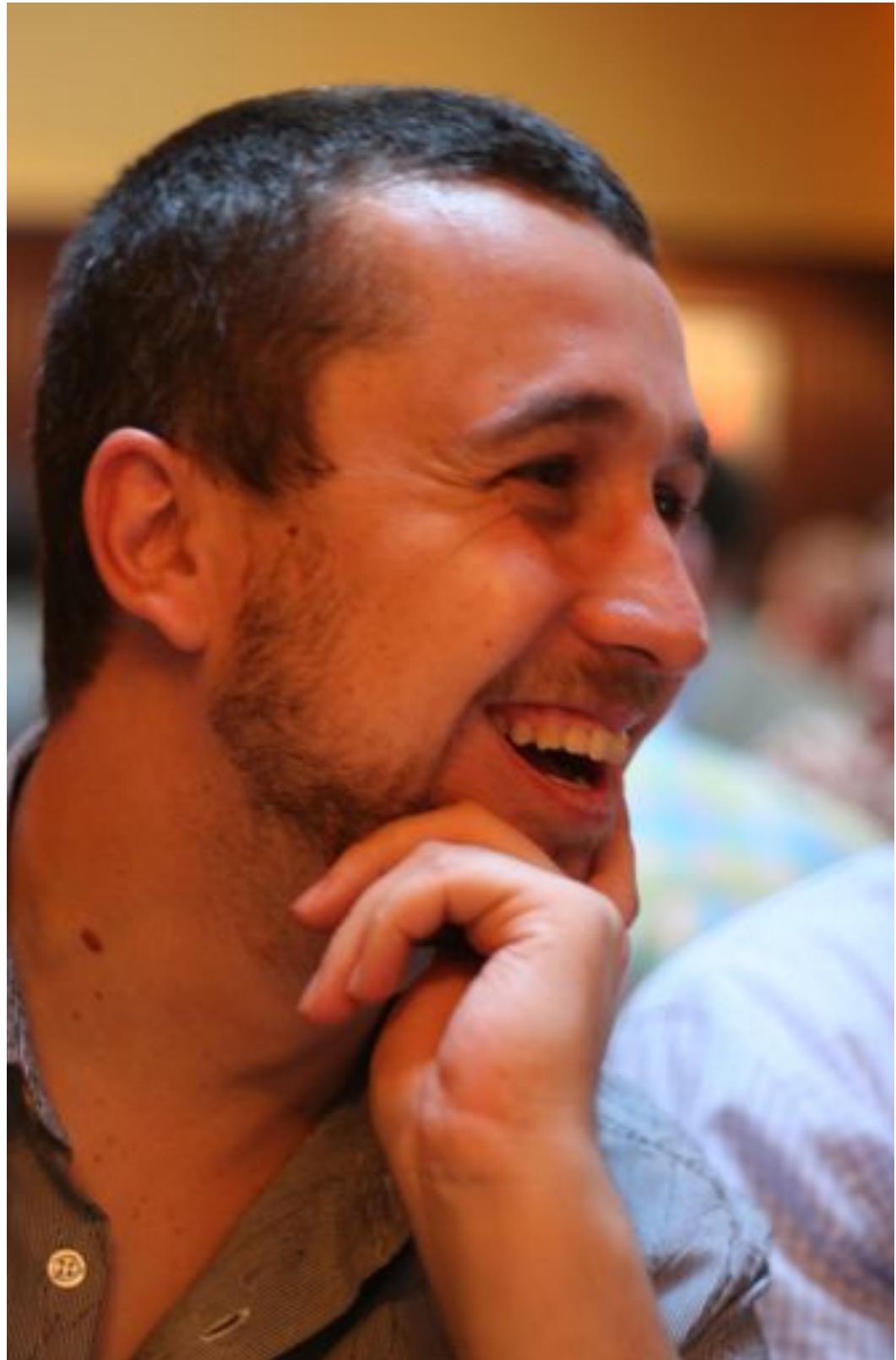
**“When all our work for students is canned, and when everything is rated in terms of grades, we miss so much of the richness of real learning, which relies on failure, trial and error, getting to know people, and reaching for things you didn’t think were possible.”**

**Do you think institutions will adapt to the new reality or will educational innovators have to find workarounds/build new kinds of institutions?**

I think the school as such will fade. As a professor working on and with Mozilla, I could do my work from anywhere in the world, and I could be teaching students from anywhere. I've helped students in Spain, France, Japan, Australia, all over the U.S. and Canada, England, India, and a dozen other countries. It didn't matter that we were in different locations, or at different schools. Projects like Mozilla cut across educational institutional boundaries.

**Anything else you'd like to say about the future of education? What will education look like in 2020?**

I hope that the approach I've adopted will become less of a novelty and more the way many people work. I also hope to be engaged with more students outside my own institution. I'd like to teach from my basement by 2020. :) ✕





Profile:

# Ismael Peña-López

Ismael Peña-López teaches at the Open University of Catalonia, a virtual university based in the region surrounding Barcelona, and maintains an insightful and incredibly lucid blog about the “de-institutionalization of education” at ictology.net. He has a solemn, sleepy demeanor that breaks easily into laughter.

## Tell me about the Open University of Catalonia.

We started in 1994. It's like the U.K.'s Open University, fully virtual. The founding president didn't want to have all the binds and structures of a traditional university. So what he created is a tiny core of people. In our case it's 200 professors for 50,000 students—these are coordinators of subjects. We create the syllabus, teaching materials, design what's going to happen in the four months of the semester. And then there are 2,000 to 2,500 teaching assistants—these are online mentors who enter the classroom. If we have something synchronous or in-person, it's not compulsory and it's mandatory that an abstract or a video is put online. On our Microweb you can find all the books as HTML PDFs. Now that people are getting more DSL we have video, audio, multimedia.

## So how is this model doing?

It's growing, popular—but people are threatened by the popularity of e-learning. The president of the university was a visionary man: he began from scratch. No faculties—no people trying to get small kingdoms for themselves. We created a cooperative so students could buy their own computers. At first, there was a lot of reluctance. It was understandable: We were very new, very different.

By 2000, e-learning had become more normalized and so we had some pressure to offer Spanish courses [rather than just Catalan, the regional language], which are now available.

## So how do the fees work out, and how about the actual costs?

It works out to 400 to 700 euros a semester for Catalan courses. For courses in Spanish, it's three to four times more because the Catalan government won't subsidize teaching in Spanish.

As far as the costs, we have a much lower payroll than a traditional institution. We charge the students the same, but the government subsidizes us at 40 to 50 percent. For a normal university they pay 75 to 80 percent.

## And who are the students?

For 15 years we had the profile of any other Open U—Netherlands, U.K. Dropouts, people who want to study for the sake of it, 98 percent are working, 70 percent have a partner and a kid. My former president used to say we were the most successful university in the world in having students working—because they already had the job when they came in!

## But that's changed?

Just now, in the last semester, 25 percent of new students came directly from high school. That's really new. The average before was like one percent—people who wanted to study something like multimedia, which wasn't being offered anywhere else. Our average age has dropped from 45 to 35.

## Wow! Why do you think that is?

One reason is this digital next generation. They have lives online so why not study online? It's much cheaper. They don't have to commute or rent a flat. They can study and work at the same time.

## Tell me about your interest in free software and open education.

Along with my students, I started an E-learning for Development nonprofit. We use free people (volunteers), free software (our learning platform), and free content—to teach either NGOs or people who are in developing countries like Morocco or post-conflict countries like Bosnia-Herzegovina. We have all kinds of courses like human development, economics, web development. We can do lots of things for free. We need lots of ways to circumvent the huge structure that's normally very slow in adapting.

My research is also about the digital divide or e-empowerment, e-poverty. It's a big thing that is interrelated. If you can change the transmission of knowledge, that's one of the huge axes of development. ICTs (information and communication technologies) can empower people to get their own food, their own health, why not their own learning? ICT is about decentralization and bringing the knowledge back to the people.

## So it's really about justice for you. And it changes teaching and learning practice too, right?

Yes. The teacher becomes a mentor—engaging and monitoring, curating more than just concentrating the knowledge. We can transform education into learning instead of teaching. We have lots of possibilities—why stick to old ways of lecturing? The university has proved that a switch is possible but not a huge transformation of the whole system.

People normally think that face-to-face is rich because you can engage in a conversation with peers and your teacher/savior. You can talk, you can reflect. They are thinking about the Greeks and Aristotle and those disciples going around the cloister. This is only true for good learning, which happens .00001% of the time—maybe at a posh Harvard seminar for 12 graduate students. One of the things we did well in the industrial revolution was to democratize access to knowledge and education. But the tradeoff was about personalization and being able to monitor people very closely.

Online learning is doing very well in that. I have dialogue with my students. On chat boards they can contribute without having to raise their hand. There's no time constraint—we're not rushing off because class is finishing.

# Digital technologies in knowledge-intensive areas (such as teaching and learning) have cut down to the minimum the cost of building, testing, trying, simulating, of being wrong.

With all the materials online, you can customize the experience to the max. The only thing that's blocked in e-learning is this sense of humanity, where I get to look you in the eyes.

## So how do you overcome that?

I like the blended classroom where people work a lot at home with lots of access and interaction, a rich and intensive debate, and they just meet face-to-face once a week or once a day, to check that people are people and are able to access the social part of the learning. At the same time, we have such rich experiences online with streaming video conference and Twitter. It's a tradeoff—if I have to spend two days to go to my campus to meet people, it means during these two days that I'm missing out on this ongoing conversation taking place online.

I'd rather have Wi-Fi without the conference than a conference without Wi-Fi. I'd rather have no human contact but rich contact with all the people online.

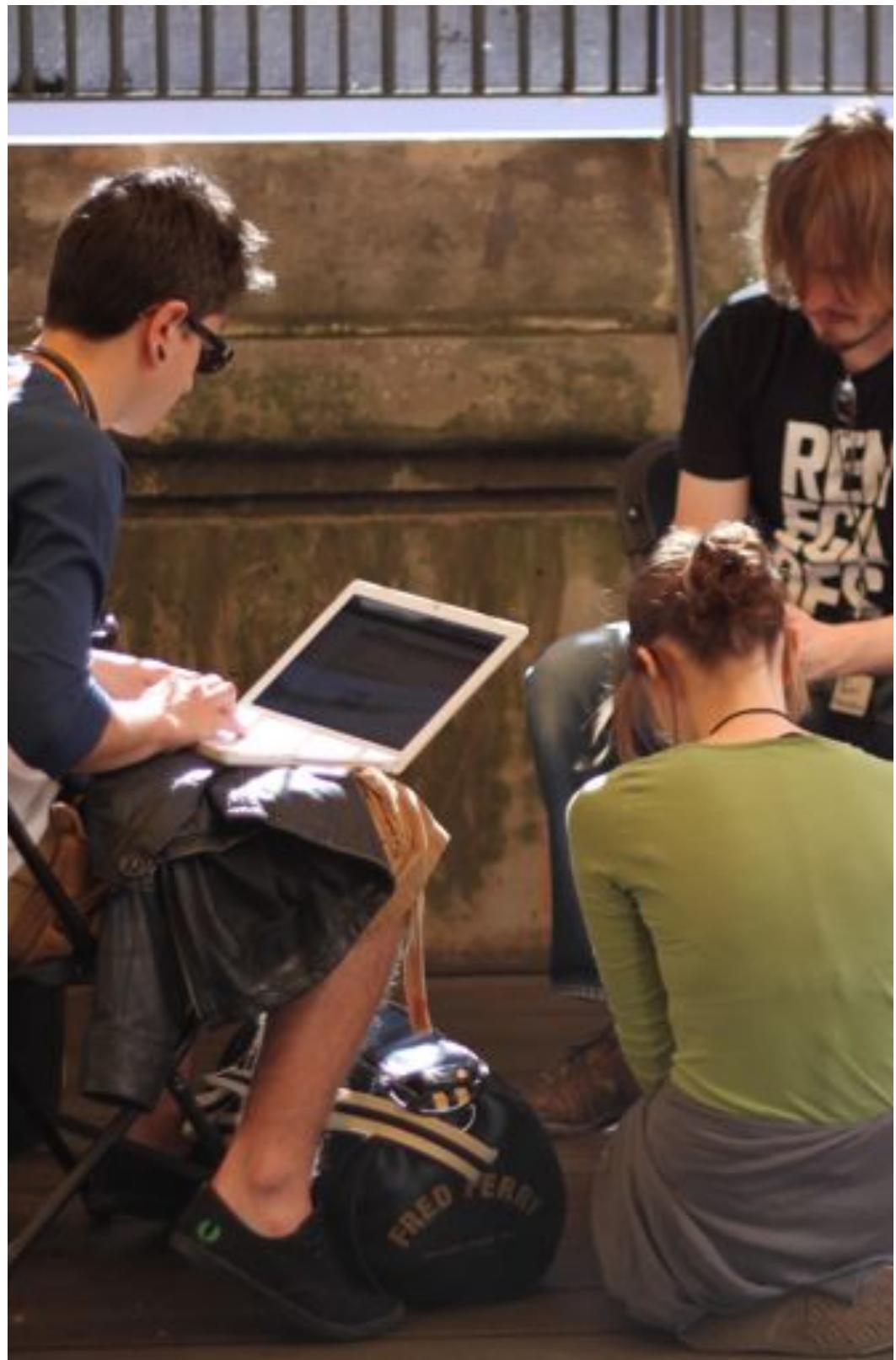
## Wow. That's a bold statement.

I've taught face-to-face and online. I like the adrenaline of teaching offline. I used to gig with a sax so I'm a stage animal. But I find that I get closer to the students online. I can stretch them and force them to think more.

**So what do you think will happen in European education, with all these budget pressures and things like the Bologna process?\***

I think the Bologna process is a good step, even if it's got a lot of opposition from the students. We're ringing alarms about 24 percent of our students being 18. Why should they have to commute an hour to Barcelona to listen to a boring guy, go home, ask somebody for the notes, and end up looking it up on Wikipedia? Maybe this will push face-to-face, not to go online, but to have richer learning experiences. ✗

\*Starting with the Bologna Declaration of 1999, the Bologna process is a broad reform effort to streamline and integrate the higher education systems of 29 EU countries.



# Learning Everywhere

Informal learning leaps the walls of the classroom and shows up in libraries, parks, museums—wherever we are. With the recognition that Learning is Everywhere, the future of learning is finding safe spaces at the margins and in between the lines.

*THE FLIP SIDE* of storming the walls of the academy is opening up to the learning that goes on everywhere else. Increasingly, cities are being recognized as places where innovation happens at an intensified pace in an organic, distributed fashion. Cities themselves can be the most amazing teachers, giving new meaning to the words “street smarts.” There’s a hum of conversation going on amongst people from libraries, museums, hackerspaces, computer labs, bookmobiles, afterschool programs, community gardens, and other spaces for informal learning, who, thanks to the Internet, are increasingly seeing themselves as part of a global community.

“A lot of people perceive museums and libraries as “sacred spaces” where you get a crafted experience,” says Jess Klein of the New Youth City Learning Network, a community of such institutions in New York City convened and sponsored by the MacArthur Foundation, and now operated by Mozilla as part of the Hive Network. “More and more museums, libraries, and community organizations are trying to let people self-curate and self-educate. It’s about taking your learning into your own hands.”

Free from worries about tests and grades, supported by peers, following curiosity and passion, young people can hack, explore, and drive their own learning in such settings.

The outstanding questions: how to share best practices across networks that are nascent and informal, how to surface and make visible the value of this kind of learning, and how to set even more learning free.

Fred Mednick, the founder of Teachers without Borders, a nonprofit “global community of teachers who are working to enhance education and human welfare,” in 180 countries, was a visiting scholar at the Festival. He wrote afterwards: “I particularly loved the gathering of those interested in the future of the library and the ease with which the facilitators helped us tell and gather stories of libraries in several countries: libraries as bookmobiles on donkeys, libraries as community centers, libraries as information hubs. My jet lag downright evaporated when we collaborated on new designs that validated the need for accessibility, availability, affordability, and adaptability. It was electric, rather than electronic.”





## Question: What do you think of when you hear the word "library"?

Some cite the traditional role of libraries as “book warehouses,” where the librarian is responsible for checking out books and cataloguing the books. They’re now thought of as more of a knowledge center—a space where people from community can come and learn, create, and use resources. There were examples cited from around the world that the definition of libraries is changing.

<http://www.fastcodesign.com/1662561/what-happens-to-libraries-in-the-post-print-era>

### 1. Chicago:

Goodreads API for teenagers to share what they’re reading, swap copies, or list books they don’t want anymore for their friends to pick up. “The library is not only related to books, it’s more about connection.”

### 2. Chile:

Connecting family members during an earthquake—geographically long and narrow country, with a lot of cultural differences and many disconnected people. During earthquake, libraries were central part of community, where individuals were interested in reaching out and being a part of their community.

### 3. Rio:

Building a library in the middle of the seven most violent favelas in Rio. Tiny, dingy houses between the sewage and DMV, no one goes there. What people do in poor communities is get wagons to collect books, bring it out in the street and kids and families will come out and read the books. Issues with language because it’s the only Portuguese country in Latin America. Kids can’t read English; only an informal use of English.

### 4. Berlin, Georgia:

A library bus comes by every Tuesday.

### 5. Colombia:

A library got a ARS Technica award for giving workshops to teach kids about blogging, online games, etc. It now has community of bloggers who are telling story about experiences in Medellin. A blog called Sector X allows people to publish their own stories, do workshops on graffiti, fashion shows, and things people are interested in.

### 6. 826 Valencia, 826 National:

Features a pirate store in San Francisco and a super-hero supply store in Brooklyn, NYC.

### 7. Amsterdam:

A Library Designed for the Post-Print Era (Dutch example). Library books are not on shelves but on stacks on the floor. Lockers where people can store their own stuff.



*IN THE AFTERMATH* of “Learning, Freedom and the Web,” a team formed around a new project dubbed Hackasaurus.

“It started at the Festival with Atul (Mozilla’s Atul Varma), Jack (The New York Public Library’s Jack Martin) and Taylor (YouMedia’s Taylor Bayless) and from there the conversation grew more and more,” explains Jess Klein. “Basically the idea is that the web isn’t just static—that it’s really a canvas that can be remixed and reviewed and reconstructed and re-envisioned. Not everybody really understands that, particularly kids. They see the web as something they search and where they’re actively being advertised to.”



## Hackasaurus

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### WHO

YouMedia (Taylor Bayless), New Youth City Learning Network (Jess Klein), Mozilla (Atul Varma), New York Public Library (Jack Martin), Mozilla (Ben Moskowitz), Indiana University (Rafi Santo), New York Public Library (Chris Shoemaker).

### WHY

Create a generation of webmakers. Make it easy for millions of youth to learn about, explore, and redesign the web. Help digital natives see the web as something they actively make and shape (like Lego or magic ink). Instead of something they just passively consume (like TV).

### WHAT

Digital literacy through tinkering and messing around with the online spaces kids already hang out in. “X-ray Goggles software,” local workshops, and an online community for kids will allow youth to play with the web and HTML like Lego.

### WHAT'S NEXT

Further developing tools, games and local “hack jams” around the world at Hackasaurus.org.



### How to get involved in Hackasaurus

[www.hackasaurus.org](http://www.hackasaurus.org)

- Play around with the amazing X-Ray Goggles
- Host your own hack jam for kids
- Help create learning curriculum, online games and more
- Develop Hackasaurus tools and software





How To:

# Hold a Hack Jam for Teens

**Purpose:** Getting young people excited about opening up the web and messing around inside builds valuable skills. Plus it's the best way to ensure that the web stays open – and it's fun!

**Difficulty:**  
Moderate

**Time:**  
1 afternoon  
minimum, 2 day  
maximum

**Who:**  
Many facilitators,  
many youth

**Materials:**  
Venue, computers  
with Internet  
access, yummy  
snacks, permission  
slips

## Step 1:

Decide the topic of the jam: HTML re-mixing, game design, music production, video.

## Step 2:

Invite youth and facilitators who have experience in the field and/or with kids and work with them in advance to develop a game plan or curriculum for the day of the jam.

## Step 3:

The goal of every jam is to make something. Set expectations for outcomes: user testing and project development (for example, of Hackasaurus), or building new projects (like an Arduino robot).

## Step 4:

Let teens work together in teams, and throughout the jam encourage them to take on specific roles on their project (i.e., visual designer, coder, project manager, documentarian).

## Step 5:

Have the youth present what they did, encouraging conversation about process and techniques!





Profile:

## Jack Martin

Jack Martin is a radical librarian. He's been working in the library since his mom made him volunteer there at age 13. Today, he's assistant director for public programs and lifelong learning at The New York Public Library. He also teaches future librarians at Pratt about 21st century learning and social media, and he's focused on the kind of learning that goes on outside of school.

### How did you get involved with the Mozilla universe?

I first got involved through the New York Public Library's relationship with the New Youth City Learning Network, sponsored by MacArthur Foundation. The idea is to pull together cultural and educational institutions and organizations around the city to provide kids with a seamless learning experience, to create learning pathways.

The MacArthur Foundation sent me to Chicago to meet with Mark Surman, and we had a really exciting day of brainstorming to find out what kind of open source cool tool Mozilla could create that could be used in libraries and new media centers across the country to support kids hanging out, messing round, and geeking out online. [This became Hackasaurus, above]. And the Festival is the second phase of that.

### So what do libraries have to do with the future of learning?

Public libraries have always been a place where kids can discover themselves—artistically, educationally, technologically, and inspirationally. So I think we're a natural fit for this new 21st century learning. We just have to figure out where we can learn from analog and take it to the online environment.

Learning has changed in the 21st century and social media plays a really big role, and I'm very interested in finding out everything from baby steps to big picture ideas on how libraries and other public organizations can support that, whether on the local hacker level, or a widespread system that spreads across a whole infrastructure.

**Can you give some examples from your experience with the New Youth City Learning Network?**

Sure. We've recently finished a 10-week project with an organization called Global Kids. They explored social and global issues using social media. They made online comics about social issues, interactive Google maps, and even built some serious video games.

[http://www.olpglobalkids.org/social\\_media/](http://www.olpglobalkids.org/social_media/)

Traditional public libraries' primary focus has been on crafting and games and things that are book-related. I think there's been a fear in some libraries that these intense levels of learning after school might be off-putting for kids, but by blending the technology and gaming and social media, we're discovering that kids are interested in engaging with serious content.

**How old were the kids?**

8th grade and up.

**Cool! So lots of times informal learning doesn't get the same respect or centrality as the kind of learning that goes on in school. How can that be changed? How can we make this kind of learning more visible?**

Kids are already learning after school—there are studies out there that show they're online, finding interests from peer circles and becoming experts and reaching mentors. So all that we really need to do is for libraries and schools and other like-minded agencies to realize how they can be a part of that learning, which is already happening. ✕

**“Traditional public libraries’ primary focus has been on crafting and games and things that are book-related. I think there’s been a fear in some libraries that these intense levels of learning after school might be off-putting for kids, but by blending the technology and gaming and social media, we’re discovering that kids are interested in engaging with serious content.”**





*“LOCAL LEARNING”* was a unique track at “Learning, Freedom and the Web.” It was the strongest attempt (if not completely successful) to connect the Festival with its setting in the heart of historic Barcelona, skateboarders zooming by in the graffittied square between the MACBA (Contemporary Art Museum) and the FAD (Art and Design Foundation). It was the one place where actual young people interacted with the festival programming, field-testing a lot of the theories that were floating around about the best way to engage people in learning that is alive, awake, and aware of its surroundings.

Several local organizations collaborated to bring local learning to the festival and to follow up, most notably with the “OpenRaval” project, to leverage the Raval—a diverse, historic, artistic and sometimes notorious district—as a kind of open classroom.

“The local learning incubator focuses on the possibilities that the urban environment can bring to learning. We all have similar interests in youth or citizens learning and teaching each other, and working around smaller devices when they are not in the classroom,” says Enric Senabre Hidalgo, the coordinator of projects at CitiLab-Cornellà (<http://citilab.eu>), a “citizens’ lab” or “experimental center for active diffusion of technological culture” in Barcelona. Activities include Arduino, Scratch animation, music editing, Legos, video, and more. He helped coordinate the local learning incubator at the Festival. Youth participants came from TEB, a center that encourages young people to develop digital skills that play to their passions.

**“It is particularly interesting to note that a century ago, right here in Barcelona, the “Escuela Moderna” (Modern School) was founded by free-thinker Francesc Ferrer i Guàrdia. The school’s stated goal was to “educate the working class in a rational, secular and non-coercive setting” and is, at the present, a main milestone in the critical pedagogy ideas and in the history of education.”**

—Free Technology Academy.

Open Raval's co-coordinator was Ingrid Erickson of the New Youth City Learning Network. As she explained in a Q&A on the Festival website:

<http://www.drumbeat.org/content/qa-ingrid-erickson>

- ▀ “The New Youth City Learning Network is a group of museums, libraries, and afterschool programs working together to create learning opportunities for middle and high school-aged kids in New York City around a set of integrated projects and programs that focus primarily on design, citizen science, civic engagement, urban ecology, and sustainability. It’s based on the notion that kids are motivated by their own interests and encouraged by their peer groups to try new things and explore the world around them. We’re sort of taking that literally by developing opportunities for ‘structured autonomy’ by using the city as the context for learning—city streets as game board, for example.

I am personally a big believer in the idea: If we can understand, expand, and control the means to author and create, we can do just about anything. The web is really just a playground for exploration and learning, if you look at it this way. Even cooler since the web is a network, once you learn one small part of it you’re always going to be connected to many more parts as well. The connections are endless!

“I’m particularly interested in using the web in physical contexts to add a layer of meaning to the world around us. So we also need open tools for mobile web to really bring the notion of an OPEN Internet of Things to its fullest potential.”

Like the Open Web, we consider the city to be a sparking point for acquiring significant knowledge, but also a platform for gathering and sharing what has been learned or is understood. The urban environment is a playground for discovering places and people, often aided by the use of digital tools, but also for teaching in a distributed way using public spaces as platforms or stages.

The intersection between being a digital citizen and an urban learner provides a wide path for exploring, thinking, and showing one’s views about sustainability, conflict, context, aesthetics, and feelings. Via the screens of mobile devices or computers, in particular, urban streets can be discovered by learners in an entirely new way: as being full of data that is waiting for meaning.” 

And as the wiki for OpenRaval explained: “The vision of the OpenRaval Classroom was a free, autonomous learning zone for sharing, testing, and showing how digital and open web resources—already much a part of youth culture—can be powerful tools for reshaping society and creating knowledge. As an experimental space, it had its first instantiation on November 6, 2010, in the heart of Barcelona’s Raval neighborhood.”

<https://wiki.mozilla.org/Drumbeat/events/Festival/Barcelona/OpenRaval>

## Goals

- To turn the Raval area into a distributed, digital learning lab that facilitates the remixing of local projects and people from different initiatives and institutions and produces new synergies, new plans and new processes.
- To give local young people ideas, tools and freedom to act on their learning interests, decide on their own terms about what they want to learn, and interact with others about their lives and environment.

### Brutal, l'Open Raval

by Joves del TEB | November 6, 2010

Aquest matí, encara que amb una cara d’adormits impresionant..., ens hem trobat un grup de 18 joves del TEB amb moltes ganes d’anar a participar als tallers que organitzàvem al FAD. A l’arribar, ens hem separat en 3 grups:

- Un grup, està fent un aparatet que fa música!!
- Un altre, està fent un videoclip amb un croma (la tela verda aquesta que amb una màgia que no sabem, fa aparèixer darrera teu un escenari com una platja o el que es vulgui).
- El tercer grup, ha marxat a fer unes proves d’una gimkana digital.

<http://jovesteb.org/blog/2010/11/06/brutal-lopen-raval/>

### Google translate

This morning, though with sleepy faces... we amazingly encountered a group of 18 youth from TEB eager to go participate in workshops organized at the FAD. Upon arrival, we separated into 3 groups:

- One group is making a machine that makes music!
- Another is making a video with a chroma (greenscreen—with a magic we don't understand, behind you can appear a beach scene or whatever you want).
- The third group has come to do some testing of a digital gimkana.





How To:

# Have a Digital Gymkhana

The name comes from a kind of autocross sport; this is more of a scavenger hunt that crosses back and forth between real-world and digital-world. See new things in your everyday urban environment that you had overlooked or never knew about!

**Difficulty:**  
Moderate

**Time:**  
4 hours

**Who:**  
Many +  
1 facilitator

**Materials:**  
Cameras for each group; computer with Internet access

## Step 1:

Write 2 or 3 questions for each group of 3 or 4 people. The questions will send you to a particular place in the surrounding neighborhood: a street corner, historical plaque, sculpture, park bench, etc. The clues may be easy (visual details) or hard (historical events).

## Step 2:

Each group must go out and find the object described in the question and take a photograph of it.

## Step 3:

The groups return to base and upload their photographs to Wikipedia Commons.

## Step 4:

Groups post comments on each others' photographs, to see if they can find out more about each place and its history.





Profile:

# Carolina Botero

An attorney by trade, Carolina Botero got into the world of openness from the legal side of things. She's the leader of Creative Commons in Colombia, works for a family foundation spreading technology in education, and is a recognized figure speaking for the adoption of open education all around the world.

## So how did you get interested in learning, freedom, and the web?

For the past 20 years, my father and his friends have been working in educational software. As the Internet started to appear, institutions in the public sector needed help to find the right applications for our context. Many institutions have old computers, there's not much connectivity. So we help them, saying, what do you have and how can you do that better?

## What are the special issues facing the production and adoption of open educational content in countries like Colombia?

If you go looking for OER (open educational resources), you'll find it from Europe and the U.S. One of the main axes of the OER movement is to produce content for others to reuse, and it assumes that the third world needs to take the content from the first world. But the truth is that in the third world we are producing a lot of content! It just doesn't go out easily.

That's the moment we are in right now. Teachers are starting to realize the problems and find out really how they can reuse content better on the Internet. This also faces many other problems—legal and language issues, for instance. Whether it's Wikipedia or anything else you find on the Internet, English is mostly it.

## Are you finding that people in Latin America are excited about open education?

The educational sector is very strong on the use of open licenses in Latin America, and most educators are really into the open idea. People basically feel connected to the idea of openness and sharing, but they don't necessarily have the whole understanding of what openness means. That takes a little more time.

## So tell me about some of the projects you're working on now.

Many of the content in Spanish was made 10 years ago for diskettes or CD-ROMs, and the open content you're finding now doesn't run on the old computers. Teachers need to become very good on technical issues to be able to use it. We'd like to start a community where teachers and technical people can join to bring obsolete content to life.

## Another project involving Creative Commons?

It's tricky to understand how to use open content. So we put together a card game for teachers to understand compatibility of the licenses. I even went to Vietnam to the OCWC meeting this year, and played it with teachers from different parts of the world. We are also doing a DIY kit, so anybody can print out the cards and have the instructions to play.

## Carolina, what led you into this field of freedom, learning and the web?

Precisely the philosophy I was talking about, the idea of sharing. I've never been the typical lawyer. I like to work with others—not just other lawyers but across disciplines, artists and teachers and journalists and everybody. We all know something, we can all put in something that makes an idea bigger. And sharing is a very positive world.

## And what do you think learning is going to be like in the future?

I think that the learning process is changing. We used to go to school and learn what we needed. Boundaries are being erased by new technology, and that means that the school has to change, too. It cannot remain the way it has. Probably we have given too much importance to formal education up to now, and new technologies are bringing new opportunities for informal education and our own interest to have a part in the learning process.

## Do you have an example?

I was attending a conference in Bogota and someone was talking about this project, SE-BAL, in Uruguay. In the small towns in Uruguay, a few years ago a school on Sundays would be empty. People would be playing soccer or in church.

Now, it's full on Sundays because it's the place where the Wi-Fi is open. The kids go there with parents and grandparents to check on the Internet. And the school is alive on Sundays, even if there's no formal education. Now the teacher is the student, because he is the one who knows how to work with the Internet. That's what open ed is for me: I don't need to wait for you who is the expert to teach me. I can try to do the effort to learn by myself. ✕

**Now the teacher is the student, because he is the one who knows how to work with the Internet. That's what open ed is for me: I don't need to wait for you who is the expert to teach me. I can try to do the effort to learn by myself.**





SECTION TWO

# WEB X LEARNING



## Web x Learning

The web can lower barriers, cut costs, blow open access to knowledge. It enables—and demands—new models of teaching, learning, assessment, and accreditation.

### In this Section:

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Page 116      Page 150  
**Open Content**      **Webcraft**

Open licenses provide the intellectual and practical framework for a world of unlimited learning resources.

What if web education worked like the web?



**“About 500 years ago, the primary mode of teaching in the university was to come in with blank sheets of paper and listen to the professor recite from a manuscript so you could make your own copy of the book. There was an opportunity 500 years ago with the invention of the press to radically change education. But that didn’t happen. The lecture is still the primary model. Now we have the birth of the Internet. If we only get these opportunities twice a millennium, we should try to use them.”**



– David Wiley, a psychology and technology professor at Brigham Young University and one of the godfathers of open educational content, who addressed the crowd on Drumbeat Festival's opening night.





Profile:

## Joi Ito

Joi Ito is the head of MIT's prestigious Media Lab, former chairman and CEO of Creative Commons, and a worldwide avatar of the free culture movement, which means, like Santa Claus, he has more houses to visit in one night than seems possible given the laws of physics. But he was able to make it to the Festival for one night and to be interviewed from an airport somewhere in Asia later on.

### So why all this energy around open education?

I think there are a lot of trends coming together here. There's a general reflective review of our educational system. You see the MacArthur Foundation focusing on online media, kids, and learning. The Hewlett Foundation supporting OER, Cathy Casserly, and Mike Smith who went to the White House. And then you see a lot of awareness by the people in the White House about the value of openness in all its forms, including both open government and open ed, and being really aware of the value of openness and sharing and communicating with the rest of the world, connecting different cultures.

At the same time, I think, as we lower all the different barriers to connecting with people and content, making the Internet more ubiquitous, the tools cheaper and easier to use, I think that has finally reached the point where massive adoption at the global scale is possible.

Innovation in learning can now happen at the edges, and there's a lot the education community can learn from open source. So there's two things going on. It's the maturing of the Internet and opening up of all the layers together with a general review of education and a thoughtfulness about openness.

### In your keynote you talked about the idea of layers of the Internet—can you unpack that a little bit?

Sure! It used to be you had to have a permit to connect a device to the telephone network, and those devices were "black boxes"—closed. The Internet created open standards and unbundled each layer, so people running the network weren't running the content. The Internet is organized in layers: the physical cables, TCP/IP, the World Wide Web, HTML. And each of these layers is usually open standard. It's not encumbered by proprietary patents. This allows people to interoperate, compete, and innovate.

You used to have to buy software just to have a little Local Area Network inside your office, and you had to hire big consulting firms to create databases or websites. When the World Wide Web came about, you could create your own website without having to hire a software person. And before blogging, there were these huge content management systems that cost hundreds of dollars and took thousands of people to run.

At each layer we opened the black box, and unlocked those tools. Now, what's important about open source is that it allows the people using the tools to modify and make the tools.

Creative Commons is trying to solve one of the points of friction at another layer, the layer of massive collaboration. Today, professors and students can connect online, but their academic publisher says, you can't share your paper to other people directly, they have to subscribe to the journal.

### So obviously Creative Commons poses a huge threat to the academic status quo.

I'm not trying to make a war! Those institutions all still have a lot of purpose. But elements of their mission need to be changed. The Internet layers have forced the lowering of the cost of production and distribution. So the gatekeepers now are preventing access to people who could otherwise have access. It's a transition that needs to occur.

It reminds me a lot of the advent of open source. Linus Torvald used to say, we're not Microsoft haters, we're Linux lovers! It's not that I'm against formal education, but I want this other path to be embraced.

### Where would you get started with changes?

We have to look at the accreditation system right now for formal education. We have students sitting around in seats getting credits so they can get out of school. What is school for? To teach you to show up on time? What if you were going to libraries, museums? You could be learning all this stuff but not getting any credit for it. There's tons of learning going on outside school, and it's sub-optimal to ignore or not encourage more of those forms of informal learning. Of course, I'm biased because I'm a dropout.

### Where did you drop out from?

Tufts and the University of Chicago. At Tufts I was studying computers in the 80s. I was learning dead languages, and I could learn a lot more online. So I went to UC to study physics. But I started working in a night-club—I was very interested in community, communications, and media. I was learning a lot more every day there than I was in school.

# Informal education is the mirror of how the Internet is organized, and formal education doesn't mirror that or map that at all.

You're talking about threatening education's monopoly over accreditation—are we looking at a fight like what happened in the music industry?

Well, helping people learn, it's really hard to argue that's a bad thing. When sharing music it's easier to argue that the people who are sharing really aren't contributing to society. In research and science, the fundamental thesis is that you build on the work of others. So the notion of sharing is much more logical and natural in education than in many other industries. At the same time, there is a conflict of informal versus formal education. I think the Internet has made it so that kids know more than their parents and teachers. Informal education is the mirror of how the Internet is organized, and formal education doesn't mirror that or map that at all.

Where do you see all of this going in the next decade?

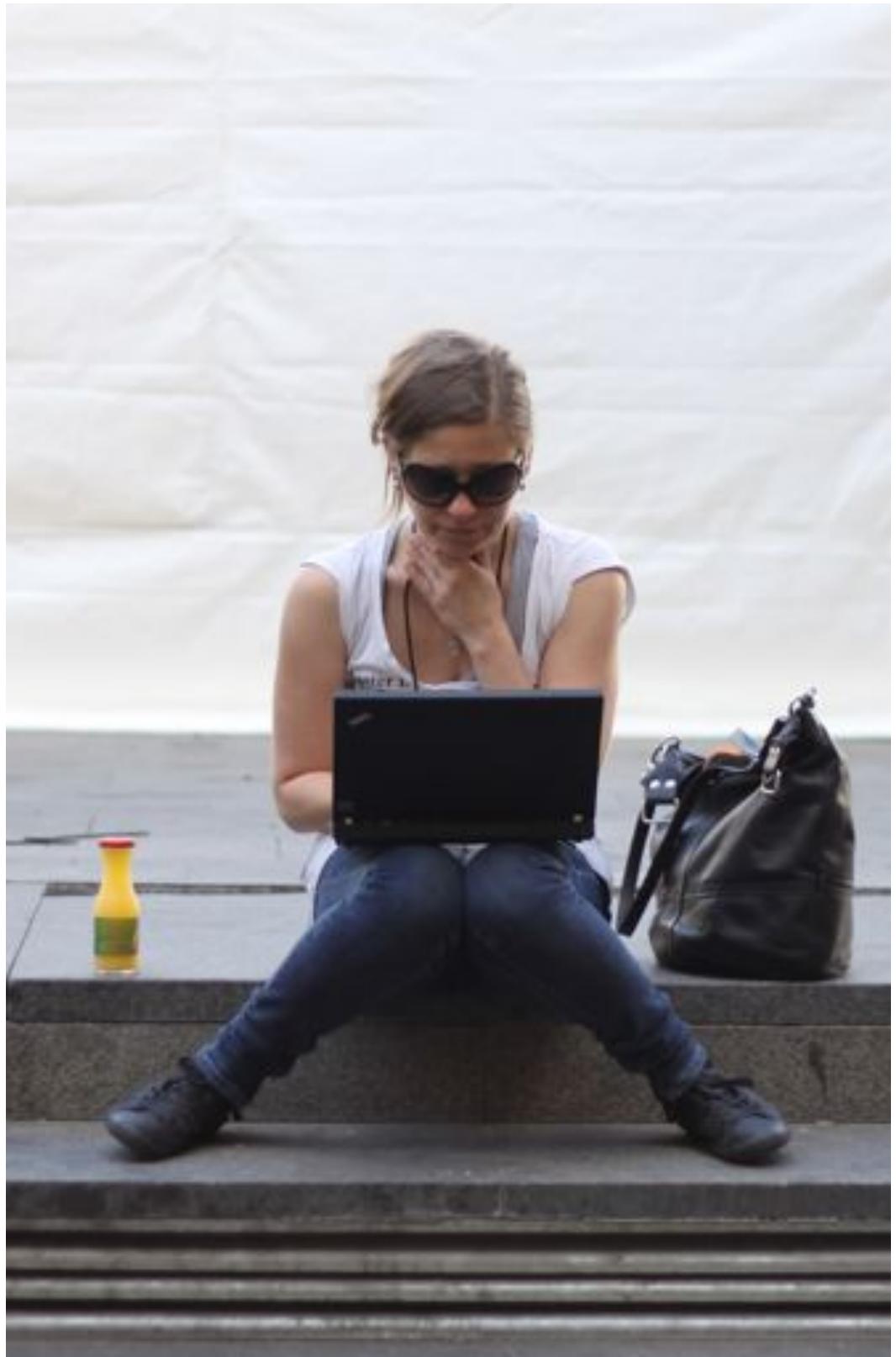
I'd really liked to see more alternatives to formal education that are recognized, to allow informally educated people to participate in society. The U.S. is moving forward here, at least on the research side. It's really behind in a lot of other countries. In Dubai, for instance, I can't set up a company as a CEO because I don't have a college degree. I can't even get a visa in Singapore because I don't have a college degree.

Finally, I think it's empowering the practitioners to learn how to modify the tools themselves rather than rely on vendors for everything. Great tools on the Internet are made by people who created their own tools. Technology is just getting to the point where teachers and students can't just use the tools but make the tools, and opening the black boxes is something they can and should do.

That happens at places like the Mozilla Festival where you bring the geeks together with the practitioners. It doesn't have to be centrally funded or authorized. You can do it together in small groups. There's going to be a shift in who leads the future of this stuff. You're talking about threatening education's monopoly over accreditation—are we looking at a fight like what happened in the music industry? ✕







# Open Content

Open licenses provide the intellectual and practical framework for a world of unlimited learning resources. What does open content have to do with learning, freedom, and the web?

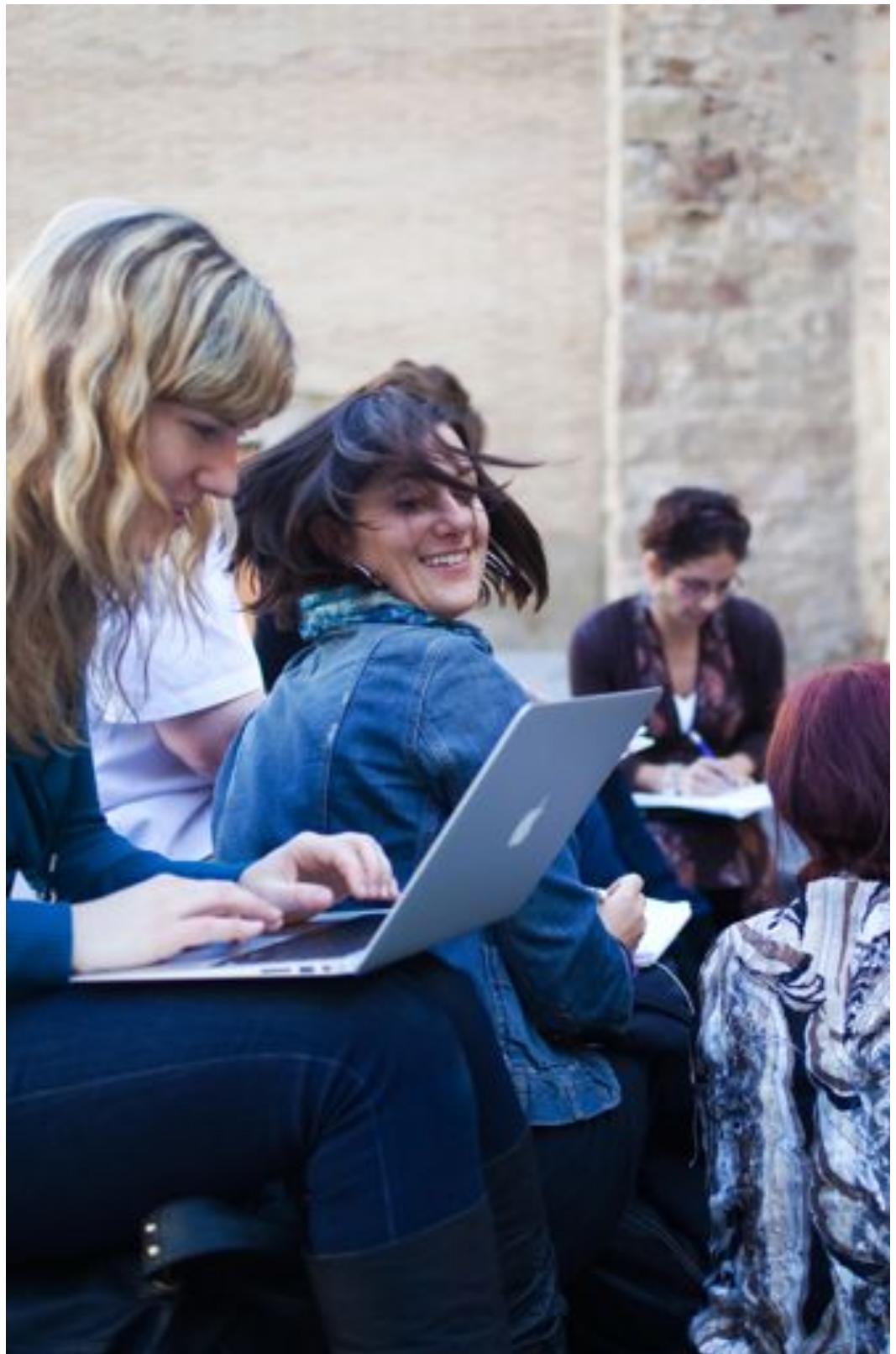
*IT STARTED WITH* MIT's OpenCourseWare program in 2001. Professors were offered a few thousand dollars in incentives in exchange for taking the time to upload their lecture notes and syllabi to the web, for free. Over the past 10 years, tens of foundations, hundreds of schools and dozens of governments have released thousands of entire courses from pre-K to PhD—video lectures, podcasts, textbooks, exams, serious games, and everything in between—that can be freely shared, reused, and remixed under licenses like Creative Commons.

CC licensing provides the practical framework for sharing open educational resources. And maybe more important, it provides a key philosophical tie among the worlds of learning, freedom, and the web. Education is a central use case of Creative Commons in its stated mission to “increase the amount of creativity (cultural, educational, and scientific content) in ‘the commons’—the body of work that is available to the public for free and legal sharing, use, repurposing, and remixing.”

In the words of Molly Kleinman, a Festival attendee and a librarian at the University of Michigan, “ccLearn [Creative Commons’ learning division] is striving to realize the full potential of the Internet to support open learning and open educational resources, and to minimize legal, technical, and social barriers to sharing and reuse of educational materials.

In the United States alone, plummeting budgets and rising costs for both K-12 and higher education are making it harder for students and teachers to access the quality educational resources they need. Until recently, most educational content was locked behind digital paywalls or hidden in print books, and the free stuff you could find online was often unreliable. Now, the pool of high-quality open educational resources is growing every day, with open textbooks, open courseware, and other experimental projects popping up all the time.”

<http://creativecommons.org/weblog/entry/19158>



In the emerging world of learning, freedom, and the web, open content is the area that's farthest down the path of institutional acceptance. Free or cheap textbooks have proved to be a potent gateway drug. In January of 2011, Obama's Department of Education announced a \$2 billion fund to create materials for career training programs in community colleges, all of which must be open licensed. Many view this policy as a potential "textbook killer" and a first step toward the open licensing of all educational content created with government funds.

"If the Department of Interior commissioned a new public park and hired somebody to pave the roads and build the bathrooms, would we then give the contractor the keys to the park and say you can charge admission?" asks Hal Plotkin, a Festival attendee who is a senior policy advisor to Martha Kanter, a Deputy Undersecretary of Education. "The public paid for it, they should benefit from it. Yet in intellectual property for many decades the practice has been quite the opposite."





Profile:

## Hal Plotkin

Hal Plotkin is the open education movement's man in Washington, D.C. Since 2003, he's made a career leap from journalism (he helped create the radio show Marketplace and was a technology columnist for the "San Francisco Chronicle") to public service, getting elected to the Board of Trustees of Foothill-De Anza Community College. Together, Plotkin and Foothill's president, Martha Kanter, turned the Silicon Valley college into a national leader in the use of open educational resources. When President Obama appointed Kanter to Deputy Undersecretary of Education in 2009, the first community college president to ascend to such a post, Plotkin came along to the Department of Education. But he retained his journalist's ability to speak like an actual human being.

**So tell me why President Obama is excited about open education.**

The president's goal is to restore the U.S. to having the most highly educated workforce by 2020. He's also talked a lot about American soft power, why it's in our interest to share intellectual assets and boost education and training overseas. OER is the only tool that makes those goals really practical. President Obama made his first speeches about open courses just two months after his inauguration, in Warren, Michigan, and support for OER is enumerated in the National Educational Technology Plan. <http://www.ed.gov/technology/netp-2010/executive-summary>

So I don't feel like I'm freelancing here.

**Okay, but with all that great support, why aren't we seeing more adoption of things like free textbooks?**

It's a huge frustration for me personally. The institutional embrace of these practices has been painfully slow. Frequently, knowledge about OER in the higher education world is inversely proportionate to rank. When somebody benefits from a system that they end up on the top of, it's very hard to question the premises that led to their ascension. I don't think the system will change until it's on the verge of irrelevance from a social and economic context. And it may not even change then.

If educational institutions continue their exclusionary practices and elitist approaches, it may be that 50 years from now they're relegated to the status of elite social clubs, while the work of education takes place outside them.

## Wow, Hal. Revolutionary! What was your take on what was going on at “Learning, Freedom and the Web”?

As I was coming home on the plane, most of my notes were about the badge [alternative accreditation] work. The idea that a collaborating, diverse group of people from around the world would be working in a voluntary association with learned and technical societies to develop curriculum, courses, and pedagogy that leads to industry-recognized credentials, and that you could earn one, maybe as a graphic artist, and put it on your resume, and a potential employer somewhere down the road could click your badge and see your portfolio—I thought that was just breathtaking. Think that through a few years from now. There's an employer faced with two applicants, one with a series of badges linked to representative examples of work that are directly relevant to the job, and the other one shows up with a BA from a baccalaureate institution. Who's going to get the job? It's at least an open question.

## So what's the government's role in this?

It was ironic—at another OER gathering not long ago, people were talking about the ideal structure that would make OER sustainable. They said, what we need is an organization that has widespread membership, collects dues, and has an interest in educating its members as efficiently as possible. I pointed out that what you've just described is something we call the government. To the degree that governments are not supporting OER, they're abdicating a fundamental responsibility to provide for their citizens.

## And what's the best way to do that?

Our proposed policy is that for all educationally significant intellectual property, what the public pays for, the public should get access to through open license.

## But can government really take a leadership role in supporting innovation in education without picking winners?

The most important innovations with economic impact have been byproducts of government actions: the Internet, the GPS, microprocessor computers. The government is uniquely positioned to provide the kind of resources and goals that will incentivize and make possible iterative developments beyond what we can imagine.

OER is about more than efficiencies and economies of scale. It has the potential to break down the silos in education. OER creates communities of practice, where people can collaboratively improve; we see this as a wonderful indispensable tool to improve the quality of learning and teaching itself. ✅

**The most important innovations with economic impact have been byproducts of government actions: the Internet, the GPS, microprocessor computers. The government is uniquely positioned to provide the kind of resources and goals that will incentivize and make possible iterative developments beyond what we can imagine.**



*OPEN CONTENT TODAY* is frustratingly far from reaching its full potential: free, high-quality lessons for every learner. And content by itself, of course, is not learning. Truly free, web-enabled learning means developing the skills among learners and teachers to discover, share, remix, create, and otherwise interact with knowledge in every possible format.

OpenEd, the eight-year-old gathering of the open courseware movement, was held in Barcelona just before the Mozilla Festival. As a result, the Open Content studio boasted participants from Creative Commons; the Open Courseware Consortium, an organization of over 250 institutions worldwide that release free courseware; MIT's seminal Open Courseware project; Connexions, a repository of open courseware released by individual educators, hosted at Rice University; and Flat World Knowledge, which commissions and markets low-cost open-licensed textbooks.

The outstanding question amongst this community: Why don't people use more of this great stuff out there?

As Meena Hwang, director of the OpenCourseWare Consortium, told me, "When I first got to know about mechanisms of open source programs and how things should be working on the Internet, I took it a little more idealistically. The truth is, crowdsourcing hasn't worked all that well. I've tried it in so many places, so convinced this could work, but it's difficult to get things organized, to get going."

In one session, the group brainstormed ideas to overcome barriers to adoption of open content within the academy:

<http://www.edtechpost.ca/free-and-learning/>



### Session Notes: Overcoming Barriers to Adoption

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- |  |  |
|--|--|
| <p>1. Work on convincing high profile people that open content is good.<br/>Creative Commons goodwill ambassadors.</p> <p>2. Promotion.</p> <p>3. Education.</p> <p>4. Central area where other communities show what they are doing.<br/>Discussion forums, groups, photos, posts.<br/>Case studies on community building (P2PU).</p> | <p>5. Leverage student communities on campuses more, ask students to do case studies.<br/>Students for free culture.<br/>Student groups, ie. student pirlgs, etc.</p> <p>6. Raise awareness that anyone can start a salon.</p> |
|--|--|





## Session Notes: Quality and Sustainability

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A second session focused on the other main concerns with open content, issues of quality (how good is the stuff?) and sustainability (how will we pay for all this free stuff?).

### Quality

Quality depends on the involved actors and publics. Quality metrics and criteria are different in arts, academy, online communities, and other contexts. Having that in mind is a key issue to reach quality standards, and each context may need a different approach strategy.

### Sustainability

Sustainability is not about just making profit and making a living. Also: reusing resources and efforts, creating a sustainable model in a social, economical, and ecological ways. Open Content in education is a great example of reuse and economical efficiency.

### Open

If you make your content open, more people will read it and you would get more potential contributions that improve the content. Under a Copyleft/ ShareAlike license, you will benefit from the contributions of others and you could include them in your work or product. A good example of that is Wikipedia.

### Involvement

Enabling the possibility to get anyone involved in the (re)production process will make your work potentially best in quality. Free Software is an example of that: sometimes has great quality, sometimes not, but even in those cases the software can be improved and potentially get more quality. Private and closed models lock that possibility.

### Standards

Open is not just about the license, also the support/format. Using open standards file formats is a key issue to enable participation without barriers, get contributions from anyone and improve quality in all possible directions.





## Creative Commons Attribution Tool

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Out of the discussions at the Festival emerged a new project to try to solve one barrier to reuse of open educational content—making it easier to give credit where credit is due.

### WHO

Molly Kleinman at University of Michigan;  
Nathan Yergler, former Chief Technology  
Officer for Creative Commons

### WHAT

"Open Attribute," a browser add-on that makes it ridiculously simple for anyone to copy and paste the correct attribution for any CC licensed work, including:

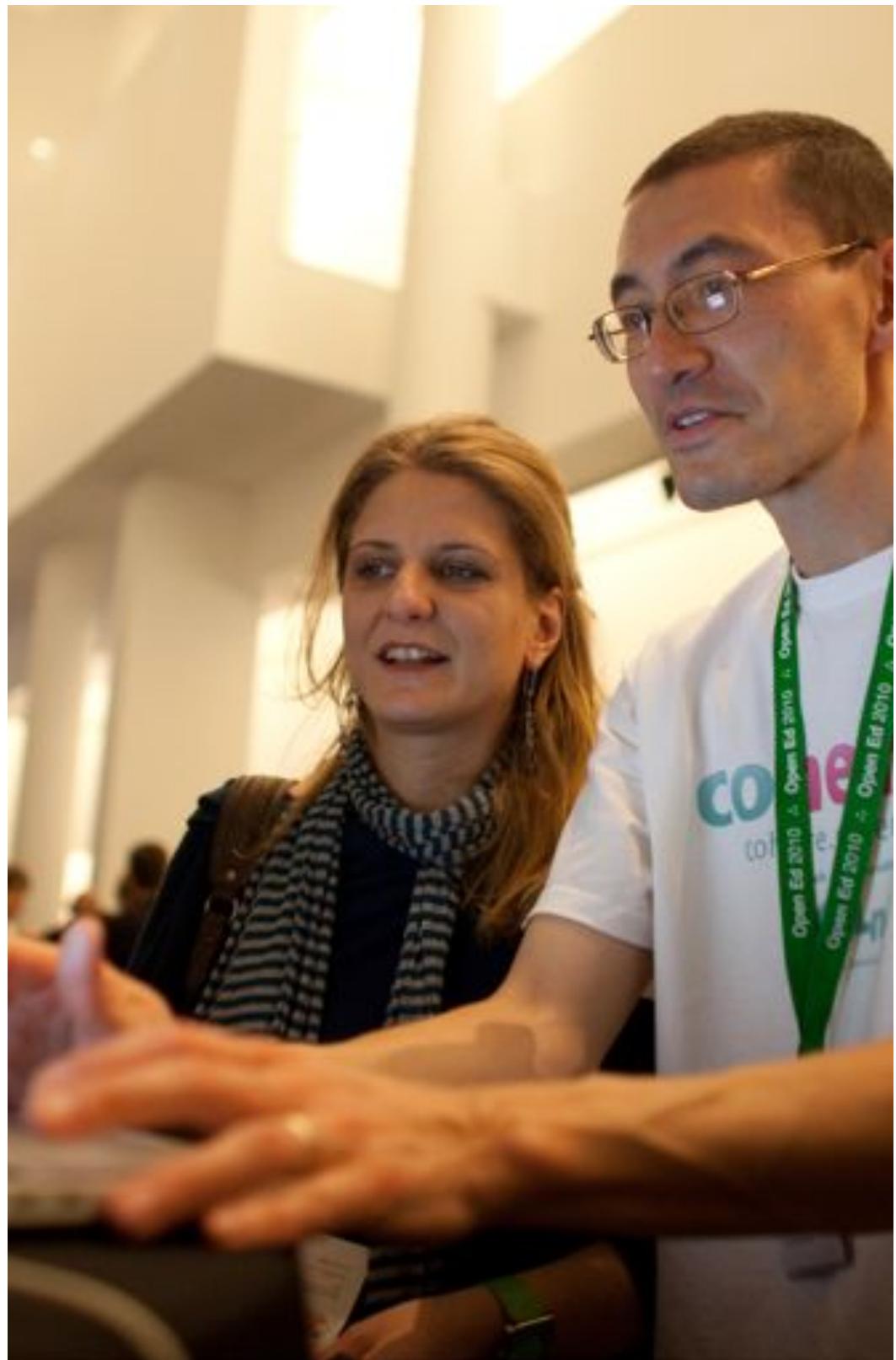
- 1) Title of the work being attributed
- 2) Attribution name (e.g., author, company, username)
- 3) Source URL for the attributed work
- 4) CC license name (e.g., CC-BY, Creative Commons Attribution Non Commercial)
- 5) CC license URL  
Optional attribution elements (CC+)  
1) URL for the author site 2) Contact information for additional permissions

### WHY

To make open educational resources easier to cite properly and reuse.

### WHAT'S NEXT

Try it out at [www.openattribute.com](http://www.openattribute.com)





How To:

# Create an Open Educational Resource

**Purpose:** Sharing your knowledge and learning resources with the world, for free, is the fundamental building block of learning, freedom, and the web.

**Difficulty:**  
Easy

**Time:**  
5 minutes

**Who:**  
1 or more

**Materials:**  
Computer with Internet access and a piece of educational content: test, lesson plan, set of learning resources, curriculum

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**Step 1:**

Choose a piece of writing, test questions, or other educational content that you want to release for free.

**Step 2:**

Choose a Creative Commons License at <http://creativecommons.org/choose/>. Do you want to allow others to alter your work? Restrict commercial use?

**Step 3:**

Choose where you want to publish your content: Connexions.org, <http://cnx.org/> or the Open Courseware Consortium <http://www.ocwconsortium.org/> are two good places to start.

## Agenda

- Korea University
  - ~ Introduction to KU
  - ~ Korea University
- Portfolio Contest
  - ~ Purpose & expectation
  - ~ Outcome
- K-OCWC efforts
  - ~ 9/13 OCWC
  - ~ Goal +





Profile:

## Meena Hwang

Meena Hwang is in charge of communication and community outreach at the OpenCourseWare Consortium, the premiere worldwide community of over 200 institutions dedicated to sharing digital-format, open-licensed, university-level educational materials of all kinds. She speaks with a sly wit born from hard experience, having traveled everywhere from Romania to Vietnam, spreading the gospel of openness and learning.

### What is your background and why are you interested in open education, free sharing and reuse of knowledge?

I used to work in corporate training for multinational businesses and in higher education. My interest in free sharing and reuse comes from being an idealist who believes that this is something that can change the world. I'm a Marxist, I guess, even though that's last year's clothing. It's the whole democracy of creation. It's really cool how people can actually create something and have it published and people can all have access to it.

### So why is this important to the world?

It can be a tool to provide people with basic human rights as stated by the U.N.: Human beings are entitled to food, shelter and education.

### Can you describe OCWC's current projects? How many people are participating? What kinds of projects are they working on? What are the goals?

The Consortium works on projects that ensure bigger discoverability, accessibility, and further propagation of open educational content. For discoverability, we are working on a global course catalog of all OCW courses. For accessibility, there are continuing discussions on how to make contents accessible to the visually impaired, people with bandwidth problems, or those who have little access to technical devices. For further propagation of OCW, we are not just talking about outreach for more institutions to participate, but creating something that enables more people to participate with less effort.

## How closely is open courseware related to open-source software?

I have met many people who regard OCW as something identical to open-source software. I would say that the idea of sharing is the same, but the mechanism for building the “product” may have been a bit different. Whereas open-source software has been modularized for individuals to build upon and improve, thus reducing the cost of rebuilding it, OCW contents in large part have been provided by institutions as “community source.” We are trying to encourage reuse and remix of the materials, and there are people who are making derivative work, to fit the context of their use, language, and culture.

## And how close do you feel you're getting to this ideal of wide reuse and remixing of open courseware?

I've not seen it yet. When I first got to know about mechanisms of open source programs and how things should be working on the Internet, I took it a little more idealistically. The truth is, crowdsourcing hasn't worked all that well.

I work with a consortium, mostly of producers, mostly in the global North, and a lot of them totally believe that they're helping the developing world, and it's bullshit. When I go to places like China and say, do you actually use these resources?, they say, no, it's not fit for my classroom. My students do not speak English so it's not great for them. So right now, I'm concentrating on translation first. I figure that would be capacity-building, to show a model to collaborate on the web together, so things will move a little easier. But translation is a really difficult and tedious job.

## Where is the open courseware movement seeing the most success?

Where we're farthest along is in our integration with policy. We started with institutions, and it's easier for us to work with institutions. For example, many institutions are trying to embed open publication into their system, with some schools seriously considering using OCW as criteria for faculty promotion. And Korea, Brazil, and the Netherlands are looking toward opening federally-funded material, though it's just in the discussion stage at this point.

## So what is your hope and interest in participating in “Learning, Freedom and the Web?”

We have to work with the technology community, because we really need advanced technology to move on. And I'm not talking about high-tech stuff, I'm talking about user-friendly stuff. What I really want to develop right now is an authoring tool so that any teacher can fill it out as their course notes application, press a button and upload it as an OCW.

## Anything else you'd like to say about the future of education? What will education look like in 2020?

Nobody knows and I think that's the most exciting part! People keep talking about informal learning, but in parts of Asia and Africa, people are not into informal learning at all. Yet, for sure I know OER has to be an alternative to the problem we're facing. Given the rate of population growth, there's no way possible to physically educate all these people. We had no idea what was going to happen in 10 years, 10 years ago. ✗

**My interest in free sharing and reuse comes from being an idealist who believes that this is something that can change the world. I'm a Marxist, I guess, even though that's last year's clothing. It's the whole democracy of creation.**



## Part 2: Wikiworld

A *SPECIAL CASE* of open content in academia is the world of wiki. Wikipedia and other collaboratively created and edited repositories of information are not official “open educational resources,” but sometimes they function much better for the purposes of learning, freedom, and the web. They’re free, easy to find, available in dozens of languages, and anyone can contribute.

Jon Beasley-Murray, a Festival attendee and a Latin American studies professor at the University of British Columbia, famous for his use of Wikipedia (about which more in a minute) writes: “At present, Wikipedia hovers at the fringes of academia, like an uninvited guest. Wikipedia’s aims are eminently academic, concerned with collecting, processing, storing, and transmitting knowledge. Judging by the number of the site’s articles and readers, it has been remarkably successful at promoting a culture of intellectual inquiry. Yet it is fairly consistently derided by academics themselves. Still, everybody uses it, in one way or another, even if they might want not to admit to the fact. Above all, our students use it, openly or otherwise (as they are often explicitly told not to cite Wikipedia articles in term papers), but without necessarily knowing how it works. They are told that Wikipedia is bad, but they are not often told why; and of course, they find it an incredibly useful resource.”

<http://en.wikipedia.org/wiki/User:Jbmurray/Madness>





The Wikimedia lounge, presided over by S.J. Klein, hosted discussions and hack sessions on the use of wikis for learning. Some cases in point:

[http://outreach.wikimedia.org/wiki/Wikipedia\\_for\\_Teachers\\_-\\_School\\_%28Bookshelf%29](http://outreach.wikimedia.org/wiki/Wikipedia_for_Teachers_-_School_%28Bookshelf%29)

- Wikiotics
- Wikipedia in Education
- The Public Policy Initiative
- Wikimedia campus ambassadors
- Wikieducator and Wikiversity

Jon Beasley-Murray gave a presentation on his use of Wikipedia in the Classroom, which Matt Jukes Digital Manager for the Medical Research Council in the U.K., reported on in his blog:

 **Murder, Mayhem and Mystery: Wikipedia in the Classroom**  
by Matt Jukes | November 5, 2010

<http://backpass.org/2010/11/05/murder-mayhem-and-mystery-wikipedia-in-the-classroom/>

Jon Beasley-Murray had been exploring and contributing to Wikipedia as a work avoidance ploy and in doing this he realized that the articles in his area of expertise weren't great and that maybe his students could do better.

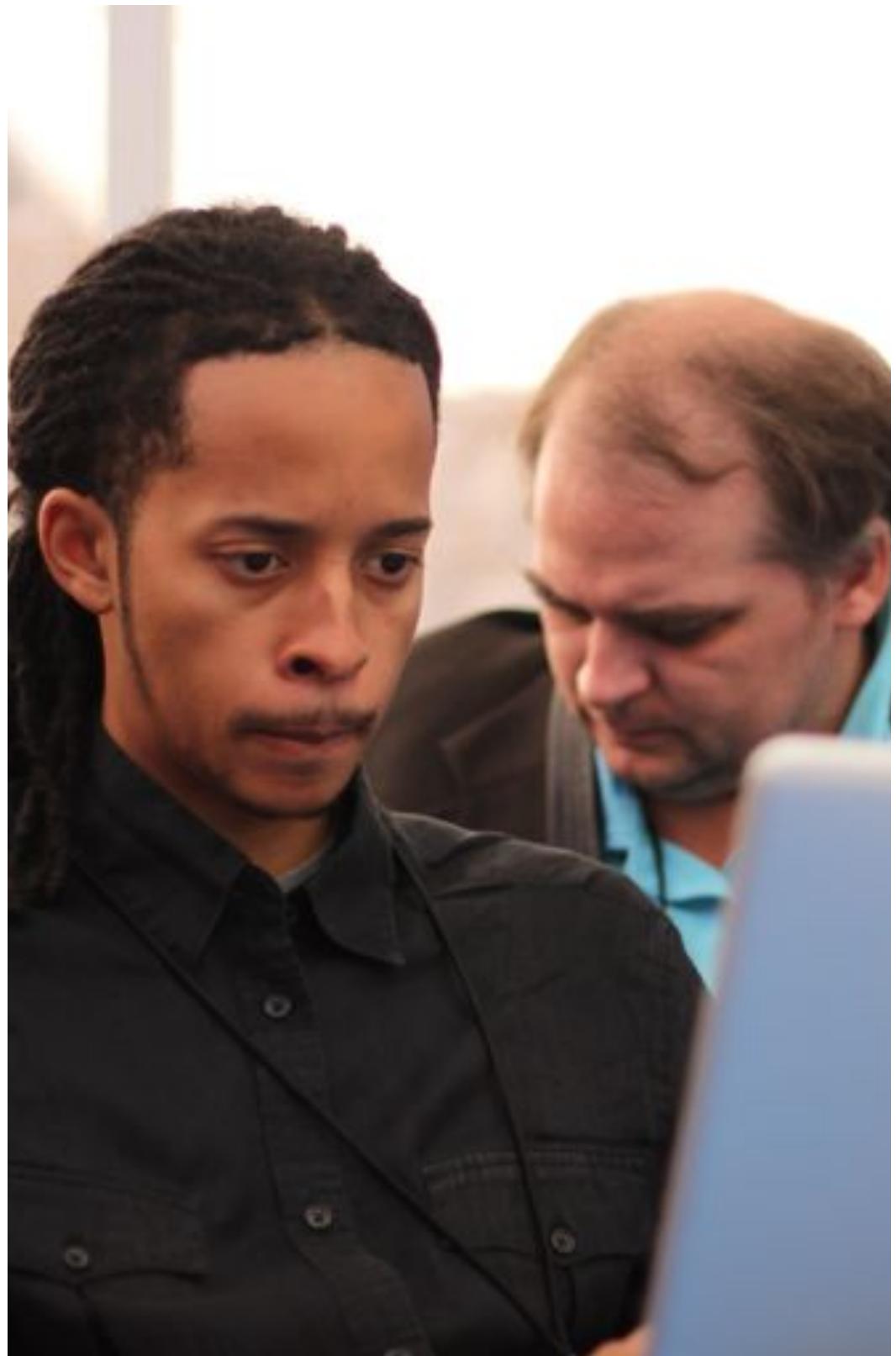
For an entire semester, he set a goal for his class of either editing or creating articles based on the authors and the novels they were covering in a Latin America literature class—with guaranteed A's for any team that became featured. In the end, they managed to get three featured articles (less than 1 percent of articles manage this) and as an amazing side effect, the work they did with Wikipedia not only gave them a much more mature insight into how to use Wikipedia, but it also reignited much more traditional research skills.

The Wikipedia project page is well worth scanning through: [http://en.wikipedia.org/wiki/Wikipedia:WikiProject\\_Murder\\_Madness\\_and\\_Mayhem](http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Murder_Madness_and_Mayhem). They get the kind of traffic most scholarly publications would kill for and the entire project gave us an inspiring demonstration on the opportunities that can arise when traditional and open methods meet rather than clash!

Clearly there are lots of obstacles standing in the way of the transition from free and open learning resources into free and open education. There are discoverability barriers (actually finding appropriate stuff to use when you need it), language barriers, and major educational cultural barriers to getting teachers and students to actually adopt open material, let alone remix and improve it.

Some of these issues will simply resolve themselves with time, as open content gets better known. Policy changes, such as those contemplated by the federal government, could do a lot as well. But the case of Wikipedia, and particularly Professor Beasley-Murray's experience, illuminates a different path forward.

What makes Wikipedia so powerful is that 1) everyone knows about it, and 2) everybody contributes to it—maybe not every single user, but there's a much, much larger editor base than is found in your typical open course-ware repository, where every contributor is already a credentialed academic. If you think about defining “open content” as content that learners alter and improve, as a matter of course, then it suggests a different means of teaching, not just a different tool for the old methods of teaching.





How To:

# Teach and Learn with Wikipedia

Purpose: Editing Wikipedia offers the advantages of publishing and peer review to learners at every level.

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## Step 1:

Find a topic you would like to learn more about, or choose a research topic from an existing course.

## Step 2:

Rather than complete a standard research paper, start or contribute to an existing Wikipedia article on the topic.

## Step 3:

Do lots of research, on the web or in the library. Make sure your writing is properly sourced and formatted, as well as clear and easy to read.

## Step 4:

Submit the article to processes of revision and peer review. Be prepared to improve the article over multiple revisions to reach "Featured" or "Good" status.

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**Difficulty:**

Moderate

**Time:**

15 weeks or more

**Who:**

1 or many

**Materials:**

Computer with Internet access, library

**Resources:**

[http://en.wikipedia.org/wiki/Wikipedia:School\\_and\\_university\\_projects](http://en.wikipedia.org/wiki/Wikipedia:School_and_university_projects)

lists 70 such projects, of which Jon Beasley-Murray's is exemplary.  
[http://en.wikipedia.org/wiki/Wikipedia:WikiProject\\_Murder\\_Madness\\_and\\_Mayhem](http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Murder_Madness_and_Mayhem)





Profile:

## David Wiley

David Wiley kept a low profile at the Festival, partly because of its overlap with Open Ed, the premiere conference on open educational resources and practices that he founded at his home base in Utah eight years ago, and partly because of his naturally unassuming personality. The Mormon father of five created the first open license for educational content ten years ago; today he jets around the world spreading the good word about openness.

### What are you thinking about right now, David?

A big message for me right now—my tiny brain can think about one thing at a time—Is the value proposition of openness. What's the point? First, if you're a part of an organization that's interested in getting better: You can get data about how you're doing. And second if you're a school and those data tell you there are opportunities to get better, you need permission to change your curriculum. So, if you don't have some kind of data gathering and analytics—and openness—you cannot engage in continuous quality improvement. For example, at Brigham Young we did an independent study. We put Open Courseware online with a button: If you think this is cool, click to enroll.

### Previously the concern was that if you publish openly, you would put yourself out of business.

I'm doing a small pilot funded by the Hewlett Foundation with eight teachers and 1,200 students on open science textbooks and cost effectiveness. Most use printed versions of the books, while a few hundred students in one-to-one schools will use the online versions of the books on netbooks or iPads. First, we're comparing costs. If a typical textbook costs \$100 and has a five-year replacement cycle, now you're buying a new open text and telling them they can highlight it and mark in it and do whatever they want. The price has to be less than \$20 a book for that to work out.

So some chemistry teachers took this 1,400-page chemistry book and turned it into a 250 page book that covers what they want it to, and they've read every single word. On a short print run, including shipping, the books cost \$7.30.

**Wow.**

It's extremely powerful. Some of the other books that people didn't customize as much cost more than \$20. That's half of the study. The other half, and in some ways the more important part, is that next summer after the state administered exams, we'll compare the science learning of the kids with open texts to those with the \$100 textbooks. If you look at the entire body of education research, you would bet the farm and the tractor that there'd be no difference. However, we do have some reason to believe that because the kids can highlight and annotate the open texts, they might learn a little more. With free and open resources, people say, oh you get what you pay for. We're saying, let's not ask if it's poor quality or not [in the abstract] but let's compare to the book you're already using.

The basic idea is for any learning materials that the public pays for, they should be released under CC-BY. My favorite story about this is my wife and I were in Ohio and we drove past this pizza parlor that said: "Buy One, Get One." And I said, if I buy one I better get one! And I think this should be our position. The public, if we buy one, we should get one.

### So how did you get involved with Mozilla? And what do you think about "Learning, Freedom and the Web" vs. OpenEd?

Mark [Surman] and I first met at the meeting where we did the writing for the Cape Town Open Education Declaration. Mark's great at making connections. He's a fabulous matchmaker between people, but he also sees connections between ideas. My folks at Open Ed largely don't have the technical chops these folks have. We're formal—the senior policy advisor to the undersecretary of education, provosts, university presidents. Here it's much more of a hacker thing. I would doubt anyone registered for the Festival has an executive role at a university. And I think this meeting is more populated by people who, for a variety of good reasons, have lost faith or lost interest in the structure, in the orthodoxy. ✗

The Port Huron Statement of the Open Educational Resources movement  
<http://www.capetowndeclaration.org/read-the-declaration>, released in September 14-15, 2007, after a meeting of the Shuttleworth Foundation and the Open Society Institute, lays out the position that "everyone should have the freedom to use, customize, improve, and redistribute educational resources without constraint."

A big message for me right now—my tiny brain can think about one thing at a time—Is the value proposition of openness. What's the point? First, if you're a part of an organization that's interested in getting better: You can get data about how you're doing. And second if you're a school and those data tell you there are opportunities to get better, you need permission to change your curriculum. So, if you don't have some kind of data gathering and analytics—and openness—you cannot engage in continuous quality improvement.





How To:

# Adopt an Open Textbook

Purpose: Open courseware gives your students more learning options than a static paper textbook. Plus it's cheaper, or even free!

**Difficulty:**  
Easy to difficult

**Time:**  
A few hours

**Who:**  
1 or many

**Materials:**  
Computer with  
Internet access,  
photocopy shop

## Step 1:

Find an open textbook that meets your standards for a course. Free, faculty-reviewed open textbooks are available at:

- WikiBooks
- WikiEducator
- Connexions
- CCCOER Open Content
- OER Commons
- MERLOT

Flat World Knowledge  
<http://www.flatworldknowledge.com/>  
offers open-source textbooks with various pay-for-download or print-on-demand options.

## Step 2:

Customize the textbook experience: Choose chapters that are especially relevant to the course, or combine chapters from different textbooks.

## Step 3:

Tell your students where to access the textbook. Give them plenty of options: A URL to download the PDF, a print-on-demand service such as Lulu.com, and a photocopied course packet at the campus print shop.

## Step 4:

Publicize your choice. Go back to the network where you found the open textbook and give feedback and reviews; and don't forget to tell faculty at your school about your choice as well.



# Webcraft

What if web education worked like the web? Web-building skills (or webcraft) constitute a new, critical form of literacy that is lacked by far more people than good old reading and writing. Can you use the practices of the open web to spread webcraft farther and wider? It's worth a shot.

*AN EVISCERATING KEYNOTE* presentation from a 20-year-old self-taught British programmer left no doubt in attendees' minds as to the sorry state of web education.

"I got into this industry when I was about 13 by playing games, NeoPets, then Myspace pages," said Anna Debenham, who founded "Scrunchup," a web magazine for young developers. "When I started studying design in school, the course material was hugely out of date."

She gave several examples in her slides: British college-prep test questions specifying the use of tables (a slow, inflexible method) in websites, instructing people to write code in PowerPoint or Word rather than directly in a working program, giving outdated definitions for HTML.

The problem: Traditional academia is hard-pressed to move at the speed of technology. We're not just talking about universities, we're talking about primary schools and secondary schools. By the time you get to university, it's too late. As Anna pointed out: "People like me grasp on to technology at such a young age that the schools just can't keep up."

So, is it possible to make web education work more like the web? Especially the open web? It turns out that there's an emerging world of people trying to do just that. Chris Mills, founder of the Open Web Education Alliance, says: "So many institutions out there are teaching either no web design or teaching it in a really outdated crappy way. A community-led approach can cover more ground a lot quicker."





Profile:

## Chris Mills

Chris Mills looks like a typical metalhead. At over six feet tall with long hair, a goatee, a black T-shirt, and the Skype name “dark satanic mills,” he doesn’t do anything to dispel the aura of gloom. But far from worshiping Satan, the U.K. native is actually dedicated to ideals of inclusion and accessibility, especially in webcraft. He works for Opera, an open-source software company as the chief creator of its Web Standards Curriculum. It’s a “course designed to give anyone a solid grounding in web design/development, no matter who they are—it is completely free to use, accessible, and assumes no previous knowledge.”

### How did you get interested in the connection between free software and open education?

It's been a passion of mine since I first started using the Internet. I did biochemistry for a degree—most webby people never do anything for official qualification that has to do with what they do for a living. I've never been a massive tech person although I am good at HTML. I'm interested in the social and educational applications. I think the Internet is an amazing invention as a universal communication mechanism.

### And how did you come to write Opera's web standards curriculum?

I worked for about a decade at various publishing houses, and I kept going to publishing companies saying, why don't we produce an amazing free resource to allow anybody to learn this stuff even if they can't buy our books? I can understand a company having a slight business conflict over this. But Opera, from a purely business perspective, saw it as a good public relations strategy to spread the world of open standards and best practices.

So I got together the people who I thought would be good for the job and signed them up to write the course. It took me a year to design the curriculum: <http://www.opera.com/company/education/curriculum/>

Now it's at a pretty good stage and it's been translated into 10 different languages. I've had good feedback from people around the world who found it useful, ranging from teachers at colleges and universities as far away as Indonesia, China and Japan, to an 80-year-old guy from Australia that learned how to make websites and put up photos of his grandchildren.

## And this has connected you to a broader learning, freedom and the web community?

In 2007, at South by Southwest. I bumped into some like-minded people, like Aarron Walter, the lead U.S. designer for MailChimp, an Atlanta-based company. He was producing something at the time called WaSP interACT, another really cool educational resource that provides core structures and sample exam questions and rubrics for assessment—not the tutorial itself but the other stuff to go along with that to put together a curriculum.[<http://interact.webstandards.org>]

And so, even though we'd started those projects totally separately, they worked together really nicely. And they've listed all the OPERA web standards curriculum as recommended reading.

Aaron and I also worked together on a book, InterACT with Web Standards: A Holistic Approach to Web Design, which came out in May of this year. What we wanted to do was to produce the perfect basic textbook for people who want to get into web design. It doesn't cover a lot of JavaScript, just information architecture and HTML.

## Cool! So tell me about the Open Web Education Alliance.

OWEA is meant to act as a kind of governing body that will be able to regulate all this stuff and show that curricula are kept up to date and in good quality, and that this stuff is actually getting to the educators who need it.

## And how does this connect with the accessibility work you've been doing?

I've been working with the U.K. government to try to actually get proper government legislation. There's nothing to force educators to update their material and teach it properly, so we want to make that a bit more enforceable. One big dream I have, if this kind of legislation is successful in the U.K., would be to use that template to work in other countries as well.

## *Isn't it a bit strange for a self-taught web designer who's pioneered in the field of open education, to get so immersed in government mandates this way?*

Well, I don't think there's anything wrong with web design being self-taught. I know some hideously talented people who've been working since the age of 17. But it's good to have proper courses available for people who want to go down that path equally as well as self-learning. We should make it so the option is available in a more effective way.

The other thing it's about is getting the university structure and industries in general to take web development and web design more seriously. It's talked about a lot in OWEA. Web design at the university level is an orphan. It doesn't fit well into any existing subject area. In computer science it's seen as a wussy lightweight copout thing to do because it's not programming. Graphic designers are scared of it because it involves code. I'm trying to get the slight chaos of self learning more into official courses—to make education courses work more how the web works. ✕

I'm trying to get the slight chaos of self learning more into official courses—to make education courses work more how the web works.

*“LEARNING, FREEDOM AND THE WEB”* was a scene for publicizing and further developing the idea of a community-led approach to teaching web development, through an emerging network of organizations including the Open Web Education Alliance, Peer 2 Peer University, and its School of Webcraft (in partnership with the Mozilla Developer Network).

“The Webcraft Toolshed: bringing together interdisciplinary web professionals across design, development and marketing, students, university and college web educators, informal trainers, advocates, and anyone who wants the core values of openness and inclusion to form the foundation for the web’s vibrant future. Together, the School of Webcraft and OWEA want to establish open collaboration on projects that share the common goal of standards-based web education.

The Webcraft Toolshed aims to achieve this by:

1. Mapping the necessary skills you need to practice web craft and describing the overarching principles that guide web professionals.
2. Building concrete strategies to connect the organizations, methods and resources that learners turn to for web education.
3. Remixing and repurposing existing web learning resources for new learning forms and channels.”

Hosted by the School of Webcraft (powered by P2PU and Mozilla), Mozilla Developer Network (MDN), and the Open Web Education Alliance (OWEA).

<http://p2pu.org/>

Peer 2 Peer University, with the tagline “learning for everyone, by everyone, about almost everything,” is {“an online community of open study groups for short university-level courses. Think of it as online book clubs for open educational resources. P2PU helps you navigate the wealth of open education materials that are out there, creates small groups of motivated learners, and supports the design and facilitation of courses. Students and tutors get recognition for their work, and we are building pathways to formal credit as well.” }

Though less than three years old, P2PU is one of the most well-established and best recognized experiments in peer-led learning. It began when Harvard graduate student Neeru Paharia met Jan Philipp Schmidt, a German computer scientist working on open courseware in South Africa, at a conference in Croatia. They formed a team together with a Norwegian, Stian Haklev, and an Australian, Delia Browne, and got a \$70,000 seed grant from the Hewlett Foundation to launch their first pilot of 10 courses in 2009. True to the peer learning spirit, P2PU has to give the public what they want—courses got going in subjects that already had online audiences of self-motivated learners, like writing, behavioral economics, and Wikipedia visualization.

P2PU is trying many different technologies, from video chat to EtherPads, Google docs, and plain old email. Class facilitators are experimenting with ways to put assessment in the hands of peers to take the pressure off the facilitator as the “single point of failure”—which is key to getting a model that can attain scalability.

To do this, they need to innovate the practices of both teaching and learning. They don’t use the term “teaching,” rather, facilitating, with the idea that learners will identify their own goals and reasons for being there. It’s very much a work in progress.

### From the P2PU Course Design Handbook

a community-generated wiki: <http://wiki.p2pu.org/w/page/27905271/Course-Design-Handbook>

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#### 1. Course organizers identify basic learning objectives

Developing learning objectives are a necessary component of P2PU courses. Learning objectives are a broad generalization of the purpose of the course and include the acquisition, retention, application, and adaptability of knowledge and skills acquired through participation. What skill or sum of knowledge will a participant gain? Where will they be able to apply it?

#### 2. Participants identify their personal learning goals

You'll find that P2PU participants have differing motives for taking a course. Often participants work on a range of projects within the same course. Therefore, participants should identify their personal learning goals when they sign up for the course and revisit them when course begins. Ask participants to share their personal learning goals with the group to promote discussion and cross-pollination of ideas.

In the fall of 2010, P2PU teamed up with Mozilla to launch the School of Webcraft, with the goal of creating “a peer-led system that helps people around the world easily gain skills and build careers on open web technology.” Pippa Buchanan, who started her journey into the world of self-learning by blogging about a DIY Master’s degree, now works for P2PU.

She says:

[http://www.w3.org/2005/Incubator/owea/wiki/Web\\_Craft](http://www.w3.org/2005/Incubator/owea/wiki/Web_Craft)

“The original idea for the School of Webcraft arose when John Britton taught a course on P2PU about ‘Mashing Up The Open Web.’ That sparked a conversation between Mozilla and P2PU on the idea of a partnership based around web developer education. Mozilla would provide the brand recognition and focus on the open web, and P2PU would bring a lively community of peer learners to incubate the School of Webcraft.

Fall of 2010 saw the creation of 12 initial School of Webcraft courses. Over 500 people applied to take part in the free peer-led classes and 345 were accepted. There were a range of people, from those wanting to build a career in web development, to teachers and designers. And there was a great range of participants from people in their late teens to those in their fifties who are both updating their skills and building their first ever website.”

Some people are aiming to build educational tools, others are testing HTML 5 support across different browsers and other people are learning the skills that help them to read software source code better.”

“We’ve got 15-year-olds from Bangalore, and retired librarians, and everything in-between,” says Stian Haklev, a PhD student originally from Norway and another P2PU founder. “Many organizations like Opera, Adobe, Yahoo, WOW, and WaSP InterAct have been diligently working to develop curricula and outreach programs to help schools better prepare their students for a career on the Web. The Open Web Education Alliance (OWEA) will bring many education initiatives together in a broad collaborative. Its mission is to bring together companies, schools, and organizations involved in shaping the education of Web professionals to explore the issues around the topic of Web development education and create solutions for improving it.”

<http://www.w3.org/2005/Incubator/owea/>



#### How to get involved in School of Webcraft

[www.p2pu.org/webcraft](http://www.p2pu.org/webcraft)

- Start learning basic web-making skills in minutes
- Volunteer to mentor novice web developers
- Suggest resources and learning challenges

**The School of Webcraft borrowed the term “webcraft” from the Open Web Education Alliance, which defines it as: “Web Craft is a systematic approach to Web development and design education. Web Craft emphasizes the fundamentals of Web technologies, including markup, styling, accessibility, internationalization, client-side, and server-side scripting, Web architecture, webapp development, user experience, and other considerations, in a manner beyond that acquired by using WYSIWYG [What You See Is What You Get] authoring tools [such as blogging interfaces]. Web Craft also concentrates on a pragmatic investment in skills that meet market needs, and solve problems for potential employers. Professionalism and self-training is a key aspect of practicing Web Craft.”**





Profile:

## Pippa Buchanan

Pippa Buchanan found her way into open education by blogging about her attempt to do a DIY Master's degree. In the fall of 2010 she came on officially as coordinator of P2PU and Mozilla's joint venture, the School of Webcraft. Pippa is a childhood nickname that really fits her wide eyes, blunt-cut bangs, and boundless enthusiasm. Over a cup of tea, she freely declares: "I just love learning!"

### What is your background and why are you interested in open education, free sharing, and reuse of knowledge?

I drifted into the dark arts of computer science and then games development for several years in my twenties. After traveling the world, and not sure how to reconcile my technical training with my creative impulses, I realized that I was interested in learning almost everything. At the end of 2008 I wrote a blog post called the Academy of DIY <http://diymasters.battlecat.net/2008/12/19/studying-at-the-academy-of-diy/> in which I speculated on how I could organize my own Master's degree by gathering resources, people, and mentors around media art and friendship.

I ended up working in a design school as an educator and web developer and was incredibly frustrated by the hierarchy and bureaucracy involved in making changes in the way people learned. Luckily, I then fell into the Mozilla project, heard about the School of Webcraft, and ended up working as the coordinator. It's my dream job. It satisfies my geek and teaching backgrounds and most importantly, allows me to shape the way people will learn in the future.

### What would you say is your main motivation for working on free and open education? Why is this important to the world?

I think the most important thing about free and open education is that it offers learning choices to people. It's not just about helping people from Detroit learn web development so that they can find a better job, it's about putting learners of niche subjects such as cyberpunk literature together. I think of it as the long tail of learning.

Open educational resources have given people access to information about learning, but as we develop better ways of having people freely learn together (and shape their learning) we're going to have people's minds meeting and growing together. That's really exciting, I'm looking forward to the serendipitous and innovative ideas that will grow from this learning crucible.

### What do you think is the relationship between free software and open education?

The relationship between the free software movement and open education is so much more than licenses. It is about providing access to experiences that would otherwise be restricted by price, where anyone is welcome to become a part of the community and drive forward with an idea and share their knowledge. A lot of people get involved with a free software project because they report a bug, end up fixing it and then get welcomed into the community. If we could get a similar model to lead to a new way to learn philosophy that would be great!

### Why is it that so many people who are interested in one, are working on building the other?

I can't help but use a Matrix reference and call this the Red Pill of Openness. Once you 'get' openness in one context such as software, you can't help but realize that those same principles of sharing, collaboration, remixing, and innovation are incredibly relevant to many other contexts such as design, music, and education. The success of certain FLOSS projects has given people a language and methodology to apply to new (and old) problems.

### What are the main obstacles standing in the way of an entirely free and open world of higher education? Are they technological, social, matters of government policy or the conduct and structure of institutions?

I feel that technological challenges are really going to prevent many people from having access to freer learning opportunities for a long time to come. This affects people living in remote rural communities, and disenfranchised urban areas even in the most developed nations.

There are also going to have to be significant social changes in the way people learn to approach ideas of sharing and collaboration before open educational movements can really thrive. Learners in this new environment have to understand that they are as responsible for everyone else's learning as they are for their own.

### Do you think institutions will adapt to the new reality or will educational innovators have to find workarounds?

I think that many formal learning institutions will find themselves changed by radical innovation from within and will eventually have to adapt. The true revolution will take place outside of the system and sit in the cracks of existing institutions—there's no way that the universities and colleges of today can truly respond to the desire for learning from the global population.

# Once you ‘get’ openness in one context such as software, you can’t help but realize that those same principles of sharing, collaboration, remixing, and innovation are incredibly relevant to many other contexts such as design, music, and education.

There are concerns about participation in open education by traditionally disadvantaged student populations. What is the best way to reach these students?

I’m hoping that a “pay it forward” attitude will be sown in communities such as P2PU. Within disadvantaged communities there are often lucky people who can access resources like our community. I’m hoping that after a peer-led experience within P2PU, many people will feel confident enough to take their own experience and to facilitate a face-to-face learning experience for other people.

Anything else you’d like to say about the future of education? What will education look like in 2020?

In 2020, we’ll be seeing the longer term results of the financial crisis. I don’t want to be a pessimist, but I think we’ll also start seeing the first significant effects of climate change. On the bright side, these new and challenging situations will mean that people are going to have to become more responsive in the way that they learn to deal with the world.

This responsiveness is going to call for a change to the way ideas are shared, education is going to have to be faster in its development and delivery and it’s going to have to be able to update to new conditions. Learning and sharing your learning will become a quality of resilient communities.

I also think that we’ll be seeing a really drastic swing away from formal degrees as the focus of tertiary education. The idea of curating a lifelong learning experience that has timely bursts of learning is going to become more of a priority for individuals who don’t know what their future will be like. ✅

TALK ABOUT  
WEB HISTORY

STANDARDS ARE  
A PROMISE OF  
THE WEB'S FUTURE

CSS3 media  
query.  
but still validating  
**HTML5**

EQUAL  
OUTCOMES

Aware of hierach-  
ies of impairment

ADAPTABILITY

WEB STANDARDS  
- SEO+ RANKINGS  
+ NEW MARKETS

INQUIRITY  
+ CURIOUS

VIEW SOURCE

*RATHER THAN REPLACE* the existing informal, self-organizing learning practices with formal codification and professionalization through institutions, the Webcraft community is trying to pull off something much trickier: Learn the way they've always learned, but more so. Open the doors so that every frustrated Anna Debenham can find the mentors and information she needs. This requires a constant commitment on the part of those within the developer community to embrace and welcome newcomers, without placing an undue burden on established members of networks.

The Webcraft experiment, which includes the creation of free online curricula, informal conversations in online forums, networks like Github, and attempts like the ones at Seneca College to get students involved in open-source projects, is an important case study in designing the future of education. Allied disciplines like graphic design and illustration, game design, and video are proceeding down this path as well. How much of education could be transformed to work more like the Web?

How important will P2PU models get?

After the Festival, P2PU's email list exploded, and dozens of new courses were created, including many in Spanish from those who had seen an article in Spain's *El País*. Clearly the appetite is out there.



## Session Notes

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### School of Webcraft main ideas and values:

- Interoperability
- CSS3 Media query
- Standards are a promise of web media future
- Aware of user goals
- Adaptability
- View Source
- Collaboration & sharing
- Less SEO less ranking + new markets

### What are the soft skills that web professionals need?

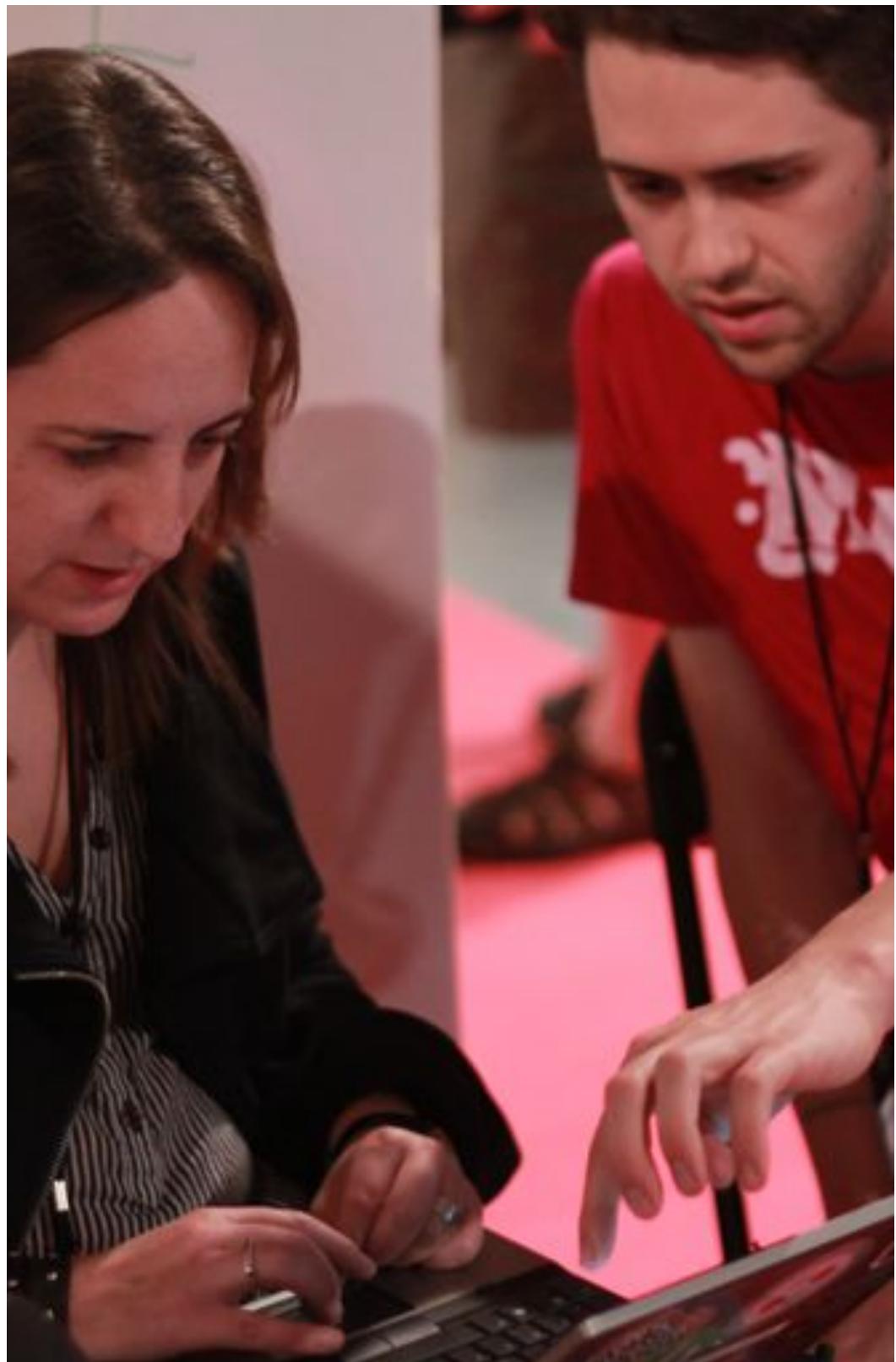
1. Basic sysadmin skills:  
Knowing how your website will be run on the server is very important. If your application will run on Apache or nginx, you'll need to install locally and be sure that your code runs on the live site. You also need to understand performance issues that could arise from your servers specific setup and learn to circumnavigate these potentially problems with your code.

#### 2. Usability:

Unless something goes terribly wrong, a website will be used by somebody. A web professional needs to identify and research who those users will be and make the site usable accordingly.

#### 3. Planning:

Web Professionals of all sorts need planning skills.





How To:

# Start a P2PU Course

**Purpose:** P2PU is a platform that makes it easy to join together with other learners and explore any topic you choose.

**Difficulty:**  
Moderate

**Time:**  
6-12 weeks

**Who:**  
Many +  
1 facilitator

**Materials:**  
A computer with  
Internet access,  
passion and a topic  
you're interested in!

## Step 1:

Identify what it is you want to learn.

**Tip:** You can be a total beginner, or you might want to improve your knowledge about a topic.

## Step 2:

Visit <http://p2pu.org> and read the Course Design handbook. We also recommend signing up for the Course Design Orientation.

## Step 3:

Create a course plan based on open educational resources from sources such as the Creative Commons DiscoverEd search engine: <http://discovered.creativecommons.org/search/>.

## Step 4:

Include collaborative activities and a balanced workload—this means choosing an appropriate length. P2PU recommends 6–9 week courses. Some comprehensive courses spread out over 12 weeks.

## Step 5:

Register, create a draft of your course on *P2PU.org*, and share your course draft with other community members. They'll give you feedback on your idea and help you facilitate your course.

## Step 5:

Invite people to sign up for the course. Encourage each participant to define his or her own learning objectives and metrics for success.

## Step 6:

Begin your adventure in open, social learning!

SECTION THREE

# FREEDOM X THE WEB

## Freedom x the Web

The public, open, participatory, transparent, remixable nature of the web has been integral to its growth and must be revealed, defended, celebrated. If it's not open all the way down, it's not the web.

### In this Section:

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Page 172

**Hacking**

Making things with your hands is one of the best ways to learn by doing. Hacktivists let programming escape the screen and move into the public square.

Page 190

**Open Video**

Open, hackable video has untapped potential as a learning resource.



**“We have learned that essentially you need to teach people by making them play very quickly.”**



– Massimo Banzi of Arduino



# Hacking

What does hacking have to do with learning, freedom, and the web?

*USING YOUR HANDS* is one of the best ways to learn by doing. It taps into a part of our brains that gets undernourished when we spend too much time in front of screens, and helps reach people with different learning styles. Hacking at the level of hardware is essential if we're to keep the creation and use of the Internet truly free, as mass-produced devices necessarily limit creation in favor of consumption. Plus, it builds community, develops problem-solving skills, is creative, and fun!

As Johannes Grenzfurthner, proprietor of the Hackbus, put it, “The main problem with technology nowadays is that the means of production are still very centralized. You have all the freedom of information you want on your iPhone, you can blog and tweet and do whatever you like, but somebody had to build this thing somewhere in China in extremely bad working conditions. As long as we cannot download our iPhones for free, there's a problem.”

At the Festival, DIY hacktivists from Europe and the U.S. showed how programming can escape the screen and move into the public square. Membership on Hacker Planet included Monochrom's Hackbus from Berlin, the Arduino team from Italy, and Alison Lewis's Switchcraft from California.

Maybe we can't make our own iPhones yet, but tools like Arduino are the first steps in open-source hardware. Begun about five years ago, Arduino “is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments.”

[www.arduino.cc/](http://www.arduino.cc/)

Arduino can sense the environment by receiving input from a variety of sensors and can affect its surroundings by controlling lights, motors, and other actuators. The microcontroller on the board is programmed using the Arduino programming language (based on Wiring) and the Arduino development environment (based on Processing). Arduino projects can be stand-alone or they can communicate with software on running on a computer (e.g. Flash, Processing, MaxMSP).

New applications of Arduino are being invented all the time—that's the beauty of an open platform. A short list of what people have come up with so far includes: the Cupcake CNC (an affordable 3-D printer by Makerbot), a programmable coffee machine, a wearable microcontroller called the Lilypad, and a DIY Segway (a self-balancing personal transportation device).





*MASSIMO BANZI*, a founder of Arduino, gave a funny keynote with elegant slides, about how he developed Arduino as “a tool for teaching electronics to designers.” His little box emerged as a great metaphor and case study for all kinds of teaching that leads people gently outside of their established comfort zones. Banzi explains:

“Essentially I’m a geek. I studied electrical engineering. Designers don’t have electronics backgrounds—they think visually. We wanted to turn electronics and software into a creative medium available to anybody. The Arduino came from five years of experimentation. We figured that we could teach programming with this thing very quickly, by using hardware, instead of just pushing pixels on the screen. It’s the first piece of practical open source hardware.

Arduino has held workshops everywhere from community hackerspaces like Budapest’s Kitchen and NYC Resistor, to university programs like NYU’s ITP, to companies like Apple, IDEO and Panasonic.

It’s a hands-on teaching methodology. In graduate school, I had the advantage over my friends because I knew how the story ends! I learned by plugging wires: no explosion? no fire? no smoke? Good, I learned something. So I started teaching like I learn as a kid. We bring people a child’s open mind and exploration. And our community is incredibly important in the process. Our Wiki we call the Playground: <http://www.arduino.cc/playground/>

And we teach workshops in the weirdest places. We discovered that people come to our workshops to find 10 or 20 like-minded people. They learn more from each other than from us. We found that if you put young engineers and artists in the same place and shake, you get weird outcomes. You come spend some time there, they look at you see if you fit into the whole system—If you’re a nice person who understands how to interact with other people. Then you’re in.”

[http://arduino.cc/  
blog/2010/11/09/  
mozduino/](http://arduino.cc/blog/2010/11/09/mozduino/)

As they explained on their blog, the Arduino crew built a robot at the Festival: “We wanted to give back to the community what we’ve been doing in the Arduino Playground: Mozduino! We worked on a robot that was able to avoid the obstacles. The first version was based on the sensing obstacles with light (using LDR) the second using ultrasounds (using PING), the DC motors are driven with Mosfet Modules. We could control the number of rounds of the wheel (and so its direction) by using an HALL sensor with a magnet.”

# Own your Own! If you can't open it, you don't own it!

## Hackbus

“Hackbuses (or mobile hacklabs or hack vehicles) are a low-threshold way of bringing the culture of hacking to the people. They are migratory learning and teaching units, taking the talented hackers and their ideas out of middle-class urban centers and bringing them to people who might not otherwise be aware of the possibilities available to them.”

[http://www.drumbeat.org/  
content/hackbus-  
migratory-learning-  
and-teaching-units](http://www.drumbeat.org/content/hackbus-migratory-learning-and-teaching-units)

Hackbus grew out of monochrom, a European art-tech collective interested in DIY, hacking, art, counter-culture, and guerilla communication. The monochrom collective, the founders of *hackbus.info*, believes a new hardware DIY movement needs to be started, and other approaches on education are possible. Direct, non-hierarchical education. Interchange. Exchange. Classic educational approaches are always top-down and have a strong feeling of authority. What we need is open community labs where interested folks can come together to share resources and knowledge to build and make things. We need a root movement of doing strange things with hardware which was not intended (aka “hacking”) because only when we use things in ways other than they were planned can something new arise. We follow a long tradition of this nomadic approach to bring self-empowerment to the people. These units can be everywhere. And they should be everywhere. Start one yourself!”

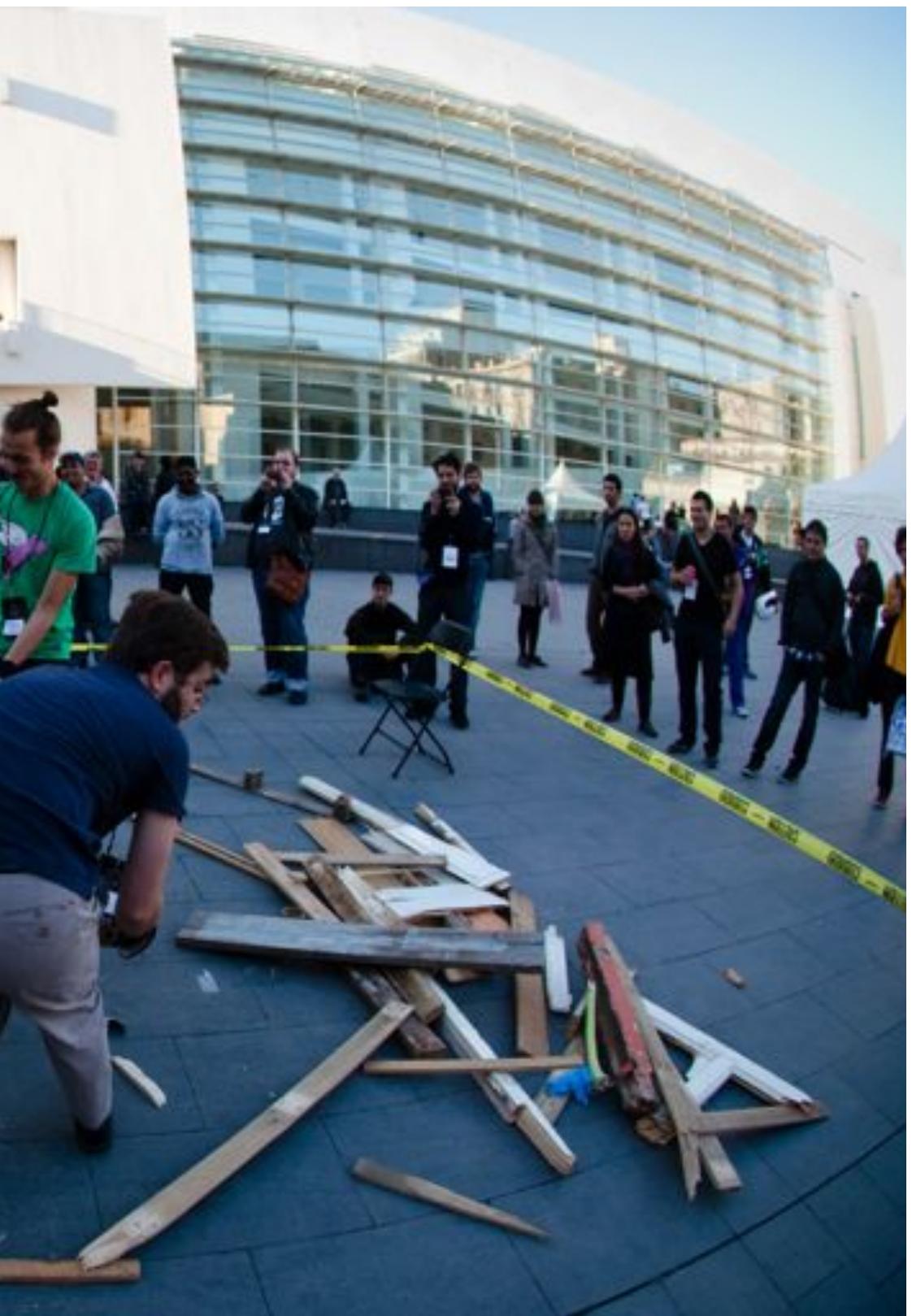
Hackbus events during the festival included making wearable LEDs, a Sculpture Mob (complete with faux police raid), and a Massively Multiplayer Thumb War.

**The Sculpture Mob:**

Even art hackers  
are often helpless  
against official "art  
in public space"! Oh,  
the horror! Those  
endless atrocities!  
All of them labeled  
"sculpture in  
public space"! Ah!  
Monstrous "public  
art installations"  
on roundabouts,  
on main streets, in  
shopping malls! It is  
time to reclaim the  
street art! It is time  
to create your own  
public art! Get your  
hammers! Get your  
welding equipment!

It's time for  
Sculpture Mobs!









Profile:

## Johannes Grenzfurthner

The fedora-clad Johannes Grenzfurthner and his compatriots brought a certain outlaw spirit to the Festival (it didn't hurt that the police wound up towing their vehicle). From the graffiti-covered bus, which brought them all the way from Berlin and back, to extralegal "sculpture mobs" and a massively multiplayer thumb war, the Hackbus crew was there to remind the group that hacking is supposed to be fun. Yet Johannes brings some very serious theory to all this playing around: "We're classic European leftists. A little bit melancholic, but you can count on us."

### So who is the hackbus crew, really?

We are part of this art and technology collective called monochrom <http://www.monochrom.at/english/> which started a long, long time ago in 1993, before the web revolution actually started. There was the Internet, but no *World Wide Web*. Even in universities, only nerds were using this tool.

We started monochrom with a fanzine of cyber culture and cyber politics, to share the stuff we find interesting and help people find more interesting stuff.

### Okay, so you have a hidden agenda. How does hacking fit in?

With a friend, I co-authored a small pamphlet on hacking spaces as a reaction to this Cambrian explosion of hackerspaces. The basic concept is pretty old—the first were in the 60s or early 70s, more like workshops. Because of the economic crash two or three years ago, many people who used to work in tech companies were freed from their boring jobs sitting behind a desktop, so they ended up founding hackerspaces for tinkering around and building interesting things.

Some places are just like breeding grounds for Google, full of white guys, which is a little bit sad. So the idea with the Hackbus is to lower participation barriers by going into rural areas and inviting more diversity.

We started like a year ago in Austria. We also started the [hackbus.info](http://hackbus.info), which is a Wiki open platform community tool.

## What kinds of projects specifically can you do with people with the hackbus?

We focus on things you can do, where you can actually build stuff in under five minutes, like LED throwies and Arduino kits.

We'll show people how to do their own documentation. It's cool if you build your own gadget but it's better if people can actually see how it works.

## So what are your thoughts on how this all relates to education?

Education, especially in the Western world, has almost always a negative connotation. Especially if you talk to normal everyday people, nobody is super excited about going to school. It's there, it's something the state provides, but most of the time it's pretty bad. Yet people inform themselves on the Internet constantly, every day. There are videos on YouTube where people show this is what you do, and then you do that. With our hackbus projects, we take people to the next level of not buying a kit and building it but learning the grammar of doing something yourself by watching someone else do it. So the basic way you teach stuff changes. ✕

**Education, especially in the Western world, has almost always a negative connotation. Especially if you talk to normal everyday people, nobody is super excited about going to school. It's there, it's something the state provides, but most of the time it's pretty bad. Yet people inform themselves on the Internet constantly, every day.**







*BRINGING HACKING* “to the people” also means reaching populations who haven’t historically felt empowered by technology—like women, for example. That’s Alison Lewis’ life’s work.

Alison is a designer with a degree from Parsons School of Design, where she also teaches fashion technology and fashion communication. She’s the proprietor of Switch, “a technology life and style blog which showcases innovative design, fashion and topics from a female perspective. Switch is not just another tech blog about gadgets or digital design, but rather a social look at technology through the genres of fashion, beauty, design, and craft.”

## Mozilla Festival: Part 1. Let's Play Together!

by Alison Lewis | November 21, 2010

Part 1: Let’s All Play Together! Wednesday was opening night and I set up my examples from Switch Craft at the Science Fair and demonstrated how to make them. The participants were inquisitive and encouraging. Each question of how and why was followed by a statement of confirmation that we do indeed need more women in technology who love fashion.

About an hour in, it died down and people went inside to hear Joi Ito, CEO of Creative Commons. I went for the free snacks and wine. It was there that I made a friend. His name is Massimo, one of the creators of Arduino. If you don’t know it already, Arduino is an open-source hardware platform that is used around the world by artists, designers, architects, teachers, scholars, and just about anyone who wants to create an experience with the physical world. He’s famous among the DIYers, such as myself, though admittedly I did not recognize him and one of his entourage was kind enough to remind me.

We talked and the Arduino crew was very complimentary and supportive. I was honored to talk to them as this is a community I haven’t been a part of in awhile because it involves programming and hardware wiring which are a level two for my readers. I tend to stick with level one. At least I did, but after hanging with Massimo, I think I am ready to graduate Switch readers to another level of learning.

I learned that the Arduino platform was created in Italy in a creative design program at the Interaction Design Institute Ivrea. I had known about this school years ago, but it was shut down in 2005 for no apparent reason, just as it was gaining success.

He smiled as I explained my passion to get fashion designers, craftsman, and artists into creating with technology. Then he gave me a cute purple Arduino pin with a heart on it and pointed at one of my pins and said, “I’ll trade you one of mine for yours. I really like what you are doing here, please feel free to come and hang out with us in the hacker space tomorrow.”

His smile made me smile, and that is how friendships are born. ✕

<http://www.iheartswitch.com/blog/drumbeat-festival-part-1-lets-play-together>





How To:

# Learn and Play with Arduino

Practice programming, learn about electronics, and get back in your house after you've locked your keys inside.

---

**Difficulty:**

Easy to moderate

**Time:**1 hour, 1 day,  
1 week, or  
1 month**Who:**

1 or many

**Materials:**Computer with  
Internet access,  
USB Arduino  
(\$29.95 USD), which  
is available here:  
<http://www.arduino.cc/en/Main/Buy>,  
accessories**Step 1:**

Find a project that you'd like to try.

Step-by-step tutorials can be found at:

- [www.arduino.cc](http://www.arduino.cc)
- [www.sparkfun.com](http://www.sparkfun.com)
- [www.adafruit.com](http://www.adafruit.com)
- [blog.makezine.com/archive/arduino](http://blog.makezine.com/archive/arduino)
- <http://hacknmod.com/topics/arduino>
- <http://arduinofun.com/>
- <http://www.instructables.com/>
- or by searching Google.

**Tip:** Try the Knock Controlled Door Unlocker, posted by "Mr. Hasselhof" at:  
<http://forum.zomgstuff.net/showthread.php?220710-Arduino-Projects-and-Inspiration-for-Beginners> and <http://www.youtube.com/watch?v=T8eAcbISkXQ>  
 Or Blinking LEDs, posted at: <http://www.sparkfun.com/tutorials/145>

**Step 2:**

Download and install the Arduino software to your computer. Instructions are here:  
<http://arduino.cc/en/Guide/HomePage>

**Step 3:**

Wire the physical parts together. Follow the photos in the tutorial. You may need extras like LED lights, jumper wires, USB cables, or "shields" which are boards that can be plugged in on top of the original Arduino, allowing it to do more stuff.

**Step 4:**

Open the project "sketch" on your computer.

**Step 5:**

Modify the sketch. Add comments to explain what you are doing.

**Step 6:**

Compile the sketch.

**Step 7:**

Upload the sketch.

**Step 8:**

Test the program, troubleshoot, and repeat.

**Tip:** If you get stuck, search YouTube or the forums at: <http://www.arduino.cc/playground/>.

**Bonus:**

Consider taking pictures or making a video, and sharing what you've learned at one of the sites above.



# Open Video

Open, hackable video has untapped potential as a learning resource. What does video have to do with freedom and the web? Why is it important to learning?

*MARK SURMAN BLOGGED:* “My mind is regularly blown by the way web video is changing how we learn, and increasingly how we teach. I watch my 11-year-old become a bit of a geek. He doesn’t use help files or FAQs to learn new software. He watches YouTube tutorials. And, as his skills grow, he shows off and shares by making his own.

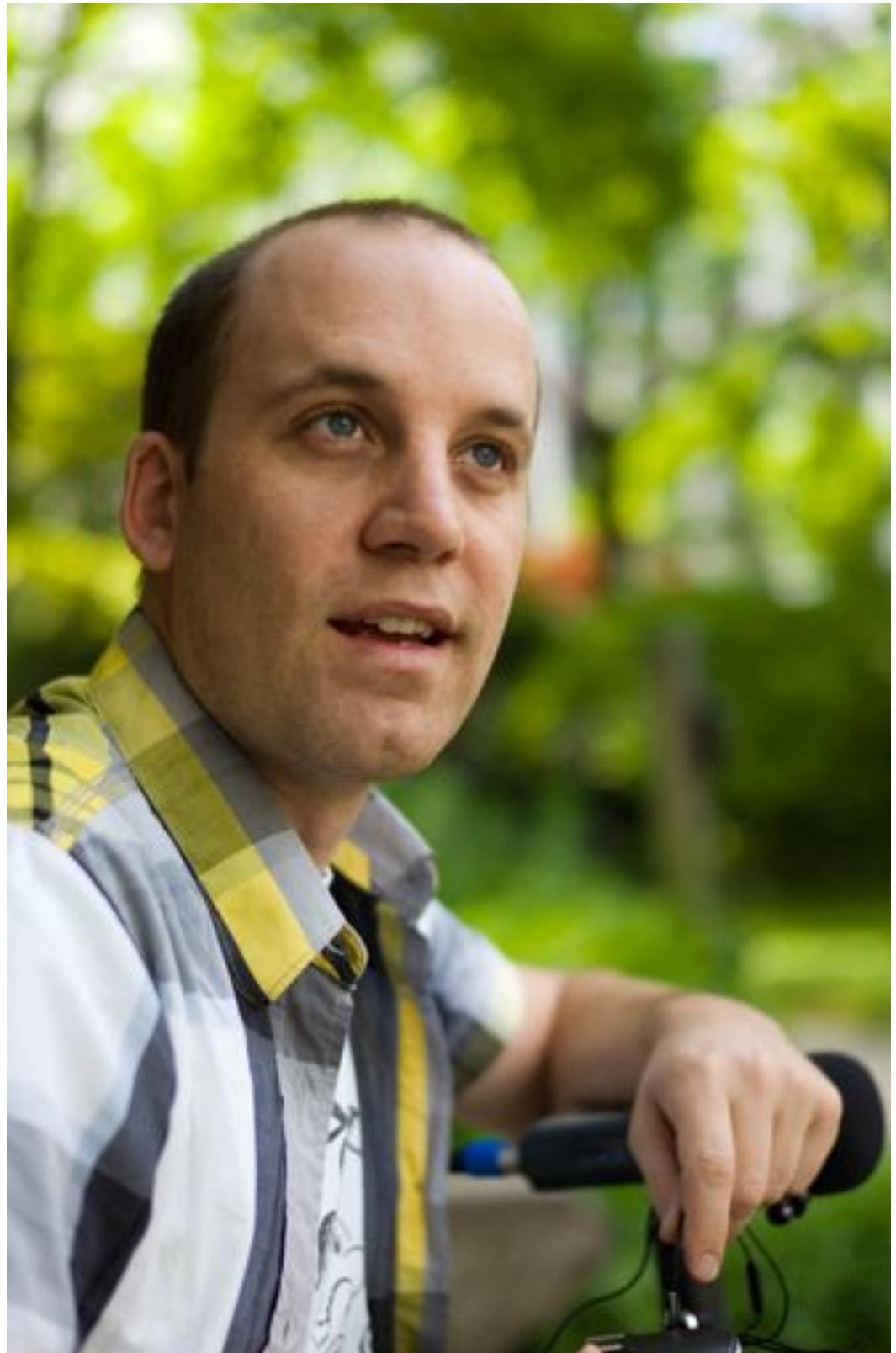
Clearly, video packs way more info punch than print. And the ubiquity of online video means we all tap into rich (and fast) new learning opportunities constantly. TED’s Chris Anderson released a great talk a few weeks ago: <http://www.youtube.com/watch?v=X6Zo53M0lcY>

Anderson points out that we live in a world of online video fueled by a desire to dance, sing, perform, play, and think. Most people who post videos online are not driven by the desire to teach—they just want to show off or have fun. Yet, as we watch them, we learn.

There is, however, a huge online phenomena very much about the desire to teach: web video tutorials. A great example is the Khan Academy: Driven by frustration with how schools teach math and science and also the easy access of YouTube, Sal Khan has produced a massive, high quality collection of 1,800+ web tutorials. The idea has landed him a \$2 million Google grant and has attracted millions of viewers eager to learn. What’s even more exciting to me is that this sort of teaching isn’t limited to over-achievers like Khan. YouTube alone holds over 10 million tutorials (search: tutorial and how-to). Videos with people teaching everything from how to set up WordPress (400,000 views), to how to curl your hair with a paper bag (2 million views), to how to moonwalk (8 million views).

The question remains: What does this mean for the future of education? What does it mean for who we turn to when we want learn something? And how do we all start to teach each other?”

[http://  
commonspace.  
wordpress.  
com/2010/09/27/  
web-video-tutorials/](http://commonspace.wordpress.com/2010/09/27/web-video-tutorials/)





Profile:

## Brett Gaylор

Filmmaker and activist, Brett Gaylor makes his home in Victoria on Canada's west coast. He's the kind of interlocutor who emails you links to stuff even while you're still talking—bursting at the seams with new ideas.

### **How did you get involved with Mozilla?**

I got to working with Mark Surman right around the time my film, "RIP: A Remix Manifesto," was released. It was all about mashup and remix culture and the tension between old and new ways of thinking about collaboration and proprietary ownership and knowledge and the opportunities of a connected digital world. But the experience of watching this film on the web was pretty much the same you would have watching on TV. You were a passive consumer of this content.

### **So you wanted people to have the power to rip and remix your own movie?**

Pretty much! I met Mark at the Open Video Conference and I expressed that while I had a lot of excitement about where the technology was heading, I felt there wasn't enough being done about how this could actually affect the language of cinema or how filmmakers think about their work in this new medium.

I have been on the web from the beginning. And the experience with video now and then is pretty much the same. The rest of the web has seen this massive innovation with mash-ups and what we used to call Web 2.0. But video has not been party to that up until very recently. So Mark invited me to join the team and see if I could eat my own dog food a little bit. I started a project as part of Mozilla called Web Made Movies.

### **Tell me about Web Made Movies!**

We think of it as Mozilla's open video lab. There are filmmakers like myself working with software designers and developers—and there are much more collaborative relationships than has been typical. I've made many websites in my life and I've been on both sides of this client/service relationship. Typically filmmakers think about the web as a place to put their content. They don't make videos that are of the web: mashable, re-mixable, hackable, bringing in different sources, or personalizing to the viewer.

So Web Made Movies is a lab where the story ideas of the filmmaker and the traditions of cinema could mash up with the thought processes and traditions of the web to make something that's radically different and could actually formally change what video on the web can be.

**And you made this thing with students called Popcorn. What is it?**

Right now we don't have a World Wide Web of video—we have just these isolated silos. The rest of the web page on a technical level has no idea what's going on inside that <object embed//>. So with a bunch of students we created a JavaScript library called Popcorn.js. It's way of creating a video that triggers different elements to appear in a web page as it's playing. So if a new character comes into the scene, the subject matter will trigger Google searches and the video interacts with the rest of the web.

**So what does this video stuff have to do with education?**

I think that students who are being educated today need to learn how to synthesize different sources and answer questions of veracity and authorship. They also have shorter attention spans. Showing a film in a classroom no longer works. The class times are too short and the students do not engage with media in that way any longer. You cannot roll the TV to the front of the room and say: Okay, now learn.

**I mean, filmstrips have always been seen as the refuge of the lazy teacher.**

Right, but even more so today, the kids don't sit back that way. These are kids who are used to having access to the entire history of recorded music. They want to lean forward and learn different perspectives on that piece of media.

Can students record their experience of browsing, learning, synthesizing, and giving their own editorial opinion on a topic for learning that they're designing? And how do we rethink the idea of a book report in a connected web environment? How do you make a video or web report and present your research that incorporates the open web? Or do a YouTube response video that describes how something made them feel that triggers web pages and incorporates a lot of sources?

And then, we're involving teachers. Teachers can, as they're browsing with the web, select segments of videos that they find and create their own customized mashup. So when students go and watch it, they are also presented with other links they could dig into.

**And how does this goal of transforming education fit in with your broader mission?**

If we're going to succeed at this goal of keeping the web open, we need people from other disciplines and all walks of life to participate in that process. As a filmmaker, I bring some perspective that traditionally wasn't held within Mozilla. And if we want educators to help us safeguard the open nature of the Internet, we need to work collaboratively with them and create structures that allow their perspective on that to be heard.

**On a deeper level, of course, we want to disrupt education. We want education and schools to operate more like the web, in that they're transparent and hackable and open for students to be able to learn in the new ways that the web allows.**

**So reaching out to educators is about finding allies and fellow travellers?**

On a deeper level, of course, we want to disrupt education. We want education and schools to operate more like the web, in that they're transparent and hackable and open for students to be able to learn in the new ways that the web allows.

Teachers want their students to learn. And the web, and specifically the open web, obviously is the most powerful engine we've ever created for learning. We are interested in and hope that the education community sees the value of a truly open web as well—I think they do already. They have an altruistic desire to be able to educate tomorrow's citizens and I think there are natural allies there.

<http://popcornjs.org/>

[www.etherworks.ca](http://www.etherworks.ca)

**How does this relate to your own educational experience?**

I was really lucky that the school that I went to here in the Gulf Islands in British Columbia got a computer lab in the final year that I graduated. Before that, my school district gave a discount for kids who wanted to buy Macs. I saved up and bought a Mac and taught myself HyperCards when I was 11-years-old. It sparked something in me to see my computer as something that was malleable and that I could use creatively.

When I was in high school we had an animation lab. So I could use the tool not as something to use spreadsheets but something to create. I eventually wound up going to Concordia University in Montreal. But what was most valuable for me was having a computer I could hack when I was 11. ✕

“VIDEO IS PART of this ecosystem that students can learn with,” Before the festival, Brett Gaylor recalled: “My clothes dryer just broke and I wanted to know how to fix it. And I Googled it and the first thing that came up was somebody showing me how to do it. How can we integrate that into the classroom?”

So that’s one big crossover—*call it the YouTube-ification of the classroom.*

A second layer of possibility has to do with freedom—or making video content more accessible and more available to be mucked about with. Nicholas Reville is a co-founder of the Participatory Culture Foundation, “a nonprofit, building consumer technology and trying to promote open decentralized infrastructures.” He’s the creator most recently of Universal Subtitles. “Given the importance of subtitles, it’s amazing how difficult it is to add subtitles and captions to a web video,” Reville explains. “That felt like a huge opportunity to change video for the better—make it more open and accessible.”

This, of course, has huge applications for education. “Translation, making it accessible to anyone who’s deaf or hard of hearing. And there’s interesting opportunities for Same Language subtitling,” says Reville. “For literacy, there are huge implications, in terms of open education resources and things online.”

*So call this the Rosetta Stone-ification of video.*

Ben Moskowitz of the Open Video Alliance, which is a coalition of organizations and individuals devoted to creating and promoting free and open technologies, policies, and practices in online video, summed up open video with the Mozilla slogan: “View Source has a posse.” View Source is a menu item you can hit on any web page to peek under the hood and see the HTML that creates the page.] View Source doesn’t work for Flash, the format in which most videos are available on the web, but it does work for HTML 5, another video format endorsed by Steve Jobs, and others.

Moskowitz explains: “What they’re delivering to you with Flash is binary—only machine readable. The self-taught, garage, innovative way of doing things, that’s a huge advantage of HTML 5. If I write an amazing innovative clever app, someone else can go look under the hood and see how it works and fix it, and they can reconfigure it.”

So one big part of what the Open Video Alliance is trying to do is to make sure more video is available in readable formats. A second step is making larger numbers of videos available under a Creative Commons license, for example, on Wikipedia (see Get Videos on Wikipedia). What's missing, too, for the full applications of video in the classroom, is a set of tools to allow video to be easily remixed and annotated, as with the Popcorn project.

<http://popcornjs.org/>

"Rich media is not searchable," says Moskowitz, "but I can do a Google search on transcripts. Let's say I'm doing a paper about the Corn Bill. I can say go to Google: Show me videos of senators from Iowa debating corn subsidies between 2003-2009. Within these 45 videos search term "Hard-working American farmer" Take those clips and make a montage—"Daily Show" style. And that's my term paper."

*Call this the Jon Stewart-ification of the classroom.*

But the denizens of the Open Video Lab at the Festival were too busy making awesome stuff to spend much time on theory. Their collaborative projects were some of the coolest stuff to come out of the fest, by far.

As Gaylor said in his pitch to the crowd on the first day of the fest: "We're in the Video Lab on the 2nd floor to seize the moment of open video—HTML 5—to allow us to build and embrace video as a first class citizen of the web: hackable/remixable/interoperable. All of this is being built as we speak. We want to: blow Up Your Video like AC/DC!"

And people showed up. And stayed for two days.



## Day 1: Barcelona: Open Video Lab

by Elizabeth Castro | Thursday, November 4, 2010

Elizabeth Castro, a computer book writer, spent most of her time in the Open Video Lab. She wrote about her experience as a participant:

<http://www.pigsoundsandwiches.com/2010/11/drumbeat-barcelona-open-video-lab-day-1.html>

I opted to spend the day in the Open Video Lab. I wasn't quite sure what that was going to mean, and I think a lot of the people, including the organizers, Brett Gaylor, David Humphrey, and Ben Moskowitz might not have either. That didn't stop them from skillfully guiding and coaching the group to figure out some hands-on projects to work on.

Brett and David began the workshop by asking us "what is possible with open video" and then showing us a few demos that took advantage of HTML 5. There was a page with a video of a whale with an overlaid canvas element that mapped the audio to a visual representation. There was a kung fu video that used the browser to add a shading effect in real time. There were even video games that mixed 3d, Flickr, Twitter, and rendered right in the browser.

Ben Moskowitz showed us a demo of MediaThread, a project at Columbia that allows professors and students to reference, annotate, and cite videos available through YouTube or other sources. It looked really valuable. The code is open-source, but the working project is unfortunately available only to folks associated with Columbia University.

Ben also showed us *Pad.ma*, an Indian site that catalogs videos with all sorts of different kinds of metadata, including name, title, keywords, and words in the transcript, and then lets visitors search through the metadata for particular videos.

Then it was time for the hands-on section. They showed us the example they had pulled together that morning, referenced above, using the *popcorn.js* library. Finally, we decided it was how to expose existing metadata that was already related to a video. There were a few people who had libraries of video as well as XML structured metadata and wanted to be able to overlay the metadata on the video so that the metadata was revealed in the browser. ✕



## One Step Closer to Universal EDL

by Gabriel Shalom | 09 November 2010

Last week, I attended the Mozilla Festival in Barcelona. It gave me an opportunity to collaborate with an amazing ad hoc team of people in the context of the Open Video Lab, coordinated by Brett Gaylor and David Humphrey. Together, over the course of a two-day sprint, a big team of us collaborated on a demo of the *popcorn.js* JavaScript library that really shows off the potential beauty of web made movies.

The tweets are aggregated from the *#futureofeducation* hashtag. The Flickr photos that appear in the demo are based on timeline metadata that I approximated by putting dummy content (the blue events in the screenshot above) on the timeline to get a sense of a rough rhythm. I then gave a rough approximation of that time code information to Berto Yáñez, the programmer who did much of the heavy lifting on the demo. Oscar Otero helped with the design of the page. Oscar, Berto, and Xabier all work together at the Galician web company, A Navalla Suíza. ✕

Gabriel Shalom  
is a filmmaker  
who also got very  
excited about  
Open Video at the  
Festival.

<http://quantumcinema.blogspot.com/2010/11/drumbeat-future-of-education-demo.html>

Posted by Gabriel Shalom at 1:47 PM  
Labels: #drumbeat, #videolab, editing, flickr, mozilla, objects, open source, popcorn.js, twitter, Universal Subtitles, web made movies



## Mozilla Drumbeat Festival: Open Video Lab

by David Humphrey | November 8, 2010

David Humphrey teaches at Seneca College and is a longtime Mozilla contributor and developer. He helped run the Open Video Lab.

<http://vocamus.net/dave/?p=1194>

Last week I was in Barcelona, Spain for the Mozilla Foundation's Festival. The festival's theme was Learning, Freedom, and the Web, and attendees came to participate in sessions and workshops on a variety of education, open source, and open web topics. Together with Mozilla's Brett Gaylor, I ran the Open Video Lab.

Our goals for the Open Video Lab were simple to state and harder to guarantee—show people what you can do with HTML 5, link film people with developers with storytellers with designers with educators; and to, as Mark Surman is fond of saying, “help people build cool shit using the open web.” Thanks to the amazing people who came to the festival, we did all that and more. ✎



## Day 2: Open Video Lab

by Elizabeth Castro | Saturday, November 6, 2010

David Humphrey got us thinking about the projects we had talked about on Thursday and helped us both focus on what the projects consisted of and what we were trying to solve, as well as what skill sets the members of the group had to offer. There were a lot of JavaScript and HTML coders as well as a few designers and video production people. I was totally intimidated by the idea of writing actual code with these guys, and at the same time didn't want to lose the opportunity of learning what they knew. I was also unsure I had enough to offer myself, though thankfully I wasn't the only one to say this.

We ended up dividing into two groups. The first, led by Brett Gaylor, wanted to create a jazzier, prettier demo of popcorn.js, a JavaScript library that allows you to line up data to particular points on a video timeline, and thus create mashups like the one they showed the day before in which people in the video tell where they're from and this information is used to trigger Google Maps and Wikipedia giving more information on that location.

The second group, which I was a part of, wanted to figure out a way to expose existing metadata, like the title, creator, or date a video was produced, that was associated with a video either right in the page (with RDFa), or with an external XML file, so that people watching the video could actually see information about the video with a single click.

I think the part that most surprised me is how small the individual pieces of the project seemed at first, and how much they all realized that they weren't really that small, and would take the better part of the day to create, even divided up between the participants as they were. It was also interesting seeing how they wrote the code in a way that they could test it separately, but that it could later fit together with the other pieces. I loved how they really drew on the different strengths of this randomly assembled group of people and made it possible to all work together. There was really good energy in the room.

Once all the code was together, they connected the last computer to a projector so that we could all see and debug the final project together. At this point, the designer folks jumped in and offered suggestions about positioning and font size. What a collaboration! We found the extra space and got it out just in time to finish the capture, and run down to the presentation with USB stick in hand. ✕

<http://www.pigsgourdsandwikis.com/2010/11/drumbeat-open-video-lab-day-2.html>

 Back to David Humphrey

For Brett and myself, the single hardest part of preparing for this event was the fact that we didn't know who would come. It's hard to program two days of content when you don't know the make-up of your group, their interests, and backgrounds. Further, we didn't know if people would only want to come for an hour and then leave to attend other sessions, or stick it out with us and stay to build things.

In the first session we had a packed room, and were met with professors, filmmakers, web developers, designers, producers, students, translators, writers, and artists. It was a fantastic group, and had all the energy and diversity we needed to actually build some things. Also, there was a core of people who were determined to stay and see things get finished.

On the first day Brett shot a really quick video getting various people in the square to say where they were from. Nicholas Reville then took the video and had people translate and subtitle it into 17 languages using the Universal Subtitles project. Next we built a simple Google Maps tool to allow us to extract longitude and latitude info so we could get geo-data for all the speakers. Finally we put it altogether using Popcorn.js to create a mash-up of the video, Google Maps, and Wikipedia pages

After we'd built an example open web video demo together, it was time to think about what we might build next.

After much debate and discussion, we agreed to take on two projects: 1) make a film about the future of education using the open web; and 2) make it possible for librarians, archivists, and other metadata people to have their bibliographic metadata reveal itself to users.

The next day we spent an entire day building things together. The metadata team worked with JavaScript, RDFa, and Dublin Core data, and built a custom overlay UI to make it possible to see info like the video's title, creator, and date. Meanwhile, the second group took advantage of the incredible set of educational experts on-hand at the festival to conduct interviews on the future of education. This being Europe, they shot five interviews, each in a different language (French, Catalan, German, Italian, and English). They then had these translated to English, and wrote the subtitles. The rest of the group figured out how to get Flickr and Twitter content to mix with the video, and worked with the designers on an overall aesthetic.

It was an amazing feeling to work in the lab that day. Everyone was engaged and valuable—not one of us able to do everything that had to get done. Our main goal had been to give the attendees an authentic experience of working on and with the open web, and doing so in a highly collaborative way. This was exactly what happened, and it was a thrill to be part of it. ✕

*IN THE END*, there was a very exciting dramatic reveal as Brett Gaylor, Dave Humphrey, and Gabriel Shalom raced across the room with the video on a Flash Drive in the middle of the closing keynote's "Best of the Fest." The video was worth the hype: a short documentary on The Future of Education with interviews with luminaries in German, Italian, French, Spanish, and English, all subtitled by volunteers using the Universal Subtitling Tool, and time-synced with tweets under the #futureofeducation hashtag and photos pulled down from Flickr.

As lots of Festival attendees noted, the Open Video team was exemplary not only for its output but for the way they worked together. As Humphrey wrote: "It still amazes me that it was all done in one day (before 6:00 pm!), and I think it captures so much of what was going on at the festival: educators, artists, hackers from all walks of life coming together to share, learn, and build." Somehow, they managed to take advantage of a wide variety of skills and levels of knowledge to pull a project together in record time. Shalom observed that "the number of contributors to this video is mind-blowing." And the finished product wasn't bad either, as the crowd exploded in applause, whoops, and hollers.

Video as a medium tends to attract devoted followers simply because it's cool. This, combined with its information-richness (enriched even more with the adoption of "hyper-video") make it an excellent learning tool. And by building demonstrations of the useful and cool nature of openness in video, the Open Video Lab pointed the way toward a new direction for Video, Freedom, and the Web. Or, as Humphrey wrote, "As we ran to the final keynote to present our projects, one of the filmmakers said to me, 'So this can't end today, we have to do more of this.' A lot of us had that feeling."





## The Popcorn Project

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### WHAT IT DOES

Turns boring old linear video into dynamic "hyper-video" or "social video," pulling content from across the web right into the action. Events on the video timeline can trigger Flickr, Twitter, Google Maps, and Wikipedia content in real time.

### WHAT'S NEXT

Refine and simplify "Popcorn Maker," a new web application that makes it easy for non-technical audiences to use Popcorn.js and create their own "Web Made Movies." Try it at <http://www.popcornjs.org/popcornmaker>.

### WHY

Shape the future of the moving image in a digital world. Make video work like the rest of the web: linkable, searchable, mashable, social, dynamic.





How To:

# Do a Book Report with Popcorn Maker

Purpose: Interactive video is a great new way to present an idea or tell a story.

**Difficulty:**  
Easy

**Time:**  
2 days

**Who:**  
1 person

**Materials:**  
Book, computers  
with Internet  
access

## Step 1:

Choose a book you want to report on.

## Step 2:

Use your computer or a Flip cam to make a video of yourself reporting on the book. A 500-word script will make about a three minute, 30-second video.

## Step 3:

Now it's time to annotate your report with embedded links. You can find Popcorn Maker, the user interface for the Popcorn JavaScript library, at: [www.popcornjs.org/popcornmaker](http://www.popcornjs.org/popcornmaker).

## Step 4:

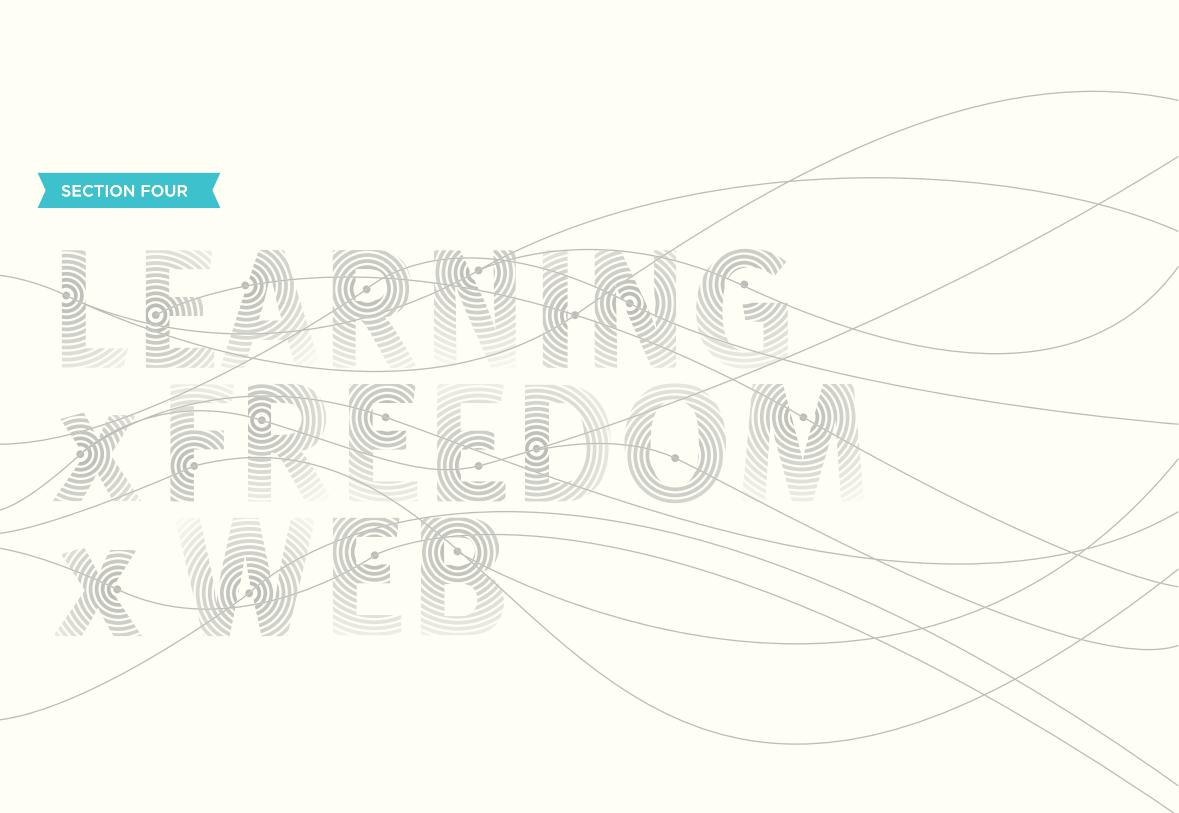
Ideas for links: Wikipedia pages for concepts in the book, author websites, Google maps for locations, and blog posts for additional commentary.

## Step 5:

Post the embed code Popcorn Maker produces to your blog. Tell the world. Don't let your dog eat it.

SECTION FOUR

LEARNING  
X FREEDOM  
X WEB



## Learning x Freedom x Web

Learning gets more agile, more active, more participatory, more like the web. The web strengthens its public mission and its place in human history. Everyone gets to invent his or her own end to the story.

### In this Section:

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**Badges**

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**The Future**

Cracking assessment is the next major frontier of the open learning revolution.

What is the future of learning, freedom and the web?



**On a personal level, we have all experienced the great excitement to create, use, and share knowledge. It's amazing to be able to access this huge knowledge base that the Internet provides us, to contribute to a peer-produced movie, reuse course books from others, listen to free music, be able to create a book without anything else than your own time and that of your peers. And so much fun! Now that we start to understand these new forms of production, we can also appreciate why some of the strongest corporate powers feel so threatened!**



– Free Knowledge Institute  
Learn more in their profile on  
the next page





Profile:

## Free Knowledge Institute

As befits members of a revolutionary European collective, the founders of the Free Knowledge Institute chose to complete their interview collectively, on a wiki. Wouter Tebbens (*left*) founded the Barcelona-based free software company, xlocal.com. He also helps develop tech strategy for the Dutch government. David Jacovkis has worked as a systems engineer, ICT consultant and editor of educational materials. Nowadays he collaborates with Ismael Pena Lopez's university, the UOC, as well as the Dutch government. Franco Iacomella studies at the University of Buenos Aires (UBA), in Argentina, FLACSO (Latin American School of Social Sciences) and consults for the UOC.

### Can you tell me how the Free Knowledge Institute got started?

The FKI started as a spinoff of the Dutch chapter of the Internet Society [a non-profit founded in 1992... “dedicated to ensuring the open development, evolution and use of the Internet for the benefit of people throughout the world”].

### Why are you interested in the free sharing and reuse of knowledge?

Our interest in sharing knowledge without restrictions is huge. We explore this from various angles:

On a personal level, we have all experienced the great excitement to create, use, and share knowledge. It’s amazing to be able to access this huge knowledge base that the Internet provides us, to contribute to a peer-produced movie, reuse course books from others, listen to free music, be able to create a book without anything else than your own time and that of your peers. And so much fun! Now that we start to understand these new forms of production, we can also appreciate why some of the strongest corporate powers feel so threatened! Think of the entertainment industry, Big Pharma, Monsanto, Microsoft, and Apple.

We are working together with a growing multitude of people all around the world to stand up against these old “aristocratic” powers and establish the new forms of peer production of free knowledge within the old system of capitalism. We foresee that a new productive and organizational system is emerging from the ashes!

### **What would you say is your main motivation for working on free and open education?**

Equality and freedom are fundamental principles of democracy and are also basic preconditions for a true Knowledge Society. Information and communication technologies enable access to knowledge and higher levels of innovation and inclusivity, enriching the diversity of individuals and groups that are able to contribute and participate.

### **How did the Free Technology Academy get going? How many people are participating? What are the characteristics of your students in terms of their demographics and preparation for study? What kinds of projects are they working on?**

Although there is a growing interest in free technologies, there is still a limited number of ICT professionals, teachers, and decision makers with expertise in these fields. This is particularly problematic since these are crucial actors in promoting and implementing free technologies.

In order to tackle this problem, the Free Technology Academy has been set up as a distance education program, a joint initiative from several educational institutes in various countries.

### **What are the main obstacles standing in the way of an entirely free and open world of education? Are they technological, social, matters of government policy or the conduct and structure of institutions?**

We could write a whole book about this topic. In a broad scale, we can say that the main obstacles are not technological, they arise from policies in governments and educational institutions. Some have to do with recognition and certification of formal learning, others with pedagogical models that have not evolved to adapt to the knowledge society, and others with copyright law and publishing practices that are not exclusive of education.

### **Do you think institutions will adapt to the new reality or will educational innovators have to find workarounds?**

“Education” as a concept itself is being redefined. The great challenge of our time is to save the world from inevitable collapse of the current global capitalist system through the construction of distributed, sustainable, egalitarian, and autonomous societies.

# “Education” as a concept itself is being redefined. The great challenge of our time is to save the world from inevitable collapse of the current global capitalist system through the construction of distributed, sustainable, egalitarian, and autonomous societies.

There are concerns about participation in open education by traditionally disadvantaged student populations.

**What is the best way to reach these students?**

Open education empowers traditionally disadvantaged student populations. The old Dutch saying, “If you were born a dime, you can never become a quarter,” is being put aside by, amongst others, open education. The success of open education depends on a well-structured outreach to these populations, together with facilitation and guidance. You’re not done by putting learning materials online along with a note, saying: “You can download these, click here.” You need to initiate and mobilize the networks (start with your neighbor)—and you’ll find out these networks are intertwined and energized by each other.

Enable the students to have access to technology, whether that be work in developing and transitional countries, or by teaching your mother-in-law how to switch on a computer.

Anything else you’d like to say about the future of education? What will education look like in 2020?

We hope it will be fun and engaging, and will allow learners of all ages to grow as autonomous individuals and participate in a global community. ✕

<http://ftacademy.org/programme/2011>



# Badges

Cracking assessment is the next major frontier of the open learning revolution. Badges=assessment for informal/authentic/peer-based/practical learning. What are badges and what do they have to do with learning, freedom, and the web?

*BY WAY OF* introduction to Badge Lab, Philipp Schmidt told the crowd: “We’ve been given an accreditation system that’s broken and we want to fix it in the next two days.”

### **An Open Badge System Framework:**

“Imagine...a world where your skills and competencies were captured more granularly across many different contexts, were collected and associated with your online identity and could be displayed to key stakeholders to demonstrate your capacities. In this ideal world, learning would not be limited to a formal classroom, but could come from open education courses, previous experience, discussion with peers, participation in a forum or that book you read... evidence of skills could be acquired automatically from your interactions with online content or peers, could be explicitly sought out through various assessments or could be based on nominations or endorsements from peers or colleagues. This would allow you to present a more complete picture of your skills and competencies to various audiences, from potential employers to yourself.

This world is not purely fictional, but instead is the direction that we are moving. The next step is to support and acknowledge this learning so that these skills and competencies are available and become part of the conversation in hiring decisions, school acceptances, mentoring opportunities, and even self-evaluations. This is where badges come in.”

A foundational piece on assessment and badges for open, informal and social learning environments.

by Peer 2 Peer University and The Mozilla Foundation, in collaboration with The MacArthur Foundation.

Badges can refer to any system of recognition for informal learning or accomplishment. There are many examples in the real world from badges in Boy Scouts to black belts in Tae Kwon Do. There are also emerging examples in online communities, like Wikipedia barnstars.

## Working Badge Systems

by Joshua Gray

### **10. *Slashdot.org***

[http://joshuagay.org/  
blog/?p=32](http://joshuagay.org/blog/?p=32)

This social news site awards badges for various kinds of achievements, such as The Tagger, Posted a Comment, The Contradictor, Days Read in a Row, Comedian, and Member of the {1,2,3,4,5} Digit UID Club. With a large community and a lots of data and functionality on the site, this minimal badge system has a great potential for growth.

### **9. *World of Warcraft***

100s of achievements you can earn that cover every facet of gameplay. General gameplay achievements cover everything from the number of levels you have completed to getting a haircut. There are achievements for alliances, and player-versus-player achievements.

### **8. *Edufire***

This is a live video learning site. Badges in eduFire track your activities on the site, including: 'I've Promoted Myself on Craigslist,' 'I've Left 20 Ratings,' 'My Idea was Implemented!' '1,000 Unread Inbox Messages,' and '1000 Classes Taken.'

<http://edufire.com/badges>

### **7. *Professional Association of Diving Instructors (PADI)***

The PADI Rescue Diver Badge PADI badges are earned by completing training courses with PADI certified instructors. Courses and badges range from fun and playful such as the underwater photography to serious and dangerous topics such as deep water diving.

### **6. *Wikipedia Barnstars***

"It is the custom to reward Wikipedia contributors for hard work and due diligence by awarding them a barnstar. To give the award to someone, just place the image on their talk page (or their awards page), and say why you have given it to them. If you are sure the barnstar is appropriate, don't be shy!"

## 5. Peace Corps Merit Badges

The Peace Corps Merit Badge project is run by a group of Peace Corps volunteers. The Web site contains a collection of badges, as well as the ability to suggest new badges or to design your own badge. What I find unique and interesting about the Peace Corps Merit Badge program is that each badge is associated with a life changing moment or a monumental triumph.

## 4. Martial Arts Rhee

Tae Kwon-Do 1st, 2nd, and 3rd Dan black belts. The image to the left is above is an example of black belts of Rhee Tae Kwon-Do. Wikipedia informs us that this particular school has a rank system that works as follows. There are ten colored belt grades, or kup ranks, and nine black belt degrees, or dan ranks. Non-black belts, from white through to brown, denote the kup ranks. A specific dan rank is represented by the number of white bars embroidered on the black belt.

## 3. StackOverflow.com

StackOverflow.com is a community driven Q&A site. You earn badges along the way for everything from filling out your profile (“the autobiographer” badge), to providing great answers to people’s questions. Badges are organized into three categories: bronze, silver, and gold. Another component of the StackOverflow system is that you can earn “reputation” points by posting, commenting, etc. Some uses of the site require a certain reputation level to be attained. For example, you can not rank up or down a given post unless you have attained a reputation of 125.

## 2. The Scout Movement Merit badges

It is typically the case that the national branch of the organization dictates what badges Scouts may attempt to go for as well as be the sole authority when it comes to granting badges (e.g., Scouts submit applications that are submitted in conjunction with a troop leader; if the student passes, the national organization mails them an embroidered cloth badge).

## 1. United States Military

A lot of thought has been put into the dozens of awards and decorations awarded by the US Military. Despite the depth and breadth of the system, every detail of it has been described in exacting detail, down to the exact dimensions; where and how the decorations and various medals should be worn; and what combination of medals and ribbons is appropriate to wear on specific occasions. ✕

*LEARNING/FREEDOM/WEB* people are getting excited about badges as a new kind of accreditation, one that can help motivate self-directed learners and gloss learner-centered and peer-based learning with just enough formality and authentication to get it recognized by a wider community. The “audience” for badges could include employers, potential mentors, and professionals in a field, peers, and even yourself.

Mozilla has a very specific use case for badges. They’re investing in a School of Webcraft badge pilot program to help create a Mozilla badging system. As Mitchell Baker suggested, they want to create “a viable alternative to Cisco and Microsoft certification so Mozilla participants can use it to find a career.”

Developing more free, more web-like ways of recognizing learning is important for philosophical, not just practical, reasons. The power to grant accredited diplomas remains the key to the kingdom for traditional education. Economists and sociologists refer to the “signaling” power of diplomas and the “sheepskin effect” to make the point that possessing a degree—no matter the quality of the learning behind it—is the make or break for whether people will have access to a whole host of opportunities and a higher income bracket. Break that monopoly, and you have taken a huge step forward in opening up learning.

A Mozillian named Leslie Orchard first suggested the idea on his blog this past summer:

## Why does Mozilla need Badges? by Leslie Orchard | Thu, 22 Jul 2010 11:00:00 -0700

<http://decafbad.com/2010/07/badger-article/>

What if Mozillians could give each other Merit Badges? It’s not an original idea, and there are lots of variations: badges for Scouts; medals for athletes; achievements for gamers—these are all tokens of recognition from a group to an individual.

The thing I thought might work for Mozilla, though, was this: What if there were no central committee in charge of inventing awards and overseeing their distribution? What if, by way of the same Open Web technologies and philosophies we support, the community could be empowered to craft artifacts of gratitude and present them to each other? ✕



## Experiment: Badges, identity, and you

by Mark Surman

Historically, we've used degrees and certificates to show what we know. This breaks down online— partly because we have no good way to show these credentials and partly because so much of our learning is now informal that degrees aren't really relevant. People like P2PU, Remix Learning, and others have come to the conclusion that we could use online badges to represent these things. Sites like Stack Overflow already use badges like this. We're going to do the same for the Mozilla/P2PU School of Webcraft. 

[http://  
commonspace.  
wordpress.  
com/2010/08/12/  
badges-identity-  
and-you/](http://commonspace.wordpress.com/2010/08/12/badges-identity-and-you/)



### Why badges?

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#### Dale Dougherty

- Make magazine and the Maker Faire:  
"I'm interested in self-taught informal learning. It's less for me about badges and more about trying to make visible what's happening in informal education. I think of it as a set of paths through various stops: How did you get to be a welder, how did you learn to do this? What's unique in the DIY space is the eccentric paths that people take."

#### Anna Haas

- College Unbound/Big Picture Learning:  
"One of our biggest goals is to offer our students recognition for what they already know how to do new things they're learning."

#### Alex Halavais

- Trinity College:  
"Diplomas and transcripts have a chokehold on the education process. I'm interested in making institutions and noninstitutions interoperable."

#### Rafi Santo

- Indiana University:  
"How do we validate informal learning when that's where the best learning is happening? What happens when we attach validation because the minute we attach it, someone games the system?"

#### Philipp Schmidt

- P2PU:  
"Figuring out badges—making informal learning visible—is the key component that will let us change how education works today."  
Five data points needed to define a badge:
  - Identity of receiver
  - Identity of issuer
  - Rationale
  - Audience



## Badge Lab at Mozilla Drumbeat

by Simon Buckingham Shum | November 8, 2010

Simon Buckingham Shum, who works on human-centered computing, "sensemaking," and content mapping at the Open University, a government-funded online university in the U.K., wrote about his ideas on badges after his experience at the Festival.

What does a radically flattened, net-enabled paradigm for accrediting learning look like? As I hinted in my interview for the Mozilla Festival last week in Barcelona (which was enjoyably activist/plot the revolution in vibe)—one of the really tough nuts to crack around open peer learning is accreditation.

Like many educational institutions, Open U is now experimenting with the accreditation of students' prior learning and experience in a variety of ways. But Badge Lab was pushing the model to the extreme, asking the question at the top.

We came up with myriad use cases, categories of badge, worried about whether we were in danger of reinventing the lumbering institutions we're trying to move away from, as well as recognizing, but not dwelling upon, the challenge.

A Badge infrastructure should be agnostic about who is awarding, and what the criteria are. Simple is best. Follow the principles of net-neutrality that's made the Internet so successful. How the badge came to be awarded should sit outside the system: All the badge infrastructure needs to know is that it was awarded, with some basic, uncontroversial metadata that will allow others to build cool apps on top to browse, search, visualize, etc.

A Badge infrastructure is like Verisign: It gives confidence that the claimed badge really was awarded via an authenticated, trustable infrastructure.

A set of Badges is shorthand: something to scan quickly, a conversation opener to find out the Story Behind The Badge, just as you do when you see something on a CV, or a LinkedIn endorsement.

Many Badges will be Low Stakes: they're not worth gaming the system to obtain, because their authority derives entirely from the awarder's reputation. Since much of the time the awarder will be unknown to a third party, a key attribute of a Badge is the link the owner provides to the story/evidence. ✕

*THERE SEEMS TO BE* particular interest in Badges for authentic, practical learning. The point is that we already have existing systems in place for communicating and examining academic, abstract bodies of knowledge, but what's missing is a way to document in one's portfolio the authentic applications of one's knowledge and skills, at an appropriate granularity. Moreover, since such displays of knowledge are by definition situated in unique contexts, the most authoritative sources of evidence will be real people who had direct contact with you.

We could equate Badges with clearly codified, formally assessed qualifications: a university might indeed provide a badge that confers a degree, but here we're simply providing a digital replica of the current system. Instead, let's think about how we appropriate symbols to project our identity.

Badges could—most likely will—be used for personal expression, like your clothes, homepage, blogroll, tweets, what's on your bookshelf, or music playlist. I'm imagining not only community groups inventing badges to recognize talent and motivate their team, but groups of teenagers awarding each other badges, creating a local currency.

<http://people.kmi.open.ac.uk/sbs/2010/11/badge-lab-at-mozilla-drumbeat/>



## Some questions asked and answered by the Badge Lab over 2 days

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### Who provides a badge?

- Mozilla
- Quest to Learn
- YouMedia
- NYCLN
- Current higher education institutions
- For-profit businesses (Kaplan, Pearson)
- Peers/community

### What is it given for?

- Webrickf:

Web developers, assessment handled by P2PU. Community drives the badge development, but frontload it. Webrickf community is developing the skills map-goals: motivation/engagement share information/skills across courses share information with the outer world.

- Accessibility:

Best practices, an inclusive way of coding the website, beyond its visual appearance: Semantic HTML/CSS Explainer, Enabler, Developer (with CC-like easy explanations).

- Soft Skills:

Things like question/answering, teamwork, being an active community member, communication, problem solving, critical thinking, and talking to normal people.

- Volunteer Skills:

An organization (like Crisis Commons) can put the call out using the badge system to locate new volunteers— matching people who have the time and the capacity to volunteer could be notified via the badge system, so badge becomes a volunteer service tool in addition to individual recognition and potential for employers, too.

### How is it validated?

- Linked to a student portfolio, validated by a community but be able to show the work and represent the outcome?
- We could tie it into a Firefox extension, or use a delici.us tag for nomination, to enable a bottom-up process.
- Keep metadata? (e.g. reference to actual technical artifact, source code, revision). And to the version of the standard you are validating against, and the date? (e.g. CSS2/CSS3).
- Bugzilla parallel – allow community members to file a bug as in an open-source reporting system?
- Replicate Amazon metareview system: "Was this review helpful to you?"
- A "like" button that gives endorsements to both you and the endorsers?
- Person submits proof by describing what you have just done to local community, gathering their endorsements, submitting a video, having external people evaluate—all of that becomes the link behind the badge.
- Work with expert/professional/technical societies to create badges with demonstrable value.

**How is it used?**

- It validates!
- Smoothes the accreditation curve for informal, self-directed learning.
- Communicates clearly what you've done.
- Opportunity for others to learn from project.
- Hiring someone young or without a college degree that could use the badges.
- Not trying to replicate the grading system, where degrees are given by seat time.
- Badges: specific competencies, capture the subject mastery, capture the path.
- Membership in professional, technical societies.
- Granularity can allow more specific expression of skills (not just "I am a doctor," but "I am a doctor who is has a very specific expertise.").
- To change higher education—transform from a system that weeds people out to a system that lifts people up--and create an alternate system.

**Who is it for?**

- Employers
- Clients
- Students
- Communities
- Target audiences (users on the website)
- Readers
- Other Webcraft community members

**And finally,****What's wrong with badges?**

- Are we recreating the factory system of education?
- Will people game the system?
- Are we substituting extrinsic motivation for intrinsic motivation?
- What happens if commercial interests get in the game? Can openness remain the standard?
- Can we make sure our badge system eats theirs?
- What if Bb [Blackboard, the dominant closed-source commercial learning management system] gets into the game?
- What if the market gets saturated with low-quality badges?
- How do we include marginalized communities?
- Renewal/validity: Anything based on technology will become obsolete so maybe badges expire, fade away, rust.
- For it to succeed, we have to seed well executed uses of that platform, and starting points for people that want to use it the point is, what does "well" or "good" mean? That they have accomplished something, there is some reason to have a badge?
- Are same hierarchies going to be replicated? We need a sense of playfulness, instead of just reinforcing the existing divides. What we are talking about is fundamentally more democratic, because the credibility of the badge will depend on the authority of that issuer—an open structure which is easy to use provides some way of saying that you can trust this badge. Let's not over-engineer it from the beginning.

SKILL BADGES



COMMUNITY & FILER BADGES



VALUE BADGES

OTHER





## Open Badges

<https://wiki.mozilla.org/Badges>

### WHO

Erin Knight, Brian Brennan, the School of Webcraft, and many, many others

### WHAT

An open infrastructure that fuels the growth of badges as a new way to incent and recognize learning. A public spec, API for badge issuers, and "Badge Backpack" software that lets individual learners collect and share badges between websites, social networks and apps.

### WHY

Revolutionize how we incent and recognize learning. Help learners open doors and get jobs.

### WHAT'S NEXT

Since the Festival, a white paper outlining the badge and assessment model has been completed and circulated widely. A pilot version of the badge infrastructure is nearly complete, and a beta version will be ready for broader use as of January 2012. Follow along at: <https://wiki.mozilla.org/Badges>

## 💻 Status Report

by Paul Osman | November 15, 2010

Badges can be issued by any site, stored in a “backpack” (which simply stores the badge data in localStorage) and consumer sites can show badges stored in the backpack with just a few lines of JavaScript. ✎

<http://blog.eval.ca/2010/11/15/status-report-what-ive-been-up-to/>

## 💻 The Backpack

by Dan Mills

Sites that want to either provide or use badges import a JavaScript library, which behind the scenes uses post messaging to communicate with an iframe. That frame in turn uses local storage, so that no server storage is necessary (though it can be added). Things like identity verification get pushed to the edges, when a site retrieves a badge it can then query the source to determine if the badge is real, and whether it belongs to you. ✎

<http://blog.sandmill.org/>



### How to get involved in Open Badges

[www.openbadges.org](http://www.openbadges.org)

- Check out our vision, plan and pilot badges
- Learn about how your organization can use Mozilla's Open Badge infrastructure
- Develop your own badge program





Profile:

# Philipp Schmidt

Philipp Schmidt is the Peer 2 Peer University (P2PU) co-founder and director and an open education activist/researcher. He runs several projects at the University of the Western Cape and is a board member of the OpenCourseWare Consortium. He's also a tall, cool South African with a dry sense of humor. During the Festival he and another participant scouted a local shop with a giant boom box in the window that sold vintage and handmade sunglasses. Both started rocking black shades that looked like reimagined Wayfarers.

## Can you retell the story of how you got started with P2PU?

Neeru Paharia and I met at the iCommon summit at Brazil in 2006 and 2007 and first started speaking about these things. In August of 2009, we got more serious. There was an Open Ed conference in Utah where we ran a workshop. It was the moment where we felt either people think this is a good idea and they're going to get engaged in it, or maybe we were wrong and should be spending our time on other things. So let's just try it and see what happens.

## So what's happening?

We're about to launch the first set of pilot courses as an experiment. In the past we've held back because we need to answer questions like how we link to accreditation and how people assess each other. And what I've come away with is that you don't need to have all the answers. People who sign up are happy to be figuring out these things with you. So I've just had a chat with all the people last week and we decided to jump in the deep end and start running and see what happens.

## What kinds of courses are people signing up to do?

All kinds of things: creative nonfiction writing, behavioral economics, an "open education for educators" course, and Wikipedia visualization. These are all niche topics that appeal to a certain demographic group. It's not your econ 101 or calculus tutoring or basic Spanish.

## Was that a conscious decision, to steer away from general ed courses?

We thought about that quite a lot. I'm not so sure how that open P2P model works for these basic education services being provided by mass market universities.

There's some pretty broad shifts in the way people learn and how they engage with each other, so why not take advantage of the possibilities rather than try to build a slightly better University that just costs less. We might add more basic or general courses later, but for some time we're more excited about these quirky topics.

## And it's really up to your community what courses are featured, right?

Absolutely. The people who will join P2PU and who will be successful are really committed and willing to spend some time and energy to learn it. It's people who would be going out and looking for the materials themselves who now can do in a community and get help from other people.

## So what do you think about the connection between learning, freedom, and the web? Why is it that so many people who are interested in one, are interested in the other?

A couple of reasons. One is, there's that whole conversation about 21st century schooling, which I find very convincing. I think the basic skills of communicating, finding information and knowledge, and finding the people to get the info you need is absolutely right. We need procedural skills of how to learn more than factual knowledge, since facts are changing more quickly now. It's obvious that people need to evolve what they know throughout their lives much more than they used to.

Then, as people become more comfortable online and in these social networking applications, that has implications on how they engage with other people. It would be crazy if that didn't influence how they look at education.

## Why are you interested in badges?

The idea that one monolithic institution will provide everything—teaching, testing, accreditation, research—that idea is already an idea of the past. It seems like the institutions themselves are the last people clinging to that concept and everyone else is already innovating around them.

To define the interfaces, the fault line between formal/informal education, that's where my interest lies.

## People often hold up medicine as an example of a discipline where degrees will be used for a long time.

Certification will break out of the overall system in medicine, too. There's no reason that universities should be accrediting doctors.

## So what does all this have to do with badges?

Something I've been thinking about quite a lot is assessment and accreditation. Those are the crucial areas where we don't have good answers yet. If you look at the Internet and the way information is managed there are a number of ways used to assess what's quality. And the concept of quality is much more individualized than it was before.

On the one hand you can aggregate opinions more than ever before, so very quickly that's a way to assess quality within a particular definition. That's one way to look at what a student or learner is producing and what the community thinks about it. Another way we're going to see a bit more is these trust networks.

**The idea that one monolithic institution will provide everything—teaching, testing, accreditation, research—that idea is already an idea of the past. It seems like the institutions themselves are the last people clinging to that concept and everyone else is already innovating around them.**

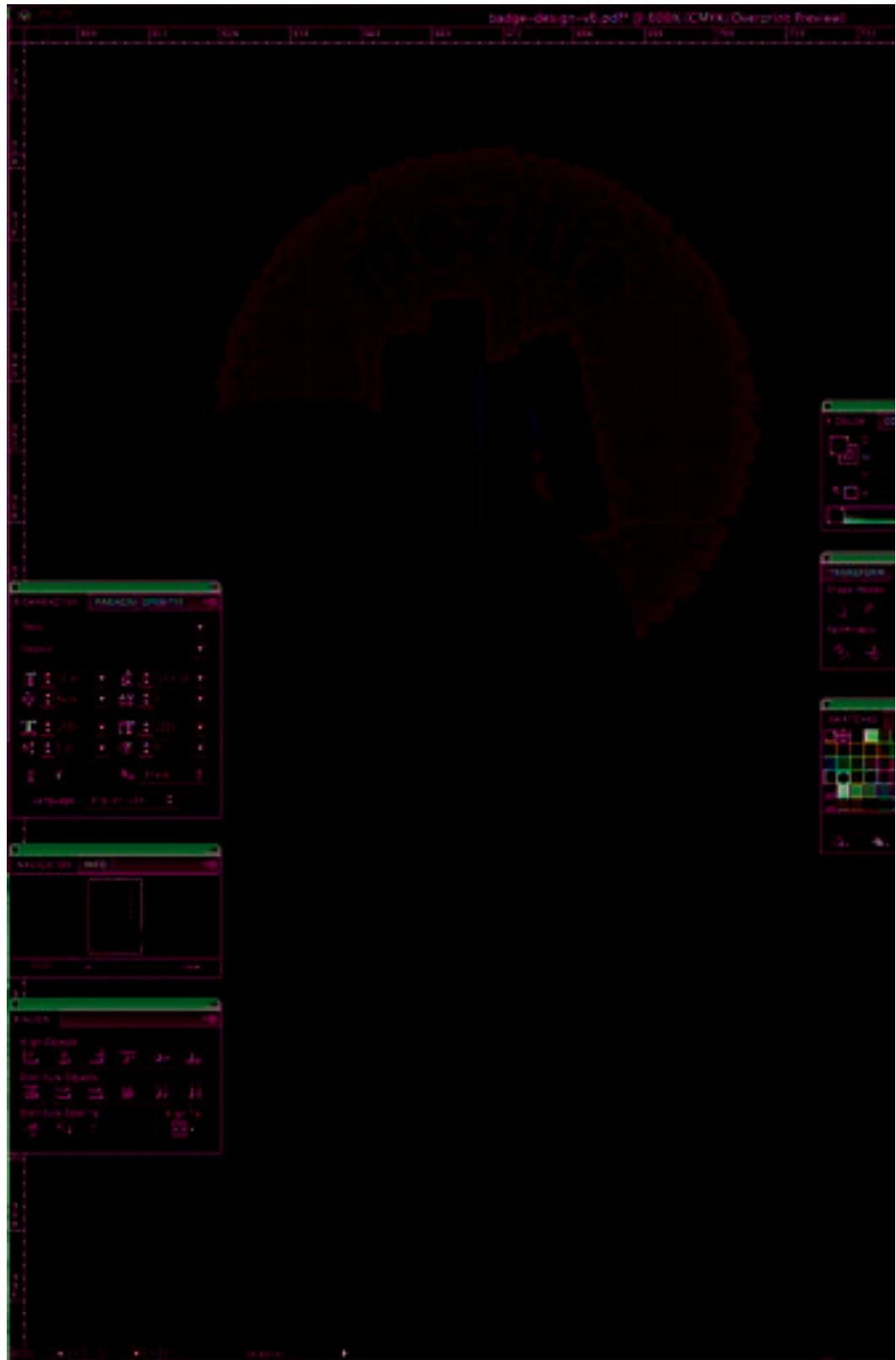
#### **Recommendation systems?**

Right. Recently I've been speaking about these trust networks with a friend of mine who has written the code for Topsy, a Twitter real-time search engine. It's like with LinkedIn, you can say: I think these are good people in that area. If you use that and place it as a filter on top of the web and look specifically at things people are doing as part of their learning, you can automate a quality assurance mechanism that's incredibly complex, because we have all this computing power. People only have to say: I trust these three or four people, and you can come up with pretty accurate descriptions of learning quality, entirely taken out of the institutional space.

The second one is more, let's say I assign a certain trust value to you: I know Anya is an expert on student debt. Even though I might not know anything about the subject in question, I can be fairly sure that there is quality there.

**So you replace trust in an institution's authority, the name on the diploma, with trust in a reputation-based, peer-to-peer community?**

Well, that's future music. We do know that peer assessment works. There's been a huge amount of research on students' ability to assess each others' work. If you explain it well, students can do this. There are ways to control for bias and error that can be reliable. ✕





How To:

# Create and Award a Badge

Create badges to reward participants in your community, or to show off your own learning.

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## Step 1:

Decide what your badge will be for.

**Tip:** Consider linking it to a discrete, concrete achievement (like baking bread) or a positive behavior valued by a community (like leaving five comments on a user forum, or giving helpful feedback on a classmates' or colleague's presentation).

## Step 2:

Create a fun name (Chef Supreme) and recognizable symbol for your badge. Make this in a form of a button they can post on their profile.

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## Step 3:

Make clear how the badge will be verified (honor system, link to some proof, such as a photo, or community votes up/down.)

## Step 4:

Start awarding or nominating people for the badge. Give them a lot of props!

## Step 5:

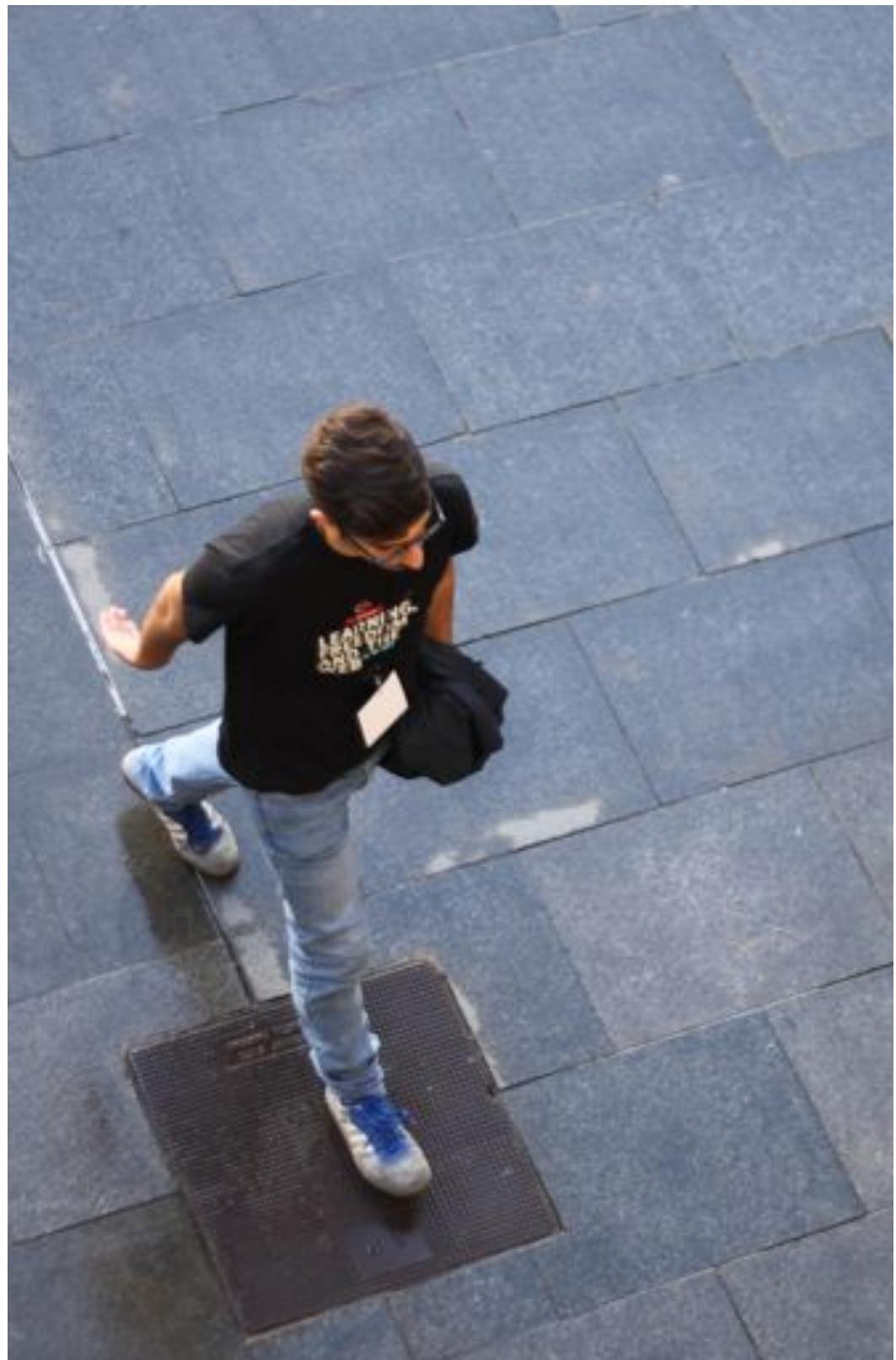
Publish these steps so others can add to your badge system.

**Difficulty:**  
Moderate

**Time:**  
1 day to create;  
several weeks  
to use

**Who:**  
1 or many

**Materials:**  
Computer with  
Internet access, a  
drawing program  
such as Inkscape:  
<http://inkscape.org/>  
and membership in a  
community



# The Future

What is the future of learning, freedom, and the web? It's a slate of ongoing projects. It's a percolating of new ideas. It's a crossbreeding of old categories. It's a building of new relationships. It's a founding of new organizations. It's the construction of new systems. It's the coining of new words. It's the creation of a new reality. Together.

*WHAT REALLY KEEPS* a community going? Shared work, shared goals, shared fun, shared vocabulary, and shared rituals. There doesn't have to be one ultimate unified vision. The idea of what learning will mostly look like in ten years, 50 years, or 100 years remains fuzzy, and that's by design, because one definition of an improved future is one that has a greater diversity of choices than in the past.

In many ways, the medium speaks louder than the message. The Festival worked the way we want learning to work with the help of the web and in the context of freedom.

Convene a group that finds strength in difference. Make room for all kinds of constructive debate while keeping an eye on shared values and goals. Keep a bias toward action—there's nothing better for collaboration and camaraderie.

There were mistakes along the way, grand ideas that didn't quite materialize or got bogged down in the details. There were difficulties in communicating and building bridges amongst people with very different backgrounds, skill sets, and languages. (The lack of translators for sessions, which were held exclusively in English, came in for a fair amount of criticism.)

There are ongoing concerns about the future—keeping momentum going for projects and finding funding models that work. All of these issues are part of the process.

At the end of two days, on a rooftop in Barcelona at three o'clock in the morning, there was dancing and there was singing. And there were plans for the future.



**“I’m a college dropout. I dropped out twice—I completely failed formal education—but I survived because of the Internet. The Internet saved my life. The Internet presents an amazing opportunity for us to enable informal learning. Until we figure out how to change education into learning we’re not going to reach the final potential of the Internet. We trust the Internet not to be centrally controlled. We have learned that abundance and redundancy and resilience works. Education still believes in scarcity—you had to dish out education to people who deserved it. We’re going to a world of abundance. When we have abundance and we act like we have scarcity, we get things like obesity.”**



— Joi Ito, Opening night remarks  
Learn more about the work Ito is doing in his profile on page 64

Monica Resendes, a PhD student at the University of Toronto, “studying how the development and integration of collaborative online learning technologies can enhance the teaching and learning of history in schools,” mused in an email:

“The one question that I have come away with, when we say we want to open up the great wide world of open education for whoever is willing, able, and excited to dive into it, what kind of learning do we hope to encourage? Is it to impart specific knowledge, to improve a certain skill, to facilitate communication and investigation, to inspire creativity? The answer is all of those things and more, of course. And there is a myriad of amazing and innovative learning resources out there designed to do these very things.

All these initiatives strive to provide free, cutting edge and robust educational resources. What sets these projects apart is their shared objective to create connected and committed communities around them as an integral component of the platforms themselves.

It is the community-building aspect underlying the technology which I feel is really at the heart of the new movement that we—those who attended the Festival, those working in the field of Open Ed, those reading this document—need to keep pushing and working for.”



## How do you want learning to be different in the future?

From Festival participant evaluations

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Self and community based learning.	The supporting material and software should be made by and for teachers and learners (people who identify themselves as such).	Subject based & grade based models will be increasingly rejected by many more middle & high schools.	Tech should be actually integrated into curricula instead of being a simple complement to traditional approaches.
Widespread OER and culture of openness.			
Rapid iteration of learning models and environments.			
Everybody should be a teacher and a learner.	Many school systems will abandon the single teacher classroom model when possible.	Math education will become integrated & authentic/group-based learning opportunities will increase.	Let people be people—not a set of grades or evaluation standards.
		Less textbook knowledge, more hands-on/real world pedagogy.	

**“You have a common ethos of openness—sharing power, decision making and, participation. An ethos of DIY—learning-by-doing, making. That’s what’s exciting about the potential of this group—for the next two days and beyond. A common ethos and passion for innovating can be incredibly powerful. So I have an invitation for you guys to reflect on the poetry and the pragmatics of what that means. It’s Powerful. And if we just share that and become more articulate at it there’s power in that. More importantly, we have to work together.”**



– Mark Surman, Opening night of  
"Learning, Freedom and the Web"

Fred Mednick, the founder of Teachers without Borders, a nonprofit “global community of teachers who are working to enhance education and human welfare,” wrote afterwards:

### Mozilla Festival: An Elder's Perspective

by Fred Mednick | November 6, 2010

“Here are a few words of wisdom extracted from my steno, turned into sentence form, transferred to EtherPad, backtracked to my blog, and flicked over to my Kindle and Touch (I feel a need to add all of these references to technical gadgets so that I would not be dismissed as a Luddite—a word, by the way, referring to bands of English workers who destroyed machinery they felt was threatening their jobs).

Here goes: Stand on the shoulders of giants and validate the contributions made by generations that were, themselves, also restless, undaunted, dissatisfied with the status quo, exploratory, and driven to make something happen overnight. Remember that tweets were once haikus. Symbols first appeared on the walls of caves. Moveable type helped make classics accessible. P2P was once a form of basic trading in the village marketplace. Be careful not to build a digital form of the very institutions you find so distasteful, even the online ones. Words bandied about or overheard in sessions: ‘institutional inaccessibility,’ ‘Blackboard-dominating,’ ‘frontal teaching,’ ‘corporate machines,’ ‘colonial,’ ‘exclusive.’

Several demos focused on building global repositories of social media for teachers made viable only if the community of users is large enough, resources plentiful enough, and bandwidth ubiquitous enough. I now have a stack of business cards and brochures and URLs and photographs of Post-it notes.

Sure, today’s classrooms can be stifling and anachronistic. At the same time, classrooms can, by their very existence, also be a form of liberation and the ultimate expression of human rights. 70+ million children do not go to school at all. Most of them only dream of putting on a uniform, carrying books, and learning from each other. Figure out how your application (and your motive for building it) can work even if the electricity is off, then build it because its effectiveness can scale.

Challenge yourself at the level of the worst-case scenario. In South Africa, for example, there are some classrooms of 60+ children who, in alternating rows, bend over so that the children behind them can use their backs as a desk. Can your app work there? Watch your grammar when you’re in a foreign land. Though it is true that the best meetings are impromptu and largely unscripted, seek diversity as a natural starting point. Try not to convene a group of hackers in a basement

unless educators know where the stairs are and can find you (literally and figuratively). I promise, we won't slow you down. Similarly, to educators: don't convene a private cabal without corralling an equal number of Red-Bull hackers who, indeed, are your friends if you just let them dream with you after class or in the faculty lounge. Really, lighten up.

At the Festival, I learned two important things that challenged and changed me. First, my insistent, and somewhat obnoxious, drive for instant practicality can obscure and squash creativity. While I may have often felt that many creations were solutions looking for problems, I also realized that innovation does not need a rationale in order to flourish. The rough and inaccessible could, indeed, be made smooth and useful if only given a chance. The innovator should not feel the need to justify pure creation. Art does not need a reason to exist. There is a reason we all carry within us a certain measure of arrogance; it's motivating, as long as it's not foisted on me. I learned to let it all be and to pay attention.

Second, I realized that the Mozilla Festival may have used somewhat hackneyed, manic Marxist rhetoric and caffeine to fuel itself, but so what? My organization, Teachers Without Borders, needs you. We need your repositories and platforms, your XML and HTML 5, your acronyms and hash-tags and @-signs and mashups. We need your conviction and drive for social justice, provided you're open enough to embrace the courage of your contradictions and give it to us for free so that we can focus on giving away our own assets, too. Together, let's continue to ask both difficult and playful questions and honor each other. I know that I will do my best to connect it all to a human narrative, to solving problems, and to the pressing and emerging issues facing those who work in classrooms far away from our three-day festival at a gorgeous Museum of Modern Art in Europe. To the conference organizers, fellow volunteers, and fellow travelers at the Mozilla Festival: Freedom, Learning, and the Web, as well as for those who are connected through those tiny internet traffic controllers, I am truly grateful.” 

Alex Halavais, a professor at Quinnipiac College in Connecticut, wrote:

 **Mozilla: Enter the Lizard**  
by Alex Halavais | November 16, 2010

<http://alex.halavais.net/mozilla-drumbeat-enter-the-lizard>

“It seemed to me that there was a great charge of revolution in the room at a number of moments, with the traditional school and university structures firmly in the crosshairs. Two of the plenary speakers were proud dropouts of traditional educational institutions, and there was a general feeling that we can do it better ourselves. As Cathy Davidson noted in one of the early talks, we needed to find the “joy in insurgency.”

And you will find no one more responsive to that general feeling than I am. But I think it is worth tempering.

After all, I am a high school dropout with a PhD—a condition that probably reflects my intermediate position on the issue fairly well. Are schools and universities broken? Of course they are, always have been, and always will be. Internet Explorer is broken too. The solution, however, was not to throw the browser out with the bathwater, it was to make a better browser. (Oh, and btw, Firefox is broken; there is nothing fundamentally wrong with brokenness, as long as you are also always in the process of fixing, and the ability to fix is not impeded.)

I think that a hard stance against the university is strategically the wrong way to go. As Mitchell Baker noted in her brief introduction, one of the successes of openness is that it kills with kindness.” 

The members of Nois3lab, an open-source digital media agency in Rome, put the best spin on things of all:

## **Barcelona Drumbeat Festival**

by Imke Bähr | November 21, 2010

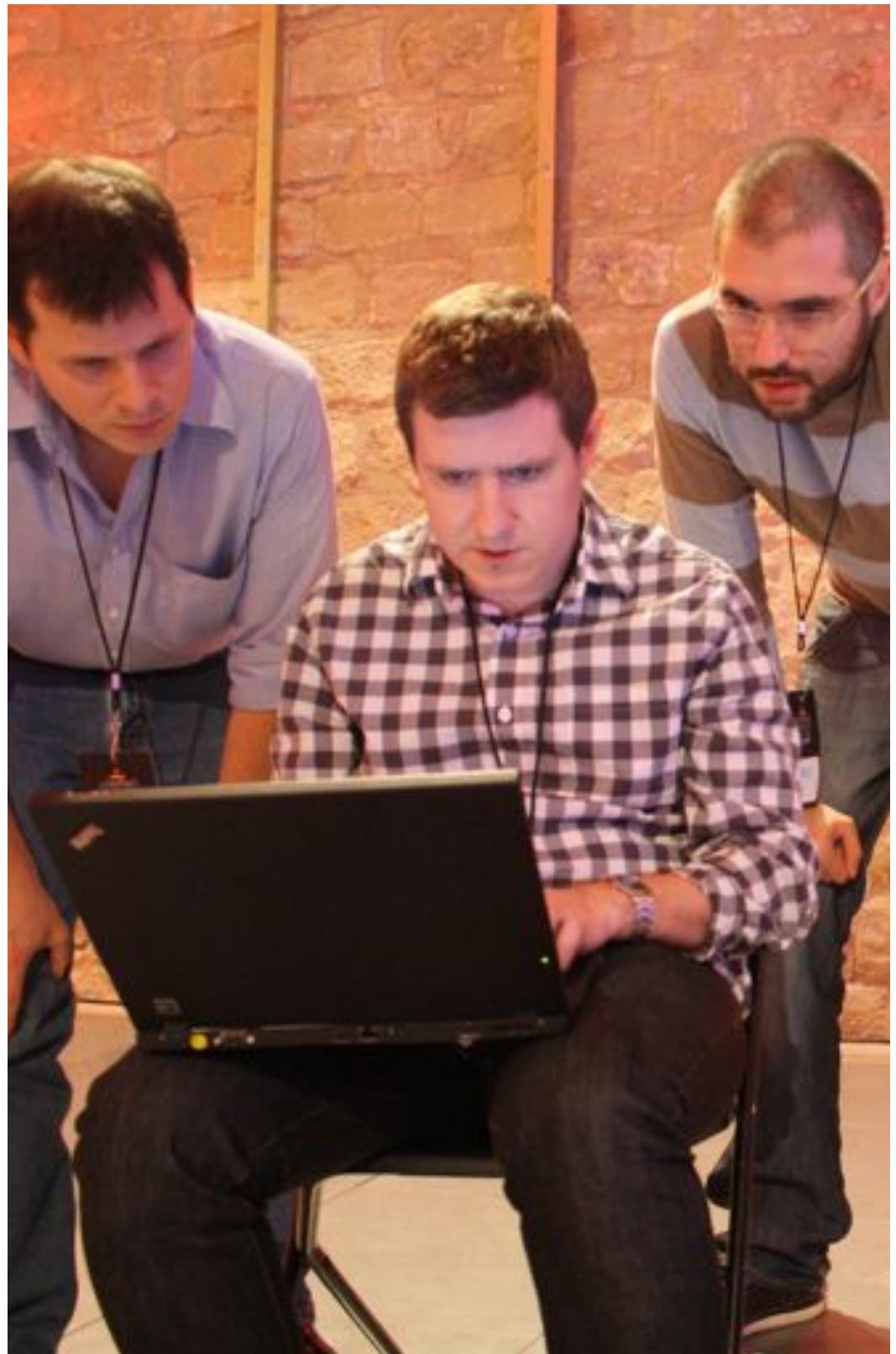
The Barcelona Mozilla Festival was about Learning, Freedom, and the Web. It was about projects and initiatives, ideas and missions, but above all it was about *people*—yes, people like you and us, people seeking an alternative way for learning, sharing and teaching knowledge, people caring about the web and the freedom to express themselves, people trying to safeguard a critical approach toward social changes and willing to find a new evaluation system in order to give “credit” to alternative learning and teaching methods.”

Thus, the Learning, Freedom and the Web Festival was about how all of us could contribute to create a better and more conscious future. The goal is to build a new and open learning model using the web as an opportunity in order to get access to projects and contents and to reach and meet as much people as possible. People are precious resources, they are full of experiences and knowledge to share.

The web is our venue to come together even if we are far away, the web is our tool to learn and get things done/teach things even if, in the beginning, we don't know how to do it, the web is our opportunity to change the thinking of tomorrow...and this is exactly why it is so important to ensure the openness of the web.

All of us must have the possibility to choose when, where, and how to learn new things, all of us must have the opportunity to gain access to the large variety of information that people share in the web. So, keep it open, share, and you will see that you are not alone out there. ✕

<http://blog.nois3lab.it/archive/2010-11-21/barcelona-drumbeat-festival>





How To:

# Create Your Own How To

**Purpose:** Share your knowledge in an easily understood format that allows others to try it and learn too! Also helpful for exploring your own knowledge.

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**Difficulty:**  
Medium

**Time:**  
5 minutes

**Who:**  
1 or many

**Materials:**  
Pencil and paper,  
or computer

## Step 1:

Decide on a topic. It should be something you know well that is not too broad.

"How to identify chanterelles" is better than "how to identify edible mushrooms."

## Step 2:

Identify the purpose of the exercise, the level of difficulty, the materials, and whether it is for one person or a group.

## Step 3:

Break down the process into steps. Use simple, unambiguous language. Five to eight steps should be enough, otherwise your how-to may be too broad.

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## Step 4:

Add any tips you've come across, and links to where people can get more information.

**Tip:** Visual aids are often helpful. Photos of each step in the process, or a video of the whole process are both great.

## Step 5:

Share your how-to on your blog, website, Twitter, a wiki, or anywhere else you like!

## **Illustration and Photography**

### **Acknowledgements**

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Pages 12, 38, 54, 56, 58, 64, 80, 82, 104, 116,  
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