Web Literacy

People everywhere should have the knowledge they need to tap into the full power of the Internet—and to use it to make their lives and the world better. This means that everyone needs the skills to read, write and participate online. For this to happen, web literacy must be foundational in education, alongside skills like reading and math.

From the Mozilla Manifesto:

#01: The Internet is an integral part of modern life—a key component in education, communication, collaboration, business, entertainment and society as a whole.

#05: Individuals must have the ability to shape the Internet and their own experiences in it.

Web literacy is now the 4th foundational skill next to reading, writing, and arithmetic. Combined with 21st century skills like problem-solving and collaboration, web literacy is necessary to thrive in today's world.

Internet use is expanding, with the broad majority of people—60% worldwide—expected to be online by 2020. The integration of the Internet into people's daily lives is helped by hardware and software that are easy to use and require little technical understanding. This lowers the barrier to entry and makes the Internet increasingly accessible.

What's more, while TV or modern radio promote passive consumption of content, the Internet offers everyone the opportunity to create and share content, just as easily as they can consume it: no sophisticated technical skills or large financial investment required. This is what has made the Internet an open, innovative space.

Yet, technical simplification also means that people are required to understand less about the tools they use everyday—tools that are increasingly complex. For most people, technology is a black box.

A lack of understanding of the Internet's core fundamentals is a barrier to creating and participating online, which often results in people seeing the Internet as just "TV 2.0". In more extreme cases, it can lead to false impressions about the nature of the Internet itself. For instance, a study in Nigeria and Indonesia showed that **60% of participants believe Facebook is the Internet.**

Web literacy is necessary for people to understand and be able to take full advantage of all the Internet has to offer. Using the Internet without also building core web literacy skills is like learning the alphabet, but not the vowels—something fundamental is missing, making it difficult, if not impossible, to fully understand or use it effectively.

Empowering people to shape the web enables people to shape society itself. This is why Mozilla envisions a world in which everyone has the skills to read, write, and participate in the digital world. We call this "universal web literacy".

This is part of a series of briefs intended to provide more depth into Mozilla's thinking and actions on five key issues that comprise Internet health. Their objective is to educate, to guide, and to inspire action. They are meant to be illustrative, rather than exhaustive.

Key topics in web literacy:

<mark>Moving beyond coding</mark>   <mark>Integrating web literacy into education</mark>   <mark>Cultivating digital citizenship</mark>

Moving beyond coding

Like reading, writing, and arithmetic, web literacy is both a competency and an activity.

You don't just learn "about" reading: you learn to read and comprehend. You don't just learn "about" arithmetic: you learn to count and calculate. Likewise, you don't just learn "about" the web: you learn, for instance, how to search to expand the frontiers of your knowledge. Or you learn a new skill. Or how to share your own work online.

Universal web literacy doesn't mean that everyone needs to learn to code complex webpages. A lesser degree of technical awareness and empowerment can be very meaningful. For many, learning how to customize the programs on their devices or how to more easily find reliable information online creates a

powerful, and valuable, sense of agency.

Web literacy includes three main aspects:

Reading—Understanding basic web mechanics used to search for and locate resources and information, including the ability to judge the credibility of these sources.

Writing—Building and creating web content to make meaning, including how to add information or links to a webpage, ways to remix existing content and basic coding/programming skills.

Participating—Connecting and contributing to communities that share, build, and sustain meaningful content online, including understanding how to keep content, identity and systems safe.

<mark>**The Web Literacy Map**</mark>

21st Century Skills

- ☑ **Problem-Solving**
- ☑ **Communication**
- ☑ **Creativity**
- ☑ **Collaboration**
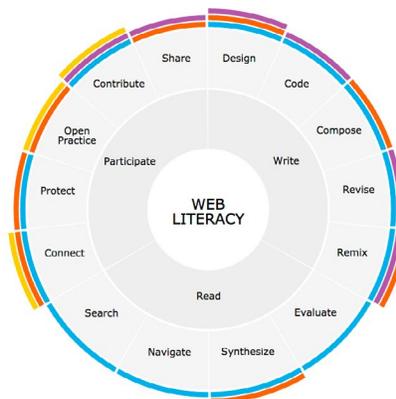
The nexus between 21st century skills and web literacy skills is the entry-point to the skills and competencies necessary to thrive in our digital age. As with reading, writing and arithmetic, web literacy begins simply with basics you can build upon. For some it can lead to a profession (i.e. becoming a programmer), but for most it expands our access to the world we live in and gives us the tools to contribute and participate in that world.

However, where "digital literacy" is emphasized in public policy, very often the focus is on people becoming novice coders and prolific ebook readers - not on deeper web literacy skills that prepare people to think, create, and thrive in the connected world.

A comparative analysis between essential web literacy skills and widely used U.S. workforce and learning standards found critical gaps in the existing standards. Essential web literacy skills such as "Navigate" are not specifically addressed by any of the examined standards, despite being vital to web literacy and learning today. For example, "Navigate" is necessary for understanding the basic structure of the web, including how to use hyperlinks to access online resources.

Without an emphasis on universal web literacy, people may be left without the sophisticated web literacy skills that the world and jobs of tomorrow require. Marginalized populations are most at risk, and there is increasing concern that the push for coding skills may result in socioeconomically disadvantaged people being limited to more "blue collar", automated tech jobs.

Working with and building on the foundations laid by leaders in STEM (science, technology, engineering, mathematics), computer science, media literacy, youth development, and many other disciplines, Mozilla is collaborating with our allies proactively address this gap. Our aim is to help ensure that policies and approaches that focus on enhancing people's abilities to participate in the digital world incorporate the full range of web literacy skills.

Alignment of Standards to Mozilla Web Literacy Map

X = Alignment

		ALA American Library Association	Common Core / Next Generation Science	ISTE	NAEP	European Commission	UNESCO	P21	Department of Education
Write	Design	X		X		X		X	X
	Code					X		X	
	Compose		X	X		X	X	X	X
	Revise			X		X		X	X
	Remix					X	X	X	X
Read	Search	X	X	X	X	X	X	X	X
	Navigate								
	Synthesize							X	
	Evaluate	X	X	X	X	X	X	X	X
Participate	Connect	X		X	X			X	X
	Protect	X		X	X	X			
	Open Practice								
	Contribute			X				X	X
	Share	X		X	X	X		X	X

Integrating web literacy into education

Incorporating web literacy into education is essential. In the ==digital world, learning happens everywhere==: classrooms, libraries, parks, museums, online and all spaces. Determining how to effectively incorporate web literacy into education requires examining the opportunities and challenges faced by both educators and youth.

Supporting educators

Educators are the change agents who will lead web literacy to become as universal a skill as reading, writing and arithmetic. Looking within and also beyond traditional classrooms is important, as students spend only about a ==1000 hours/year in classroom instruction== and are ==learning anytime, anyplace, and at any pace==.

Classrooms today look and function the same as they have for decades. However, society has changed, and young people are learning and creating in rich, collaborative ways, facilitated in large part by new media and technology, like the Internet. This presents an important opportunity to harness technology toward broader education goals through a ==connected learning approach== that, in turn, both requires and helps build strong web literacy skills for both students and educators.

Simply putting computers in classrooms isn't enough: a ==study by the Organization for Economic Co-operation and Development== found that frequent use of computers in classrooms does not improve students' performance. However, the same study also said that this finding should not be used as an "excuse" not to integrate technology in schools. Instead, it should spark an even greater effort to develop more effective approaches to using computers to teach, and to teaching web literacy.

We need educators to lead this charge. And in order for educators to ==create spaces where connected learning can flourish==, they too require strong web literacy skills. Skills that will enable them to, for example, ==embed web literacy into authentic activities==. Unfortunately, there are currently few effective learning opportunities or peer-support networks for educators keen to incorporate web literacy into their work. Even in school districts and cities that are investing in providing professional development opportunities, these supports often fall short of enabling educators to effectively leverage the Internet and digital media in their classrooms.

Through ==Hive Learning Networks== and other initiatives, Mozilla works to fill this gap by supporting both formal and informal educators in becoming web literacy leaders. We facilitate events and workshops at places where people gather, like schools, libraries, and community centres - places where people can teach and learn together, and find local resources in each other as well as online. We extend to the people we serve a broad, inclusive invitation to become more comfortable and confident participants in online life, knowing that caring adults committed to web literacy can help young learners find entry-points into the connected learning opportunities they need to take full advantage of the web in their lives.

Supporting youth

Simply being a 'digital native', who has grown up in the world where the Internet and connected devices are pervasive, does not automatically mean having robust web literacy skills or better understanding of how the web works. For example, a recent study indicated that **69% of UK teens couldn't tell the difference between Google ads and search results**, despite the fact that ads were clearly labeled as such.

Further, not all young people have equal access to technology, which impacts their ability to build web literacy skills. People living in wealthier countries **have far greater access**, and it is well documented that Internet adoption is **slower for women than men almost everywhere in the world**. This is not a phenomenon isolated to emerging markets: in New York City, **25% of all households—and 50% of those who earn less than $20,000 a year**—don't have broadband Internet at home.

The World Bank estimates a record number of young people—**1.8 million—are living on this planet, with approximately 85% of them living in developing and emerging economies or in fragile states**. In many countries (especially in Africa and South Asia), youth make up nearly a third of the population. Young people account for roughly 40% of the world's unemployed and are up to four times more likely to be unemployed than adults. When young people are not fully participating in the labor force, economic and social costs are high. Soon, every job will be be a digital job and, without web literacy skills to successfully participate in a connected global economy, the cost to society will sky-rocket.

It is clear that no matter what part of the world you're born, or how long you've been using a smartphone, web literacy education is needed to ensure that you have the full range of skills to understand and participate in online life.

Through participatory learning and initiatives such as **Clubs** and **Hive Learning Networks**, Mozilla helps create opportunities and build communities to support youth in becoming full and confident participants in online life. We mix web literacy with participatory learning to make the web accessible, delightful, and relevant for leaders and learners.

For example, Mozilla is partnering with **Digital Opportunity Trust** (DOT), Mozilla is helping to train youth web literacy ambassadors across the Northern Corridor of Africa. DOT's mission is create global networks of talented, energetic young leaders who make real change by educating local communities to apply technology effectively to real life.

Cultivating Digital Citizenship

To unlock the next wave of openness and opportunity on the Internet, we need the public to understand, feel a sense of ownership of, and be ready to address the biggest challenges and opportunities that face the Internet today—because these challenges are the same ones hidden inside the technologies people use everyday.

Widespread engagement is limited by a lack of understanding of the issues that shape the Internet's future. This understanding is a part of web literacy. It's a prerequisite to being part of building and defending the open Internet.

Everyday Internet users should be able to shape their own Internet experience - not only through the choices that they make online, but also through the policies or organizations they choose to support. This requires that people have at least a basic understanding of how the Internet works, what decision-makers are shaping their experiences online today, and which values they want to support when it comes to online life.

Politicians, government officials and policy makers everywhere also need to have a strong understanding of the opportunities and challenges facing the Internet today. Decisions about Internet policy impact a broad range of people's access and experience online. Even decisions about policies and programs that are not directly related to Internet infrastructure or regulation can affect, or be affected by, the Internet and related technologies. It's important that the decisions made about the Internet, and sectors that depend on it, be informed decisions.

The knowledge gap is significant, but it can be bridged. For example, over many years the hard work of civil society advocates, technology industry marketing and policy teams, and media professionals turned "net neutrality" from a rare buzzword into a powerful and emotional issue associated with freedom and choice - as well as a phrase heard both in government boardrooms and around kitchen tables, around the world.

We urgently need to repeat this success, to raise awareness and ignite action about other critical that issues that impact, and are impacted by, decisions we make about the Internet—fundamental issues like privacy, equity, and censorship, which have an effect on people everywhere. Web literacy is the starting point.

Read More

The Web is the 4th Literacy, Mark Surman @ World Innovation Summit for Education 2013

Connected Learning Alliance

Mozilla Learning

Web Use Project, University of Zurich

Mozilla's Open Leadership Training

Web Literacy Map