

Digital Inclusion, Computational Thinking & the Urgent Need to Reconsider Digital Literacy

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I L L I N O I S

School of
Information Sciences

The iSchool at Illinois

Warmup

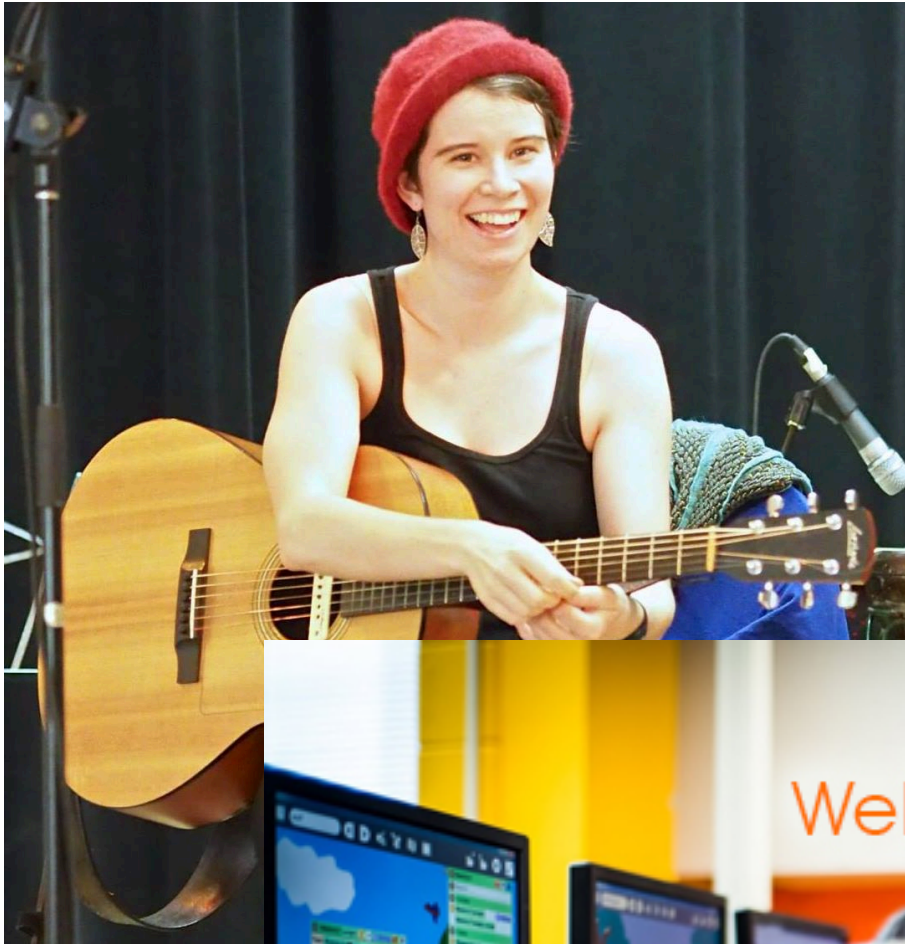


1. How are digital technologies like Chromebooks transforming education?
2. How would the classroom change if every student in your school had a laptop & the digital literacy skills to effectively use them?
3. If you magically had 5 more hours a week & a personal tech coach, how might you use digital technology to address a pressing educational challenge?



*It is not the answer that
enlightens, but the question.*
Eugène Ionesco





Welcome to Kenwood



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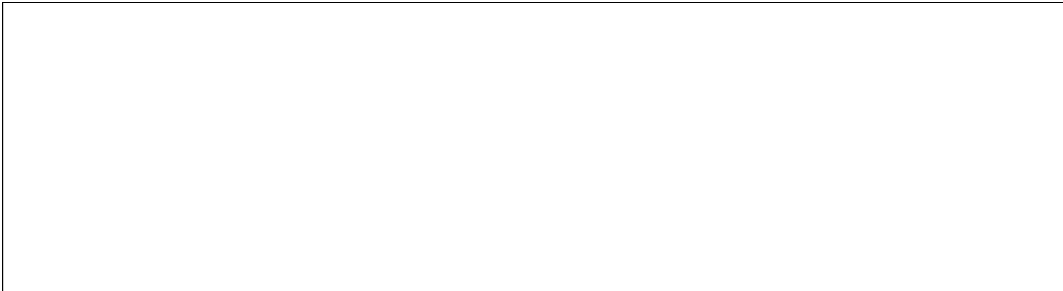
Collaborative Discussion Framework



- Developed at Kenwood Elementary School, Champaign, by Todd Lash and Minsoo Park.
- 5 Steps
 1. What are you trying to do?
 2. What have you tried already?
 3. What else do you think you can try?
 4. What would happen if?
 5. Celebrate and share!

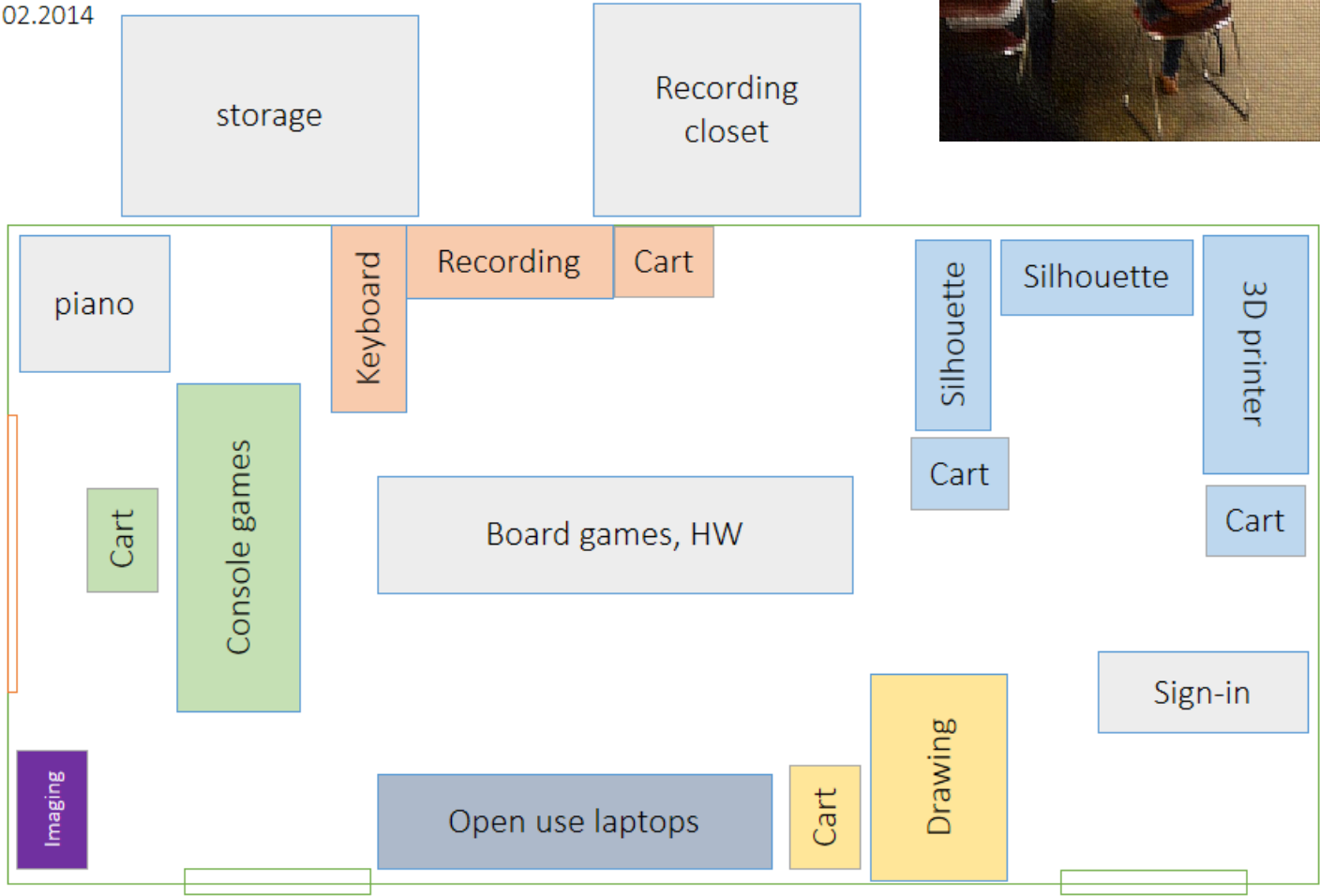
The Urbana Free Library Teen Open Lab





Layout of the space

Jeff Ginger, Joel Spencer, Amber Castens
02.2014



The Call



We must rapidly begin the shift from a "thing-oriented" society to a "person-oriented" society. When machines and computers, profit motives and property rights are considered more important than people, the giant triplets of racism, materialism, and militarism are incapable of being conquered.

Rev. Dr. Martin Luther King, Jr. (1967)
"Beyond Vietnam"



Consider for a moment some questions that are "obviously" absurd. Does wood produce good houses? If I built a house out of wood and it fell down, would this show that wood does not produce good houses? Do hammers and saws produce good furniture? ... Everyone realizes that it is carpenters who use wood, hammers and saws to produce houses and furniture, and the quality of the product depends on the quality of their work.

Seymour Papert, 1987

“Computer Criticism vs. Technocentric Thinking”



*Technology only
magnifies
human intent and capacity.
It can't substitute for them.*

Kentaro Toyama, 2015
Geek Heresy

Digital Inclusion



<http://digitalinclusionalliance.org/definitions/>

- Digital Inclusion is the activities necessary to ensure that all **individuals and communities**, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). Digital Inclusion must evolve as technology advances and recognizes that access to and use of ICTs are an essential element for **participation in our society, democracy and economy.**

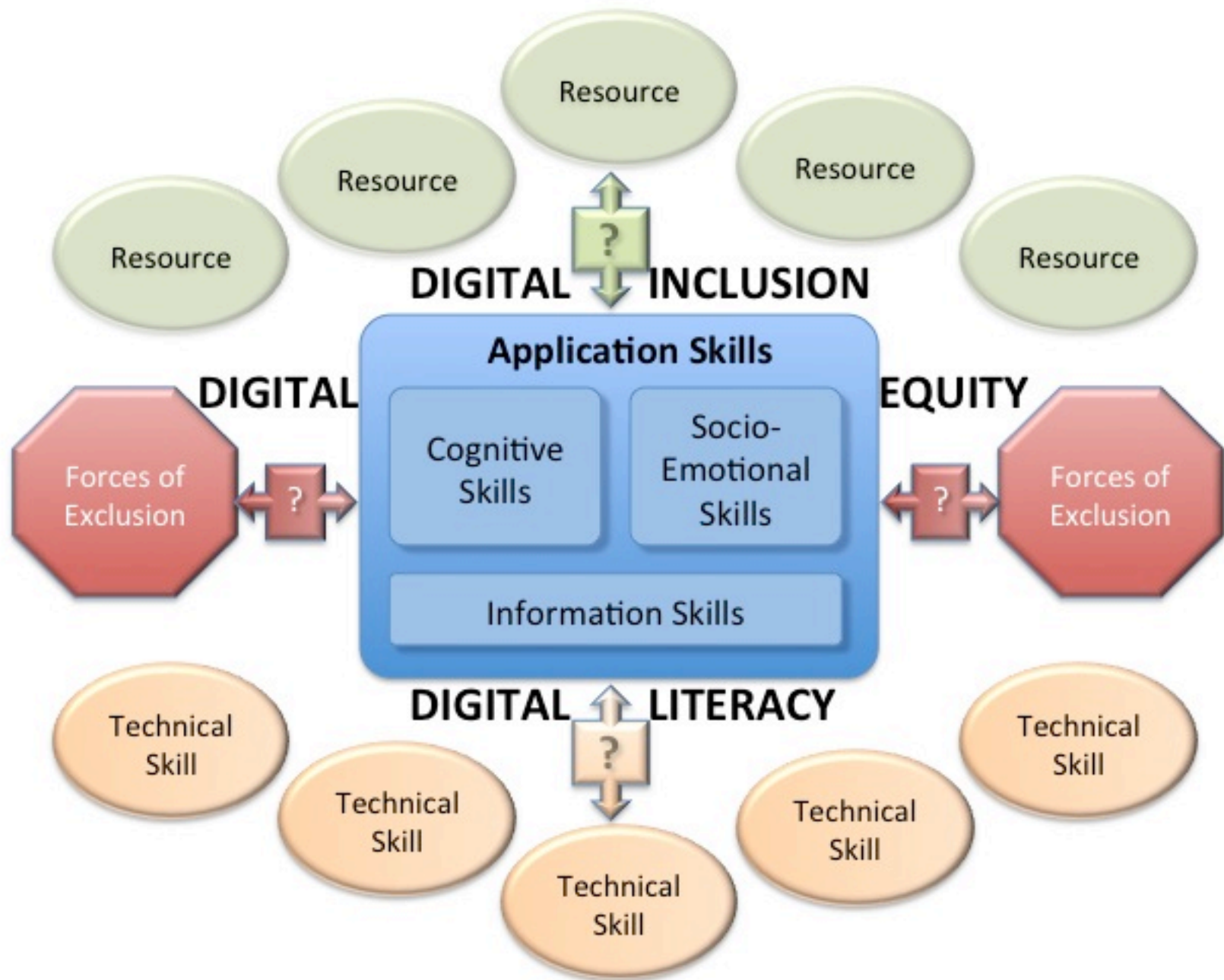
Digital Equity



- Digital Equity is the ultimate outcome of full digital inclusion, with focused action and investments to **eliminate historic, systemic and structural barriers** that perpetuate disadvantaged individuals and communities. Digital equity recognizes our moral obligation to **harness ICTs** to address the needs of disadvantaged individuals, as well as community or neighborhoods, community-based organizations and small businesses.

Reshma Saujani: Teach girls bravery, not perfection (excerpt)





Digital [Computational Thinking] Literacy



Application skills – the ability to select, modify, and effectively use technologies to make the hard work of our professional, personal, and civic interests and responsibilities more effective.

Socio-emotional skills – the ability to communicate and collaborate with others, along with the personal confidence, persistence, and tolerance, in order to tackle complex, ambiguous, and open-ended problems;

Cognitive skills – the ability to logically analyze and organize problems in ways that allow use of available tools and resources to help solve them, as well as the ability to generalize new processes to other problems; and

Information skills – the ability to seek, evaluate, interpret and apply relevant and trustworthy information across multiple media.

Technical skills – the ability to appropriately select and effectively use a range of technologies to amplify our efforts.



Project Portfolio



The central problem of an education based on experience is to select the kind of present experiences that live fruitfully and creatively in subsequent experiences.

John Dewey, 1938
Experience and Education



Not Yet

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Critical Reflection



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Thank You!



I'd love to hear from you:

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Center and Related Project Sites:

- <http://cdi.ischool.illinois.edu>
- <http://dl4all.illinois.edu>
- <http://dilp.lis.illinois.edu>