



# Digital Equity and Digital Fluency

By Lee Skallerup Bessette, PhD, for Kentucky Digital Equity Summit  
February 26th, 2024

# Understanding Access Issues and Unintended Consequences

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## Court Days, Mt. Sterling

Anecdote:

- Vendors for Court Days cannot use Square or other digital payment methods due to poor cellular coverage.
- Verizon wants to charge them thousands and thousands of dollars to increase coverage for those dates only.
- What is the effect on the local economy? What is the effect on local culture?



## We know the issues with access

As per your own report, those with limited access are the most vulnerable populations:

- Rural
- Low income
- Aging
- Disabled
- Visible/ethnic minorities
- Veterans
- Incarcerated population

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We also know the *types* of access is often unequal.



## Digital Equity and Digital Redlining

Digital redlining is not a renaming of the digital divide. It is instead concerned with “the creation and maintenance of technological policies, practices, pedagogy, and investment decisions that enforce class boundaries and discriminate against specific groups.” (Guillard 2016)

In other words, what are the conditions that created and have worked to maintain or exacerbate the digital divide? It is ACTIVE, a verb, an act of doing, rather than the naming of the consequence.

The boundaries created by digital redlining are real and consequential. They can dictate who has access to necessary online resources and determine whose digital data can be extracted and exploited.



# Algorithmic Bias

What influences what you see online?

- Zip code
- Device type
- IP address
- Browser type
- Internet provider
- Previous search history



# Algorithmic Bias

*How do these factors influence what we see and how we live?*

- Amazon's hiring software not recommending women because of an algorithm (Dastin, 2018)
- Employers using Facebook algorithms to "hide" job ads from women and older workers and advertisers using them to practice housing discrimination (Tobin, 2019a; Tobin, 2019b)
- Algorithms that were supposed to target hate speech on social media showing bias against Black people (Carbone, 2019)
- YouTube's content recommendation algorithms leading viewers towards hate speech and conspiracy theories (O'Donovan et al., 2019)
- Social media algorithms promoting vaccine misinformation (Sunderji, 2021)
- A Black man in Chicago being shot on two separate occasions because the Chicago police department's predictive policing program said he would be involved in a shooting (Stroud, 2021).



Surveillance: <https://www.screeningsurveillance.com/>





What are the Consequences?

# Pregnant woman arrested after facial recognition tech error

**Porcha Woodruff is the third person incorrectly arrested by Detroit police due to the AI software in as many years.**

BY ANDREW PAUL | PUBLISHED AUG 7, 2023 4:00 PM EDT

# Understanding Digital Fluency

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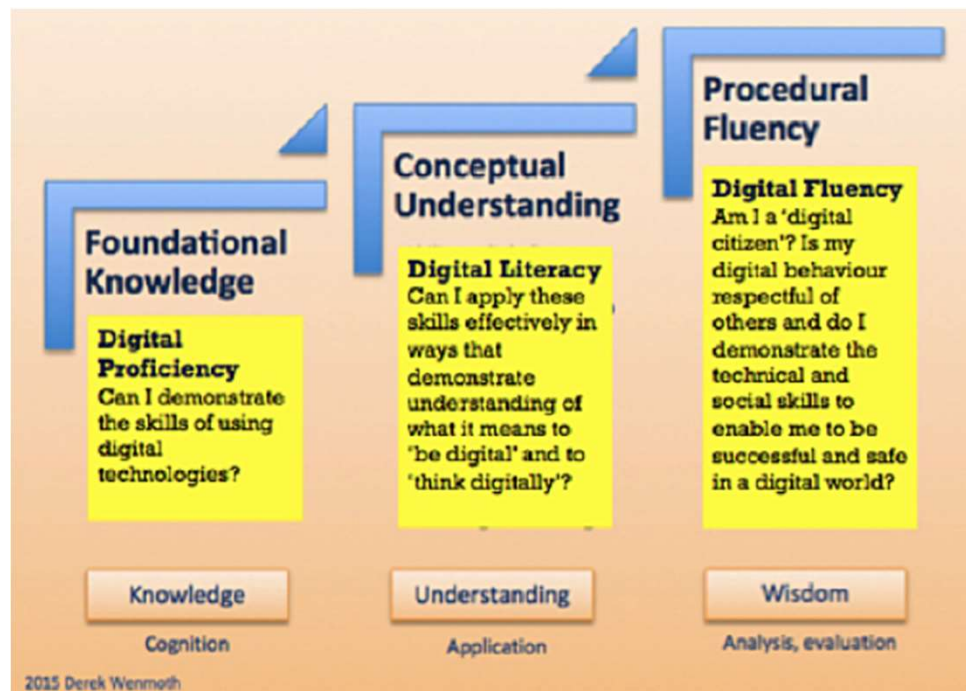


# What is Digital Fluency?

Three Components:

- **digital, or technical, proficiency:** able to understand, select, and use the technologies and technological systems;
- **digital literacy:** cognitive or intellectual competencies, which include being able to read, create, evaluate, make judgements, and apply technical skills while doing so;
- **social competence, or dispositional knowledge:** the ability to relate to others and communicate with them effectively. (Spencer 2020)

# What is Digital Fluency?





## Why Digital Fluency?

Crucially, the outcome of being digitally fluent relates to issues of **responsibility, equity, and access**. We all have the right to fully participate in a digitally-enabled education system and in an increasingly digitised society. (Spencer 2020)



## Pause and Reflect

1. Can you recall a time when you had to explain how a technology or device worked to someone who had never interacted with it before? How did you approach your explanations?
1. Do you recall needing to be taught how to use a certain technology? How long did it take before you felt proficient in that technology? Do you think you could teach someone else how to use it now?



# Digital Fluency Myth

## The Digital Native

“Young people” are no more likely to be digitally fluent as it is defined that anyone else. While some may have grown up with technologies, that doesn’t mean they can use them safely, effectively, and efficiently.

Instead, think of what habits of mind younger people have that make it “easier” for them to adapt/adopt new technologies? What might make it harder for them?





# Digital Fluency Fact

Adopting a Fluid Mindset

How did you learn how to use email?  
How to use a VCR? How to use a  
landline telephone? How to use a  
microwave?

We have been adapting and adopting  
to new technologies throughout our  
lives, although the pace of innovation  
and change has accelerated. We have  
adapted in the past and we can  
continue to adopt moving forward.

# Building a Digital Toolbox





## **Tools are Constantly Changing**

What is a tool or technology that was once essential to your job that is now obsolete?

What is a tool or technology that is now essential to your job that didn't exist when you started?

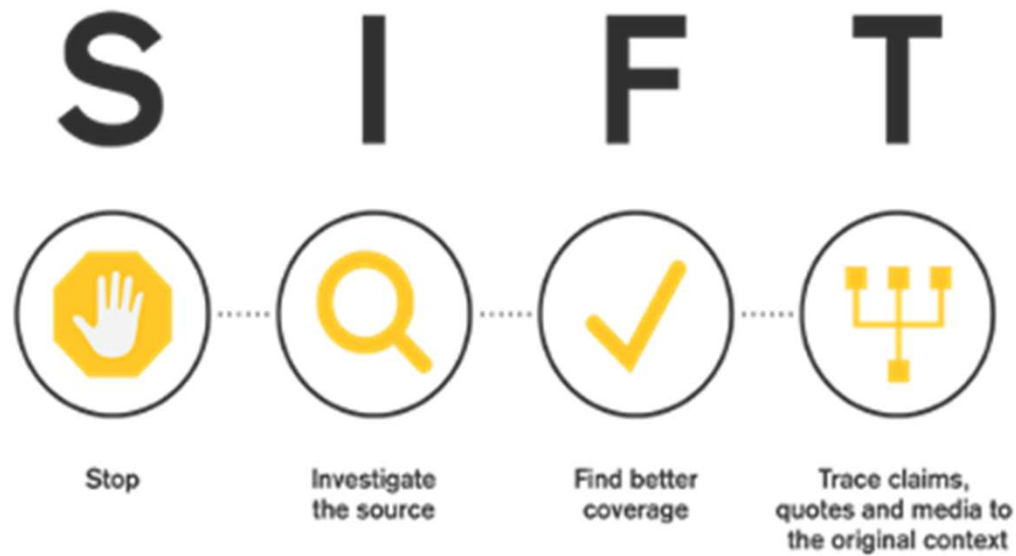


## Focus on Mindset

It's still about the tools, but...

Tools, apps, and platforms are being developed and released faster than we can adapt and adopt them, let alone critically understand the implications of adopting and using them with regards to issues to security, reliability, and applicability. How, then, do we decide what tools to use, what information to trust?

## Doing Better Research



<https://oer.pressbooks.pub/collegeresearch/chapter/the-sift-method/>



## Protecting Yourself, Protecting Others

Terms of Service:

- Privacy?
- Security?
- Ownership?
- Permissions?
- Data Usage?

Activity:

Find the Terms of Service or Terms of Use for an app or platform that you use daily. Use CNTRL+F (on PC) or command+F (on Mac) to search for terms like “data”, “privacy”, “security”, or “property”. Are you surprised by what you discovered in your search? Does it change how you will use the tool moving forward?



## Accessibility

Are your materials/tools accessible to people with disabilities?

- With keyboard only
- With the screen zoomed 200% and 400%
- With a screen reader?

Web Content Accessibility Guidelines:

<https://www.w3.org/WAI/WCAG21/quickref/>

# Engaging with a New Tool - ChatGPT and AI

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# The ChatGPT Tsunami



Stephen Wolfram Writings  
<https://writings.stephenwolfram.com> › 2023/02 › what...

## What Is ChatGPT Doing ... and Why Does It Work?

Feb 14, 2023 — It's Just Adding One Word at a Time. That ChatGPT can automatically generate something that reads even superficially like human-written text ...



ZDNet  
<https://www.zdnet.com> › ... › Artificial Intelligence

## How to use ChatGPT: Everything you need to know

Jul 25, 2023 — ChatGPT is a large language model that uses artificial intelligence to hold text conversations with users. ... These conversations can feel as ...



Business Insider  
<https://www.businessinsider.com> › News

## Everything You Need to Know About ChatGPT

Jun 4, 2023 — Chatbots like GPT are powered by large amounts of data and computing techniques to make predictions to string words together in a meaningful way ...



Zapier  
<https://zapier.com> › Productivity › App tips

## How does ChatGPT work?

ChatGPT is an app built by OpenAI. Using the GPT language models, it can answer your questions, write copy, draft emails, hold a conversation, explain code in ...



PC Guide  
<https://www.pcguide.com> › apps › what-is-chat-gpt

## What is ChatGPT and how can you use it?

Aug 3, 2023 — ChatGPT is an AI chatbot auto-generative system, created by San Francisco-based OpenAI to engage with and respond to natural human language. It ...



MIT Technology Review  
<https://www.technologyreview.com> › 2023/03/03 › in...

## The inside story of how ChatGPT was built from the people

Mar 3, 2023 — ChatGPT is a fine-tuned version of GPT-3.5, a family of large language models that OpenAI released months before the chatbot. GPT-3.5 is itself ...





## Putting into Practice

Using what we have discussed today, in a small group

1. Research what ChatGPT is.
2. Discuss the risks and rewards of the tool.
3. Develop a plan to address ChatGPT in your workplace and/or for the population you work with.



## Links:

Contact:  
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Further Readings:

<https://bit.ly/3YwjQWo>

Activities:

<https://bit.ly/3s7cxIS>