

# Digital Equity and Literacy: A Work in Progress

May Chang University of Cincinnati, US 09 April, 2024

1

# **Summary**

- Definitions
- Digital Equity Act, 2021
- Digital Equity & Literacy initiative @ UC
- Part of larger campus "One IT" working groups
- D E & L working group and sub-groups
- Activities



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

# Digital Equity ~ Digital Literacy

**Digital equity** is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services. (National Digital Inclusion Alliance NDIA, https://www.digitalinclusion.org/definitions/)

**Digital literacy** is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills. (American Library Association, https://literacy.ala.org/digital-literacy/)

3







- Digital Awareness
  - Symposiums, seminars
  - Workshops, libguides, etc.
- Interest groups
  - Libraries' Al/ML group
  - Colleges, curriculum



### "One IT" collaboration

- ✓ College and unit-level IT managers envisioning a strategic and collaborative future as "One IT"
- ✓ IT professionals, sharing best practices and learning from one another to continuously improve technology services
- ✓ Key to delivering more efficient and effective IT services, leverage shared costs, resources, and expertise
- ✓ Improve and streamline cyber and data security (timely updates and upgrades, better patch management, etc.)
- Support student success, ensure access to the technology they need for their education and beyond

Working Groups		Access Computing & Endpoint Management	Optimize/Standardize Access Computing and Endpoint Management
	i Z	Classroom & Conference Room Standards	Define standards that provide a streamlined experience; Ideas for innovation across classrooms and academic technologies
	0	Configuration & Patch Management	Standardize and optimize configuration and patch management
		Data Center Consolidation & Cloud	Reduce infrastructure silos and consolidate data center
	<b>~</b>	Optimize Application Landscape	Optimize application landscape and reduce/ remove duplication and optimize contracts
_	ā.	IT Service Catalogs, Process, & ServiceNow Optimization	Create and share IT catalogs and streamline workflows, particularly SN implementation

7

# Digital Equity & Literacy Working Group



#### Overview

Collaborate on ideas that ensure all students, faculty, and staff across our institution have equitable access to the technologies, training, and knowledge to be successful.

#### **Future State**

An empowering, inclusive, and equitable digital environment for all UC students, faculty, and staff and affiliated community.



#### **Project Outcomes**

- 1. Define inclusively what DE&L means to UC
- 2. Create and implement a DE&L program
- 3. Define key performance indicators related to DE&L
- 4. Put an actionable plan and framework in place to identify and address DE&L across UC

# D E & L Sub-groups

- 1 Student Technology Access & Baseline Literacy
  - 2 Faculty & Staff DE&L
  - **3** Generative Al
- 4 ShareIT 2.0

- 1 Student Technology Access & Baseline Literacy
- 150 laptops
  - COVID funding
  - o Provost Office, criteria
  - CPS
- Community app / Student portal under development
- Student technology support recommendations under development

A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2, UNESCO Information Paper No.51, June 2018, pp.88-89

Appendix 12. Proposed digital literacy competence areas and competences from online consultation

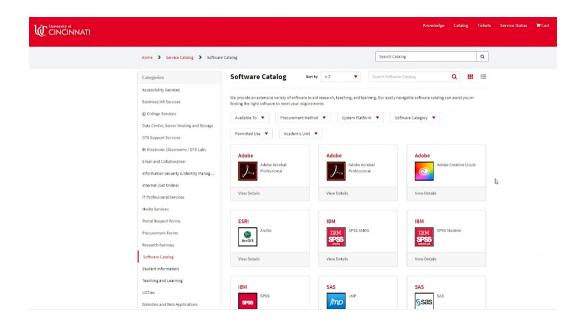
https://bit.ly/3PIIAxi

Digital Literacy: Competence areas and Competences		
Hardware and software operations	Physical operations of digital technologies     Identifying data, information and digital content to operate digital technologies	
Information and data literacy	<ul><li>1.1 Browsing, searching and filtering data, information and digital content</li><li>1.2 Evaluating data, information and digital content</li><li>1.3 Managing data, information and digital content</li></ul>	
Communication and collaboration	<ul> <li>2.1 Interacting through digital technologies</li> <li>2.2 Sharing through digital technologies</li> <li>2.3 Engaging in citizenship through digital technologies</li> <li>2.4 Collaborating through digital technologies</li> <li>2.5 Netiquette</li> <li>2.6 Managing digital identity</li> </ul>	
3. Digital content creation	3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming	
4. Safety	<ul> <li>4.1 Protecting devices</li> <li>4.2 Protecting personal data and privacy</li> <li>4.3 Protecting health and well-being</li> <li>4.4 Protecting the environment</li> </ul>	
5. Problem solving	<ul> <li>5.1 Solving technical problems</li> <li>5.2 Identifying needs and technological responses</li> <li>5.3 Creatively using digital technologies</li> <li>5.4 Identifying digital competence gaps</li> <li>5.5 Computational thinking</li> </ul>	
6. Career-related competences	6.1 Operating specialized digital technologies for a particular field     6.2 Interpreting data, information and digital content for a particular field	

11

# 2 Faculty & Staff DE&L

- UC faculty and staff need to have equitable access to software and web tools including access to the process of procuring tools and documentation regarding recommended use of the tools.
- UC Software Catalog



13

# **3** Generative Al

- Level knowledge around Al
  - o ChatGPT, Microsoft 365 Copilot, etc.
  - o Al-related conversations on campus
- Al-powered assistive technologies
  - > Federal and local mandates
  - Improve access to technology and services, developing voiceactivated systems, smart captioning, and audio descriptions

# **AI-powered Assistive Technologies**

Technologies with most impact on Accessibility in 2023:

- Voice recognition
- Gesture control
- Virtual reality

Voiceitt Accessible Video Meetings https://bit.ly/3x2gYXW (1:24 mins)





Be My Eyes Integrates Be My Al https://bit.ly/3VmTs1H



Voiceitt \_ Dream Bigger https://bit.ly/3Plg8fa (1:16 mins)

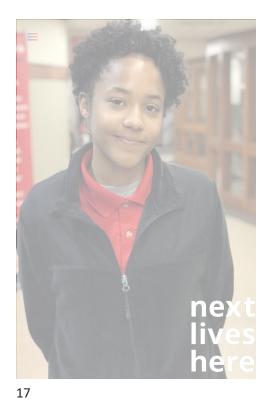
4



15

# ShareIT 2.0

- IT Pathway: High school → University → Workforce
- Employers consider students "not as well versed in technology", start earlier
- Unique opportunity to bridge digital divide embrace, empower, excel
- Implement ShareIT 2.0 as per grant proposal
- Establish a home-base and Program Coordinator
- Identify other schools to join/expand the program



#### **ABOUT SHAREIT**

Bridging the gap by connecting resources to support our future leaders.

- ✓ Initiated in 2015 with 5 students.
- √ 12-15 week program covering a wide range of technology professions.
- ✓ Program has grown to support 25-30 students yearly.
- ✓ Supported by DTS, Office of Equity, Inclusion & Community Impact, and College of Education.
- ✓ Internships.
- ✓ Partnership with industry.
- ✓ Students who successfully complete their projects keep the resources provided including a laptop and backpack.
- ✓ Mentors are available at each session.



#### **PROGRAM GOALS**

Belonging, Agency, Cultural Competency, Accountability

#### **GOALS**

- ✓ Provide resources, interactive learning programs and internships geared towards students who want to pursue a career in IT
- ✓ Provides real world experience in multiple careers in IT
- ✓ Provide mentoring opportunities with IT professionals
- ✓ Provide information and support for pathways into UC
- ✓ Focus areas:
  - · Leadership Skills
  - · Application Development
  - Programming
  - Cybersecurity
  - Networking
  - · Game Design



#### **SHAREIT 2.0**

Belonging, Agency, Cultural Competency, Accountability

- Create an ecosystem that ensures that the university can retain, attract, and produce the skills and expertise required to evolve and support transformative student initiatives.
- A unique opportunity to leverage technology as an equity indicator for innovation, support, and student success.
- Focus is on education and bridging the digital divide by promoting smart campuses that empower and support the larger community.
- This initiative encompasses four key areas:



19

# FECH PORTAL

#### **TECHNOLOGY PORTAL**

- Customizable alerts and notifications regarding programs and activities
- · Funding notifications
- · Mentorship matching
- Internship opportunities
- ShareIT mentor led discovery gateways that provide information channels and video segments on various IT areas
- Help / Request module
- ShareIT progress tracker for ShareIT participants
- Feedback module / Discussion Board and social media like sharing to promote discovery and gather feedback on programs, initiatives, and campus climate



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#### **TECHNOLOGY HUB**

- Physical lab that promotes belonging and emphasizes smart education services and resources and in parallel leverages smart technologies.
- The hub will incorporate hands-on creative development, experimentation, and industry collaborations.
- · Promotion and proctoring of structured activities for students in the greater Cincinnati community.



21

# ANALYTICS

#### **DATA & ANALYTICS**

#### **Technology Portal (Gateway)**

#### **Education**

- SystemsResources
- Advising

#### Experimentation

- Virtual Labs Student Life
- 1819 Connect
- Bearcat Tracker

#### Innovation

- App-a-Thon Virtual Assistants
- ChatbotsProximity Sensors

#### **Entrepreneurship**

- Start-up
- Research

#### Student surveys

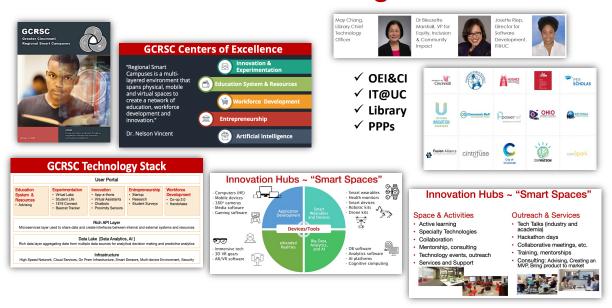
#### Workforce **Development**

- Co-op 2.0
- Handshake

#### **Artificial Intelligence**

**Data Lake** 

# ShareIT writ large ...



23



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