Achieving the Dream Digital Economy & Digital Literacy

LSU-Eunice Fall 2022 Campus Visit

September 6, 2022

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Achieving the Dream

Agenda

- What is the Digital Economy
- Defining Digital Skills
- Implications for Higher Education
- Four Strategies
- Digital Learning
- Two Frameworks

What Are We Talking About?

What is the Digital Economy? Broad range of economic activities that use digitized information and knowledge as key factors of production

The digital economy represents the pervasive use of IT (hardware, software, applications and telecommunications) in all aspects of the economy, including internal operations of organizations (business, government and non-profit); transactions between organizations; and transactions between individuals, acting both as consumers and citizens, and organizations.

Digital Economy, cont.

- Includes new technologies and their applications:
  - artificial intelligence,
  - the internet of things,
  - augmented and virtual reality,
  - cloud computing,
  - blockchain,
  - robotics and autonomous vehicles;
  - and encompasses traditional technology, media and telecoms sectors and new digital sectors such as e-commerce and digital banking.

Digital Economy, cont.

The digital economy, also termed the “new economy”, is transforming how markets work, including how consumers obtain services, information, and goods; businesses models and day-to-day operations; and how businesses, consumers, devices, and processes interact with each other. ***The digital economy is the economic activity that results from billions of everyday online connections among people, businesses, devices, data, and processes***.

Defining Digital Skills

- A range of abilities to use digital devices, communication applications, and networks to access and manage information
- Enable people to create and share digital content, communicate, and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work, and social activities at large

Examples of Technical Skills Sought by Employers

1. Cybersecurity
2. Big Data and Internet of Things
3. Artificial Intelligence/Machine Learning
4. Cloud Computing
5. Software Development
6. Robotic Process Automation
7. Project Management
8. Autonomous Driving
9. IT Service Management
10. Marketing Automation

Group Talk

1. How do you think about digital literacy at LSU-Eunice? Are these conversations occurring across campus? Any related conversations with employers?
2. Are digital skills an expected learning outcome for your course or program? If yes, are you able to identify which ones?
3. How well do you think students in your program (or across the college) are prepared for jobs in the digital economy?
4. What specific topics can you suggest to augment faculty professional development in this area?

Implications for Higher Education

“One of the best ways to prepare yourself for a post-coronavirus world is to acquire technology skills. The COVID-19 pandemic is fast-tracking digital transformations in companies as they are trying to become more resilient to future outbreaks and disruptions.”

Bernard Marr, author of *Tech Trends in Practice: The 25 Technologies That Are Driving the 4th Industrial Revolution*

Strategy One

Developing New Majors and Courses

Strategy Two

Incorporating new digital certifications across the curriculum

Strategy Three

Generally supporting acquisition of digital Skills

Strategy Four

Incorporating human/social skills across all majors

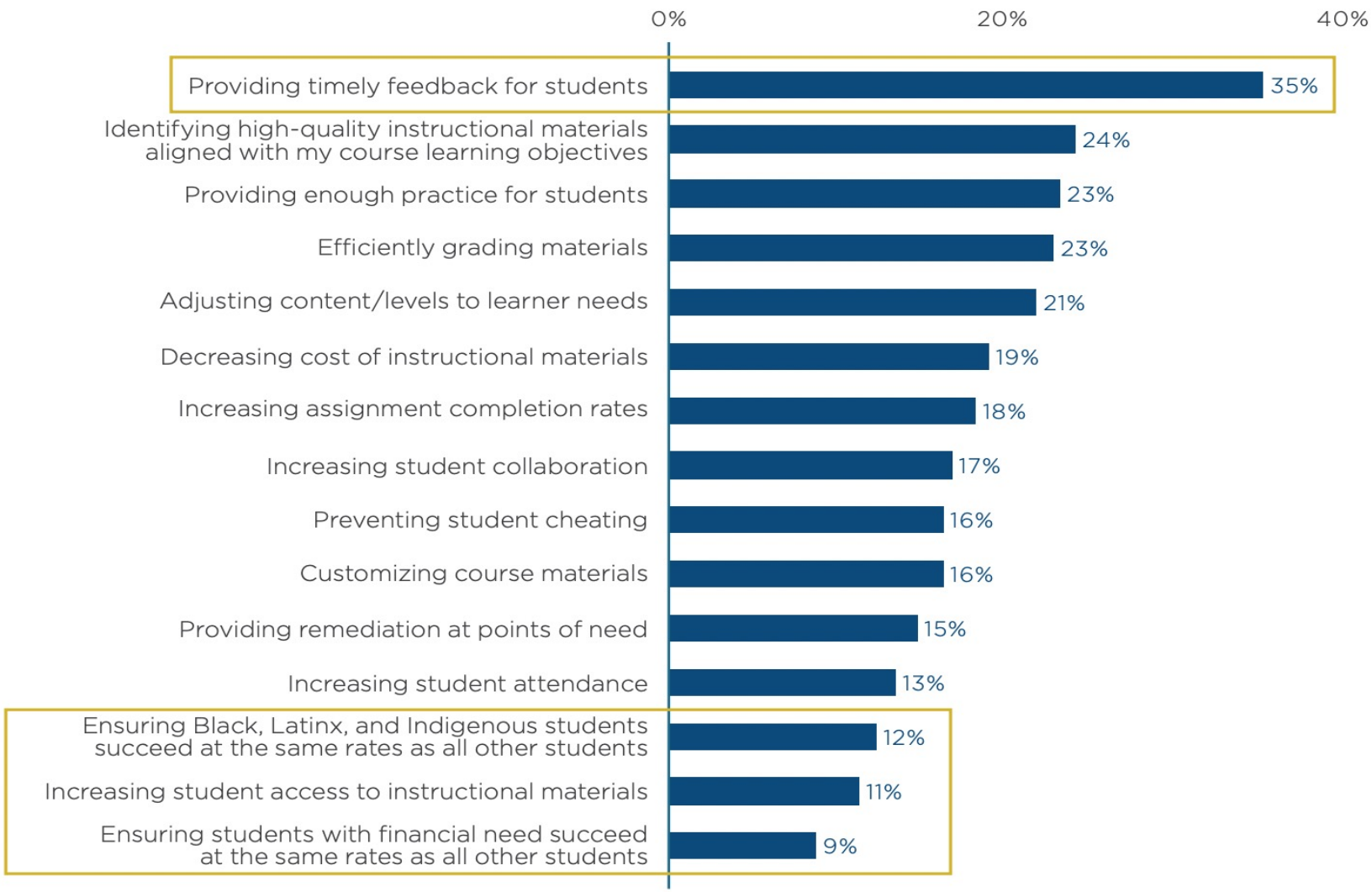
What are we doing at LSU-Eunice?

- Do any of the 4 strategies resonate with you?
- What are other ways, academic or non-curricular, you can prepare students for the digital economy?
- How might you apply curriculum in different ways to support changes in work due to the digital economy?
- How does the digital economy impact relationships with employers?

Digital Learning

Instructional Materials & Infrastructure

INSTRUCTIONAL CHALLENGES



Notes: "Which instructional challenges are top priorities for you to address in this course? Please choose up to three." N = 2,046

Digital Learning

The use of technology and teaching practices enabled by digital tools to enhance learning

Digital learning includes a broad range of content and communication tools, curricular models, design strategies, and student support services that personalize instruction for students in face-to-face, blended, hybrid, and online learning environments. Equitable digital learning adapts instruction to students' needs. Implemented well, digital learning can enable active learning, empowering instructors with data to inform teaching and create better student outcomes.

Digital Instructional Materials

Courseware - instructional content that is scoped and sequenced to support delivery of an entire course through software that is built specifically for education purposes

E-texts - electronic versions of printed materials that can be read on a computer or handheld device

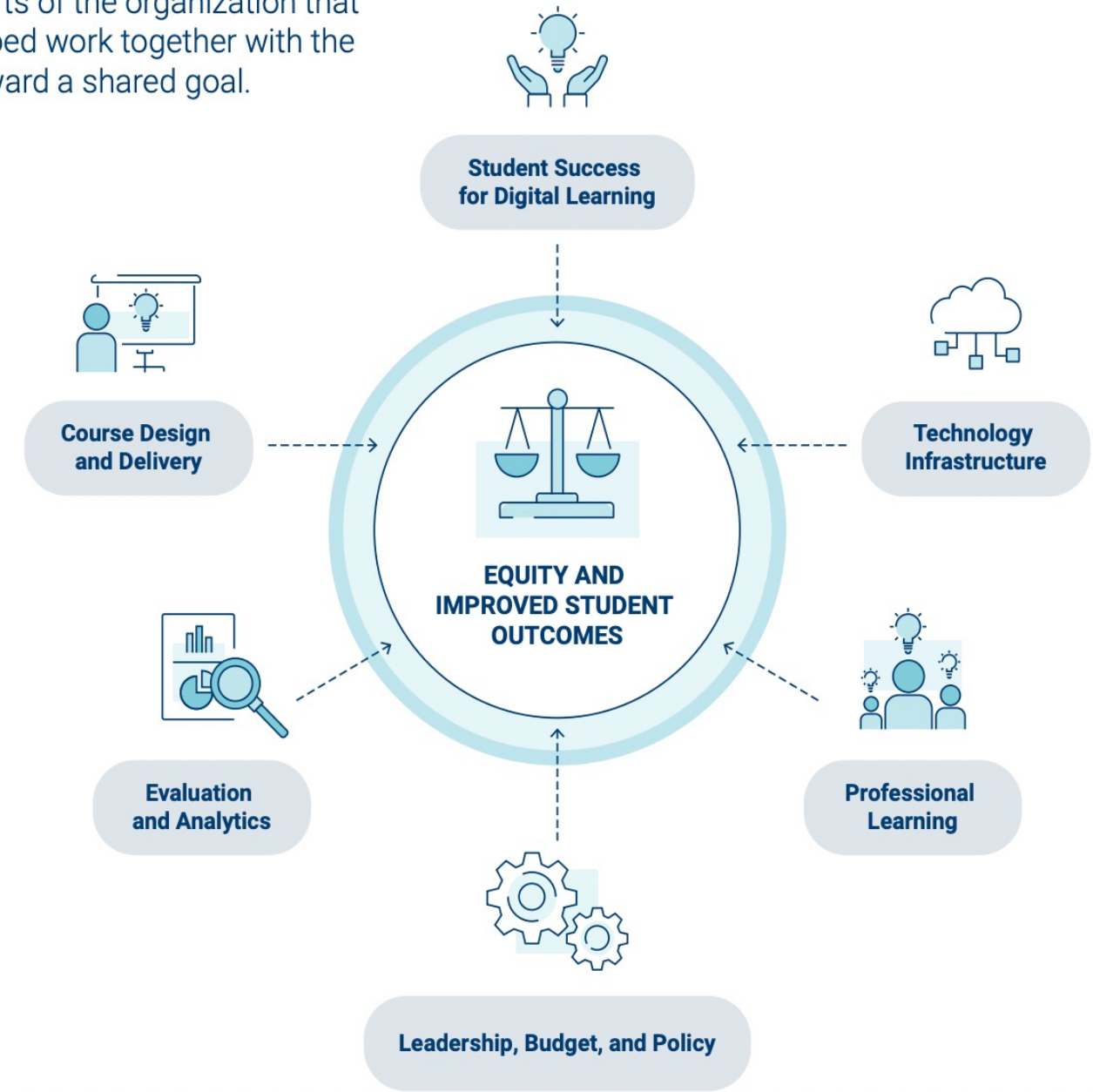
Advanced e-text: An emerging category of e-text

Open Educational Resources - teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others

Instructional tools: Supplementary digital tools that enhance learning through incorporating social learning, classroom engagement, assessment, and/or analytics

Equity-focused Digital Learning Infrastructure Elements

Success requires that parts of the organization that have been historically siloed work together with the support of leadership toward a shared goal.



Digital Literacy Frameworks

Digital Skills Competence Area	Digital Skills Competency
Fundamentals of hardware and software	Basic knowledge of hardware such as turning on/off and charging, locking devices
	Basic knowledge of software such as user account and password management, login, and how to do privacy settings, etc.
Information and data literacy	Browsing, searching and filtering data, information and digital content
	Evaluating data, information and digital content
	Managing data, information and digital content

Digital Skills Competence Area	Digital Skills Competency
Communication and collaboration	Interacting through digital technologies
	Sharing through digital technologies
	Engaging in citizenship through digital technologies
	Collaborating through digital technologies
	Netiquette
	Managing digital identity
Digital content creation	Developing digital content
	Integrating and re-elaborating digital content
	Copyright and licenses
	Programming
Safety	Protecting devices
	Protecting personal data and privacy
	Protecting health and well-being
	Protecting the environment

Digital Skills Competence Area	Digital Skills Competency
Problem solving	Solving technical problems
	Identifying needs and technological responses
	Creatively using digital technologies
	Identifying digital competence gaps
	Computational thinking
Career-related competences	Operating specialised digital technologies for a particular field
	Interpreting and manipulating data, information and digital content for a particular field

Framework Two: ISTE Standards for Students

I. Empowered Learner

II. Digital Citizen

III. Knowledge Constructor

IV. Innovative Designer

V. Computational Thinker

VI. Creative Communicator

VII. Global Collaborator

Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

1.1.a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

1.1.b. build networks and customize their learning environments in ways that support the learning process.

1.1.c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

1.1.d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

1.2.a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

1.2.b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

1.2.c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

1.2.d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

1.3.a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

1.3.b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

1.3.c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

1.3.d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

1.4.a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

1.4.b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

1.4.c. develop, test and refine prototypes as part of a cyclical design process.

1.4.d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

1.5.a. formulate problem definitions suited for technology- assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

1.5.b. collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

1.5.c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

1.5.d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students:

1.6.a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

1.6.b. create original works or responsibly repurpose or remix digital resources into new creations.

1.6.c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

1.6.d. publish or present content that customizes the message and medium for their intended audiences.

Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. Students:

1.7.a. use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.

1.7.b. use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.

1.7.c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

1.7.d. explore local and global issues and use collaborative technologies to work with others to investigate solutions.

Thank You.

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