The Age of Digital Learning

What is digital learning?

- Digital Learning is "learning facilitated by technology that gives students some element of control over time, place, path and/or pace.“
- Learning is no longer restricted to the pace of an entire classroom of students.
- Interactive and adaptive software allows students to learn at their own pace, spending more or less time on lessons or subjects to achieve the same level of learning.

McGraw-Hill Education's

2015 Digital Trends in Higher Ed

85%

of students use mobile devices to study

up 40% since 2013

77%

of students say adaptive technology has helped them improve their grades

62%

of students say that technology helps them feel better prepared for classes

48%

of students say that technology helps save them time

.Results based on survey of nearly 1,700 college students aged 18+ who are currently enrolled in higher education institutions across the U.S

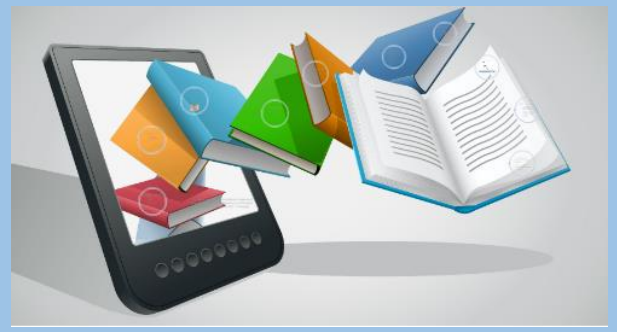
Why?

- Digital learning is necessary to create an environment that contributes to deeper learning and produces a new generation of students equipped to thrive in college and their careers.

Digital Learning Leads to Deeper Thinking

Key learning skills and techniques include :

- Ownership of learning
- Ownership of learning techniques such as:
  - time management,
  - note taking,
  - memorizing,
  - strategic reading and
  - collaborative learning, investigation, and critical thinking



Benefits of Using Discovery Education

- The Science Techbook can deliver **the personalization and customization of instruction** and content that characterizes a competency-based learning system, because
- **“[it] is inherently personalized as students progress upon their learning trajectory in a way that is unique to them”**

- It adds that “deeper learning— the development and application of knowledge— requires real-world experiences or project-based learning

U.S. Department of Education

- According to a study by the U.S. Department of Education in 2010 that did an analysis of digital learning studies, it found that **students in digital learning environments performed better** on average, than those learning the same material through traditional direct instruction.

What is the teacher's new role?

- With digital learning, teachers will be able to provide the personalized guidance and assistance to ensure students learn and stay on track – throughout the year and year after year – to graduate from high school.
- Teachers may be the guide on the side, not the sage on the stage.
- **This is a new adjustment for students who are used to direct instruction where teachers stand in front of the classroom and lecture.**

Mc Graw Hill Education

BACK TO SCHOOL 2015

"Old School" Textbooks Out, Personalized Digital Learning In

91%

of parents embrace the idea of personalized digital learning

85+%

of parents feel the classroom experience should be personalized

BACK TO SCHOOL 2015

"Old School" Textbooks Out, Personalized Digital Learning In

78% College

73% K-12

of parents think today's classrooms should focus on adaptive learning

"Parents are tuned into the transformations taking place in the classroom and understand the benefits of personalized learning for their children."

- Peter Cohen, U.S. Group President

Source: 2015 digital learning survey commissioned by McGraw-Hill Education and fielded by TNS research.

What does the data say?

- In November 2016, a survey of 12,525 students and 10,800 teachers primarily in the United States, asked respondents about their use of technology in teaching and learning.

Results: The survey found two major trends among teachers and students.

- Trend No. 1: Teachers say tech makes learning more fun, whereas students say it helps them learn.
- 69 percent of students say devices help them learn, but 40 percent of teachers say they help them teach.

Engineering and Physics at Vanderbilt

- “We need a new way to look at bioengineering education. Why not use the modern methods that we’ve been developing in the learning sciences and learning technology, and really take a look at this from an entirely new point of view?”
- The result is a $10 million NSF grant for Vanderbilt and its academic partners to develop a new curriculum in bioengineering, one that utilizes fundamental principles of learning science and “is driven by technology, web based technology, simulations, slides, interactive systems, and tutoring and homework systems,” Harris says.

According to the U.S Dept. of Education

The strategy of digital learning is often utilized to:

- Accommodate students' diverse learning styles
- Enable them to work before or after school in ways that are not possible with full-time traditional classroom instruction.

According to the U.S Dept. of Education

- Digital learning has the potential to improve educational productivity by:
- accelerating the rate of learning,
- taking advantage of learning time outside of school hours,

Generation Z

- Trend No. 2: Gen Z is more positive about learning tech in the classroom than Compared to millennials, Gen Z students are:
- 28 percent more likely to say tech in the classroom helps them learn more quickly than traditional worksheets, books and lectures;

Supporting Ideas

- Technology presents new opportunities for drawing out and leveraging student agency.
- One of the ways that technology accomplishes this is by personalizing the learning experience, allowing students to work at their own pace and being responsive and responsible to their own individual needs.
- (Corbett, Koedinger, & Anderson, 1997, in Lindgren, R., & McDaniel, R. (2012.).

Since 1995

- As Magni (1995) noted in her dissertation, if we combine the principles of learner-centered pedagogy, the methods of participatory design and the flexibility offered by the Internet, educators can use technology not as a prescriptive learning tool but as one that enables students and teachers to gather material, manipulate and alter resources to design environments that are suitable and appropriate for the learners.