



connect[®]**MASTER**

Investigating Technology

**ONLINE LEARNING
WITHOUT COMPROMISE**



ONLINE LEARNING WITHOUT COMPROMISE

*Students often struggle to connect concepts to application. Connect Master: Investigating Technology's customizable content is built with deliberate instructional alignment which provides students with focused instruction and assessments. Connect Master takes students **beyond rudimentary knowledge to mastery** of foundational concepts through adaptive learning with just-in-time learning resources, paired with **practical assessments**.*

Most students claim to possess 'digital literacy' as they enter college, but did you know:

37%

A majority of students demonstrate a lack of basic digital literacy. North Idaho College created a Digital Literacy Assessment using McGraw-Hill's SIMnet platform. The assessment was given to over 500 students from 5 different colleges/universities. The assessment covered basic Microsoft Word, Microsoft Excel, Microsoft PowerPoint, file management, and computer concepts skills. **The average student score was 37%.**

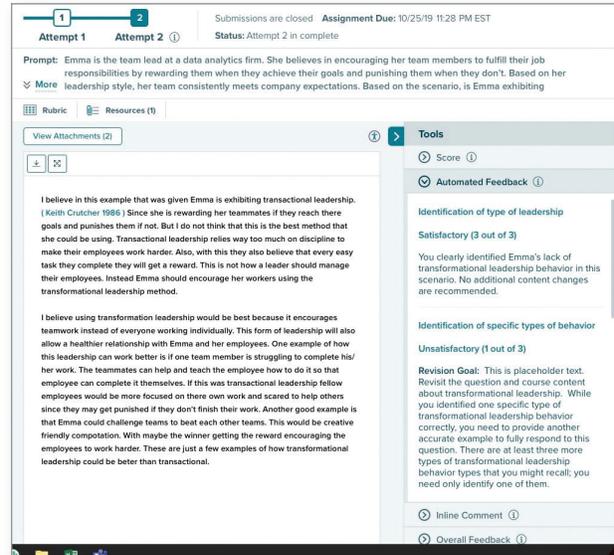
10%

A lack of digital literacy assessment. A 2019 study by the Kapoor Center noted that of 55 California community colleges surveyed, only 10% of these institutions were assessing incoming students' digital literacy skills.

DIGITAL-FIRST COURSEWARE

Connect Master: Investigating Technology content is designed for digital use, rather than a static reading experience. This allows for:

- More immersive concept exploration, boosting engagement and efficiency for students and addressing the often-raised concern that “students don’t read.”
- Greater ability to reconfigure and customize—content is organized and divided at a more granular level. This, combined with the transparent instructional alignment, makes it easier than ever to delete, add, and move content while still preserving the cohesion of the learning experience.
- Regular and seamless updates to the adaptive content give students access to new and current information throughout the semester, without requiring instructors to create new assignments or courses.



Unit	Topic	Unit/Course Objectives	Topic Objectives	Assessments
Computer Security	1. Discuss the various types of malware.	<ol style="list-style-type: none"> 1. Identify the various types of malware that impact digital devices. 2. Discuss how to identify malware attacks. 	<ol style="list-style-type: none"> 1. Discuss different types of computer viruses. 2. Explain how computer viruses infect digital devices. 3. Describe various types of malware including spyware, ransomware, zombies, spyware, key loggers, and packet sniffers. 4. Identify various malware attacks. 	<ol style="list-style-type: none"> 1. Test Bank 2. Adaptive Learning/Assessment Probes 3. Discussion Questions 4. Module Worksheet 5. Module Activity

A large percentage of students are not receiving computer science/digital literacy education opportunities. According to data from Goodcall.com...

40% of high school students report using computers every day at school while only...

52% say their school offers dedicated computer science classes and opportunities.

Employers rate digital literacy skills as essential. According to the **National Association of Colleges and Employers' 2018 Job Outlook** report, more than half of employers rate technical and computer skills as essential attributes of new hires.

Growing research suggests digital literacy is tantamount for post-collegiate success:

What can institutions and computer technology educators do to prepare busy, over-stimulated students who lack the enthusiasm or the time to read a traditional print text?

Teach technology *using* technology with **Connect Master: Investigating Technology.**

PRACTICAL ASSESSMENTS

Practical assessments, such as application-based activities, case studies, and more, help students develop their skills and show their work. This approach supports lifelong learning and allows instructors to better assess students' 21st century skills.

WISE PANDA ANIMATED VIDEO TUTORIALS

– Short engaging animated videos that summarize some of the most challenging computing concepts for students.

CLICK & DRAG EXERCISES

– Brief, interactive activities that allow students to demonstrate and reinforce their knowledge of key concepts and terms.

ASSESSMENT QUESTIONS WITH PROMINENT VISUALIZATION OF CONCEPTS

– A majority of young adults prefer and excel in concept mastery with the use of visual imagery.

APPLICATION-BASED ACTIVITIES

– ABAs are highly interactive, assignable exercises that provide students a safe space to apply the concepts they have learned to real-world, course-specific program. Each Application-Based Activity involved the application of multiple concepts, allowing students to synthesize information and use critical thinking skills to solve realistic scenarios.

VIDEO CASES

– Video cases are animated videos that summarize challenging key topics with relevant companies such as Netflix and Target. The video cases are five minutes or less and provide a variety of questions covering content in the videos to ensure students are engaged. Throughout these videos there is a path of imagery providing students a visually stimulating experience.

The screenshot shows a video player interface for a video titled "Buying A Laptop". The video content features a yellow background with a laptop and a speech bubble that says "Fortunately, Wise Panda is here to help you." Below the video player, there is a text box that reads: "Great graphics make Macintosh computers the industry standard for photo and video editing. You'll often see Macs on TV and movie sets - Hollywood loves them!". To the right of the video player, there is a sidebar titled "Click to explore the terms" with a list of computer-related terms: Platform, Laptop or Tablet?, Budget, Macintosh, Windows PC, Chromebook, Screen size, Memory (RAM), Hard Drive, and Optical Drive. At the bottom of the player, there are buttons for "GIVE FEEDBACK" and "BACK TO LIBRARY".

The screenshot shows a multiple-choice question interface. The question is: "A programmer is building software for a college advising program. She is programming code to assess responses to the question: 'Are you taking more than 15 credits this semester?' Students respond either 'yes' or 'no' to the question. If the answer is 'yes', the program follows a certain sequence of steps. If the answer is 'no', the program follows a different sequence of steps. This is an example of a ... decision." The options are: Pseudocode, loop, binary, and algorithm. Below the question, there is a "Confidence Level" section with buttons for "High", "Medium", and "Low". At the bottom right, there is a "Resources" button.

The screenshot shows a video case interface. The title is "Ethics: A Decision about Employee Monitoring". The interface includes a video player showing a meeting scene with several people around a table. To the left of the video player, there is a text box with a question: "I still think that makes sense. Making mistakes costs us money. We've shown them that costly mistakes are increasing and making her charged. Knowing that they are being monitored will help them to focus on the training. Does Karen agree with you? What do you think we should do?". Below the video player, there is a text box with a question: "Try to come up with employees the importance of the training. Maybe they don't understand the mistakes they're making." and another text box with a question: "Ask the monitoring software. This seems like a good fit and the only employees that will complete will be the ones who are not paying attention." At the bottom, there is a "Submit" button.



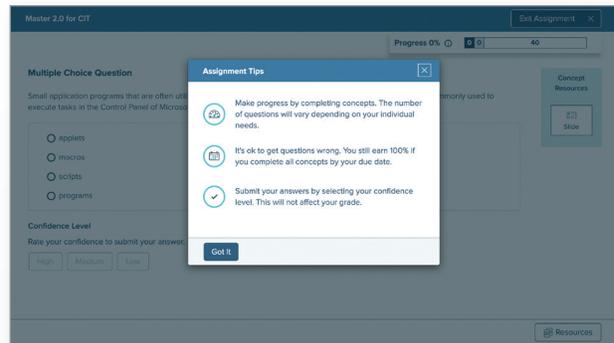
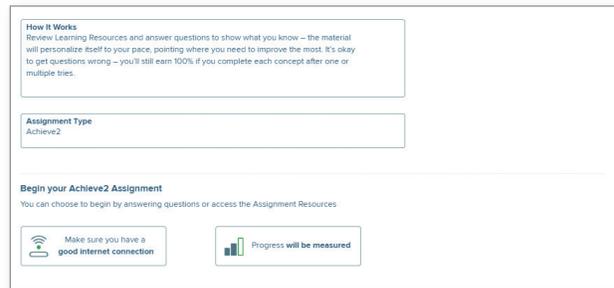
“My philosophy is to teach technology by using technology: **Connect Master: Investigating Technology** has been the game changer to allow this very thing. Student learning is not one size fits all, and Connect Master provides my students with a ‘personal tutor,’ to augment what I provide as their instructor. Couple this with world class tech support and service: it’s easy to understand why I love this digital solution.”

– **BARBARA GARRELL,**
DELAWARE COUNTY COMMUNITY COLLEGE

INSTRUCTIONAL ALIGNMENT

Connect Master: Investigating Technology content is developed through deliberate and transparent instructional alignment via backward design.

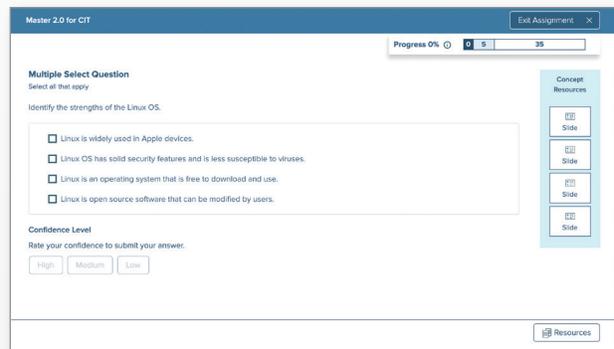
- Learning objectives, assessments, and instructional content are aligned to ensure instruction directly supports what is assessed, and time is not wasted on extraneous content.
- A scaffolded approach helps ensure that students develop the foundational understanding necessary to build their knowledge and receive the practice they need to conquer higher-level assessments.
- This deep instructional alignment also allows a transparent view into how the different aspects of the learning experience connect, making it easier to see the wider implications of changes and make effective customizations.



ADAPTIVE LEARNING

Adaptive assignments give students a personalized learning experience, leading to greater efficiency and concept mastery.

- You can build assignments that cover only the topics or concepts that you want to focus class attention on, resulting in a focused, streamlined learning experience for students.
- Adaptive Learning gives each student a personalized path to learning topics or concepts. All adaptive content—including questions and learning resources—is specifically targeted to, and directly aligned with, the individual learning objectives being assessed.
- Reporting tools in Adaptive Learning show where students are struggling to understand specific concepts and where they excel.



"I use [Connect Master] between 20-40 minutes a day, and compared to me learning the same thing through a textbook, it would take multiple hours."

– DANIEL LOPEZ,
STUDENT

INTERACTIVE READER

The Connect Master: Investigating Technology Interactive Reader is built around key learning objectives that streamline the essential conceptual information. Key concepts are enhanced by resources to provide an active learning experience.

These resources include:

WATCH & LEARNS

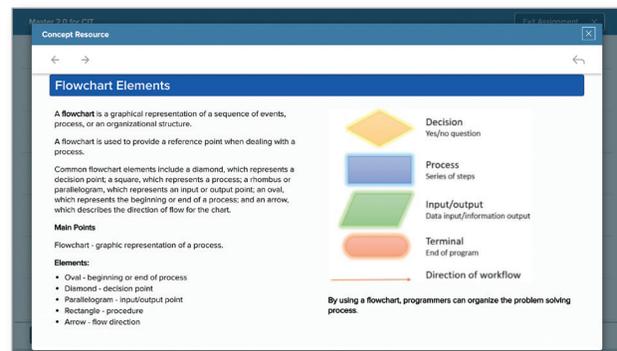
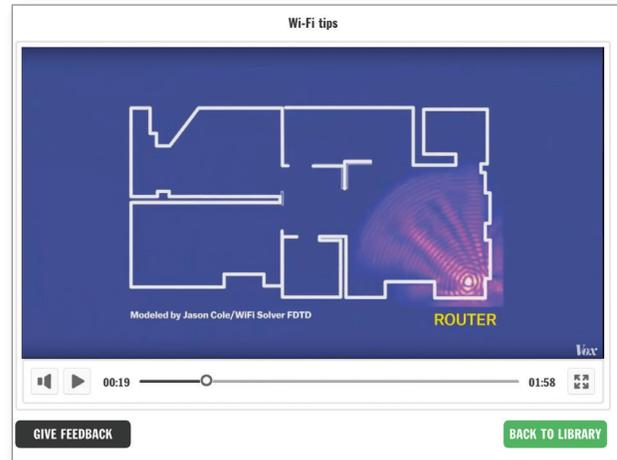
- Animated Videos that summarize challenging key concepts (such as positioning).
- Videos featuring real technology in action (such as how to effectively setup a wireless network in your home or office).

CLICK & LEARNS

- Expandable Outlines clarify complex processes in digestible, step-by-step fashion (like a computer programming flowchart).

CORE CONCEPTS NOTEBOOK

- While Connect Master: Investigating Technology is a fully digital product, we have also developed a **Core Concepts Notebook** which can be used alongside the digital product for those students who value a print reference. The Core Concepts Notebook contains the essential narrative content (without the interactives) from the **Interactive Reader** and is available as a printable PDF within the Master course.



“It made me motivated to go in [to Connect] and want to do the work, and made it fun!”

– KATHY ROBITAILLE,
STUDENT



“My experience with Connect Master: Investigating Technology has been very positive. My students enjoy the engagement and interactivity of the modules, the ease of use, and the self-paced learning environment that allows them to take their time as they go through a module. I appreciate that the content is constantly updated so my students are not learning outdated material.”

– DIANA FRIEDMAN,
RIVERSIDE CITY COLLEGE

CONNECT MASTER: INVESTIGATING TECHNOLOGY TAKES STUDENTS HIGHER

As a learning science company, we create content that supports higher-order thinking skills. This chart shows a few of the key assignable computer concepts assets aligned with Bloom's Taxonomy.

	Connect Master Reader	Connect Master Adaptive	Instructional Videos	Marketing Analytics Exercises	Application Based Activities
CREATE					
EVALUATE				✓	✓
ANALYZE				✓	✓
APPLY			✓	✓	✓
UNDERSTAND	✓	✓	✓	✓	✓
REMEMBER	✓	✓	✓	✓	✓



MEET CASEY WILHELM, LEAD CONTENT ARCHITECT

Casey Wilhelm teaches Management Information Systems (MIS) and a variety of courses in the BBA and MBA programs at the University of Idaho. His research interests are adult learning, instructional design in digital environments, and cognitive information processing. Casey has various degrees including an M.B.A., M.I.T., M.S. in Adult and Organizational Learning and a M.Ed. in Instructional Design and Technology. Before working in higher education, he held management positions in the insurance and wine/hospitality industry.



MEET TED TEDMON, LEAD CONTENT ARCHITECT

Ted Tedmon teaches management, business principles, and digital literacy courses at North Idaho College in Coeur d'Alene, Idaho. His primary research interests include andragogy, instructional design, and memory formation. Ted studied Strategic Policy and Planning at the Naval War College as well as Management at Troy University. Prior to joining North Idaho College Ted served as Commander of the U.S. Navy's largest Airwing during Operations Iraqi Freedom and Enduring Freedom. As a Captain with over 26 years of service and over 6,000 flight hours, he earned the Legion-of-Merit, 4 Meritorious Service Medals, and numerous other decorations. In his free time, Ted works with survivors of domestic violence and serves on the board of directors of the Coeur d'Alene Women's Center.

TABLE OF CONTENTS

Module 1 Computer Security	Module 14 Internet Research
Module 2 Social Media and Your Digital Identity	Module 15 Databases
Module 3 Computers in Business	Module 16 Windows 10
Module 4 Emerging Technologies	Module 17 The Mac OS
Module 5 Computer Software and Buying a Computer	Module 18 Spreadsheets
Module 6 Programming	Module 19 Global Computing
Module 7 File Management	Module 20 Time Value of Money
Module 8 Mobile Devices	Module 21 Web Design and Development
Module 9 Computer Hardware	Module 22 Windows 11
Module 10 Computer Input	Module 23 Data Analytics
Module 11 Computer Output	Module 24 Artificial Intelligence
Module 12 Computer Storage	Module 25 Blockchains and Cryptocurrencies
Module 13 Networking and Connecting to the Internet	



connect[®]MASTER

Investigating Technology

ONLINE LEARNING WITHOUT COMPROMISE

mheducation.link/connectmaster

CONTACT YOUR REP FOR MORE INFO OR A DEMO:

mheducation.link/rep

LEARN MORE ABOUT MCGRAW-HILL COMPUTER CONCEPTS COURSE MATERIALS:

mheducation.link/computerconcepts