



Understanding Courseware

A Comprehensive Guide to Evaluating and Selecting A Courseware Platform

This guide was designed to help educators and administrators navigate the courseware selection process. It provides you with the information and tools needed to understand, assess, and confidently select the right courseware platform for your students. In this guide, you'll find a clear definition of courseware, an overview of the various courseware types, a handy glossary of common features, essential evaluation resources, and additional insights to guide you through this critical decision-making process.

Introduction

The mass shift to online learning during the COVID-19 pandemic exposed countless educators and learners to courseware and other educational technology for the first time. For many, the transition was challenging. Yet posed an exciting new possibility for educators. They could envision a world where well-designed technologies could alleviate some of their workloads *and* provide their students with engaging, personalized learning experiences.

As instructors and administrators look to innovate in the classroom, streamline work processes, and support diverse learner needs, the right courseware can be an essential tool for moving classrooms and education systems forward. But choosing the perfect courseware isn't always easy.

This guide will walk you through what courseware is and what it should be capable of doing, how to assess your needs and the needs of your students, and how to evaluate different platforms. The guide also includes an overview of two courseware platforms and provides a handy rubric that you can use or modify for your own selection process.

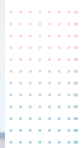
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An Overview of the Educational Technology Landscape

There are thousands of educational technology companies providing courseware, learning management systems, and standalone platforms for classroom engagement, simulations, homework, and the like. These tools can streamline many manual teaching processes and provide students with valuable and relevant resources and learning tools.

New Markets Venture Partners, a leading U.S.-based education-focused venture capital firm, continuously tracks nearly 10,000 education and workforce technology companies.¹ Of course, not all of those will be appropriate for a classroom setting but dozens could be. With so many options to choose from and implement in a course, the educational technology landscape can be an especially challenging one to navigate. All of this is only made more difficult by the reality that there is no universal definition of courseware and many, very different platforms and tools are marketed as courseware.



Courseware Defined

In a broad sense, courseware is any program, material, tool, or platform that is used for educational or training purposes. However, this definition isn't all that useful for educators and administrators. The Courseware in Context (CWIC) Framework, developed as the result of a partnership between the Bill & Melinda Gates Foundation, Tyton Partners, and the Online Learning Consortium, presents a more useful definition.

Digital courseware is **instructional content that is scoped and sequenced to support delivery of an entire course** through software built specifically for educational purposes. It includes **assessment to inform personalization of instruction** and is equipped for adoption across a range of institutional types and learning environments.²

This definition of courseware as scoped and sequenced educational content that supports the delivery of an entire course via software certainly helps to narrow the options. Courseware can fall into three broad categories of format or delivery—courseware via the learning management system (LMS), all-in-one courseware platforms, and courseware as a selection of standalone platforms. Within these categories, courseware solutions can serve different functionalities and include many distinct features.

1 Palmer, J. (2022, April 1). Why I'm Still Bullish About the State of Edtech. EdSurge.

2 Defining digital courseware. Courseware in Context. (n.d.). Retrieved January 3, 2023, from <https://coursewareincontext.org/defining-digital-courseware/>

Three Courseware Delivery Options

The Learning Management System as Courseware

It is possible to use an institution's chosen LMS as a courseware delivery platform. Instructors who choose this option add all of the course content and assessments to the LMS, aligning it with the course curriculum. This is usually a manual process and can be a considerable time investment. While delivering courseware via the LMS has the benefit of giving students a single and familiar platform for all of their content and work, educators are likely to find the functionality to be quite limited. Many learning management systems lack features for customization, robust assessment, personalized learning, and analytics.

Courseware as a Selection of Standalone Platforms

There are standalone platforms for nearly every teaching and learning tool you can think of—e-books, online homework, educational videos, simulations, quizzing, classroom engagement, and so on. Instructors can choose to create an integrated experience for students by bringing together content, pre-built assessments, and other tools from various providers. Instructors may also choose to coordinate the use of these standalone platforms by integrating or linking to each

in a single digital space like the LMS. Many educators who use a selection of standalone content and platforms choose to do so with some open educational resources (OER). However, OER varies widely in quality and can take a great deal of time to vet. Much like using the LMS as courseware, this method requires a fair amount of manual setup. The cost of standalone platforms can quickly add up for students.

All-in-One Courseware Platforms

Offering the convenience of LMS integration for administrative purposes and robust functionality, all-in-one courseware combines content, assessment, and analytics into one platform. There are numerous all-in-one options but the features they offer vary widely. While some platforms offer adaptive learning, others might focus on more traditional drill and practice for assessments. Content can also be presented in a static e-book format or can include dynamic and engaging simulations and videos. There are so many all-in-one platforms, each as different as the next, that it can be difficult to choose the best one. There are resources throughout this guide that can help you on your courseware selection journey.

Courseware Functionality and Features

The CWiC framework states that every courseware has at least two main functions—deliver instructional content and assess student learning. Courseware can also be used to engage learners and provide data and analytics that can be used to inform instruction. There are several different features that can support these different functional areas/needs.

Content	Adaptive Learning	Engagement	Data & Integrations
E-book	Quizzing	Student Reponse	Student-level analytics
Videos	Reading Questions	Activity Guides	Course-level analytics
Simulations	Diagnostics	Study Tools	LMS Integration
Interactives	Adaptive Learning	Peer Review	

An Abbreviated Glossary of Courseware Features

Activities: applicable examples of activities that instructors can implement during class (may be aligned to the content in the courseware platform)

Adaptive Learning: delivering custom lessons, readings, practice activities, or assessments based on a student’s skills and performance

Analytics: data on student performance and progress (may also be available at the course level as averages of all students’ performance)

Assessment: may come in the form of reading questions, pre-built quizzes, online homework questions, or test banks

Diagnostics: assessments designed to evaluate students understanding of core course concepts and other subject matter

E-book: makes book content available in a digital format that may consist of a combination of text and images

In-Class Polling: allows instructors to quickly ask questions and instantly receive responses from students during class regardless of class size

Interactives: worksheets, graphs, maps, or other media that students can manipulate using their devices to learn how different

LMS Integration: the ability to link to content and/or assessments created by the courseware provider within the learning management system

Peer Review: tools that allow for the online facilitation of peer review among students

Simulations: visually imitates the operation of a real-world process or system

Study Tools: digital flash cards, study guides, or other tools designed specifically to support students’ study outside the classroom

Videos: provide another format for content delivery that may pair visual media with audio and text

Tips and Resources for Selecting Courseware

Understand the Stages of Courseware Adoption

Throughout this guide, you have seen references to the field-owned “Courseware in Context Framework.” The framework suggests that there are six stages of courseware adoption including determining readiness and aligning objectives; product discovery and exploration; courseware product selection and procurement; courseware implementation; evaluation and improvement; and dissemination and scaling.

Below you will find a modified version that includes five stages—what they are, who should be involved at each stage, and questions to consider along the way.

STAGE 1: DETERMINING READINESS & ALIGNING OBJECTIVES

ABOUT THIS STAGE:

Before exploring potential products, this stage highlights items to consider in determining if a course, program, or institution is ready to adopt and scale a courseware solution.

STAKEHOLDERS TO ENGAGE AT THIS STAGE:

Faculty and department chairs, instructional technology and design staff, program administrators, IT Staff

ITEMS TO CONSIDER AT THIS STAGE:

- Have you identified a problem or challenge that you believe the right courseware option can solve or help you overcome?
- What measurable and specific outcomes would you like to see with the adoption of a courseware option?
- Does your desire to adopt courseware align with broader course goals, program goals, or institutional strategy?
- Have you identified and notified key stakeholders in the courseware adoption process at your institution? Are they aligned on the reason for the decision and goals?
- Has your institution or program allocated any resources (staff time, technology, training and development, faculty incentives and support, and student support) to support the decision-making process or a successful pilot implementation?

STAGE 2: PRODUCT DISCOVERY & EXPLORATION

DESCRIPTION OF THIS STAGE:

Courseware product discovery and exploration can be challenging in the dynamic market of digital learning solutions. This stage highlights key considerations when exploring courseware solutions.

STAKEHOLDERS TO ENGAGE AT THIS STAGE:

Faculty, instructional support staff, IT staff, courseware vendors, academic leadership staff

ITEMS TO CONSIDER AT THIS STAGE:

- Have the required product functionality and use cases been identified and illustrated for any stakeholders?
- Have you defined your product evaluation criteria and ensured that any stakeholders are aligned and agree with the criteria? Evaluation tools are included below.
- Have you requested or been given a product demonstration?
- Have you solicited feedback from any stakeholders you've engaged?
- Have you negotiated the relationship between the courseware provider and yourself or your institution regarding documentation, training, technical support, and faculty and student support?
- Have you determined ownership and access of student data with the courseware provider?

STAGE 3: COURSEWARE PRODUCT SELECTION & PROCUREMENT

DESCRIPTION OF THIS STAGE:

A careful review of applicable products that address the needs of an institution and meets its procurement policies is conducted.

STAKEHOLDERS TO ENGAGE AT THIS STAGE:

Faculty, instructional designers, accessibility experts, academic and technology leadership, procurement, and staff

ITEMS TO CONSIDER AT THIS STAGE:

- Will you define a timeline and milestones associated with the courseware selection and procurement process? When will you implement the courseware product?
- Will you need to contact procurement staff at the institution or system?
- How will procurement staff support you in any processes such as competitive bidding or pricing for institution-wide use?

STAGE 4: COURSEWARE IMPLEMENTATION

DESCRIPTION OF THIS STAGE:

After investigation, product selection, and procurement, the digital learning solution is implemented in a module or a course. The scale of implementation can vary, as initial implementations can be limited to a small single-course section pilot or expanded to entire departments.

STAKEHOLDERS TO ENGAGE AT THIS STAGE:

Faculty, instructional support staff, and students; program administrators; IT/support center staff

ITEMS TO CONSIDER DURING THIS STAGE:

- Has a pedagogical model for effective use of the courseware been identified? Are courses designed/developed in alignment with this model?
- Have instructors, teaching assistants, and other teaching team members received any necessary training and support using the pedagogical model?
- Is a student support model to help students with any technical and learning challenges required? This may include guides and orientations to the technology and course.
- Have you defined your implementation plan? How will you incorporate, or transition to, a new courseware product?

STAGE 5: POST-IMPLEMENTATION EVALUATION & IMPROVEMENT

DESCRIPTION OF THIS STAGE:

After a courseware solution has been piloted in a section or entire course, evaluation of the implementation can help inform improvements for the future, or in identifying the potential for scaling the solution across several courses or an entire program/department.

STAKEHOLDERS TO ENGAGE AT THIS STAGE:

Faculty, Instructional Support Staff, Program Administrators, IT Staff, Evaluation Team

ITEMS TO CONSIDER AT THIS STAGE:

- Which of the following does the evaluation include for you and any stakeholders—content quality, software design, pedagogical support, data sources, efficacy research?
- Do you plan to involve students in the post-implementation evaluation process? If so, how?
- Did you identify any areas for improvement during your pilot of the courseware product? How will you share your feedback with the courseware provider? Or, how will you make improvements for future iterations of the course?

Toolkit

■ Assess Your Courseware Needs

There is a lot to consider when assessing what you want to get out of a courseware platform. Are you looking for something with robust assessments? Do you need something that is simple to set up and easy to manage? Is it important that your students have access to videos and interactive content?

If you feel a little lost when assessing your courseware needs, you can always get back to the basics:

- What** you teach and **how** you teach it
- Who** you teach and **how** they learn best

You know your course, your students, and your classroom dynamic better than anyone. To assess your courseware needs, consider asking yourself the following questions:

1. How can I benefit from courseware?
2. How can my students benefit from courseware?
3. What would be easier to teach if content and assessments were integrated into a single platform?
4. What kind of content-related features would be nice to have?
5. What kind of assessment-related features would be nice to have?
6. How would I teach differently if I had insights into my students' reading, practice, and study behaviors?

■ Speak with Vendors About Their Courseware Platforms

There are a number of critical questions to ask vendors to help you in your courseware evaluation process. On the next page, you'll find a list of sample questions to ask and what to look for in vendors' responses.

■ Understand Pricing and Access Options for Your Students

Courseware platforms can vary widely in price and access options. Take time to review the cost your students or institution will be charged for courseware as well as how students will access the platform and its content.

■ Evaluate What You Know

Once you've done the information gathering and asked all of your questions, it's time to evaluate whether or not a platform will work well for you and your students. This Courseware Decision-Making Rubric can help you determine how well a platform serves the essential functions of a course.

Sample List of Questions to Ask Courseware Providers

When evaluating potential courseware platforms, the questions you ask vendors can make all the difference. The right questions will ensure you have all the information you need to make an informed decision. Here are some of the most important things you should consider asking:

- 1. Can you tell me more about the authors and editorial process?**
Dive deeper into the background and expertise of the content creators to ensure the quality of the material.
- 2. How does [insert feature] work?**
For any specific feature you're interested in, seek a detailed explanation to understand its functionality and benefits fully.
- 3. Does it meet accessibility standards?**
Ensure that the courseware aligns with accessibility standards to guarantee equal access for all learners.
- 4. I teach [insert information about student demographics, e.g., learners with varied and diverse needs], how can it help them?**
Request information on how the courseware caters to diverse learner needs beyond content delivery and assessments.
- 5. Can you show me how it works?**
Always request a demonstration of the courseware to witness its functionality and usability in action.
- 6. How do you ensure it is up-to-date and working well?**
Gain insights into the courseware provider's strategies for maintaining and enhancing the platform to ensure it remains effective and current.
- 7. What support do you provide students and instructors?**
Assess the level of customer support available to both instructors and students. Responsive assistance is crucial for a seamless learning experience.
- 8. What customization options are available?**
Inquire about the extent to which things like assessments and content can be tailored to meet your specific needs.
- 9. How is student data handled?**
Ensure the vendor follows robust data privacy and security protocols to protect sensitive student information.
- 10. What do instructors and other institutions say about their experience using your courseware?**
Feedback from other educators or institutions that have adopted the courseware might help you better understand its practical applications.
- 11. What is the pricing structure, and are there any hidden costs?**
Clearly understand the pricing model and inquire about any additional costs or fees that may arise during usage (such as additional cost for access to premium features).
- 12. Does it integrate with learning management systems (LMS) like Canvas, Blackboard, and D2L?**
Ensure that the courseware can seamlessly integrate with your existing technology stack and learning management systems.
- 13. Are there any training resources or professional development opportunities for instructors?**
Inquire about available training materials and opportunities to ensure instructors can effectively utilize the courseware.

Answers to these questions should provide you with a firm understanding of the courseware platform you're considering and help you make a decision you can feel confident about.

Courseware Decision-Making Rubric

You can use the following rubric to help you evaluate a single courseware platform or find the best option among many platforms.

	Excellent	Good	Adequate	Poor
Assessment	Assessments are created by subject matter experts and reviewed for accuracy. Assessments foster student improvement by dynamically responding to their responses.	Assessments are created by experts and are designed to foster improvement, though this may not be through a personalized learning feature.	Assessments are created by subject matter experts. Assessments have not been reviewed for accuracy and may contain some errors.	Assessments are neither created by subject matter experts nor reviewed for accuracy. Assessments are static and contain many errors.
Content	Content is created by well-known subject matter experts and peer-reviewed under a rigorous editorial process. Content is continuously reviewed, maintained, and updated.	Content is created by subject matter experts and is peer-reviewed. Content is maintained but standards for updates are not clearly defined.	Content is created and reviewed by content development professionals who may not be subject matter experts.	Content is neither peer-reviewed nor maintained.
Data & Analytics	Analytics provide instructors with actionable data at the student and full course level. Data is integrated in customizable easy to understand dashboards and reports. Sources for data and insights are coming from many places but aggregated into class and student views.	Analytics show individual and course-level performance. Fewer data sources are provided and limited customization in any dashboards or reports	Analytics show only individual student performance.	Analytics show only assignment grades.
Diversity, Equity, Incusion	Courseware provider continuously evaluates how their platform supports diverse student populations. Provider shares findings and makes ongoing improvements.	Courseware provider conducted a one-time evaluation of how its platform supports diverse student populations and made improvements.	Courseware provider has taken diversity, equity, and inclusion into consideration when developing its platform.	Courseware provider has not taken diversity, equity, and inclusion into consideration in the development of their platform.
Engagement	Engagement tools are backed by research and tested by instructors and students. Tools provide several options for engaging students.	Engagement tools are tested by students and instructors. Tools provide a few options for engaging students.	Engagement tools provide a few options for engaging students.	Engagement tools are not rooted in research, not instructor- or student-tested, and are limited to only one or two options.
LMS Integration	LMS integration includes customizable options, single sign-on (SSO), deep content linking, and automated grade sync. Integrations are well-tested and specialists are available to assist with setup, maintenance, and troubleshooting. Robust training and resources are provided.	LMS integration includes manual grade syncing, SSO, and deep content linking. Integration may not be well-tested and well-designed. Support professionals can assist with setup.	Manual options for importing grades and other data into the LMS are available. Deep content linking is not supported.	LMS integration is not offered.
Support	Students and instructors can quickly get in touch with reliable support professionals via phone and chat, or visit a knowledge center.	Students and instructors can contact support professionals via phone or chat.	Students and instructors are only able to access support via a chatbot or knowledge center.	There is no clear way for students and instructors to get support

Achieve from Macmillan Learning

A dynamic courseware platform
designed to work with the way you teach.

While most courseware solutions offer similar features, the devil really is in the details. A well-resourced, thoughtfully designed courseware platform can go a long way in making your overall course experience seamless and engaging for students — and a bit easier for you.

If you're looking for intuitive learning support solutions to help you engage all students regardless of level of preparation, wherever instruction happens, look to the unique combination of Macmillan Learning's Achieve platform, and its fully integrated classroom response system, iClicker. Seamlessly integrated into your campus's Learning Management System, Achieve and iClicker deliver powerful media and assessment tools that give every student a voice.



To learn more about Achieve and iClicker, contact your local Macmillan Learning representative to book a demo and get started.

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