

Course Design

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Overview

Before you delve into the details of page design, navigation flow, and content selection, you make overarching decisions about the design of an e-Pack. These decisions ultimately determine the success of the e-Pack.

Instructors want e-Packs that take advantage of the online environment—either by simplifying administrative tasks or by enriching the learning experience. They

Overview

want resources that help them build courses quickly, but they do not want to be told how to teach. They also do not want to spend significant amounts of time figuring out how an e-Pack works or struggling to customize it.

By following these best-practice principles of course design, you can maximize e-Pack adoption rates:

- Clearly define e-Pack goals.
- Provide time-saving resources for instructors.
- Design for modularity.
- Design for a spectrum of uses.
- Enrich the student experience of the course.
- Set up the e-Pack for easy management.

Rubric

Poor	Better	Best
<ul style="list-style-type: none"> e-Pack goals are not clearly defined. The e-Pack duplicates the textbook content and offers nothing substantively new or different to the printed material. The e-Pack does not use interactive exercises, including assessments. Content is contained in one big chunk, thus limiting an instructor's ability to selectively hide or release sections. Best practices for navigation are poorly implemented or ignored. Best practices for file management are poorly implemented or ignored. 	<ul style="list-style-type: none"> e-Pack goals are clearly defined. The e-Pack uses all WebCT tools suited to course content and goals. The e-Pack provides some time-saving resources for instructors, such as a glossary and a question database. The e-Pack provides information for instructors on hiding and enabling content and tools. Users can easily find what they need, and navigation menus are not cluttered. File directories mirror e-Pack structure, files are named for easy recognition, and images are stored in a single directory. Content modules contain no more than 30 pages of content. 	<ul style="list-style-type: none"> e-Pack goals are clearly defined. The e-Pack makes excellent use of WebCT tools and the online medium to encourage student collaboration and to enrich learning. The e-Pack provides a spectrum of time-saving resources for instructors, such as image databases and multimedia problem sets. The e-Pack provides extensive instructor support, through hidden pages and an instructor guide. The question database categorizes entries by module/chapter and level of difficulty for easy searching. Users can easily find what they need, and navigation menus are not cluttered. Content is chunked and named to support flexible use. Associated files are also handled to support flexible use.

Examples

This section provides examples of how to meet the best-practices principles of course design within a WebCT e-Pack. For further detail about a particular area of course design, see the appropriate chapter in this guide.

Clearly define e-Pack goals

The goals you define for an e-Pack determine the content, the auxiliary resources, and the WebCT tools that you include. Do not make instructors work through the e-Pack to discover its purpose.

Examples

Instead, you can define the goals as a section in the WebCT Syllabus tool:

The screenshot shows the WebCT Syllabus tool interface. At the top, there are navigation links: MYWEBCT | RESUME COURSE | COURSE MAP | HELP | COURSE RESOURCES. Below this is a header for 'Interactive Biology 5e' with a breadcrumb trail 'Home > Syllabus'. The main content area is titled 'Syllabus' and contains several sections: 'Instructor Information', 'Policies', 'Course Requirements', and 'Course Goals'. The 'Course Goals' section is highlighted and contains a list of goals and a paragraph of text.

Instructor Information	
Biography	The Syllabus tool allows you to quickly create an online syllabus, without knowing any HTML! To edit or add any areas of the Syllabus, click on Designer Options. If you need help with the Syllabus tool, click on the Help link at the top of the screen.

Policies	
Introduction	This is a useful area for such things as policies on grading and testing.

Course Requirements	
Introduction	Enter your course requirements here

Course Goals	
Course Goals	<p>This course should introduce you to the field of biology. The specific areas that will be covered are:</p> <ul style="list-style-type: none">• the origins and history of the science of biology• basic biological concepts such as cell structure and function, adaptation and its applications in macro- and micro- evolution and the interactions between organisms in ecosystems and the biosphere• the influence of biology on other disciplines, such as the recently created field of evolutionary psychology <p>This course is divided into ten modules, each of which has a self test and a graded review quiz. You may take the self tests as often as you like, and they are not tracked or recorded for grading purposes. Once you are prepared, please take the graded review quiz, which may only be taken once and does count toward your final grade.</p>

Alternatively, you might want to create a hidden page and treat the goals as an instructor resource.

For information on the Syllabus tool, see Chapter 7, “Tools.”

Provide time-saving resources for instructors

Instructors appreciate resources that lessen the work associated with building a course. Using an e-Pack can be an enormous timesaver for an instructor if it contains resources such as:

- Image databases
- Quiz question database
- Problem-solving exercises

- Skill-building activities
- Glossary

Image databases

Instructors can use the Image Database tool to organize and store maps, diagrams of battlefields, architectural drawings, stills from advertising campaigns, and other graphics. These graphically rich resources encourage active learning and class interaction.

For some disciplines, such as art history, prepopulating image databases would be a much-appreciated time saver. For other e-Packs, using images within the context of the content would be a better choice.

Image management is another consideration. You should place images in a dedicated folder or subfolder in the Manage Files area and use intuitive names so instructors can locate and repurpose the images.

Quiz question database

From the instructor's point of view, gaining access to a robust quiz question database is an enormous incentive to adopt an e-Pack. Here are some guidelines for building such a database:

- Do not limit the database to questions that students can access on a companion web site or in the textbook, for example. The answers are provided with these questions.
- Do not limit the database to questions directly related to the e-Pack's textbook. You can make the database a more flexible resource by including a range of discipline-specific questions.
- Consider specifying the level of difficulty of each question in the database. By doing so, you allow instructors to search the database by that criterion.

Problem-solving exercises

Successful e-Packs facilitate critical thinking and learning; they do not simply deliver content. By including problem-solving exercises in e-Packs, you create a

Examples

rich learning resource for instructors' use. Organize these exercises around the academic discipline, not the textbook.

The problem-solving exercises can take a variety of forms:

- Text explanations of exercises that instructors can include in classroom activities
- Animated displays of concepts followed by questions
- Animated processes, which students can manipulate by changing variables

Here is an example of an exercise that students can manipulate:

The screenshot shows a physics simulation interface with the following data and controls:

Ball 1		Ball 2	
Current velocity	5.0 m/s	Current velocity	-5.0 m/s
Momentum	25.0 kg · m/s	Momentum	-25.0 kg · m/s
Kinetic energy	62.5 J	Kinetic energy	62.5 J
Total momentum		0.0 kg · m/s	
Total kinetic energy		125.0 J	

Below the data, there is a diagram of two balls on a horizontal surface. Ball 1 is represented by a red dot and Ball 2 by a blue dot. A green 'X' is positioned between them. Below the diagram, there are input fields for:

- Mass of ball 1: 5.0 kg
- Initial velocity of ball 1: 5.0 m/s
- Mass of ball 2: 5.0 kg
- Initial velocity of ball 2: -5.0 m/s
- Elasticity of the collision: 1.0

At the bottom of the interface are five control buttons: PLAY, PAUSE, RESET, STEP BACK, and STEP FORWARD.

Skill-building activities

Many courses involve fundamental tasks and activities that are foundational to the discipline. Vocabulary work for language courses and math exercises for chemistry classes are two examples.

Instructors want to be able to assign skill-building activities to their classes and then monitor students' completion of the activities. To give instructors this level of control, embed links to the activities in content module pages. Then provide directions for the instructors, suggesting that they use the page-tracking function in WebCT to monitor student usage. You can also include concepts illustrated by skill-building activities in quizzes and self tests to ensure mastery of the material.

Here is an example of a skill-building exercise:

Glossary

Glossaries represent another learning aid that you can provide for instructors. Here are some guidelines for building glossaries:

- Build glossaries at the content module level to support the modular design of the e-Pack.
- Take advantage of the online medium. For example, include audio in the glossary so students can hear how terms are pronounced.

Design for modularity

Instructors might use e-Packs exactly as they are designed. They might also want to hide, rearrange, or add content. To give instructors the flexibility they need to build courses using e-Packs, you must structure e-Pack content in logical chunks of information. These chunks are called content modules in WebCT and typically include a chapter of content.

Examples

Here are some guidelines for structuring content modules:

- Use built-in WebCT functionality to chunk content. Instructors can track student progress both within and between content modules.
- Include learning objectives and content overviews at the beginning of each content module.
- Limit learning modules to 30 pages of content.
- For maximum flexibility, ensure that your naming scheme for chapters/modules, files, and folders does not restrict an instructor's ability to hide or reveal chunks of content.

Think about this scenario. If you name each content module using a number and a description, an instructor who wants to skip several chapters would have to rename the modules. If possible, avoid the use of numbers, and use descriptive titles instead.

For information on how to design e-Pack content for modularity, see Chapter 9, "Content."

Design for a spectrum of uses

You have two options for accommodating the range of instructors who might adopt a given e-Pack:

- **Create multiple versions of the e-Pack** – You could, for example, create one version of an e-Pack that students use simply for administrative functions, such as reviewing the syllabus and checking grades, and for taking tests. Another version of the e-Pack might offer a more robust course with student homepages, enrichment activities, discussion boards, and student groups for more immersion in the online course environment.
- **Create one e-Pack that can be used "as is," but is also easily customized** – To make the "one size fits all" approach work, you must specify the learning experience that is intended, given the tools and content currently enabled in the e-Pack.

In addition, you must support instructors who want to customize the e-Pack. Include instructions for common tasks such as hiding or enabling tools, and highlight ways to take advantage of WebCT strengths. Instructors may not

realize, for example, that they can release content on the basis of a number of criteria, such as a student's performance on a quiz or a specific date.

WebCT recommends this approach: creating a single version of an e-Pack and including directions for instructors on how to customize and enrich the course experience. Creating multiple versions of the same e-Pack adds complexity to e-Pack distribution. Updates and fixes also become more costly to implement. While there are design compromises in the "one size fits all" approach, it is usually the better choice.

For more information on providing directions to instructors, see Chapter 12, "Support Materials."

Whichever of these two approaches you select, you must select a level of online immersion for the e-Pack. You must also decide whether you are going to create any learning paths through the content.

Selecting a level of online immersion

WebCT provides a variety of tools that take advantage of the online medium to simplify administrative tasks, support active learning, and encourage collaboration and interaction.

For more information on these tools, see Chapter 7, "Tools."

You select which tools to enable on the basis of the e-Pack goals and the course content. For less-immersive courses, include basic WebCT tools such as the Calendar, Glossary, and My Progress tools. For more-immersive courses, you might add collaborative exercises and set up discussion boards and chat rooms.

By telling instructors how to enable and hide tools, as well as content, you give them the flexibility to determine the level of online immersion suited to their courses. For example, you could use a hidden instructor resource page to present various immersion scenarios to instructors. On this page, you could outline two to three levels of immersion and suggest which tools to hide or reveal to achieve each level.

Creating learning paths through e-Pack content

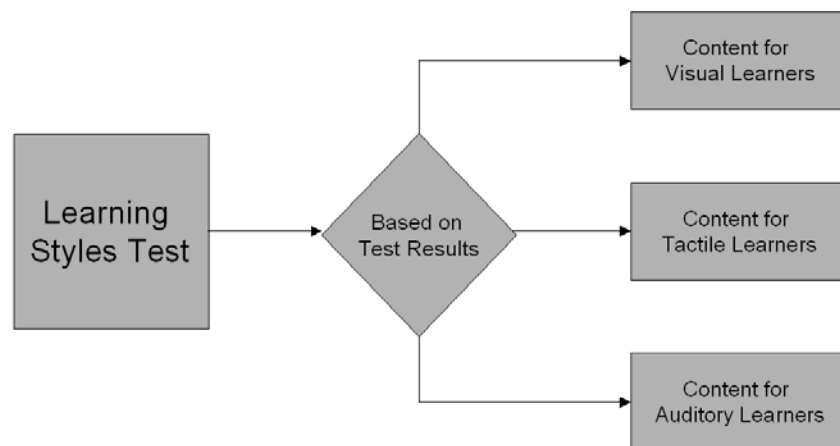
As you design the navigation paths through your course, you determine where tools are available and how content is organized.

For more information on navigation, see Chapter 8, “Navigation.”

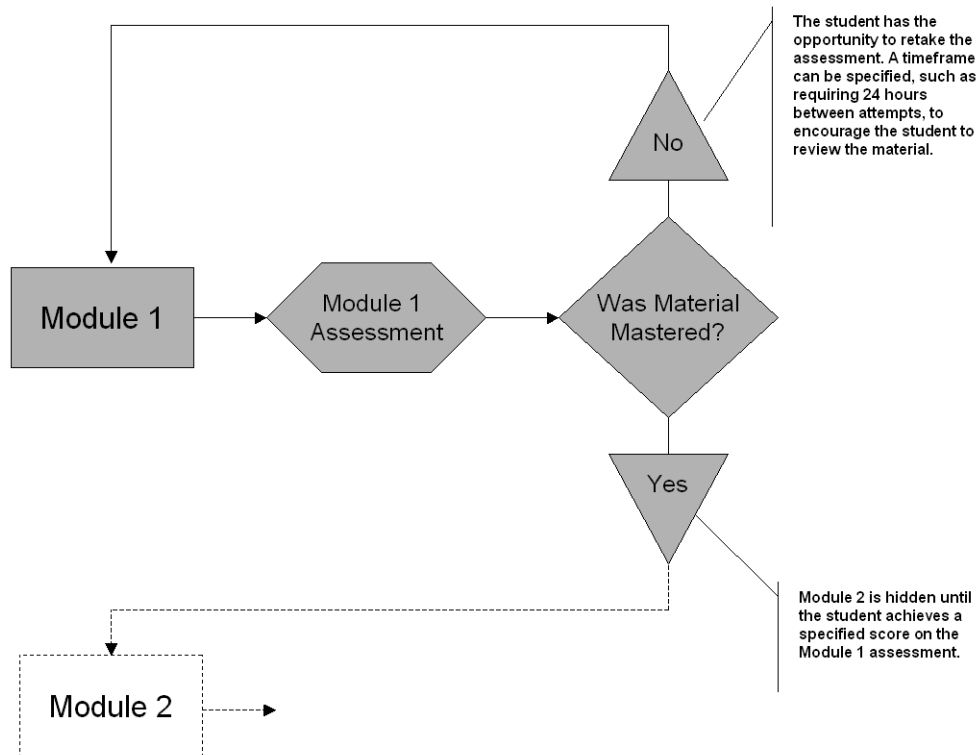
One of WebCT’s strengths is its capacity to branch and cascade content.

- To branch content, for example, you might test users on their learning styles, and then display different content based on a user’s specific learning style.
- To cascade content, you might display content modules or exercises based on a student’s test performance or a specific date.

Here is an example of branching content:



Here is an example of cascading content:



Before deciding whether to branch or cascade content, consider the pros and cons of such an approach:

Advantages

- This type of course design makes good use of the online medium and takes advantage of one of WebCT's most powerful features.
- Learners are guided through dynamic paths suited to their learning styles or levels of comprehension.
- You save instructors who want to branch or cascade content many hours of work. This time saver may result in higher rates of e-Pack adoption. It may also justify a higher price point for the e-Pack.

Disadvantages

- The course design is far more complex, which makes it difficult and time-consuming to customize.
- You must make a considerably greater investment in initial design work. You need a flow chart of the entire course before you begin to populate the e-Pack.
- You must carefully document the branching or cascading architecture for both the students and the instructors. Include directions for instructors who want to customize.

Examples

If you decide that branching or cascading content is not suitable for your target audience, you can still help instructors customize their own paths through the content. For example:

- Provide a test that assesses student learning style, define several paths through the content based on learning style, and then let students select the path best suited to them.
- Set up a single path through the content, but provide auxiliary resources suited to different learning styles (and defined as such).
- Provide detailed explanations for instructors on how to branch or cascade their content. Include flowcharts of possible paths through the e-Pack content.

Enrich the student experience

As both instructors and students become more familiar with an online learning environment, their expectations of that environment increase. They expect to do more than simply read a textbook online—a task for which a browser is poorly suited anyway.

You can enrich the student experience of the e-Pack in many ways, including:

- Enabling collaborative and interactive WebCT tools, as appropriate for the course goals and content (For more information, see Chapter 7, “Tools.”)
- Structuring access to e-Pack content and tools in a logical, easy-to-understand fashion (For more information, see Chapter 8, “Navigation.”)
- Adding animated concept explanations or problem-solving exercises that the students can manipulate (For more information, see Chapter 9, “Content” and Chapter 11, “Interactivity.”)
- Including image databases and Web resources to support e-Pack content and broaden learning opportunities.

Set up the e-Pack for easy management

File management is a crucial aspect of e-Pack maintenance. For guidelines on directory structures and file-naming conventions, see Chapter 3, “File

Management.” Media storage is also a significant maintenance issue; see Chapter 4, “Media,” for more information.

Designing e-Packs modularly also supports management of a customized course. Think about instructors customizing an e-Pack and what kinds of changes they might want to make. If instructors must change filenames or edit every page to use the content in a way that suits them, they are more likely to insert errors that will make the e-Pack difficult to use.

Checklist

When designing the template for your e-Packs:

Do:

- Define e-Pack goals.
- Enable WebCT tools and include content suited to a defined level of online immersion.
- Use WebCT navigation tools.
- Chunk content for flexible use.
- Include instructions for customizing the e-Pack.
- Include resources suited to the online environment, such as animated exercises.
- Provide time-saving resources, such as a quiz question database, problem-solving exercises, skills-building activities, and a glossary.
- Name files and set up directories for easy e-Pack management.

Don't

- Place all content into a single content module or create single pages of content.
- Do not limit the flexibility of the e-Pack through its design.