

This chapter covers the following MTC skills: 5.11 Lesson

Jason: When I was growing up, I enjoyed reading a series of books called *Choose Your Own Adventure*. Written in second person, they placed the reader into the story as the main character. Each chapter was a page or two long, and ended with a choice of actions. I could choose the action I wanted to take and turn to the appropriate page to see what happened. I could then make another choice and turn to that page, and so on until the story ended or my character died, which happened with disturbing regularity.

The Moodle lesson tool is a lot like the *Choose Your Own Adventure* books. Each page in the lesson can have a question at the bottom of the page. The resulting page depends on the answer the student gives. You can create branching paths through the material based on the selections students make at each page.

With branching lessons, you can create programmed learning opportunities in which each correct answer brings up a new piece of information and a new question. You can also easily create flash-card lessons and, with a little creativity, use the lesson module to create simulations and case studies to respond to student input, which results in a degree of interactivity.

There are two basic page types in the lesson module. The question page presents the student with a question, and the student has to enter a correct answer. After a student submits his answer, he will see the response you've created and will be taken to another page or looped back. Question pages are scored and added to the student's cumulative grade.

A branch tables page presents the user only with the option to select a branch. There is no correct or incorrect answer for each response, and the student's selections do not impact his grade.

The authors of the lesson tool envision branches as tables of contents giving students access to chains of questions. At the end of a chain, the user will return to the branch table, access another one, or end the lesson. Of course, you don't have to create a lesson this way. You can use the branch table to create a simulation in which the student's

choices present him with consequences and new decisions. At the end of the chapter, we'll explore some other creative ways to apply the lesson module.

Creating a lesson isn't complex, but the math of branching lessons means you have to plan carefully. Unless you prune your branching lesson, you will end up with a huge number of options for students and a large number of pages to write.

Creating a Lesson

Before you begin creating a lesson, it's a good idea to draw a flowchart. Lessons require more advanced planning than many of the other tools. They have the potential for branching on each page, so advanced planning is critical before you begin to develop your lesson. Even with two choices per page, if every choice results in a new page, you will quickly need a very large number of pages. The first page will require two additional results pages, and each of these will require two more—for a total of seven pages from an initial two choices. The key to minimizing the number of pages is to reuse as many as possible.

Take a few minutes to draw a flowchart for your lesson. What will the first page display? What are the options? Where will the options take the student? It's important to answer these questions for each page of the lesson to avoid getting lost while you are actually creating the content.

Once you have your flowchart, it's time to start creating a lesson.

To create a lesson:

1. Click the “Turn editing on” button.
2. Select Lesson from the “Add an activity” drop-down menu in the appropriate course section.
3. On the “Adding a new lesson” page, as shown in Figure 9-1, give the lesson a descriptive name.



Don't be put off by the long list of settings—they can generally be left as default or you can change them at a later time.

4. Choose whether a lesson attempt should be timed, and if so, what the time limit should be. If a time limit is used, then a student may finish the lesson activity after the time is up, though any questions answered after the time limit is up are not counted.
5. Choose the maximum number of answers/branches per page. This is the maximum number of selection options you want per page.
6. Select the grade options:

Practice lesson

If set to Yes, then students' grades are not recorded.

Custom scoring

This allows you to add a score (positive or negative) for each answer.

Maximum grade

Choose a value between 0 and 100 percent. If the maximum grade is set to 0, then the lesson does not appear in the gradebook.

Student can re-take

You can set this only to Yes (to allow students to re-take the lesson) or No. You can't set the number of times a student can re-take a lesson.

Handling of re-takes

If you allow students to re-take the lesson, you need to set a grading policy. You can use the mean of the student's grades for each lesson attempt or select the maximum grade.

Display ongoing score

Set to Yes to show the student's ongoing score on each page.

7. Select the flow control options:

Allow student review

If set, the last page of the lesson contains a "Review Lesson" button for the student to navigate through the lesson again from the start. Maximum number of attempts should be set to more than 1.

Display review button

If set, a Review button appears after an incorrectly answered question, enabling the student to reattempt it. The Review button cannot be used for essay questions.

Maximum number of attempts

This represents the maximum number of attempts a student can make on any question. If a student has difficulty with a short-answer or numerical question, she can make this number of attempts before being moved to the next page.

Action after correct answer

This determines how the system responds after a correct answer. Most of the time, you'll want the system to show the page you've selected as a response. You can also elect to have the system randomly display a question the student hasn't seen yet or one he hasn't answered.

Display default feedback

If set, for questions without specific feedback, the responses "That's the correct answer" and "That's the wrong answer" are used.

Minimum number of questions

With this option, you can set the number of questions used as a base for calculating the student's grade. If you set a minimum number of questions, the student must answer at least this many questions to receive full credit.

Number of pages (cards) to show

Set this parameter only if you are creating a flash-card lesson (see the following section, "Effective Lesson Practices"). If this is set to a number greater than 0, students will be shown that number of cards, then the lesson will end. If this is set to a number greater than the number of cards you've created, Moodle will display every card.

8. Select the lesson formatting options:

Slide show

If set, the lesson is displayed as a slide show, with a fixed width, height, and custom background color, which you can also set.

Display left menu

If set, the list of the pages is displayed.

Progress bar

If set, a progress bar is displayed at the bottom of each page.

9. Set the "available from" and deadline for your lesson.
10. Set dependency options, if required:

Dependent on

Access to this lesson can be made dependent on student performance in another lesson. Unless you have more than one lesson in a course, this menu will only allow you to select none.

Time spent (minutes)

You can make access to this lesson dependent on the amount of time students have spent in a previous lesson.

Completed

To access this lesson, the student must have completed a previous lesson.

Grade better than (%)

You can make access to this lesson dependent on the student scoring higher than a certain percentage in another lesson.

11. Choose or upload a file for a pop-up window at the beginning of the lesson, if required.

12. Select the other options:

Link to an activity

To add a link to another activity on the last page of the lesson, select the activity from the drop-down menu.

Use this lesson's settings as defaults

If set, the settings you have chosen for this lesson will be the default settings the next time you create a lesson in the same course.

Visible

This determines whether students may view the activity or not.

13. Click the “Save changes” button.

You are then asked what you would like to do first:

Import questions

You can import questions from a variety of formats. The lesson module will create a page for each question you import.

Import PowerPoint

PowerPoint slides get imported as branch tables with previous and next answers.

Add a branch table

A branch table is a lesson page without responses to student selections. Instead, each selection option branches to another page. Branch tables do not impact a student's grade. A lesson may start with a branch table that acts as a table of contents.

Add a question page

A question page consists of a title, some content, and a question at the bottom of the page. When a student answers a question, she sees the response for her answer and a Continue button. The Continue button takes the student to the appropriate branch page.

To add a question page, fill in the form as shown in Figure 9-2:

1. Select a question type for the page by clicking a tab. Your options are multiple choice, true/false, short answer, numerical, matching, and essay. If you want to use multiple-answer multiple-choice questions or case-sensitivity in the short-answer responses, click the checkbox below the tabs.
2. Give the page a title. The title will also be visible to the student as he completes the lesson. You can also use it to organize your pages as you build the lesson.
3. Enter the page contents. The contents will need to include the question you want the students to answer as well. If you are creating flash cards, you'll want to enter only the question here.
4. Enter the correct answer to the question in the Answer 1 box.
5. Enter the response generated by the answer.

By default, the first response takes the student to the next page while all other responses return the student to the same page. After you've created a page, you can come back and edit this behavior. The lesson automatically presents the

General	
Name*	Lesson 2
Timed ?	No
Time limit (minutes)*	20
Maximum number of answers/branches ?	4
Grade options	
Practice lesson ?	No
Custom scoring ?	Yes
Maximum grade ?	0
Moodler can re-take ?	No
Handling of re-takes ?	Use mean
Display ongoing score ?	No
Flow control	
Allow student review ?	No
Display review button ?	No
Maximum number of attempts ?	1
Action after correct answer ?	Normal - follow lesson path
Display default feedback ?	No
Minimum number of questions ?	0
Number of pages (cards) to show ?	0
Lesson formatting	
Slide Show ?	No
Slide show width* ?	640
Slide show height* ?	480
Slide show background color* ?	#FFFFFF
Display left menu ?	No
and only display if has grade greater than:	0%
Progress Bar ?	No

Figure 9-1. Adding a new lesson

question choices in random order so you don't have to worry about the first response always being the correct one.

6. Enter any other answer choices you want to student to consider, with responses for each.

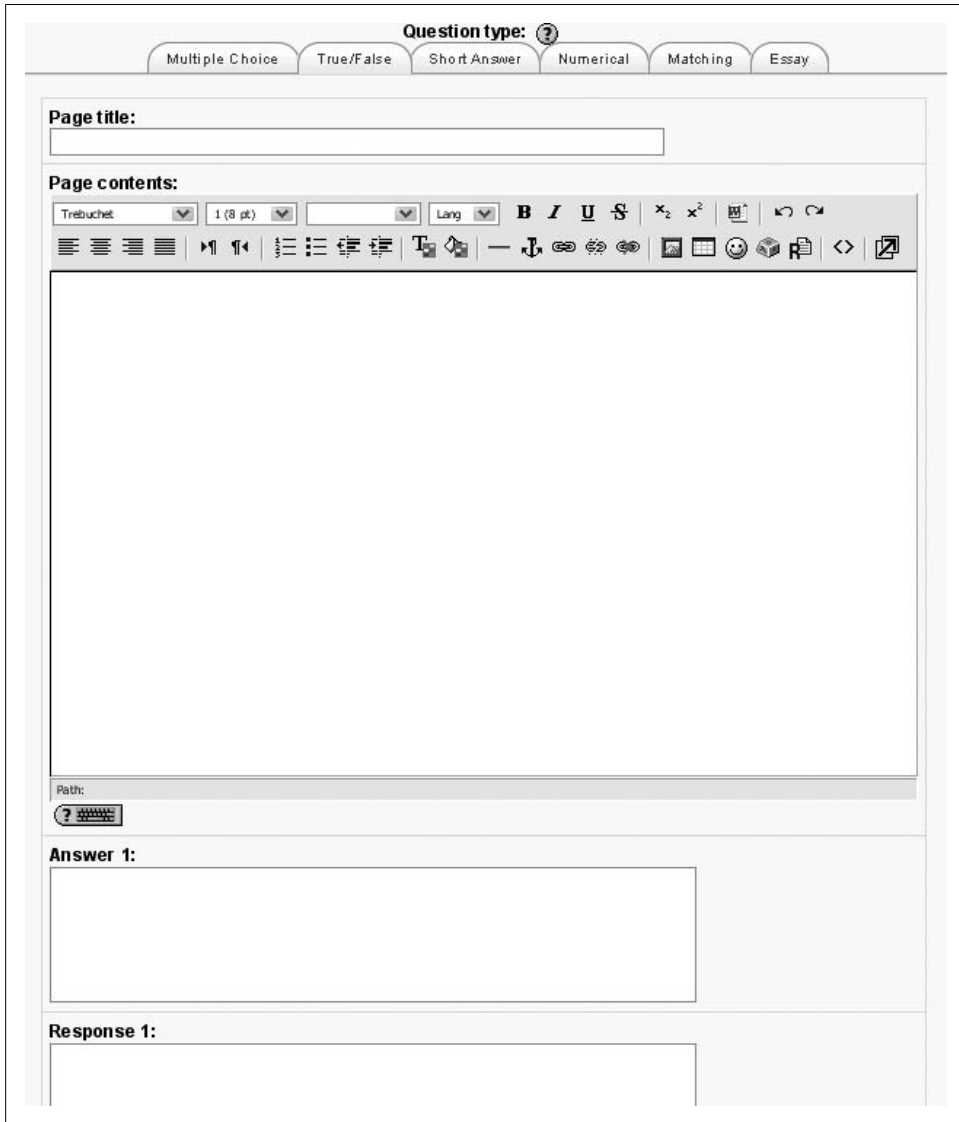


Figure 9-2. Adding a question

7. Click the “Add a question page” button at the bottom of the page.

You’ll then see the lesson construction page, such as the one shown in Figure 9-3. Each page you create will be listed here with a number of options above and below it.

In addition to the options covered previously, you also have the option to:

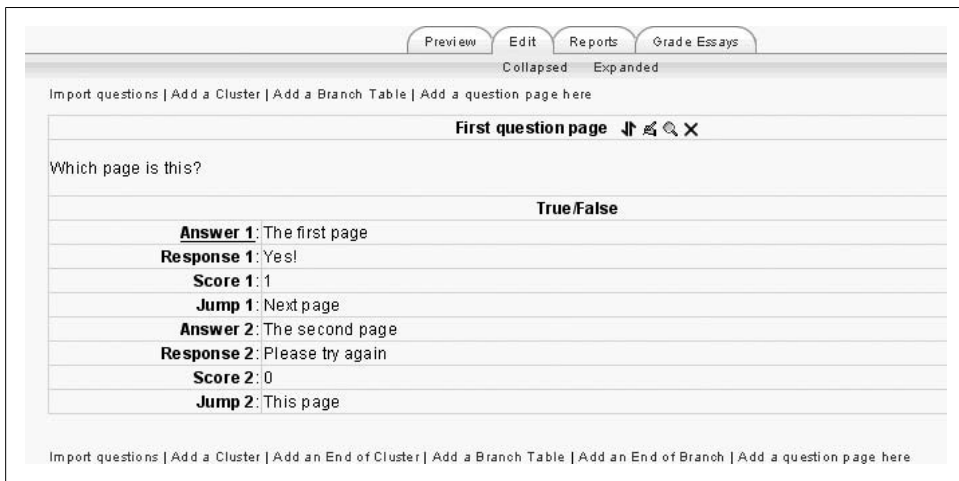


Figure 9-3. Lesson construction

Add a cluster

A cluster is a set of question pages from which one or more may be randomly chosen. Questions within a cluster are randomly selected by choosing “Random Question within a Cluster” as a jump.

Add an end of cluster

Clusters should be completed with an end of cluster page.

Add an end of branch

If you use branch tables, you should end each branch with an end of branch page, which takes the student back to the last branch table page so she can select another alternative.

Above each page table, you’ll see the icons for moving, updating, previewing, or deleting the page. Previewing the page shows the lesson from the student’s point of view. You can answer questions, check out branches, and interact with the lesson. The only thing you won’t be able to see is the final grade.

You can also preview your whole lesson by clicking the Preview tab at the top of the page list. This link will take you to the first page in your lesson as a student would see it. You can then start from the beginning of the lesson and work your way through.

Once you’ve created your first page, you can add a new page, add a branch table, or edit an existing question. You’ll need to add each page you want students to be able to view.


Preview Edit Reports Grade Essays		
Moodlers	Essays	Email
 Sam Student	23 August 2007, 12:18 PM Moodle features	Email graded essays
		Email ALL graded essays

Figure 9-4. Grading an essay

Managing Lessons

Once you've created your lesson, there isn't much management involved, unless you have included essay questions. Essay questions require manual grading with an optional comment.

To grade an essay question:

1. Click the "Grade essays" tab at the top of the lesson page.
2. Click the essay link in the middle column of the page, as shown in Figure 9-4.
3. Give the essay a score and add some comments.
4. Click the "Save changes" button.
5. When you have finished grading essays, click the "Email ALL graded essays" link to notify your students.

As students complete the lesson, their scores will be recorded in the gradebook (see Chapter 13). If you've allowed students to attempt each lesson multiple times, their scores may change as they repeat the lesson.

Lesson Capabilities

The lesson module has only two capabilities:

Edit a lesson activity

This allows a user to edit a lesson. If you create a blank lesson and allow students to edit it, they can create a new lesson for the rest of the class.

Manage a lesson activity

This allows a user to manage a lesson and grade essay questions.

Effective Lesson Practices

Lessons can be an interesting change of pace for your students. They may require more upfront development time than many other types of tools, but they do provide some

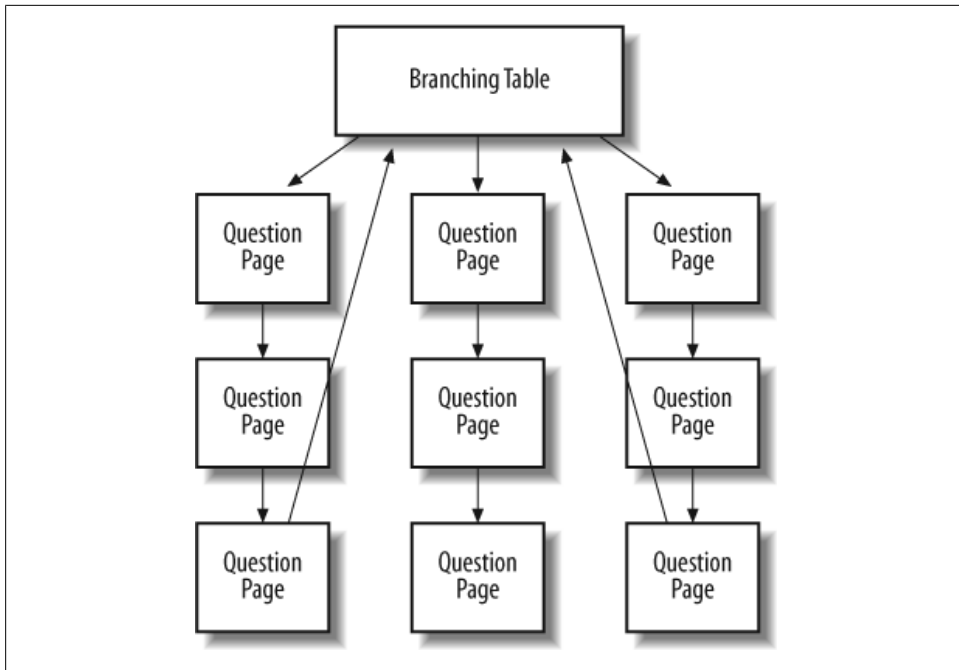


Figure 9-5. Branching quiz schematic

benefits. The two basic lesson types, branching quizzes and flash cards, are relatively easy to set up.

Branching Quizzes

The most basic lesson structure is a branching quiz. You use branches to organize sets of questions around different topics or concepts in your course. Each branch of the quiz leads to a linear series of pages and test questions, then returns to the main branch. The main-branch page acts as a table of contents for the lesson, as shown in Figure 9-5.

If you decide to build this type of lesson, be sure to include a link to the end on the main page. If not, the students will have no way of ending the lesson and recording their scores.

If you create a lesson with a branch table and strings of questions, be sure to set a reasonable minimum number of questions. Otherwise, students will be able to visit one branch and receive a maximum score for the lesson, even though they didn't look at any other branches.

To create a branching quiz:

1. Create the lesson and the first question page by following the instructions.
2. Create a question page for the first question in each branch.

3. Create a branch table with a branch for each of the questions you just created.
4. Be sure to make the last branch a link to the end of the lesson.
5. After you've saved the branching table, move it to the top of the pages list.
6. Under the first question for the first branch, create the second question page for the next step in the branch.
7. Fill in the question page for the second question. Put the correct answer in the first answer slot if you are creating a true/false or multiple-choice question.
8. Continue adding questions to the branch until you are finished.
9. Add an end of branch after the last question in the branch.
10. Below the first question for the each of the remaining branches, repeat steps 6 through 9.
11. When you have added all your pages, review your lesson by clicking the Check Navigation link.

Flash Cards

Flash cards can be a useful way to practice recalling basic facts and definitions. As we discussed in Chapter 8, learning vocabulary can be one of the most difficult tasks for novices in any field of study. Flash cards allow students to practice rapidly recalling definitions as an initial step toward learning how to communicate in a new field.

The lesson module can act like a deck of flash cards, presenting either the whole deck or a subset of cards to students when they want to study the new terms. Each question page is a separate card, and students can rapidly react to each one in turn. This is a very different structure than the branching quizzes.

Setting up a flash-card lesson requires specifying options when you first create the lesson. To create a flash-card lesson:

1. Follow steps 1 through 4 for creating a lesson in the “Creating a Lesson” section.
2. Consider setting a low value for the maximum grade. You want to reward students for using the flash cards but also make them a valuable learning tool.
3. Use the following options:

Maximum grade

Consider setting a low value for the maximum grade. You want to reward students for using the flash cards but also make the cards a valuable learning tool.

Student can re-take

Unless you have a very specific reason for limiting re-takes, it's best to set this to yes. Flash cards are used to practice recalling information rapidly. Save the assessment of students' recall skills for a quiz.

Handling of re-takes

If you set this to use maximum, it will encourage students to reuse the flash cards to attempt to get the maximum score.

Action after correct answer

Set this to unseen or unanswered. This tells the lesson module you don't want it to present the next page in order.

Minimum number of questions

Keep this at zero. The students shouldn't have a choice about the number of cards they see.

Number of pages (cards) to show

If you want to limit the number of questions students see each time they practice with the cards, set this to a nonzero number. Make it large enough to give students enough practice, but not so large that they become fatigued by the sheer volume of questions.

4. Once you save the lesson options, simply create question pages. The order doesn't matter. You're basically creating a deck of questions to draw from.

Once you've created the deck of flash cards, you can release it to your students so they can practice answering the questions you've created.

Creative Lesson Uses

While branching quizzes and flash cards are interesting applications, there is a hidden potential in the lesson module that makes it much more interesting than it at first appears. If you take advantage of the ability of each answer in a question page to link to any other page, you can create branching *Choose Your Own Adventure*-style simulations or case studies.

Simulations and case studies

A branching simulation can be a great learning tool. On each page, the student reads some information or looks at a picture (or both), then decides what to do next. For example, a medical simulation may start out by presenting a patient's complaint. Possible choices could then be to order a test or to do nothing. If the student orders a test, each branch would present the results and ask the student what to do next. Each page could include an option to switch from diagnosis to treatment, which would branch the student to a different set of options.

To successfully create a branching simulation, you will definitely have to map out each page in advance. The first page should introduce the situation. You'll need to include enough details in the first page to get the students started. If you have other materials you want them to use in the simulation, you may want to create a resource link for the students to access before they start the lesson.

If you just want students to engage in the decision-making process and not receive a grade, simply create a series of branch tables. Otherwise, you can create a combination of branching tables and questions.

To create a simulation:

1. Create a lesson as you would a branching-quiz lesson. If you're just using branch tables, assign a point value of zero to the lesson.
2. Create the first question page. If the first question page will be the first page in the simulation, be sure to provide enough details about the case so the students can start making decisions.
3. Create the first set of decision-result pages from the first page.
4. Go back and edit the first page and assign each answer a link to a resulting page.
5. Create the decision-result pages for each of the other decision pages.
6. You'll need to create all of the pages in advance or, after you create each iteration of decision-result pages, go back and add the links to those pages in the decision page.
7. After you've added all of the pages and links, test your simulation by clicking the Preview tab at the top of the page list.