



July, 2006

## Creating Quizzes in WebCT

An important part of your course is student evaluation. In a WebCT CE course, you can evaluate students using *Quizzes/Surveys*.

*Quizzes* are tests that your students take and submit online. *Quiz* questions can be multiple choice, matching, calculated, short answer, and paragraph questions. All quiz questions, except ones in paragraph format, can be automatically graded by the system. Those grades can then be returned to your students using *Quizzes/Surveys*.

*Surveys* are also created using *Quizzes/Surveys*. They are anonymous questionnaires for which no grades are assigned, but which provide statistical information.

### LEARNING OBJECTIVES

After completing this workshop, you'll be able to:

- create a link to *Quizzes/Surveys* on your *Course Menu* and *Homepage*.
- add questions to a database that can be used in quizzes.
- select questions from the database to create a quiz.
- use question sets to randomize quizzes.
- assign points to each quiz question.
- select how and when a quiz is presented to your students and then graded.
- preview the quiz to see how it appears to your students.
- communicate quiz grades to your students.
- convert a quiz in Word format for use in WebCT
- search online for Digital Content

## ADDING QUIZ

First, add *Quizzes/Surveys* to your course.

1. Click **Add Page or Tool**. The *Add Page or Tool* screen appears.
2. Under *Evaluation and Activity Tools*, click **Quizzes/Surveys**.
3. The *Add Quizzes/Surveys* screen appears.
4. For the title, enter: Quiz.
5. Select where to add links to *Quiz*:
  - Select *On the Course Menu*.
  - Select *On an Organizer Page: Homepage*.
  - Notice that *Link shows item title*, *Link shows icon*, and *Use default icons* are selected by default. Leave these items selected so that the link on the *Homepage* displays the title and a default icon.
6. Click **Add**. The *Homepage* appears. Notice that there are now links to *Quiz* on both the *Homepage* and the *Course Menu*.

## CREATING A QUIZ

Creating a quiz consists of six steps:

- 1 Create a category in the *Question Database*. Details appear below.
- 2 Add each question to the *Question Database* category. Details appear below.
- 3 Select the question settings. Details appear below.
- 4 Enter the possible answers for each question. Details appear below.
- 5 Create a quiz. Details appear below.
- 6 Add questions to the quiz from the *Question Database*. Details appear below.

### To create a Question Database category

*Quiz* contains a *Question Database*. This is the storage area for all quiz questions. All new questions must first be added to the database before they can be used in a quiz. Questions can be used simultaneously in multiple quizzes.

As a designer, you create categories to store and organize the questions in the *Question Database*. For example, you may want to group them into categories according to the subject matter, course unit, or quiz. In this activity, you'll group the questions by subject matter. The questions are about terminology.

- 1 From the *Homepage* or *Course Menu*, click **Quiz**. The *Quizzes/Surveys* screen appears.
- 2 Under the breadcrumbs, click **Question Database**.

The *Question Database* screen appears.

3. In the *Actions* frame, under *Options: Category*, click **Create category**.  
The *Create Category* screen appears.
4. In the *Category title* text box, enter: Terminology
5. Click **Create**. The *Question Database* screen appears displaying the new category.
6. Now begin adding some questions to the category.

### To add Multiple Choice questions to the Question Database

You can create any of the following types of questions to add to your quiz: multiple-choice, matching, calculated, short answer, and paragraph.

- 1 From the *Question Database* screen, in the *Actions* frame, under *Options: Question*, from the *Create question* drop-down list, select *Multiple choice* and click **Go**. The *Multiple Choice Question* screen appears.
- 2 We currently only have one category so there's no need to select a *Category* from the drop-down list.
- 3 In the *Title* text box, enter: Dial-up access
- 4 In the *Question* text box, enter: What is the name of the device that allows a computer to transmit data over a standard telephone line?
- 5 For *Format*, select *HTML*. The *Format* option allows you to select whether to enter the question content is in plain text or is formatted with HTML tags.
- 6 Leave the *Image* text box blank. You won't be adding an image to this question.

### To select the question settings

1. On the *Multiple Choice Question* screen, under *Settings*, select the following options:

Setting	Option
<i>Allow students to choose</i>	<i>One answer</i>
<i>Scoring</i>	<i>Cumulative</i>
<i>Allow negative score</i>	<i>No</i>
<i>Answer layout</i>	<i>Vertical</i>
<i>Answer Order</i>	<i>Answers listed below</i>
<i>Indices</i> (lists answers in a numbered list)	<i>Numbers</i>

## To enter the answer choices

1. In the *Answer 1* text box, enter: GUI
2. For *Format*, select *HTML*.
3. Leave the *Value (%)* text box empty. This is not the correct answer.
4. In the *Feedback 1* text box, enter: Incorrect. A Graphical UserInterface (GUI) incorporates icons, pull-down menus, and a mouse into the interface. Microsoft Windows is a GUI.
5. For *Format*, select *HTML*.
6. To set *Answer 2* as the correct answer, select *Correct answer*.
7. In the *Answer 2* text box, enter: Modem
8. For *Format*, select *HTML*.
9. Leave the *Value (%)* text box empty. Since there is only one correct answer, selecting *Correct answer* in step 5 automatically sets *Value(%)* to 100%.

**Note:** If there were two correct answers, use the *Value(%)* field to assign each correct answer a different value. For example, the most important answer could generate 70% of the question's points while the less important answer would generate 30%.

10. In the *Feedback 2* text box, enter: Correct. A Modulator-Demodulator converts digital pulses from a computer to audio tones that are transmittable by a telephone line.
11. For *Format*, select *HTML*.
12. In the *Answer 3* text box, enter: Port
13. For *Format*, select *HTML*.
14. Leave the *Value (%)* text box empty.
15. In the *Feedback* text box, enter: Incorrect. A port is a pathway into and out of a computer for plugging in printers, modems, and communication lines.
16. For *Format*, select *HTML*.

You're finished entering answer choices. Scroll to the bottom of the screen and click **Save**. The *Question Database* screen appears. The question, Dial-up access is added to the database in the category, Terminology. The *Type* column indicates that it's a multiple-choice question.

Now, add another question and answer set under Terminology by repeating the previous three activities using the following information:

Title:           Log in

Question:      What process occurs when you enter  
your email username and password?

- Answers:
1. Authorization
  2. Validation
  3. Authentication

Set answer 3 as the correct answer.

- Feedback:
1. Incorrect
  2. Incorrect
  3. Correct. Authentication is the process of verifying the identity of a user who is logging in to a computer system.

### Add another Question Database category

1. Under the breadcrumbs, click **Question Database**.  
The *Question Database* screen appears.
2. In the *Actions* frame, under *Options: Category*, click **Create category**.  
The *Create Category* screen appears.
3. In the *Category title* text box, enter: U.S. History
4. Click **Create**. The *Question Database* screen appears displaying the new category.

### To add Matching questions to the Question Database

Matching questions require students to match items between two columns.

1. From the *Question Database* screen, in the *Actions* frame, under *Options: Question*, from the *Create question* drop-down list, select *Matching* and click **Go**. The *Matching Question* screen appears.
2. Select the **U.S. History Category** from the drop-down list.
3. In the *Title* text box, enter: Presidents
  - In the *Question* text box, enter: Match the president in Column A with the correct description in Column B.
4. For *Format*, select *HTML*. The *Format* option allows you to select whether to enter the question content is in plain text or is formatted with HTML tags.
5. Leave the *Image* text box blank. You won't be adding an image to this question.

## Completing the Settings Section for Matching Questions

1. From the *Matching Question* screen, under *Settings*, select a *Marking scheme*:
  - To allocate the total points for the question equally among all correct answers, select *Equally weighted*. For example, if the question is worth 20 points and has four question and answer pairs, if a student selects three correct answers they are awarded 15 points. **Note:** With this marking scheme, there is no penalty for selecting an incorrect answer.
  - To only award points to students if all of their answer selections are correct, select *All or nothing*.
  - To subtract points for incorrect answer selections from the total points allocated to the question, select *Right less wrong*. For example, if the question is worth 30 points and has three question and answer pairs, if a student makes two correct answer selections (+20) and one incorrect answer selection (-10), they are awarded 10 points.
2. For *Preview columns*, select whether or not you want students to see a preview of that question's set of matches. If you select *Yes*, WebCT displays the *Match* column in the specified order, and randomizes the *with* column. The preview appears above the drop-down lists students use to match the pairs. **Note:** *Yes* must be selected for long answer formats.

## Completing the Matching Pairs Section for Matching Questions

1. From the *Matching Question* screen, under *Matching Pairs*, for both the *Match* and *with* columns, from the *Answer type* drop-down list, select one of the following:
  - To require answers that are single words or short phrases, select *Short answer*.
  - To require answers that are long phrases or sentences, select *Long answer*. WebCT assigns each long answer a number or letter that students select from the matching question drop-down lists. The full text of the long answers appears in the *Match* column's preview. **Note:** Selecting *Long answer* requires that you select *Yes* for *Preview columns*.
2. If you selected *Long answer* for either of the columns, click **Refresh**. The *Matching Question* screen updates and the larger text boxes for long answers appear.

3. In the *Match* text boxes, enter the questions or phrases to which students must match answers. The questions or phrases entered in the *Match* column appear in the order in which you enter them. **Note:** If you want to format the text or add images to the questions that appear in the *Match* column, use HTML tags.
4. In the *with* text boxes, enter the matching answers to the questions in the *Match* text boxes. The answers entered in the *with* column appear as a drop-down list. **Note:** If you want to format the text or add images to the questions that appear in the *with* column, use HTML tags.

Enter the following information for the *Match* and *With* columns:

Eisenhower	The General who commanded American forces during WWII
Kennedy	Reigned over Camelot; assassinated in Dallas
Nixon	Resigned rather than face impeachment
Carter	Peanut farmer; taught Sunday school

**Tip:** If you want to increase the difficulty of the question, you can include items that have no match by entering more items in one column than the other.

### Completing the General Feedback Section for Matching Questions

1. From the *Matching Question* screen, under *General Feedback*, if you want to provide feedback that pertains to the question:
  - a. In the *General feedback* text box, enter your comments.
  - b. For *Format*, select whether you want the feedback to display in *HTML* or *Text*. **Note:** If you choose text format, students will see the feedback exactly as you have entered it. If you choose HTML format you can use HTML tags to format the feedback. For example, you can add bolding, italicizing, and color to the text. You can edit settings for releasing feedback from the *Quiz Settings* screen.
2. If you want to provide additional questions and answers, click **More answers**. The *Matching Question* screen updates and additional *Match* and *with* text boxes are provided.
3. Click **Save**. The *Question Database* screen appears and the matching question is saved to the selected category.

## Creating Calculated questions

Calculated questions require students to apply a mathematical formula to answer the question. Calculated questions are designed using variables. Random values, based on a specified range, are automatically generated for each variable in the question. Calculated questions are unique for each student.

1. From the *Course Menu*, click **Quiz**. The *Quizzes/Surveys* screen appears.
2. Click **Question Database**. The *Question Database* screen appears.
3. Under *Options: Question*, from the *Create question* drop-down list, select *Calculated* and click **Go**. The *Calculated Question* screen appears.

## Completing the Question Section for Calculated Questions

1. From the *Calculated Question* screen, under *Question*, from the *Category* drop-down list, select the category to which you want to save the question.
2. In the *Title* text box, enter the question title.
3. In the *Question* text box, enter the question. Enclose variables in curly brackets, { }. For example: The conference room needs carpeting. Assume that the room is {length} feet long and {width} feet wide. How many square yards of carpeting are needed?
4. If you want to create, import, or edit an equation, use the WebEQ Equation Editor for Windows or for Macintosh.
5. For *Format*, select whether you want the question to display in *HTML* or *Text*. If you want to display an image with question, in the *Image* text box, enter the image filename or click **Browse** to search for it.:

## Completing the Formula Section for Calculated Questions

1. From the *Calculated Question* screen, under *Formula*, in the *Formula* text box, enter the mathematical formula using the supported functions in the following table:

Function	Description
()	Parentheses used to group elements for precedence.
+	Add.
-	Subtract.
*	Multiply.
/	Divide.
**	Exponent. For example, $2^{**}3 = 8$ .
sqrt(x)	Square root. For example, $\text{sqrt}(9) = 3$ .
ln(x)	Natural logarithm (i.e. $\log_e(x)$ , where $e = 2.71$ ). To get base 10 logarithm, use the following property: $\log_{10}(x) = \ln(x)/\ln(10)$ .
sin(x)	Sine. Calculates the sine of x where x is measured in radians.
cos(x)	Cosine. Calculates the cosine of x where x is measured in radians.
exp(x)	Natural exponent. For example, $\text{exp}(2) = e^2 \approx 7.34$
atan2(x,y)	Arctangent. Calculates the arctangent of x/y.

**Note:** WebCT supports additional mathematical functions, such as modulus and factorial.

1. For our formula, enter  $(\{\text{length}\} * \{\text{width}\})/9$
2. Click **Analyze variables**. A list of variables appears.
3. For each variable, in the *Minimum* text box, enter the minimum value and for each variable, in the *Maximum* text box, enter the maximum value.
  - a. Length:            20     40
  - b. Width:             15     30
4. For each variable, from the *Decimal places* drop-down list, select the number of decimal places allowed.
5. From the first *Calculate answer sets to* drop-down list, select the number of decimal places or significant figures to which the answers should be calculated.

**Note:** To specify integer results, select 0.
6. From the second *Calculate answer sets to* drop-down list, select either *decimal place(s)* or *significant figure(s)*.
7. From the *Number/set* drop-down list, select the number of answer sets you want WebCT to generate.
8. Click **Generate random answer set**. The *Calculated Question* screen updates and the random answer set appears.
9. If you want to edit the random answer set:
  - a. Click **Edit answer set**. The *Calculated Question* screen updates and text boxes appear in the variable columns.

- b. In the variable text boxes, edit the variables and click **Update**. The *Calculated Question* screen updates and the edited variables appear in the random answer set.
10. If you want to specify a percent or number of units students' answers can deviate from the correct answer, specify an answer tolerance:
  - a. In the *Answer tolerance* text box, enter the tolerance value.
  - b. From the *Answer tolerance* drop-down list, select either % or *Units*.

**Notes:**

- The values for trigonometric functions are expressed in radians not degrees. For conversion purposes, Pi radians = 180 degrees.
- Scientific notation is expressed using the format  $xEy$ , where  $x$  is the coefficient and  $y$  is the exponent. To convert numbers from scientific notation to standard notation, use  $x$  times 10 to the power of  $y$ . For example:
  - 3.2E4 equals 32000
  - -2E0 equals -2
  - 3.14E-2 equals 0.0314
- For all calculated questions that have two correct answers (for example, the square root of 9 is +3 and -3), only the positive number answers appear in the answer set.

### Completing the Units Section for Calculated Questions

1. From the *Calculated Question* screen, under *Units*, in the *Units* text box, enter the unit type. For our example, enter square yards.
2. Select whether or not units are required for a correct answer.
3. Select whether or not to ignore spaces in the *Units* portion of the answer.
4. Select whether or not to ignore case in the *Units* portion of the answer.
5. From the *Percentage of question value* drop-down list, select the percentage of the question's total points you want to allocate to the *Units* portion of the answer. For example, if the unit is worth 50% of the question's total points, select 50.

### Completing the General Feedback Section for Calculated Questions

1. From the *Calculated Question* screen, under *General Feedback*, if you want to provide feedback that pertains to the question:

- a. In the *General feedback* text box, enter your comments.
  - b. For *Format*, select whether you want the feedback to display in *HTML* or *Text*.
2. Click **Save**. The *Question Database* screen appears and the calculated question is saved to the selected category.

## Creating Paragraph Questions

Paragraph questions require students to answer in a paragraph or essay format. Paragraph questions must be graded manually by the instructor or teaching assistant.

1. From the *Course Menu*, click **Quiz**. The *Quizzes/Surveys* screen appears.
2. Click **Question Database**. The *Question Database* screen appears.
3. Under *Options: Question*, from the *Create question* drop-down list, select *Paragraph* and click **Go**. The *Paragraph Question* screen appears.

## Completing the Question Section for Paragraph Questions

1. From the *Paragraph Question* screen, under *Question*, from the *Category* drop-down list, select the category to which you want to save the question: U.S. History
2. In the *Title* text box, enter the question title: Wars
3. In the *Question* text box, enter the question: Compare the events leading up to the Civil War with the events leading up to the Revolutionary War. You should have at least 2 points of difference and 2 points of similarity in your answer.
4. If you want to create, import, or edit an equation, use the WebEQ Equation Editor for Windows or for Macintosh.
5. For *Format*, select whether you want the question to display in *HTML* or *Text*.
6. If you want to display an image with question, in the *Image* text box, enter the image filename or click **Browse** to search for it.

## Completing the Settings Section for Paragraph Questions

From the *Paragraph Question* screen, under *Settings*, from the *Answer box size* drop-down lists, select the length and width of the answer box presented to students.

## Completing the Answers Section for Paragraph Questions

1. From the *Paragraph Question* screen, under *Answers*, if you want to provide introductory text and/or an equation in the answer box to aid or orient students:
  - a. In the *Pre-fill answer box* text box, enter the text.
  - b. If you want to create, import or edit an equation, use the WebEQ Equation Editor for Windows or for Macintosh.
2. If you want to provide students with the correct answer and/or the correct equation, which displays once the question has been graded:
  - a. In the *Correct answer* text box, enter your version of the correct answer.
  - b. If you want to create, import or edit an equation, use the WebEQ Equation Editor for Windows or for Macintosh.
3. Click **Save**. The *Question Database* screen appears and the paragraph question is added to the selected category.

## To add a quiz

Now, create an empty quiz and name it. You'll then add questions from the *Question Database*.

1. From the *Question Database* screen, under the breadcrumbs, click **Quizzes/Surveys**.

The *Quizzes/Surveys* screen appears.

2. In the *Actions* frame, under *Options*, click **Create quiz**. The *Create Quiz* screen appears.
3. In the *Title* text box, enter: **Quiz 1**.
4. Click **Create**. The *Quizzes/Surveys* screen appears displaying *Quiz 1*.

**Tip:** Once your students have taken the quiz you can grade questions or view the quiz results individually or as statistical data using the *Results* options: *Submissions*, *Detail*, *Reports*, and *Summary*.

## Adding Question Sets to Quizzes

A question set is a group of individual questions from which a random selection is presented to students. Use question sets to prevent answer-sharing between students. If you use a number of question sets throughout the quiz, no two students will receive the same quiz.

## Notes:

- You can create a question set from an individual question by adding alternate questions.
- You can randomize the order that questions are presented to students by creating 1 question set that contains all of the questions in the quiz. WebCT randomizes the order that these questions are presented to students.
- Once a quiz or survey has been taken by students, questions cannot be added to or deleted from the quiz or survey.

1. From the *Course Menu*, click **Quiz**. The *Quizzes/Surveys* screen appears.
2. Locate the quiz or survey to which you want to add a question set and click its title. The *Quiz Editor* or *Survey Editor* screen appears.
3. Under Options, click **Add question set**. The *Question Browser* pop-up window appears.
4. Select the questions you want to add as a set:
  - a. To add existing questions:
    - i. Locate the category containing the questions you want to add as a set and click its title. The category expands.
    - ii. Next to the questions you want to include in the question set, select the check box.
  - b. To create questions and add them as a set:
    - i. Under *Create Question*, from the *Question type* drop-down list, select the type of question you want to create.
    - ii. Click **Create**. The *Question* pop-up window for the selected question type appears.
    - iii. Enter the question information and click **Save**. The *Question Browser* pop-up window appears.
    - iv. Repeat steps a to c until you have created all the questions you want to add as a set.
    - v. Locate the category to which you saved the questions and click its title. The category expands.
    - vi. Next to the questions you want to include in the question set, select the check box.

Click **Add selected**. The *Quiz Editor* or *Survey Editor* screen appears and the selected questions are added as a set.

## To add questions to the quiz

Now, add the questions from the *Question Database* to *Quiz 1*.

- 1 From the *Quizzes/Surveys* screen, click **Quiz 1**. The *Quiz Editor* screen appears.
- 2 In the *Actions* frame, under *Options*, click **Add questions**. The *Question Browser* window appears.
- 3 In the table under *Name*, click **Terminology** to open the folder. The questions you created, *Dial-up access* and *Log in*, appear.
- 4 To select all questions in the category, select *Terminology*.
- 5 Now select all of the questions in the *U.S. History* category.
- 6 Click **Add selected** at the bottom of the screen. The *Quiz Editor* screen appears and the questions are added to *Quiz 1*.

## ALLOCATING POINTS

You assign point values to questions once they're added to a quiz. This means that you can assign different point values to a question in different quizzes

Now, allocate the points for each question. The quiz is worth a total of 20 points, with each question valued at 10 points.

- 1 From the *Quiz Editor* screen, in the *Points* column, in each of the text boxes, enter: 10
- 2 Click **Update total**. The *Total* now shows 50.

The quiz is created. Next, select how and when the quiz is presented to your students.

## SELECTING QUIZ SETTINGS

Using *Quiz Settings*, you can specify, for example, which students receive the quiz, how long they have to complete it, how many attempts are allowed, and how the results are released to them. There are numerous settings available on the *Quiz Settings* screen. For this tutorial, you'll select *Basic*, *Availability*, and *Results* settings only.

For more information about using other *Quiz Settings*, see the online Help topic, *Quizzes/Surveys- Editing*. Go to the section, *Editing Quiz settings*. To access the online Help, click **Help** on the *Menu Bar*.

- 1 From the *Quiz Editor* screen, in the *Actions* frame, under *Options*, click **Edit quiz settings**. The *Quiz Settings* screen appears.
- 2 Select the following *Basic Settings*:
  - *Quiz title*: Verify that *Quiz 1* is displayed.

- *Question titles*: Do not select Show the question titles when students view the quiz.
  - *Question delivery*: Select Deliver all the questions at once.
  - *Quiz duration*: Enter: 30 and select minutes from the drop-down list.
  - *Attempts allowed*: Select 1.
  - *Attempts separation*: Leave blank.
3. Under *Availability*, next to the *Available after* drop-down boxes, click **Allow access now**.
  4. For *Available until*, from the drop-down boxes, select the month, day, year, and time that corresponds to 24 hours from now. Not specifying a date sets the quiz to be available indefinitely.
  5. Scroll down to the *Results* section, and under *Student score release*, select *Release the score once the availability period has ended and all the questions have been graded*. This means that students are able to view their grade in *Quiz* once the quiz is no longer available, all the questions have been graded and the quizzes are graded.
  6. Under *Release column*, select *Yes*.
  7. Leave all other settings as is.
  8. Click **Update**. The *Quiz Editor* screen appears and the quiz is now available for your students to complete.

## PREVIEWING THE QUIZ

Now that you're finished creating the quiz, you can preview it from the *Quiz Editor* screen.

1. In the *Actions* frame, under *Options*, click **Preview quiz**. A new browser window opens and the quiz appears as it would to a student.
2. Close the browser window. The *Quiz Editor* screen appears

## COMMUNICATING THE QUIZ GRADE TO YOUR STUDENTS

While selecting our quiz settings, we released grades to students in two places: *Quizzes/Surveys* and *My Grades*. Student can use *Quizzes/Surveys* to view their score once the quiz is graded. They can also view their quiz score using *My Grades*. Students can view their own *Assignment*, *Quiz*, midterm, and final grades on this screen. *My Grades* is for students use only. As a designer, you must use *Manage Students* to view student grades.

*Quiz* grades are automatically released to *My Grades* once the quizzes are graded. For other grades, such as midterm and final grades, you must enter them manually using *Manage Students*. From this screen, you select which grades to release to *My Grades*.

## To add My Grades

1. Click **Control Panel**. The *Basic Control Panel* appears.
2. Click **Add Page or Tool**. The *Add Page or Tool* screen appears.
3. Under *Student Tools*, click **My Grades**. The *Add My Grades* screen appears.
4. For the title, enter: MyGrades
5. Select where to add links to *My Grades*:
  - a. Select *On the Course Menu*.
  - b. Select *On an Organizer Page: Homepage*.

Notice that *Link shows item title*, *Link shows icon*, and *Use default icon* are selected by default. Leave these items selected so that the link on the *Homepage* displays the title and a default icon.

6. Click **Add**. The *Homepage* appears. Notice that there are now links to *My Grades* on both the *Homepage* and the *Course Menu*.

**Log in as a student and take the quiz you have created. When you are finished, go back into your course as the designer and grade the quiz.**

## To grade the quiz

From the *Submissions* screen, select the submissions that you want to grade and then in the *Actions* frame, under *Options*, click **Grade**. The quiz results are then automatically added to *My Grades*. At that time, students can access *Quizzes/Surveys* or *My Grades* to view their results.