



Creating and managing assessment questions

Comprehensive guide for designers

For Blackboard Vista 4.x

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Introduction

In the learning management system, creating assessment questions is functionally separated from creating an assessment. Questions are created within the Question Database; assessments are created using the **Assessments** tool. The Question Database is accessed through the **Assessments** tool under the **Course Tools** menu, and is only available in **Build** tab.

You can create questions for the Question Database without actually creating an assessment. You can also create questions at the same time as you create an assessment with the **Assessments** tool through a seamless link to the Question Database. Once questions are added, you then link them to the assessment.

Questions in the Question Database are grouped into categories – when creating a question, a category (new or existing) is usually specified (otherwise, questions are placed in the *Uncategorized Questions* category). Once categorised each question in the Question Database can be linked (i.e. added) to one, or a number of, assessments. Questions can also be deleted from an assessment without losing the questions from the Question Database.

This guide covers the activities involved in creating and managing questions in the Question Database. For information on creating assessments, see the complementary guide: **Creating assessments**.

Types of questions you can create

You can create the following kinds of questions:

- True-False
- Fill-in-the-blank
- Jumbled sentence

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- Matching
- Calculated
- Multiple choice
- Combination multiple choice
- Short answer with one or several correct answer(s), with or without an order specified
- Paragraph.

All but paragraph questions can be automatically marked. Paragraph questions must be marked by the grader – student submissions are accessed in **Teach** tab, under the heading **Instructor Tools >> Assessment Manager**.

You can add images to all question types, and so expand your question options.

All the various types of question can be added from the Question Database to the three forms of assessment – Quiz, Self Test and Survey.

How to create a question

There are two ways to access the Question Database building facility:

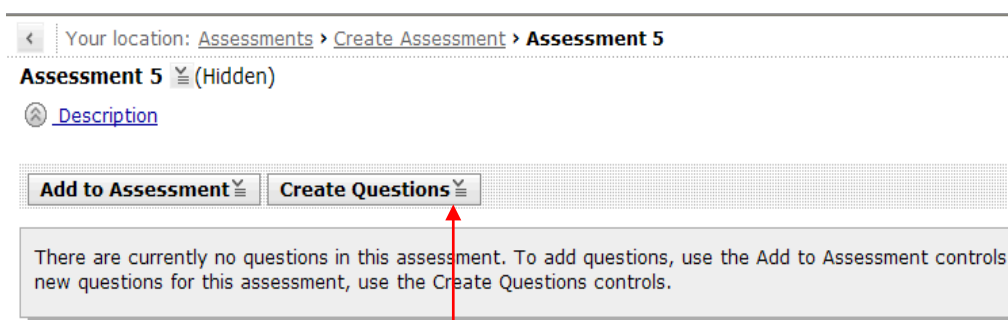
- During the creation of an assessment
- By going straight to the Question Database.


Both options are presented upon selecting the Assessments tool.

Creating questions when creating an assessment

From the **Assessments** screen:

1. Select **Create Assessment** to open the **Create Assessment** screen. Enter a title, adjust other information as necessary, and then click on **Save and Add Questions**. The following prompt appears:

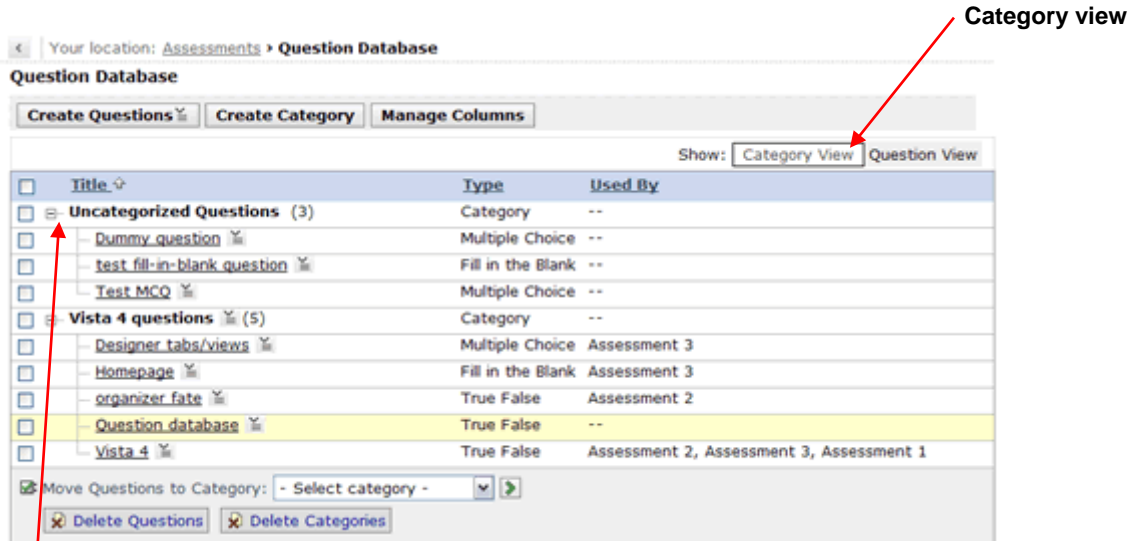


2. Click on the *ActionLinks* icon  next to **Create Questions** and, from the drop-down list, select the type of question you wish to create. The **Create ... Question** screen appears. Complete the relevant information in the field boxes and select appropriate options (see [How to create different question types](#) below).

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Creating questions directly from within the Question Database

- From the **Assessments** tool screen, click on **Go to Question Database ...**, the **Question Database** screen appears, listing the questions in the database. Category View is the default view, listing the questions by category. Question View simply lists all the questions.



- To expand/collapse each category to reveal/hide its question set, toggle the Expand/Collapse icon. Scroll to see any questions not initially visible.
- To create a question, click on **Create Questions** and, from the drop-down list that appears, select the question type. The **Create ... Question** screen appears. Enter the relevant information in the field boxes and select appropriate options as outlined in the next section.

How to create different question types

All forms of question are created from the **Create ... Question** screen.

Many elements of the screen are common across the different question types, and these are covered first. Information specific to particular question types follows.

General tips in entering data for each question type.

Title: The question title identifies the question when searching the Question Database. When students view the question, the question title appears at the top of the question. Therefore keep the title short but precise; e.g. 'Marsupial identification'.

Note: Title is a required field (indicated by the red asterisk).

Question text: Unless you want to use a What-You-See-Is-What-You-Get (WYSIWYG) interface, disable the HTML Creator. Enter text associated with the question.


Insert equation: If you want to insert an equation, select from the drop-down list and then click the **Go** icon . This takes you to the **Equation Editor** screen. You can create an equation using the provided Symbol palette and keyboard. To find out more, click **Help** and go to *Creating and Inserting Equations*.

Image: You can add an image to display with the question.

- Click **Browse** to navigate to the folder containing the image you want.

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2. Select the image and click **Add Selected**.
- 3.

Check this bit

Value (%) fields: You can assign a *percent* value to an answer (e.g. 100% for the one correct answer in a single answer question; 50% each to the two correct answers in a two-answer correct question). The actual points (marks) value for each question (and hence the points value for a particular answer) is assessment-specific and set when creating an assessment. Only percent values are entered into the Question Database, along with other information about the question.

[Questions added to a survey have no assigned points value. However, as all answers have equal weighting, assign 100% to all answers.]

[Under More Options]


General feedback: To provide all students with general feedback for the question, add text here. This general feedback displays when students view their assessment.

Section designer notes: Notes are only visible to the designer.

Category: To add a question to an existing category, select *Specify an existing category* and from the drop-down list, select the category.

To add a question to a new category, select *Create a category*, and in the text box enter a category name (e.g. Australian animals).

Save: Make sure you save the question before exiting the *Create [...] Question* screen. Click **Save**. The *Questions* or *Question Database* screen appears and the question is added to the specified category (or, if not specified, into the *Uncategorized Questions* category).

Preview: Click on the *ActionLinks* icon  for the question item, and select **Preview** to display the question as it will appear to students and check that it grades correctly. (To do the latter, select your answer and click **Grade**.)

True false questions

A true-false question is usually a simple statement that students must judge as either true or false.

From within the Create True False Question screen:

1. Enter the question in the *Question text* box.
2. Under *Answer*, click either the *True* or *False* radio button for the correct response.

Fill in the blank questions

Students are presented with a question containing blank spaces, and must provide the missing text. For each blank, you can specify one or more correct responses.

Within the Create Fill in the Blank Question screen:

1. Enter the question in the *Question text* box. For each blank that you want to appear in the question, enclose the text in square brackets; e.g. night follows [day]

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2. Click **Generate answers**. The *Answers* section appears below the *Questions* section, displaying each answer that you enclosed in square brackets.
3. Assigning a value to each answer: In the *Value (%)* text box, specify the percent value that the answer contributes towards the full marks for the question (e.g. if only one answer, this must be 100%; if two answers required, they may each contribute 50%. Note: the total value of all answers must add up to 100%.)
4. For each answer, select a grading scheme from the drop-down list:
 - *Equals* means the student response should exactly match the answer you entered.
 - *Contains* means the student response should contain words (in no particular order) in the answer you entered.
 - *Regular expression*: to allow PERL regular expression to evaluate students' answers. You need to add the regular expression in the answer text box.
5. To create an alternate answer, click **Create Alternate**. The screen will update with an alternate text box added in the *Answer text* area. Enter the alternate answer in the text box and complete the value (%) and grading scheme as above.
6. In the Settings section:
 - a) From the *Answer box width* drop-down list, select the number of characters that can be entered in the answer boxes.
 - b) Select whether the answer is to be case-sensitive or not by clicking the desired radio button.
7. **Preview and Save**.

Jumbled sentence questions

Students are presented with a portion of a sentence with drop-down lists from which they must select the words that are missing from the sentence and put them in the correct order. [This is particularly useful in language classes where students must identify the correct translated word/phrase.]

From within the *Create Jumbled Question* screen:

1. Enter the question in the *Question text box*. For each word or phrase that you want to jumble, enclose the text in square brackets.

E.g. translate the following sentence into French; 'I love to work online!'
J [aime] [travailler] [avec] [en ligne]!

2. Click on **Generate Answer**. The *Answers* section appears below the *Settings* section, displaying each answer you enclosed in square brackets, in the appropriate order.

Note: If the answer doesn't appear correct and you wish to change it, return to the question text box and edit the answer. Then, click **Update Answer**.

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3. The *Value (%)* is set at a default value of 100% for the correct answer. Edit if desired.
4. If you want to create an alternate answer that uses the same jumbled words but in a different order:
 - i) Click **Create Alternate**. The screen updates to display the alternate answer under the original *Answer* section, with fixed text and drop-down lists containing the jumbled text.
 - ii) From the drop-down lists, select the jumbled words in the order you want them to appear as an alternative.
 - iii) Add a value in the *Value (%)* text box that students will receive for selecting the alternate answer.
 - iv) Repeat the above if further alternate answers are to be given value.
5. **Preview and Save.**

Matching questions

Two lists are presented to students; students must match terms from the first list to the second list.

From within the *Create Matching Question* screen:

Enter the question in the question text box (e.g. 'Match the animal with its method of feeding')

2. In Matching Pairs:

- i) Select the column format. For simple word matches leave the format as **Short Answer** (registered in bold) – the default setting. To enter more wordy text, select **Long Answer** to increase the size of the text box and add a scroll bar.
- ii) Select whether you want the column information to appear in HTML or text (HTML is the default).
- iii) Enter the terms with their correct match.
If you need further fields click on **Create Additional Pairs**.

3. Under Grading scheme:

Equally weighted means each correct match counts the same towards the overall score for the question.

All or nothing means that all pairs must be matched correctly; otherwise zero is recorded.

Right minus wrong means that the value of incorrect responses is subtracted from the value of all correct responses to arrive at the final score for the question.

4. Under Column preview

Preview both columns: Presents the matching pairs to students as two (unmatched) columns first, followed by the first column as fields and the second column as drop-down lists. Example:

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matching question
Match the animal with its method of feeding

| | |
|-----------------|-------------|
| Tasmanian Devil | insectivore |
| Kangaroo | carnivore |
| Bat | frugivore |
| Flying fox | herbivore |

| | |
|-----------------|--|
| Tasmanian Devil | <input type="text" value="- Select choice -"/> |
| Kangaroo | <input type="text" value="- Select choice -"/> |
| Bat | <input type="text" value="- Select choice -"/> |
| Flying fox | <input type="text" value="- Select choice -"/> |

Do not preview columns: Displays only the first column as fields and the second column as drop-down lists.

5. Preview and Save.

Multiple choice questions (with one or multiple correct answers)

In the simplest form of question, students choose one answer as correct from a list of alternate answers (4-5 is the norm).

From within the Create Multiple Choice Question screen:

1. Enter the question stem in the question text box. (The stem is the introductory text prior to the presentation of the alternatives.)
2. Under Answers

a) Select mode

Select *One answer* if there is only one correct answer; select *Multiple answers* if there is more than one correct answer.

b) Enter the alternative answers in the text fields provided.

If only one correct answer, do one of the following:

Click the *Correct response* check box for the correct answer. (This automatically attributes 100% of the value of the question to this alternative, and 0% to all other options)

OR

To give some value to other than the correct answer, enter the values in the *Value (%)* text boxes. (E.g. 50% for a response close to the correct one.)

Note: The correct response must have 100% value.)

If more than one correct answer, do one of the following:

Click the *Correct response* check boxes for all correct answers. (If you have chosen a cumulative grading scheme, this will allocate equal marks for each correct alternative the student identifies.)

OR

Assign values in the *Value (%)* text boxes. One combination of correct answers must add up to 100%. (Only do this for a cumulative grading scheme.)

To provide feedback to students about a specific alternate answer, fill in the *Feedback* text box (e.g. a brief comment explaining why the alternative is incorrect. When students view the assessment (quiz, self test), this feedback displays to the right of the answer.)

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3. Under *Settings*:

a) Answer layout

To make the alternatives appear under each other in a column, select *Vertical* by clicking its radio button.

To make the alternatives appear next to each other from left to right, select *Horizontal*.

b) Answer labels

Select whether the alternate answers should be identified by numbers (1 – X) or letters (a, b, c, etc.).

c) Randomise answer ordering:

To randomise the order of the alternatives and presentation select **Yes**.

To maintain the order of answers as you entered them select **No**.

d) Grading scheme

If there is only one correct answer, you don't need to select a grading scheme. If there are two or more correct answers, select either:

Cumulative to award marks for any correct answer identified.

All or nothing if students must identify all correct answers to obtain any mark.

e) Allow negative score

With this option the marks for a question are deducted from an incorrect choice. (Sometimes used to discourage guessing, but the *No Option* is recommended.)

4. Preview and Save.

Combination questions

Students are first presented with a question or statement and associated list of possible single answers. They then must choose from a following list that contains various combinations of these single answers. You can therefore provide multiple correct answers, and so test a number of concepts simultaneously. Students find this type of question more difficult than the standard multiple choice question, partly because guessing the right answer is harder.

Example:

The screenshot shows a question interface with the following elements and annotations:

- Question stem:** "Placental mammals in the following ways:
 - A. They have a shorter gestation period.
 - B. They give birth to embryonic young.
 - C. They do not suckle their young.
 - D. They have a different lower jaw.
 - E. They have an incomplete division of the heart into 4 chambers.
- Single answers:** A list of the five options (A-E) with checkboxes.
- Single answer combinations:** A list of possible combinations (e.g., "1. A, B, D") with radio buttons.

Red arrows point from text labels to specific parts of the interface:

- "Combination question" points to the question stem.
- "Question stem" points to the text of the question.
- "Single answers" points to the list of options A-E.
- "Single answer combinations" points to the list of combination options.

From within the Create Combination Question screen:

1. Enter the question stem in the *Question* text box. (The stem is the introductory text or lead-in sentence prior to presentation of the list of answers and following answer combinations.)
2. Under *Single Answers*, enter the list of correct/incorrect answers. (All may be correct or incorrect if desired.)
3. Under *Create Answer Combinations*:
 - i) Specify the combination of single answers to be presented to students by clicking the check boxes A -X. To specify 'All of the above' or 'None of the above' combinations, enter the text in the *Other* text box, leaving the single answer checkboxes (A - X) blank.
 - ii) Select *Correct response* for the correct combination.
4. **Preview** and **Save**.

Short answer questions

Four types of short answer question can be created – the one answer question, and three types of multiple answer questions that differ in the way the order of answers is treated.

Answers can be single word, number, or phrase.

From within the Create Short Answer Question screen:

1. Enter the text of the question in the *Question* text box.
2. Under *Answers*:
 - i) Enter the correct answer(s) in the *Answer* text boxes.
 - ii) Specify the percent value for each question. For the single answer question, make it 100%. For multiple answers, the cumulative value of fully correct ones should add up to 100% - e.g. four correct answers at 25% each. Partially correct, or answers close to the mark, can be given a lower value.
 - iii) Select a grading scheme for each answer:
 - *Equals* means the student response must exactly match the answer entered by you to earn a mark
 - *Contains* means the student response must contain the words you entered in the answer box (in no particular order).
 - *Regular expression*: to allow a PERL regular expression to evaluate students' answers. You need to add the regular expression in the answer text box.
 - iv) To specify the order in which multiple answers must appear for maximum score, select from the *Allow in answer box* drop-down list. Note: Choose *All Answers* if the answers can appear in any order.
3. Under *Settings*:

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- i) Next to *Number of answer boxes shown to student*, select from the pull-down list to match the number of answer(s) required.
 - ii) Next to *Answer box width*, select from the pull-down list to accommodate the character length of the answer(s) expected.
 - iii) Select whether answers are to be case-sensitive or not.
4. **Preview and Save.**

Paragraph answers

Students answer in paragraph or essay format. The question must be graded manually by the instructor or teaching assistant.

From within the Create Paragraph Question screen:

1. Enter the text of the question in the *Question* text box.
2. Under *Answer*: If you want to display text in an answer box to aid or orient students (e.g. section headings; Point 1, Point 2 etc.) enter that text in the *Pre-fill answer* text box.
3. Enter your version of the correct response in the text box provided. This answer will display to the student when they view their marked submissions. The correct answer can also be used as a reference when instructors and teaching assistants grade the question.
4. Under *Settings*, specify the size of the answer box that is presented to students using the height and width drop-down lists provided.
5. **Preview and Save.**

Setting marks values for questions

Marks values are set when creating the assessment with the Assessments tool, not when creating the question – see the companion guide *Creating assessments*. All you do when creating a question is give a percent value to each answer specified – see *Value (%)* fields under the section 'General tips in entering data ..' above. The same question may be given different points value in different assessments – but the percent weighting for each answer remains the same.

Editing questions

You make changes to questions within the Question database. You can:

move questions to a different category

edit the text of a question or answer

change the percent value attached to a particular answer(s).

Select the Question Database from the *Assessments* tool screen. The *Question Database* screen appears.

To move a question to another category

In either *Category View* (the default view) or *Question View*:

1. Select the check box for the question you wish to move.

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The screenshot shows a table with columns 'Title' and 'Type'. The table lists several categories and questions. A red arrow points to the 'Equipment bag qualities' question, which is selected. Below the table, a dialog box is open with the title 'Move Questions to Category:'. The dialog has a dropdown menu with 'Investigating questions' selected. A red arrow points to the 'Delete Questions' button.

| <input type="checkbox"/> | Title ↑ | Type ↑ |
|-------------------------------------|------------------------------------|-------------------|
| <input type="checkbox"/> | Analysing survey (7) | Category |
| <input type="checkbox"/> | Investigating questions (3) | Category |
| <input checked="" type="checkbox"/> | Equipment bag qualities | Fill in the Blank |
| <input checked="" type="checkbox"/> | Swiss army knife functions | Matching |
| <input type="checkbox"/> | Tools needed for UFO investigation | Multiple Choice |
| <input type="checkbox"/> | survey (5) | Category |
| <input type="checkbox"/> | UFO propulsion questions (7) | Category |
| <input type="checkbox"/> | Uncategorised Questions (1) | Category |
| <input type="checkbox"/> | Vista 4 questions (2) | Category |

4. From the *Select Category* drop-down list, select the category and click the green *Go* icon

2.

From the *Select Category* drop-down list, select the category and click the green *Go* icon .

5.

To edit a question

In either Category View or Question View:

Click on the title of the question for editing. The question screen opens.

Make the desired changes to text, feedback or answer weighting.

To have the edited version *replace* the old version, click **Save**. To keep the old as well as the new versions, click **Save as New**.

Deleting questions and categories from the question database

Note: Questions deleted from the database cannot be retrieved!

Deleting questions

Select the Question Database from the *Assessments* tool screen and click on *Question View*.

Do one of the following:

To delete a single question: Locate the question under the **Title** column and click on the *ActionLinks* icon next to the question, and select **Delete** from the drop-down list. A confirmation message appears.

To delete multiple questions: Next to each question you want to delete, select the check box. Then click **Delete Questions**. A confirmation message appears.

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To delete all questions: In the table heading row, select the check box. All questions are selected. Click **Delete Questions**. A confirmation message appears.

Click **OK**. The selected questions are deleted.

Deleting question categories

Note: when you delete a category, the category *and all its questions* are deleted.

Select the Question Database from the *Assessments* tool screen and click on *Category View* (if necessary).

Do one of the following:

To delete one or multiple categories: Next to each category you want to delete, select the check box. Then click **Delete Categories**. A confirmation message appears.

To delete all categories: In the table heading row, select the check box. All categories are selected. Click **Delete Categories**. A confirmation message appears.

Click **OK**. The selected categories are deleted.

Importing and exporting questions from the question database

You can export questions from one online course to use in another. When you export questions, the categories the questions belong to, question settings, and any linked images also export. All are bundled as a content package zip file. This zip file is then imported to the destination course. **Note:** This must be done through the *Import* facility under *Manage Course* (see below)– not by the normal file upload process through File Manager.

Exporting questions

Open the Question Database and select the checkboxes next to the questions you wish to export. (To select all questions on a page, select the check box in the table heading row.)

Click on  **Export Questions**. The *Content Browser* pop-up window appears.

Navigate to the location where you want to store the zip file before importing (your current course content folder is fine, or on your computer). In the *Save as* text box, enter a name for the zip file and click **OK**. The *Export Progress* screen appears, listing details of the export in progress. When the export is complete, the *Export Log* screen will appear. The zip file should now be in the location you specified.

Click **Return** to get back to the course entry page.

Importing questions

From the home page in *Build* tab, click on *Manage Course* under the *Designer Tools* menu to open the *Manage Course* screen.

Click **Import**. The *Content Browser* pop-up window appears.

Navigate to the zip file created during the export process (either now on your computer or in the original course) and select it (e.g. by clicking its radio button and clicking **OK** –

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if within the course, or select the file and **Open** if on your computer). The *Content Import in Progress* screen appears, listing details of the import in progress. When complete you can check the Import Log (optional).

Click **Return** to get back to the Course Content home screen. Open the Question Database and check that the questions (and category/categories) have been successfully imported.

References:

Designer and Instructor Reference: Application Pack 2 for Blackboard Learning System – Vista Enterprise License (Release 4) 2006 Blackboard Inc.

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