Respondus Question Types

Multiple Choice

Multiple Choice questions in Respondus allow up to 26 answer choices but only one correct answer can (and must) be selected. You must also provide a point value for each question (the default setting is 1).

Answer choices for multiple choice questions can be randomised during a Brookes VLE quiz by selecting the randomise checkbox located just above the answers list.

With survey files, correct answers and point values cannot be included with multiple choice questions.

True and False

True and False questions are self-explanatory - enter the statement in the question wording field and then select either True or False as the correct answer.

With Survey files, the True and False question type is replaced with a Yes and No question type. However, Yes and No questions are placed in the general Multiple Choice category when published to the Brookes VLE.

Paragraph

Paragraph question types (also known as essay questions) allow students to enter complete sentences or paragraphs for their answer.

If the Enable Feedback option is turned on, a correct answer can be provided. However, these questions must be graded manually in the Brookes VLE.

The paragraph question type includes a pre-fill answer box feature that allows an instructor to enter text that will appear in the answer box when the question is displayed during a quiz. This feature only supports plain text and can be used to provide hints or tips for the student.

Matching

Matching questions require students to match items from two columns. There are two ways to create matching questions in Respondus:

1) The designer may specify matching pairs for both the left and right columns - specifically, the correct match for the left column must be placed in the field immediately to the right. If this procedure is followed, it is not necessary to indicate the correct answer in the small column located at the far left. (Note it is possible to place extra answers in the right column. In this situation, the extra answers act as decoys and do not match any of the answers in the left column.)

2) Items in the right column do not have to match the order of the left column, but the designer needs to indicate the correct answer for the match in the small column located at the far left. This approach is especially suited for questions in which a long list of items is being matched to a relatively short list of items.

Abigail Ball, Digital Services

OXFORD BROOKES UNIVERSITY

In a matching question, the left column will be displayed to the student in the order information was entered. The right column appears as a list of drop-down menus that students can use to select the appropriate match. Answers in the drop-down menus are randomised.

All answer choices are equally weighted with matching questions. So if a question has 10 matches, each match is worth 10%.

There are three choices for grading:

- Proportional to the Number Correct - all answers are equally weighted, without any penalty for incorrect answers. So if a student matches 8 of 10 items correctly, the score would be 80% on that question.
- All Points or None - the student must answer all items correctly in order to receive 100% credit. If any items are missed, no credit is given for the question.
- Right Less Wrong - this option adds up the number of correct answers and then subtracts the number of wrong answers. Hence, if the student answers 8 items correctly and two items incorrectly, the score is 6 (8 correct - 2 incorrect).

Short Answer

Short Answer questions require students to enter a word or short phrase. Since the computer automatically grades the answer, students must give an answer that exactly matches one of the answers provided by the teacher. The standard edit window in Respondus only allows one answer per question.

Respondus allows the designer to provide multiple variants of the correct answer. For instance, if the answer to a question is New York Yankees, the designer might enter each of the following as an acceptable answer:

Yankees
New York
New York Yankees
NY Yankees

Two types of credit can be given for short answer questions. The Equals (exact match) option requires the student to type an exact word or phrase, but ignores capitalisation. The Contains option also requires the user to type an exact word or phrase, but it ignores extra words or characters that appear before or after the answer provided by the instructor (capitalisation is ignored too).

Multiple Response

Respondus provides a separate question type for multiple choice questions that have more than one correct answer. The Multiple Response question type is very similar to Multiple Choice questions, except that students can (and should) select more than one correct answer. (When multiple response questions are transferred to the Brookes VLE, they are placed in the VLE's broader Multiple Choice category.)

Answer choices for multiple response questions can be randomised during a Brookes VLE quiz by selecting the randomise answers checkbox located just above the answers list.

In the column that precedes the answer choices, the letter X should be entered for all correct answers. Brookes VLE will assign equal value to all answers indicated as correct. Thus, if two of four answers are marked as correct, each correct answer will be worth 50% of the point value. If the designer selects three of four answers as being correct, each correct answer will be worth 33.3%.

It is also necessary to select the type of Credit Given for correct and incorrect answers. Respondus offers two choices: Right Less Wrong and All Points or None.

The All Points or None setting is straightforward: if any portion of the answer is wrong, no points will be awarded for the question.

If the Right Less Wrong option is selected, incorrect choices are subtracted from correct choices. For example, if a student accurately selects the two answers out of four that are correct, but additionally selects a third answer that is wrong, she would receive 100% for answering the two questions correctly, minus 50% for the incorrect answer (for a total score of 50%).

It should be noted that the default setting in Respondus prevents the final point value for a question from being negative (thereby preventing a student from losing points for answering the question incorrectly). This setting can be overwritten once questions are published to the Brookes VLE.

Fill in the Blank

The Fill in the Blank question type presents students with questions that contain multiple blank spaces that must be filled in. For example:

> People who live in _____ houses shouldn't throw _____ .

For each blank that you want to appear in the question, you most enclose the correct answer in square brackets. For the above example, the question wording would appear as follows:

> People who live in [glass] houses shouldn't throw [stones].

The words in brackets will automatically be converted to answer blanks when presented to the student. This can also be previewed by clicking the Preview button.

Since the computer automatically grades the answers, students must provide answers that exactly match the answers provided by the teacher. Respondus only allows you to specify one answer per blank. (If you need to specify more than one correct answer for a specific answer blank, you must edit the question in Brookes VLE after it has been uploaded by Respondus.)

Two types of credit can be specified for Fill in the Blank questions. The Equals (exact match) option requires the student to type an exact word or phrase, but ignores capitalisation. The Contains option also requires the user to type an exact word or phrase, but it ignores extra words or characters that appear before or after the answer provided by the instructor (capitalisation is ignored).

Jumbled Sentence

The Jumbled Sentence question type presents students with a sentence in which missing words must be selected from a drop-down list.

To create a Jumbled Sentence question in Respondus, brackets are placed around each word or phrase that is to be included in the drop-down list.

[the rain] [in Spain] falls [mainly] [on the plains]

In this example, the text that appears in square brackets is replaced by drop-down lists which display words or phrases: the rain, in Spain, mainly, on the plains. The student is required to put the words and phrases in the correct order.

Note that only plain text can be used within the square brackets i.e. you cannot place images, equations, web links, HTML blocks, or any type of formatting (e.g. bold, italics) within the brackets.

Calculated

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. Thus, calculated questions can be unique for each student, as illustrated in this example where values are inserted for [x] and [y].

Example: If a car is travelling [x] miles per hour for [y] hours, how far does it travel (in miles)?

The Respondus editor for calculated questions contains the following sections that need to be completed:

- Question Wording
- Formula
- Variable Properties
- Answer Properties
- Value/Answer Sets

Question Wording

In the Question Wording section, enter the text of the question just as you would for any other question type. However, instead of using specific numerical values to define the details of the question, use variables by specifying a name enclosed in square brackets for each one. For example: "How long does it take to travel [x] miles at a speed of [y] mph?"

Variable names can only contain letters and digits (the characters 0-9, a-z, and A-Z), and the _ (underscore) character. In addition, the first character of a variable name cannot be a number.

You can use as many different variables as you need to define the question, and you can use the same variable name multiple times if necessary.

Formula

In the Formula section, enter the mathematical formula associated with the question. This is the same formula that the student will be expected to use, and the same one that will be used to automatically calculate the correct answer for grading purposes. The same variables specified in the question wording will be used to indicate where each value should go in the formula.

The formula can be typed into the edit field directly, or entered by selecting options from the pull-down lists provided for Variables, Functions, Operators, and Constants. Selected options will

appear in the edit field at the current cursor location, and will overwrite the current selection (if any).

Variable Properties

Clicking the Variable Properties button in the Formula section displays the Variable Properties dialogue box. Here, each variable in the question wording and formula is listed by name, along with Minimum, Maximum, and Precision values for that variable.

The Minimum and Maximum define the range of values each variable can be assigned, and the Precision specifies the number of decimal places each value should be allowed before the value is rounded off.

You can click each cell in the grid to edit the specific minimum, maximum, or precision value you want to change (the variable names cannot be edited). In general, for a given variable the minimum must be less than or equal to the maximum, and the precision must be greater than or equal to 0 and less than or equal to 5.

Answer Properties

Clicking the Answer Properties button in the Formula section displays the Answer Properties dialogue box. Here you can specify values for answer precision and acceptable tolerance, as well as a unit name and associated score percentage.

Answer precision can be specified in Decimal Places or Significant Figures. If the precision is specified in decimal places, the value must be greater than or equal to 0 and less than or equal to 5, just as with the precision values specified in the Variable Properties dialogue box. If the precision is specified in significant figures, the minimum value is 1.

Answer tolerance is the amount that the student's answer can deviate from the calculated answer and still be considered correct. It can be specified as a fixed number of units or as a percentage of the answer value.

If you choose to require a unit name, you must enter a unit name and a percentage of the total question score that the correct name will be worth. Comparisons with the name entered by the student will be case insensitive and space insensitive. The score percentage must be greater than or equal to 0 and less than or equal to 100.

Value/Answer Sets

Clicking the Value/Answer Sets button below the Formula section displays the Value/Answer Sets dialogue box. Here you can generate sets of variable values and calculate the associated answers using the formula previously entered. When the Calculated question is presented to the student, one of these value sets will be randomly chosen to populate the variables in the question wording and the formula, and the associated answer will be used to grade the student's response.

The grid displays a list of numbered value/answer sets. The number of sets available can be selected from the Number of Sets pull-down list. For each set, the generated values for each variable are shown, and the individual cells can be clicked to edit those values. Note that any manually-entered values must be within the range specified by the variable minimum and maximum in the Variable Properties dialogue box. The answers cannot be edited. Instead, the Update Answers button can be clicked to recalculate the answers for all value sets.