

Designing Assessments: Common Item Types

Canvas provides many options for designing questions for your assessments of student learning. The table below, developed in collaboration with the Schreyer Institute for Teaching Excellence, and Education Teaching and Learning with Technology, provides some guidance on the appropriateness of particular item types.

- **Constructed response** item types provide students with a prompt and require them to generate an answer. Examples include short answer and essay. Typically, supplied response items are easier to write but harder to score.
- **Selected response** item types provide students with all possible answers and require them to select the correct one. Selected response type items include multiple choice, matching, and true/false and are typically harder to write but easier to score.

Table 1: Pros and Cons of Constructed Response Item Types

Item type	Description	Pros	Cons	Canvas Considerations
Essay	Question followed by a text box; must be manually graded	<ul style="list-style-type: none"> • Excellent for testing higher order thinking • Makes it more difficult to guess • Easy to write, relative to other item types 	<ul style="list-style-type: none"> • Extra steps are required to ensure objectivity, and consistency, in scoring • May put poor writers at a disadvantage • Time consuming to score 	<ul style="list-style-type: none"> • Can be used for Short Answer item types as short answer quiz questions are not available in Canvas • Allows for 16,384 characters to be entered <p>File Upload option:</p> <ul style="list-style-type: none"> • Question followed by a “Choose a File” button; use for PDFs, images, audio/video files • Great for higher order thinking • Can be good proxies for “real world” uses of knowledge • Can be time consuming to develop
Fill in the blank/ Fill in multiple blanks	Question presented as text with blank space(s) for the correct word(s) or phrase to be filled in by the user	<ul style="list-style-type: none"> • Ease of scoring 	<ul style="list-style-type: none"> • If no word bank, test taker must know the one “right answer” • You can enter more than one possible answer to aid in the student needing to know an exact “right answer” 	

Item type	Description	Pros	Cons	Canvas Considerations
Numerical answer	Question followed by an empty text box; answer options include exact answer, a range of answers, or answer with precision	<ul style="list-style-type: none"> Ease of scoring 	<ul style="list-style-type: none"> It can take a while to create items with complex formulas 	<ul style="list-style-type: none"> Flexibility with what the answer can look like Everyone gets the same question
Formula (simple formula or single variable)	Question automatically generated by mathematical formulas and variables	<ul style="list-style-type: none"> Questions and answers are different for each user 	<ul style="list-style-type: none"> Can be difficult to create if formulas are complex Currently some challenges with the math equation editor 	<ul style="list-style-type: none"> Scored automatically by Canvas

Table 2: Pros and Cons of Selected Response Item Types

Item type	Description	Pros	Cons	Canvas Considerations
Multiple choice	Question followed by a list of choices; one selection is allowed	<ul style="list-style-type: none"> Great flexibility in assessing lower- and higher-order thinking Can be used diagnostically to test misconceptions Time-efficient administration Fast and efficient scoring 	<ul style="list-style-type: none"> Difficult to assess affective constructs Challenging and time consuming to write effective questions 	<ul style="list-style-type: none"> Can utilize question banks Can randomize questions Can shuffle answers
Multiple answers	Question followed by a list of choices; multiple selections are allowed	<ul style="list-style-type: none"> Credit can be given for partial correctness Increases amount and nature of content assessed in a single question 	<ul style="list-style-type: none"> Since there is more than one correct answer, students are less able to effectively use an elimination strategy Partial credit calculation can be confusing 	<ul style="list-style-type: none"> Canvas does not indicate that an item requires multiple answers; this must be included in the question text.
Multiple drop-down	Question presented as text with drop-down menus for correct answers to be selected by the user	<ul style="list-style-type: none"> Credit can be given for partial correctness Point calculation is more simple than for multiple answers 	<ul style="list-style-type: none"> Providing options for each blank could make it easier for lower-knowledge students to guess the correct answer 	<ul style="list-style-type: none"> Similar to “Fill in multiple blank” from table 1 Difference is that students select an answer – avoid drop-downs as they are not optimized for accessibility

Item type	Description	Pros	Cons	Canvas Considerations
Matching	List of items and definitions to be matched	<ul style="list-style-type: none"> • Effective when assessing definitions and relationships 	<ul style="list-style-type: none"> • Not well-suited for assessing higher order thinking • Correct matches may be evidence of guessing rather than understanding (Make sure there are more definitions than items) 	
True or false	Statement that is either true or false	<ul style="list-style-type: none"> • Time-efficient administration and scoring • Effective when assessing misconceptions, cause-effect relations 	<ul style="list-style-type: none"> • High probability of students guessing the correct answer 	

[Instructions for creating each quiz question type in Canvas](#)