Blackboard Tests and Quizzes
(Made easier with Excel and Word)
Blackboard Institute 2004
Doug Fisher, University of South Carolina
School of Journalism and Mass Comm.

Why test or quiz through Blackboard?
   Easier to modify without need to print out entire new copies.
   Easier to grade.
   Immediate feedback.
   Convenience of creating pools from which questions can be selected or drawn randomly aids both administration and flexibility.
   Students can take test or quiz when they feel best prepared within the window provided, which can increase learning.
   Free up class time for other things.
   Especially useful for distance learners.

Why not to test or quiz through Blackboard?
   Security concerns.
   Questions or answers not easily put into machine-readable format.
   Need to set strict parameters and protocols, especially if a student gets “kicked off.”
   Need to measure what can be done under strict pressure.
   Initial time investment.
   System remains a bit clunky and very exacting.
   Students do not have network or Internet access.

Blackboard testing might not be for you if ...

♦ You use only the same test questions over and over.
   • You can put in coding to keep the test from being printed out, but once it is filled out and submitted, any feedback can be printed. (That may change.)
   • But what’s to keep last year’s students from selling that test if you’re using the same questions?
     o Solutions:
       ▪ Vary the questions by creating a pool
       ▪ Randomize selection and presentation
       ▪ Present only one question at a time (but students often hit the wrong button and end the test instead of advancing to next question)

♦ You are concerned about collaboration.
   • Nothing to keep students from working together if test administered outside of class
   • Nothing prevents use of reference materials, including the Internet
   • Nothing really prevents substitution of a “ringer” if test administered outside of class
     o Solutions:
       ▪ If computers available, administer in class. At least you save grading time
       ▪ Randomized questions using only a small percentage of your pool for each student (say 20 questions randomly selected from 50 or 100)
       ▪ Tight, but reasonable, time limits
You want only or primarily essay answers.
- Essays require manual grading
- Can be difficult to grade on a computer screen
  - Solutions: There are no really good ones, except to look closely and decide if any of the material might work as solid fill-in-the-blank questions. But a written exam is still best written and graded that way.

**Blackboard testing might be for you if ...**

- You actually want your students to have to read the books and handouts
  - Is the object to develop information seeking behaviors?
  - Especially useful for classes or situations where students need to learn how to look up material and then apply it or discriminate among choices

- Many of your questions work well as fill-in-the-blank, multiple choice, ordering, multiple answer, or true-false
  - The SAT, GRE, LSAT, GMAT all seem to do pretty well with those

- You want to reserve as much class time as possible for lecture and discussion and are not as concerned about testing outside of class

- You want to save grading time while still testing in class (if you are in a computerized classroom)

- You give spot quizzes or tests as you see a need
  - Corollary: You teach in a computerized classroom and want to quickly measure learning.

- You test at regular intervals known to the class, and you want to create as many tests as possible ahead of time and have them automatically appear and announce they are ready to be taken

- You use a textbook that has an accompanying Blackboard-compatible test module

Creating tests is a multiple-step process that involves creating questions, either directly in a test or in a pool from which the test will draw, and then “deploying” the test.
Creating Tests
Tests can be created manually or through pools.

Manually

1. Go to course’s Control Panel and click on Test Manager (it’s best if you open this in a new window or new tab.
2. Click on Add Test (mid-upper left)
3. The next screen asks you to name the test and fill in some information about it. This will help you identify the test when it is part of a list of other tests you have created. Use a descriptive name. Test1, Test2, etc., can turn out not to be useful. You also can enter instructions here, but you can also enter those later when you deploy the test.
4. Click Submit.

Helpful hint: Each box has a bar with options at the bottom. You can select how you want the text in each box treated: Smart Text, Plain Text, or HTML. Smart Text, which behaves like HTML in most cases, is generally the best choice. You can add HTML coding, such as <strong></strong> to make things bold, <u></u> to underline, etc. To the right are square root and division symbols. These are two equation editors you can use, if needed, to insert complicated formulas. The √\(ABC\) is to spell check your entry, and the Preview button will let you see what it will look like. These options are on the bottom of almost every text entry box, including the ones you’ll use to create the actual test questions.

Test Canvas
Once you click Submit, this screen appears.

If you are going to want to add images or files to any questions or answers, or if you want the point value per question to be other than 10, click Creation Settings. Here you can set those and other options. Do not click Creation Settings if you do not need to set any of these. Otherwise you will end up setting parameters on the test that can make it more tedious to change later.
Once you are done, click submit and you go back to the Test Canvas.

Begin entering questions: The Add Question line usually starts with a default type of multiple choice. (Once you have created a question, it defaults to whatever type you just used and must be changed if you want a new type.) If you do not want the type shown, click on the down arrow and a list of choices appears. For now, ignore Random Block, From a Question Pool or Assessment, and Upload Questions. Choose the type you want and click on Go. A screen comes up that lets you enter the question and the correct answers.

- Where it says Question Text, we'll type in:
  The Stooge who was <strong>bald</strong> was:
  (You don’t have to use the <strong></strong>; I just did that so you can see how to emphasize a word or words. When the question is posted, this will produce bald.

- Where it says Point Value: If you have gone into Creation Settings and clicked submit, a default value will be set. If not, you will have to enter a point value here. You also can enter a value different from the default. This blank must be filled in or you will get an error message when you click on Submit.

- Next comes the Answers section and Number of Answers. On multiple choice questions, you’ll always start with four blanks. You can add to that number by going to the pull-down arrow and clicking on the number of answers you desire, if it is more than four. For less than four, you instead must click on one of the remove buttons next to one of the boxes. I removed a box so that now I have three (note that the Number of Answers also shows 3; you can always add through that drop-down list, but never subtract).
  - I’ll put one answer in each box: Larry in the first, Moe in the second, Curly in the third.
    (Note that each box has the ability to add formulas, spell check and preview just that box’s answer.)

- Because Curly is the correct answer, I’ll click on the radio button before Answer 3.

- Next comes Feedback. If all you want is the student to see the correct answer, you can leave these boxes blank. If you want positive feedback for a correct answer, fill in the Correct Response box. If you want to elaborate on why an answer was wrong or point the student to a resource, like a page in the textbook, fill in the Incorrect Response box.
  - In this case, we’ll put “Curly”—get it? In the incorrect response box.

- Click Submit and you’ve created your first question.
If all goes as it is supposed to, once you click Submit, if it is your first question on that test, you will be taken back to the **Test Manager**. Find the test you've just created and click **Modify** to add more questions. If you are on other than the first question, when you click Submit you'll be taken back to the Test Canvas and can add more. Just keep going until you are finished.

You'll notice once you have created questions that there also is a line “Add question here” between each question pair. This is a quick way to insert a question, but you are limited to the type of question immediately preceding. So if the preceding question was multiple choice, you can't for instance, insert a fill in the blank.

### Types of questions

**Multiple choice (MC):** One correct answer. You select how many possible answers you want to create, up to 20.

**True/False (TF):** Just as it sounds. One question, and you select T or F as the answer.

**Multiple answer (MA):** There can be more than one correct answer (often the type of question where you have two or more blanks: *The major daily tabloid newspapers in New York City are ______* You create as many possible answers as you desire (max. 20), correct and incorrect. (See note later about point values.)

**Ordering (ORD):** You provide the question and the answers in the correct order, and the computer scrambles them when it presents them. The student clicks on pulldown boxes next to each answer to determine order. (Max. 20)

**Matching (MAT):** You provide both sets of questions and answers properly matched and the computer scrambles them. (First you fill in the questions; then you fill in the answers in the exact order match the questions.) The number of questions and answers must be the same; no dummy answers. (Max. 20)

**Fill in the blank (FIB):** You provide the question and as many correct answers as you will accept. **Important:** The student's answer must exactly match one of yours. So if there are possible and acceptable variations in spelling or punctuation, you must enter them all. For instance, on one journalism class question I enter Ernest Hollings, Ernest F. Hollings, Fritz Hollings, Ernest “Fritz” Hollings. You can determine how exacting you want to be (for instance, if a student spelled it Earnest, it would be wrong). For now, answers are not case sensitive, but Blackboard has been asked to allow that as an option. The area where the student enters an answer also is limited visually with no way at the moment to enlarge it. The student can keep typing in the box, but it can be disconcerting to overrun the visual area. Blackboard has been asked to make the box resize to the largest possible answer or provide selectable sizing options.

**Essay (ESS):** See earlier note for why this is probably not a good question on Blackboard, unless you are doing distance learning and find it easier to take the material this way than having it written and mailed or e-mailed.
Point values:
With multiple answer, ordering and matching questions, the points assigned to the question will be split equally over the number of answers. So if you have a matching question with six matches and you created it with a point value of 1, then each correct match is worth 1/6, or 0.167. To avoid this, assign a point value equal to multiples of the number of individual items in such questions. Give the six-item matching question a total point value of 6, and then each correct match = 1.

From Question Pools

Pools allow you to enter a question just once and use it in many tests and surveys. Pools also let you select questions randomly, increasing security through a double-random process (questions are selected randomly from the pool and then presented, if you wish, in random order through the test).

Creating a Pool Manually in Blackboard

In the Control Panel, click on Pool Manager. A new screen lists any pools already created. Click on Add Pool. Similar to what you do with a test, name the pool and fill in a description and instructions. Click on Submit to go to the Pool Canvas. Entering questions is the same as in the Test Canvas. Creation Options gives you the same options except a default point value (questions in pools don’t get point values until they are assigned to a test). Once you have created the pool, you are ready to use it in a test.

Uploading Questions to a Pool

Notice that under the Add Question option is one that says Upload Questions. This is for uploading questions you have created offline in a word-processing program following strict formatting requirements. If you choose Upload Questions, you’ll get this screen.

The Browse button allows you to navigate to and click on the file name in your computer. The file should be a generic text file, with a *.txt extension. Files created in MSWord and saved as *.txt work, as do files created in Windows Notepad. For Mac users, I recommend only MSWord. Mac’s TextEdit program often produces errors that prevent proper uploading, no matter what settings are used.
Blackboard quickly uploads the file but then spends much more time processing it. Large files can take several minutes. If an error is encountered, one of two things happens:

1. Processing stops, you get an error message, the pool is not uploaded. You must debug the file. Usually it's because the question-type code you entered does not match up with the number of answers (Putting in MC but then having a true/false question with only one answer, for instance, or not designating the correct answer on an MC question).

2. The pool processes, but you get a message that there was a problem on a particular line. If Blackboard encounters a nonfatal error, it processes all the questions but then alerts you. You need to go into the pool and compare it to your master file. A question may have been dropped.

At the end of this tutorial is a detailed section on using Excel and Word to create pools for upload.

**Selecting Questions from a Pool**

When you create a test, you can input questions directly, you can select questions from a pool, or you can do both. (You also can upload questions directly into a test, but I generally recommend creating a pool first to make sure all the kinks are worked out, and that way you have flexibility.) Before selecting questions from a pool, decide which option you want to use: **Random Block** or **From a Question Pool or Assessment**, where you select the questions you want.

**From a Question Pool or Assessment**

When you select From a Question Pool or Assessment and click Go, you see this screen:

![Search Pools and Assessments](image)

You can select another test to take questions from as well as one of the pools. You also can highlight a test or pool and search for specific types of questions (multiple check marks are OK). If you don’t select anything but click Search, you’ll get all the questions in the pool you highlighted.
Using this next screen, you can check whatever questions you want to bring into the test. You can also preview the question if the line on screen does not give you enough information.

Random Block
If you select Random Block, you'll get a slightly different screen.

This shows only pools and the number of questions in each; you can't select questions randomly from another test. You also specify how many questions to import (to minimize duplication, I suggest no more than 50% of the total in a pool) and how many points per question (this is why questions do not get points when put into a pool). Make sure you specify a point value or you will have to go into the test and add it to each question manually. Ugh.

Hint: If you are going to use random selection, it is best to have only the same point value questions in a pool. MC, FIB and TF questions go together. But MAT, MA and ORD, as noted earlier, often require varying point values to avoid fractional situations. Unless all your MAT, ORD and MA questions have the same point values, they are best selected individually and not randomly.
Deploying Tests

Once a test is created, it cannot be taken until it is “deployed.” To do that, go to the area of your course where you want students to be able to see the test. (I create a Tests area, which also allows me to put general testing instructions at the top of the screen, but you can do it in any learning area.)

Click on the Test button, and a screen comes up asking what test you want to add. (You can create a new test here, but I recommend you do it in the Test Manager instead.) Pick a test, click Submit, and you should get the message “The test was successfully added.” Click OK, and a Modify Test screen comes up. Pick Modify the Test Options. This step is important because the test will not be visible until you check “Do you want to make the link visible?” You also can set when it will be visible, decide whether you want to force completion in one setting, allow multiple attempts, set a time limit, etc. These are all valuable security options.

This is also where you decide whether you want the presentation randomized (this is different than random selection of questions) and whether you want to show the student the entire test at once or just one question at a time. (Though security would seem to favor one at a time, students invariably hit the button that ends the test instead of going to the next question, and you must reset it so that the person can retake it, etc. I also recommend checking the option that launches the test in a separate browser window.)
Test Options

1. Test Information

   Name: BBTest
   Choose Color of Name: [Grayscale]
   Description: test for BB class

   Launch item in external window: [Yes] [No]

2. Test Availability

   Do you want to make the link visible? [Yes] [No]
   Do you want to create an announcement for this Quiz? [Yes] [No]

   Allow multiple attempts: Permit students to take this assessment multiple times.
   Force Completion: Students must complete the assessment the first time it is launched.
   Set time limit: Set the amount of time students have to finish this Test
   Hours: 1
   Minutes: 00

   Display After: [Aug 11 2004 03:30 PM]
   Display Until: [Aug 11 2004 03:30 PM]

   Set password: Require students to enter a password to access this Test

3. Test Feedback

   Feedback Mode:
   - Score only: Only the final score is presented.
   - Detailed Results: The student's answers, whether they are correct, and the final score are presented but not the correct answer.
From this screen you also set the type of feedback students get. If security is a problem, you might want to limit feedback to just which questions were right and wrong and the final score, but for learning’s sake, I usually show the correct answer.

Congratulations. You’ve now created and deployed a test. Now you need to think about the Gradebook and how the results will be weighted, etc. But that’s a different lesson.

THE POWER OF CREATING POOLS OFFLINE
(OR HOW TO MAKE LIFE EASIER WITH WORD AND EXCEL)

The power of creating pools on your computer and then uploading means:

1. Fewer tedious steps per question
2. Easier to get an overall picture of what you’ve done
3. Easier to make mass changes, if needed, or to make other corrections and then upload the pool again
4. Easier to format
5. The pools are portable

We noted earlier that pool files to upload are simply text files that follow very strict formatting rules. So why not just do them in a text editor and skip Excel? Because one of the formatting rules is that all elements must be tab delimited. This seems simple enough, but have you ever hit the tab key only to have the cursor move just a space or two to the next tab stop? That makes it hard to tell if you have things formatted correctly. It’s also much easier, because of Excel’s tabular format, to move around the screen, see what you are doing, and spot errors.

Planning: You’re essentially creating a little database, and as with all such projects, a few minutes of forethought will save many minutes later. Think of how you want your questions grouped. There is no need to create a separate .xls file for each pool. Instead, individual pools can be worksheets within one .xls file. (For instance, I give spelling, acronym and usage tests. I have separate .xls files for each of those types. Then within those workbooks I have separate sheets for each grouping. So my pools, for instance, are worksheets labeled Mil or Sports within the Acrotest.xls file, or A-B, C-D in the Spelltest1.xls file.)
By grouping worksheets in one Excel file, you can do some things, in this case basic formatting, on multiple sheets at once. Here, for instance, are my spelling test pools:

(1) Open a blank Excel workbook.
(2) Decide how many worksheets you’ll need and add any needed (go to Insert/Worksheet or right click in Windows (Mac is Ctrl-Click) on a worksheet tab to find the option).
(3) Rename the sheets as needed (right click on the sheet (Ctrl-Click on Mac) or go to Format-Sheet)
(4) Select all the worksheets. (Right click or Ctrl-click on the first worksheet tab and choose Select All, or you can click-shift-click on the individual tabs. Make sure you start with the first tab.)
(5) Click in the uppermost left header square in the first worksheet (on the picture above, it’s the one with the diamond above 17 and to the left of A). The entire worksheet should highlight.
(6) Go to Format/Cells. Under Number select Text. Under Alignment, click wrap text. This makes the text wrap around a cell instead of spilling over to where you can’t see it. The cell should automatically resize vertically to fit the text.
(7) Click and drag the cell line dividers (vertical) across the top to create cells of the width similar to what you see above. Don’t worry about the side (horizontal) dividers.
(8) Click on cell A1 to turn off the sheet-wide highlighting.
(9) Shift-click on the first worksheet tab to turn off the worksheet grouping.

All the columns in all the worksheets should now match those on the first sheet. All sheets are formatted text only, and all should word wrap within cells. Now you can use all of Excel’s time-saving shortcuts, such as entering a value in one cell and dragging down to duplicate it in others, or tabbing between cells, mass search and replace, etc.

**Column A:** The type of question (see the codes on page 5)
**Column B:** The question. Note you can use HTML (<b> </b> to set something off in bold (or <strong></strong>), <i>/</i> for italic, <u></u> for underline. This translates when uploaded.
**Columns C through ?:** The answers and additional information for Blackboard to translate the line. For instance, with MC (multiple choice) questions, you designate each answer correct or incorrect.
Types of questions and formatting

**True/ False**

| TF | Larry was the Stooges’ leader: | false |

Simple format. Just write the question and tell the computer whether the correct answer is true or false. The machine will create both true and false buttons.

**Multiple Choice**

| MC | The Stooges’ leader was: | Larry | incorrect | Moe | correct | Curly | incorrect |

You must designate the incorrect and correct answers as shown. Failure to have the same number of correct/incorrect as you have answers will bring an error on upload. Up to 20 answers.

**Multiple Answer**

| MA | The two Stooges with hair were: | Larry | correct | Moe | correct | Curly | incorrect |

Same as MC, but can have more than one correct answer. Each correct answer is treated as an equal percentage of the total points assigned (in the case above, each gets 50% of the total). Up to 20 total.

**Fill in Blank**

| FIB | The latest DVD release has angered some Stooges fans because the film is now presented in _________. color | colors |

I’ve accepted color or colors as the correct answer (you can put up to 20). FIB questions should be formed to limit the possible answers. Even then, some student will type the correct answer but leave a space after it, for instance, or put a period, and be marked wrong because the computer looks for exact match. Have clear, strict rules on when students can challenge, or you’ll be bombarded. For instance, if they think they were mismarked, they must e-mail me immediately with the question wording and number, and then I go into the gradebook and review only that question. I don’t accept misspellings. It takes two or three times of giving FIB questions to wring out the possible variations.

**Ordering**

| ORD | Order these James Bond actors from first to last:<b></b> | Connery | Lazenby | Moore | Dalton | Brosnan |

You list them in correct order. Blackboard will randomize when presented to the student. Notice I’ve coded “first to last” so that it is presented in bold to emphasize. Maximum is 20.

**Matching**

| MAT | Match the congressman to the district | Clyburn | 6th | Spratt | 5th | Wilson | 2nd |

You provide the correct matches and Blackboard automatically scrambles on presentation. Up to 20.

**Essay**

| ESS | Compare the humor of the Stooges to that of the James Bond films: sample answer |

You provide the prompt question. The sample answer is optional.

A limitation with uploads: You cannot at this time include feedback, so that must be added manually to all questions once uploaded, or you just provide the correct answer as feedback without comments.
Once you have completed the spreadsheet, save the file as an Excel (*.xls) file. (To make sure it can be used on different machines, make sure it has the *.xls extension.) This will save all the worksheets together. (Windows uses the file extension automatically. In Mac, make sure the "append file extension" box is checked the first time you go File/Save As.)

1. Now we’re going to save each worksheet as a tab-delimited text file. Click on the worksheet to save and go back to File/Save As. But this time click on the arrow next to the file format and go down to Text (Tab delimited).

2. Give the file an understandable name (I combine the overall file name with the tab name, such as SpelltestAB.txt), Make sure the file name ends in .txt. Save it. You'll likely get a warning message about this format not accepting multiple worksheets, etc. Ignore it. Do this for each of the worksheets. Then close the Excel file. DO NOT resave it.

3. Go into MSWord and open that .txt file. You'll likely get another warning message that the original was created in Excel. Ignore it and open the file. It will look something like this:

You can see why doing this in Word alone could get confusing. Now, we clean the file for upload.

Blackboard Tests and Surveys
Doug Fisher, School of Journalism and Mass Comm.
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When Excel converts to a text file, it puts quote marks around any entry that has a comma in it. We want to get rid of those quotes, but not get rid of entries where we might legitimately want quote marks. Excel sometimes also throws extra tabs onto the end of lines (beats me why), and we want to make sure all the tabs are really tabs, not spaces. So we do a bunch of search and replaces. Here’s how I do them in order:

1. S/R: “” to @ -- This take the cases where there might be legit quote marks we want to keep paired with a quote mark Excel added and converts those to @ for now so we can do the next step.
2. S/R: “ to nothing -- This eliminates all the single quotes Excel put in because of a comma.
3. S/R: @ to “ -- This restores all the single quotes where we want them.
4. S/R: ^t to # -- ^t is the symbol for a tab. We convert all tabs to # (you can pick another character if you like). This lets us quickly scan to make sure all the tabs are in place and count the maximum number of tabs, if any, that Excel has dumped on the end of the lines.
5. If there are excess tabs, I do an S/R for one more than I can see and then iterate downward. So if I see #### at the end of a line, I’ll start with S/R ####### to nothing, S/R ###### to nothing, S/R ##### to nothing, S/R ### to nothing. DO NOT do S/R # to nothing or you will lose all your tab stops and have to restart by resaving the Excel file as tab delimited.
6. Give the Word screen another look to see if it appears you’ve got all the tabs out except for single # cases. Make sure there is a # between each of the major elements, not a space.
7. S/R # to ^t -- This restores all the tabs.
8. Store the file back under the .txt name you gave it, and it’s ready to upload (see the instructions beginning on page 6).

Surveys

Perhaps you want to measure student attitudes toward some aspect of class, or to some outside stimulus. Blackboard enables you to do that through surveys, which are similar to tests, except there are no correct answers.

To start a survey, click on Survey Manager in the control panel. You’ll see screens that look just like the Test Canvas. The questions are the same type, too, only there is no way to select a correct answer. You just fill in the options. You also can upload pools of survey questions. Pools for surveys must follow the same form as for test questions, including correct/incorrect answers. Those are ignored once the question is imported into a survey.

Probably the most common type of question used in surveys is multiple choice, because it allows creation of a range of variable types, from Likert-type scales to dichotomous measures.

Results are not reported by student, but are aggregated and reported through the Gradebook on the Item Detailed Statistics page. Like tests, surveys must be deployed in a course content area before they can be taken.

Other hints

- Tell students using a dial-up connection to turn off call waiting (usually by dialing *70 before dialing the phone number to their internet service provider).
- Tell students NOT to use AOL’s Web browser. Minimize the AOL window once connected and use Internet Explorer or Netscape (or another Mozilla-type browser) to log on to Blackboard.
- To help prevent printing the test, manually put in a first question and include this line of code: