



Common Inquiry:

How do I grade and report student responses?

H-ITT CRS gives you many methods to grade and report student performance based on their clicker responses to questions. Grading and reporting these data depends on what you are using the H-ITT System for.

Section 1: Grading

There are basically two ways to “grade” based on how you use the system:

1. The [points based grading](#) is used to enhance student involvement and will promote attendance, preparedness and class participation. Using the points method you do not necessarily need to “grade” questions you ask; points are given for just participating.
2. The [percentage based grading](#) is typically used where you want to give a letter or percent grade to students based on a specific test or quiz you give. And where there are right/wrong gradable answers you need to assign correct answer(s) for the questions.

Grading the question, or rather assigning a correct answer to a question you pose can be done before, during, or after the question is asked.

1. Assigning a correct answer before you deliver the question(s) requires that you have pre-made the questions, which is typical for tests and quizzes. There are 2 ways you can do this based on how you deliver the questions to your students:

- A. If you give a paper based test or quiz, you can create an “answer key” (see below about the answer key) along with it and apply this to the test or quiz from the Analyzers Answer key window, click on the Key icon button, and browse to and open your answer key.
- B. If you want to display the content to your class with a computer projector you can use Qgen2 to pre-author the questions with the correct answer(s).

2. Assigning a correct answer during the time you are asking the question is done in Acquisition. You can use your computer keyboard or your instructors remote to do this, and can be done during the questioning (answer along with the students), or when the histogram for that question is displayed.

3. Assigning a correct answer after or modifying correct answers from an Acquisition session can be done in Analyzer from the answer key window in two ways: You can create/modify and apply an answer key to a class file at anytime, or you can use the question grader to modify/assign correct answers to specific question plus modify the individual question/answers points values.

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About the Answer key: It is either a plain text or csv spreadsheet.

An example of an "answer_key.txt" file (answer key for a class file set of 4 questions) is:

1,C	MC type: C is the correct answer for question 1
2,A,3	MC type: A and C are correct answers for question 2
3,12.5	MD type: 12.5 is the correct answer for question 3
4,12.5,12.50	MD type: 12.5 and 12.50 are correct answers for question 4

An example of "answers.csv" spreadsheet file created in Excel

1	C		
2	A	3	
3	12.5		
4	12.5	12.50	

Same Answer key shown above (i.e. C is correct answer for Q1, etc), created in MS Excel, and saved as a CSV file.

Viewing and editing your grading is done from the Analyzer, Answer Key window.

In this example there were 3 Acquisition sessions where questions were asked

Click here to load an answer key for this class (question set)

Click the question number to bring up the question grader.
Or access the question grader by clicking the correct answer.

Class	Question	Responses	Correct Answer(s)	Points	Average Points	YTD Points
1 Fri 25 Sep 09 10:17 AM	1	5(3,2)	B	3	2.20	3
	2	5(4,1)	D	3	2.60	6
	3	5(3,2)	C	3	2.20	9
	4	5(3,2)	C	3	2.20	12
	5	5(5,0)	A,B	3	3.00	15
Class Total:				15	12.20	
2 Fri 25 Sep 09 10:19 AM	1	5(5,0)	12	3	3.00	18
	2	5(3,2)	45,2	3	2.20	21
	3	5(5,0)	213	3	3.00	24
Class Total:				9	8.20	
3 Fri 25 Sep 09 10:22 AM	1	5(0,5)	{empty}	1	1.00	25
	2	5(0,5)	{empty}	1	1.00	26
	3	5(0,5)	{empty}	1	1.00	27
Class Total:				3	3.00	
Course Total:				27	23.40	

About Point based grading and participation factors:

With the points system students are awarded points for both participation and achievements. The Analyzer is your gradebook and keeps a running total for each student throughout the semester. This running total of points earned vs. total points available are shown in the Analyzer>Students points window.

The point values are based on if the questions asked have a correct answer or not. The following describes the default point values for both cases. (Note that you can assign any points values you want from the Options>Answer Key pallet)

When the question does not have a correct answer it is worth 1 point, and any answer from a student is given 1 point, no answer gets 0 points.

When the question has a correct answer it is worth 3 points, and awarded as: 3 points if the student answers correctly, one point if they answer it incorrect, and 0 points for no answer.

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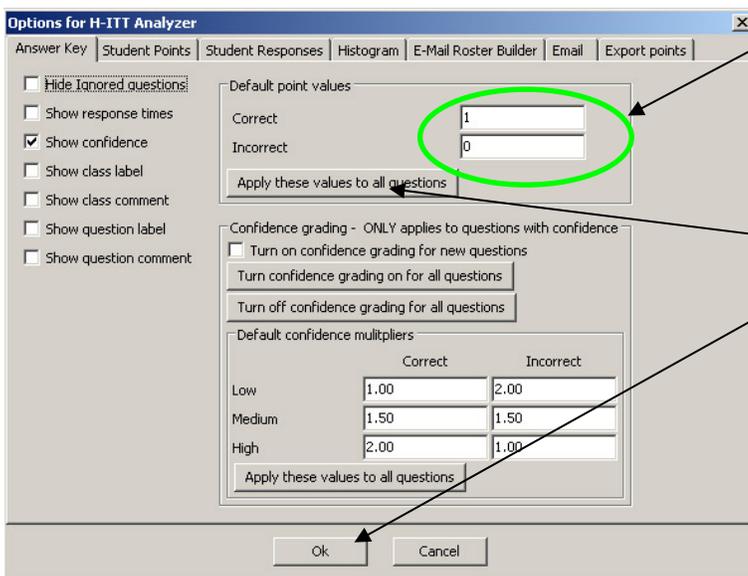
This “points system” has proven very effective in promoting student involvement and grades, however the effectiveness is directly related to how much this “participation” factor will apply to their final grade in the class.

Which brings up the question “what portion of the students grades should you give for participation?” If you already include a participation factor in grades, then it’s easy, but you may want to adjust it since every student can participate. If you don’t include a participation factor in your current grading scheme, you will be amazed at how much student performance will increase when it’s included, and they know they are accountable on a daily basis.

Some typical participation factors account for between 5% and 50% of the student’s final grade. As with most grading principals you can “slope” the results so the highest scores are “A or B”, and the lowest are “D or F”. The Analyzer provides tools to do this by dropping the lowest X number of questions, which selectively does this for each individual student. As you adjust or slope the grades you can see the overall average results from the Answer key window, or see individual scores from the Student Points window. Both areas provide you the insight to appropriately slope grading to apply a fair participation factor to each student.

About Percentage based grading:

For percentage grades, change the global points values to 1 point for a correct answer, and 0 points for or an incorrect (or no) answer from the Options>Answer Key pull down menu.



Enter the point values:

1 point for a correct answer
0 for an incorrect or no answer

Click on Apply these values to all questions

Click OK

Now every question is worth 1 point, so if you ask 10 questions, and a student gets 9 correct, the grade will be 90%, and is shown in the Student Points window as both decimal and in percentage forms.

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Section 2: Reporting

There are many options available for reporting student's scores depending on what you want to report, and how you want to report it.

Select what you want to report:

You select the class, or classes that you want to report from the Answer key in Analyzer, by clicking the GRADE button.

When the button is red the class is excluded from being reported, and when it's green, the questions in the class will be included in the report.

In the example to the right, only the first class grades will be included in the report.

Class	Question	Responses	Correct Answer(s)	Points	Average Points	YTD Points
1 Fri 25 Sep 09 10:17 AM Edit key Grade	1	5(3,2)	B	3	2.20	3
	2	5(4,1)	D	3	2.60	6
	3	5(3,2)	C	3	2.20	9
	4	5(3,2)	C	3	2.20	12
	5	5(5,0)	A,B	3	3.00	15
Class Total:				15	12.20	
2 Fri 25 Sep 09 10:19 AM Edit key Grade						
3 Questions in this class. Enable grading						
3 Fri 25 Sep 09 10:22 AM Edit key Grade						
3 Questions in this class. Enable grading						
Course Total:				15	12.20	

Once you have selected the classes that you want to report, view the student's grades from the Student Points window.

In the example to the right the students grades for the single class #1 above is shown.

To see any student's individual performance, click on the student's name.

Sort grades, highest to lowest or vice versa, click on the blue Total Points text.

Exporting the grades

Clicking on the Export to file link, brings up a browser where you can name and save the export. Also you can choose either a text format or a csv (spreadsheet) format.

#	Name	Raw	Max	Percent	Fraction
1	Mary Smith	11	15	73.3%	0.733
2	John Doe	13	15	86.7%	0.867
3	Mike Thomas	11	15	73.3%	0.733
4	Bill Williams	15	15	100.0%	1.000
5	Jane Doe	11	15	73.3%	0.733
Max Possible Points		15	15	100.0%	1.000
Max Score		15.00		100.00%	1.000
Min Score		11.00		73.33%	0.733
Mean Score		12.20		81.33%	0.813
Standard Deviation		1.60		10.67%	0.107

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Clicking the export to clipboard saves this same information to your clip board that you can paste into any program that accepts the paste function.

The Options>Student Points pallet lets you set up what you want to see in this answer key window, and can expand to show points and grades by question and or by class.

John Doe	13	15	86.70%	0.867
Mike Thomas	11	15	73.30%	0.733
Bill Williams	15	15	100.00%	1
Jane Doe	11	15	73.30%	0.733
Max Possible Points	15	15	100.00%	1

The example spreadsheet to the right shows the default export format.

Set up the grades report for your needs:

The Options>Export Points pallet lets you set up your grade report to include various items in the exported report. This is useful to set up the grades export to match the information needed for import into many standard gradebook applications.

Checking here adds the column description header.

Clicking here enables various columns of information (under Columns – display options) you may want to include.

If you choose WebCT/Blackboard, the grades export’s first column will be the students WebCT/Blackboard ID number. Note that your roster must include this ID number for each student.

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