




How To

Effectively Use the Response Chart

The Response Chart provides real time visual feedback when you ask a Question during a Response Session. You can immediately evaluate your students' understanding of the material being tested with this powerful assessment tool. Students benefit as well from being able to see where they stand with respect to the class as a whole.

The Response Chart tools make it possible for you to:

- Edit the Question's properties settings on the spot
- Show the Session Data window where you can view the live Session raw data as it is collected, as well as the Questions and their Response Charts, the Answer Key and students' Marks
- Change the chart display, choosing from vertical chart, horizontal chart, pie chart, or histogram for *Numeric Question Types*
- Change how the response choice values are displayed as either bin values, top five values, or all values
- Change the chart preferences
- Slice the data of two Questions
- Compare the answer data of two Questions side-by-side
- View the context-sensitive help for the Response Chart

During the Session, you have access to the *Session Preferences* tool. In the *Session Preferences* dialog, *Automation* section, you can choose to automatically show the Response Chart after the Question Timer expires or you stop it, or you can turn the option off by clearing the checkbox. If you turn off the automatic display of the Response Chart, it will display only when you click on the *Show Response Chart* tool  on the *Session Toolbar*. Even when you elect not to show the Response Chart, it is saved with the collected responses and the other Session data in your Response Database. You can review the Response Chart in the *Session Data* window any time and use the Response Chart tools to affect the data display.



Response Charts are not compiled for Self-Paced Sessions or for Homework Collection Sessions.


Additional settings pertaining to the colors and fonts used on the Response Chart display are established in the *Global Preferences Wizard*. Global Preferences are accessed from the *Edit Menu* in the *Manage My Data* window and from the *Session Preferences* dialog.

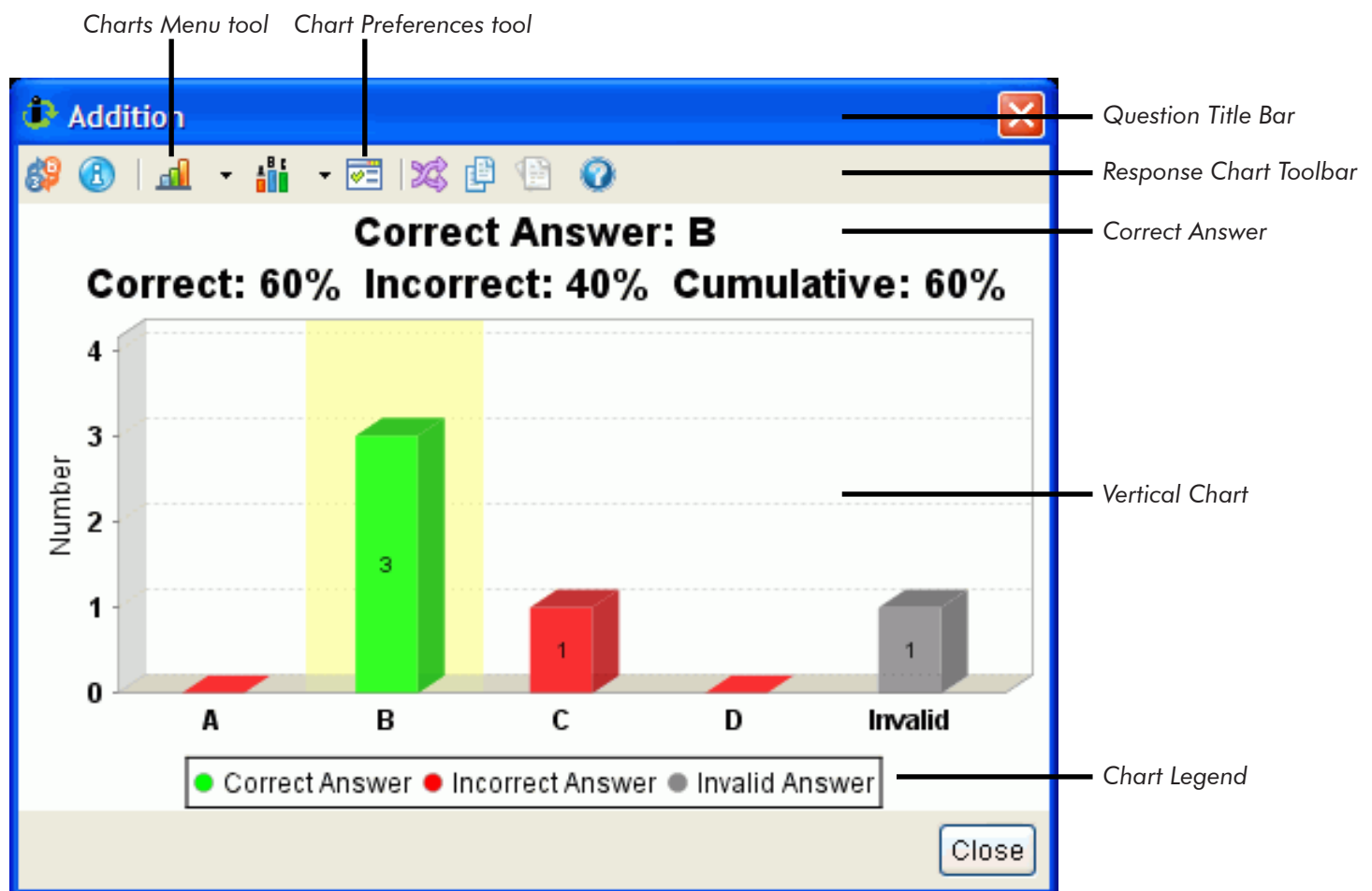




The Response Chart

Let's look at a sample Response Chart. The name of the Question appears in the window's Title Bar. Below that the Response Chart tools are laid out on the **Response Chart Toolbar**. The correct answer is displayed by default along with the percentage of correct answers versus incorrect answers and the cumulative percentage of correct answers over the course of the Session. These values can be hid-

den by clearing the *Show Correct Answer* checkbox on the **Chart Preferences** dialog. The default graph display is a vertical chart. You can change the chart display by clicking on the **Charts Menu** tool  and making a selection from the drop-down menu. The **Chart Legend** is below the chart. You can hide it by clearing the *Show Chart Legend* checkbox on the **Chart Preferences** dialog.











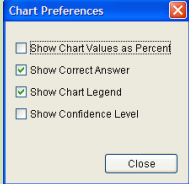






Sample Response Chart




The Response Chart Toolbar

Each of the tools on the Response Chart Toolbar is described below.

Tool	Description
	The Edit Question Properties tool displays the Edit Question Properties dialog, where you can edit the properties settings for this Question, including the Correct Answer, Partial Credit, Points awarded for a correct answer, and the associated state standards, if any, to which the Question is aligned.
	The Show Session Data Window tool displays the Session Data window, where you can review live Session data as it is collected.
   	The Charts Menu lists the charting tools for displaying the Response Chart. Select from among a vertical chart display, a horizontal chart display, a pie chart display, or a histogram display. Keep in mind that the Histogram chart is available as a charting option only when the Question's Type is <i>Numeric</i> .
  	<p>The options on the Values Menu control how the values of the answers to the Question are displayed.</p> <ul style="list-style-type: none"> • All Values tool: Show all the Response Choices or Response Choice Sets along the X axis. This is the default Values view. • Top 5 Values tool: Show the top five most frequent answers to the Question. • Bin Values tool: Show how the individual answers to a <i>Multiple Correct/Multiple Choice</i> Question are distributed. This menu option shows the frequency of each individual correct Choice in a bin in the Response Chart. This option is available only for <i>Multiple Correct/Multiple Choice</i> Question Types.
	 <p>The Chart Preferences tool displays this dialog, where you can change the way the options listed here are displayed (or not displayed) on the Response Chart.</p>
  	<p>The Slice Question Data and Compare Data tools provide two different ways of displaying Questions for comparison.</p> <ul style="list-style-type: none"> • Click on the Slice Question Data tool when you want to see a cross section of the data in this Question and the data in another Question. Select the second Question from the popup dialog that displays when you click on this tool. Click on the Return to Original Question tool when you have finished viewing the sliced data. • Click on the Compare Data tool when you want to do a side-by-side comparison between the current Question and a second Question you select from the popup dialog. Click on the Return to Original Question tool when you have finished viewing the comparison. • Use the Return to Original Question tool to return to a display of the current Question after you have compared it with another Question, or set up a data slice.
	Click on the Charts Help tool to display the context-sensitive Help for the Response Chart.

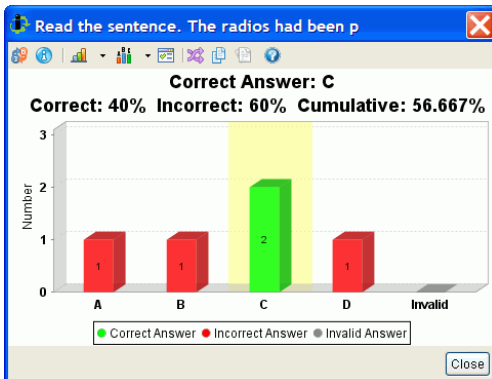



Edit Question Properties Tool

Click on the **Edit Question Properties** tool  to display this dialog. Question Properties are usually assigned when the Question is created, either in the **Question Editor** when a Question is crafted for a *Response Lesson*, or in PowerPoint when a slide in a lecture is turned into a Response Question slide. Question Properties can also be assigned to an **Impromptu Question** before it is presented during a Session.

Why would you want to edit those Question Properties when you are viewing the Response Chart? What if you just presented an Impromptu Question for which you did not provide the **Correct Answer**? You can indicate the Correct Answer using this Response Chart tool and your Response Chart will be recompiled to show the Correct Answer indicated. You can also change the **Points** awarded for a Correct Answer, assign **Partial Credit** to an incorrect answer and review, add, or change the standards aligned to the Question. Associating a Question with a state standard and assigning partial credit are discussed in *How To Manage Your Data*.

Show Session Data Window Tool




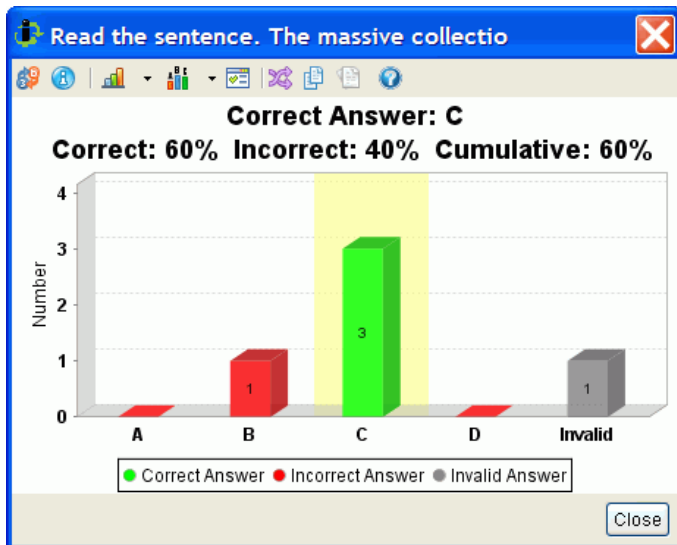
You can actually view live Session data while you are running the Session. How cool is that? Suppose the Response Chart, like the sample chart to the left, indicated that over half the Class got the answer wrong, and you wanted to see the details for this Question. You would just click on the **Show Session Data Window** tool  to display the **Session Data** window. Select the Question in the **Questions** pane to view the Response Chart in the **Charts** pane and the response data for the Question in the **Responses** pane.

Alert	Clicker ID	Response	Correct	Time	Attempts	Name	Clicker Type
	F87A0C	C	✓	00:04:504	1	Jones,Johnny	PRG RF
	D86550	B	✗	00:15:453	1	Jones,Mary	PRG RF
	D06681	C	✓	00:11:640	1	Brown,Osay IV	PRG RF
	37EE5C	D	✗	00:20:093	1	Wardlaw,Mary	PRG RF
	F67EE3	A	✗	00:09:421	1	Smith,Larry	PRG RF

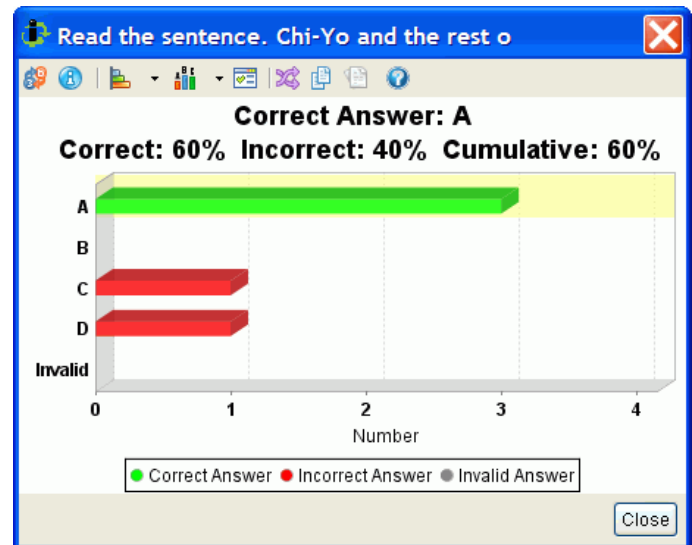


Chart Types

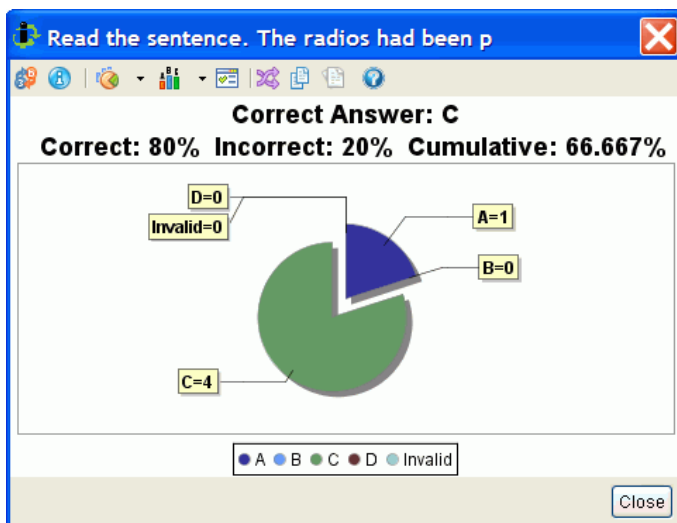
You can view the Response data in a variety of chart types. Click on the **Charts Menu** tool  to select the chart that would display the response data to best advantage. The only time the Histogram is available as a charting option is when a *Numeric Question Type* has been asked. Examples of each chart type are shown below.



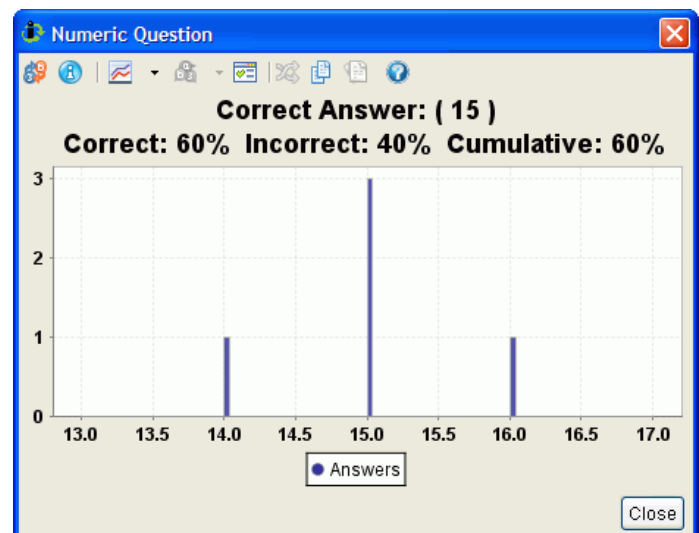
Vertical Chart



Horizontal Chart



Pie Chart



Histogram

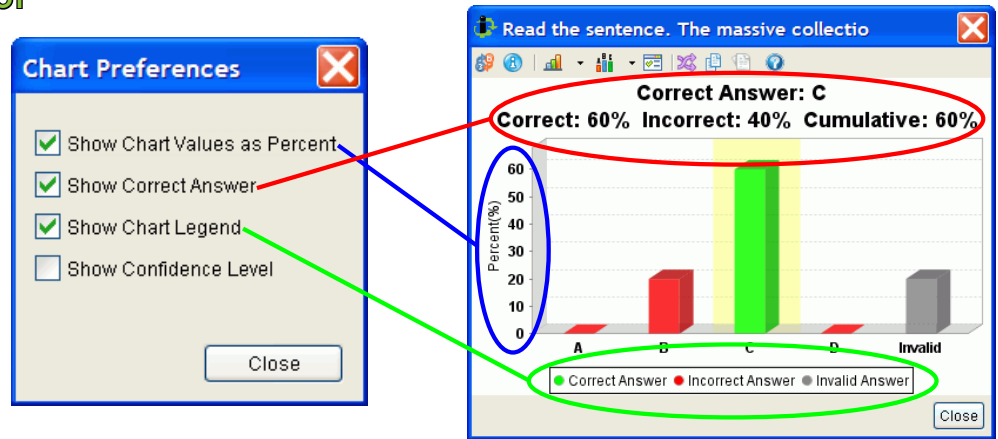


Response Chart Appearance

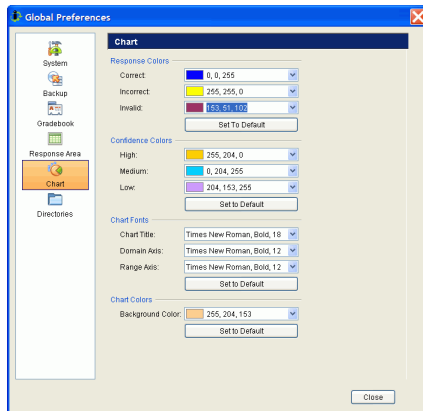
There are a number of ways you can affect the appearance of the Response Chart – the **Chart Preferences** tool on the **Response Chart Toolbar**, the **Chart** screen in the **Global Preferences Wizard**, and the **Session Preferences** tool on the **Session Toolbar**.

The Chart Preferences Tool

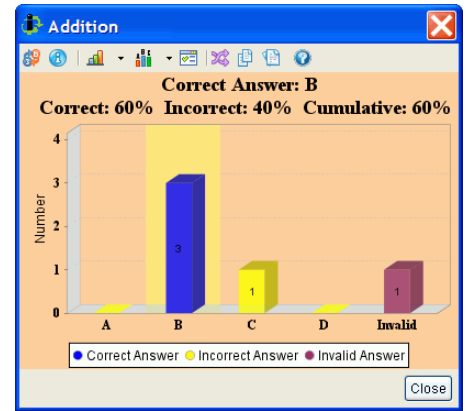
This tool determines what information is displayed on the Response Chart. By default, the Correct Answer and Chart Legend are displayed. The sample chart here shows what the Response Chart looks like with the *Show Chart Values as Percent* option checked.




The Global Preferences Chart Screen



As described in *How To Navigate the Response Interface*, you can change a number of color and font settings in the **Chart** section of the **Global Preferences Wizard**. The screen shot on the left shows the color changes that were made to the **Chart Legend** and the chart background and the font changes for the **Correct Answer** and the **X** and **Y** Axis text. The sample Response Chart on the right shows the effect of the settings changes. You would click on the **Set To Default** button to return the settings to their default values.




The Session Preferences Setting

The setting on the Session Preferences dialog that affects the Response Chart can be found in the **Automation** section. By default, the Response Chart automatically displays either when the Question Timer has expired, or when you stop the Timer. If you clear the checkbox for this Automation setting, the only way the Response Chart will display is if you click on the **Show Chart** tool  on the **Session Toolbar**.



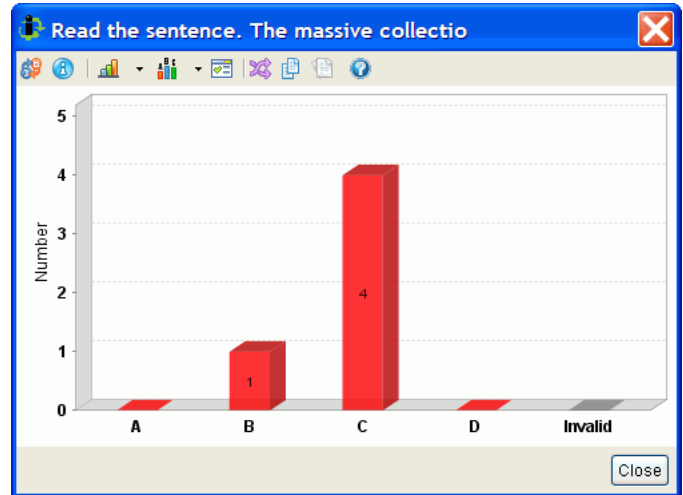
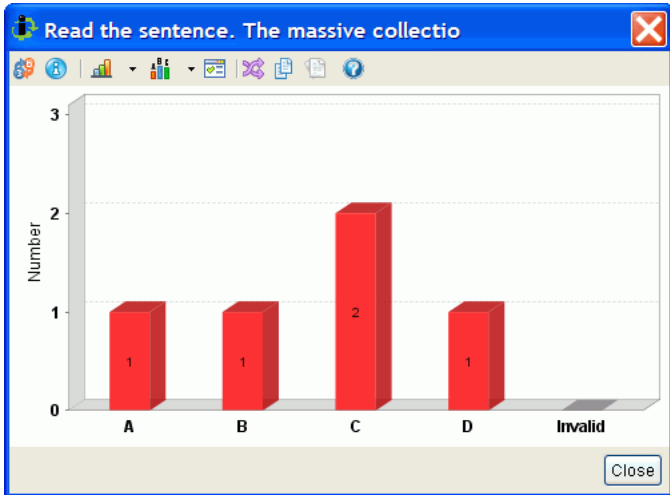


Compare Data Tool

The Compare Data tool  makes it easy for you to do side-by-side comparisons of your Session data. You can compare Question results during the Session, as well as when you are reviewing Session data in the Session Data window (see *How To Manage Your Data*). This tool is available in both places.

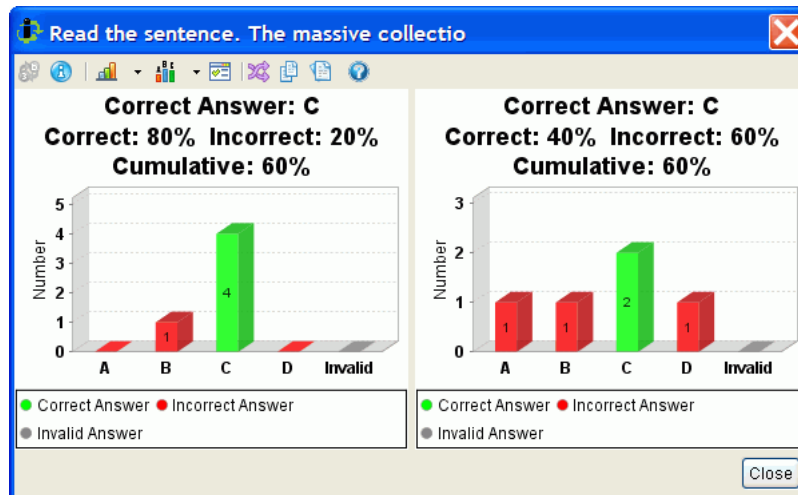
The sample Response Charts shown below demonstrate one scenario where you would want to compare Questions. You ask a Question during the Session and the results


indicate that 60% of your students answered incorrectly. So, you have a discussion about the material covered in the Question, then re-ask the Question. After the students have sent their responses, you would click on the Compare Data tool on the Response Chart Toolbar, select the first instance of the Question to compare the current Question to, and click on the OK button. The two Response Charts appear side-by-side, so you and your students can evaluate the outcome.



The Response Chart for the first instance of the Question is displayed without the Correct Answer and answer statistics and the Chart Legend, so students will not see what the Correct Answer is. All that is shown is the distribution of the answers to the Question.

After the discussion about the material covered in the Question, the Question is presented to the Class again. This Response Chart is also displayed without the Correct Answer and the Chart Legend.




Now you are ready to compare the results of the two instances of the same Question. Click on the **Compare Data** tool, select the first instance of the Question. The first Question Response Chart is displayed next to that of the current Question. The Correct Answer and Chart Legends are displayed for both charts. Click on the **Return to Original Question** tool  to return to the display of the current Question's Response Chart.




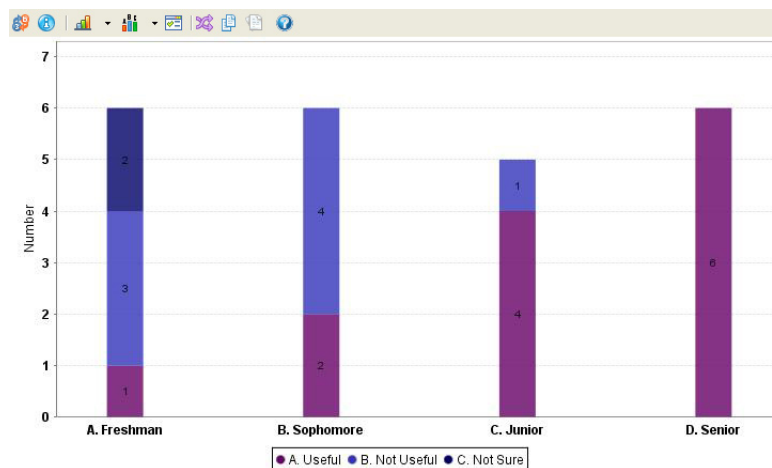
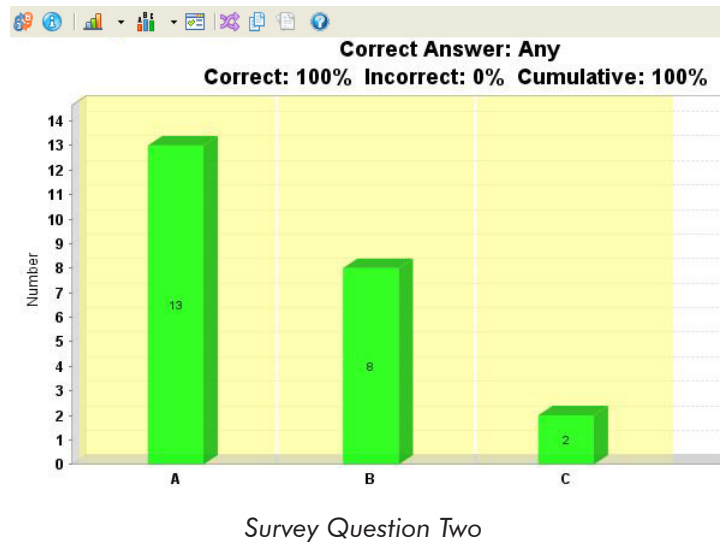
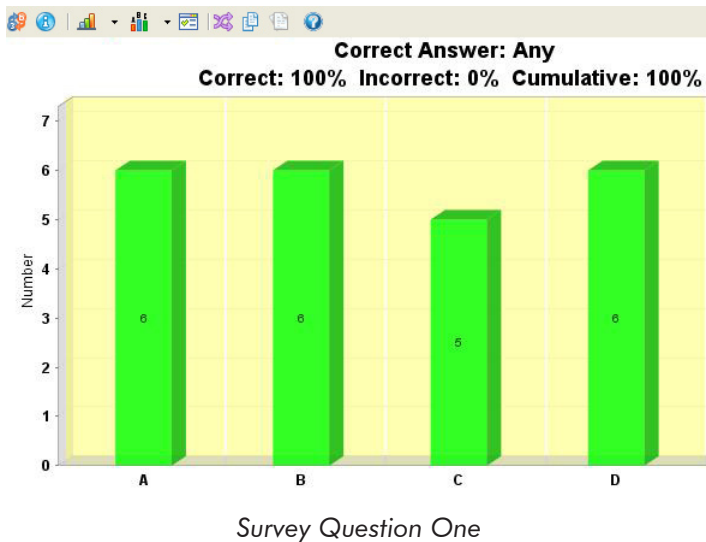


Slice Data Tool

The Slice Data tool  allows you to slice the data from two Questions and view a cross section of it. This is another way of comparing the results of two Questions. The trick here is to pose two Questions that lend themselves to this type of comparison.

In the example scenario shown below, the first Question was a Survey Question Type, which asked what year the

student was in. *Freshman, Sophomore, Junior, and Senior* were the choices. The second Survey Question asked *What is your opinion of the use of clickers in the classroom?* The response choices were: *Useful, Not Useful, and Not Sure*. The bottom chart shows how the responses compared when the data from the two Questions was sliced. The Return to Original Question tool  will redisplay the current Question in the Response Chart.



Sliced Data comparison of Questions One and Two