DEVELOPING CLICKER QUESTIONS

In the following examples, Professor Robert Brym illustrates how to integrate clicker questions into lecture content. Using material from a Sociology 101 lecture, Professor Brym unpacks three different strategies of clicker questions with an accompanying explanation of how to include audience responses.

Kinds of Clicker Questions

Attitudinal
What is your opinion? How does it compare to the opinion of others? Why is it similar to/different from the opinion of others?

Behavioural
How do you act? How does your action compare to the action of others? Why is it similar to/different from the action of others?

Application
To what degree can you use your knowledge to solve a problem?
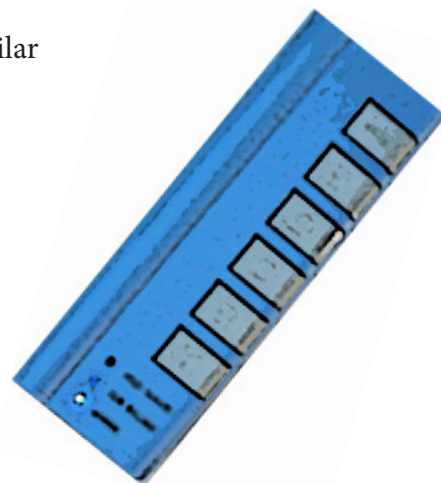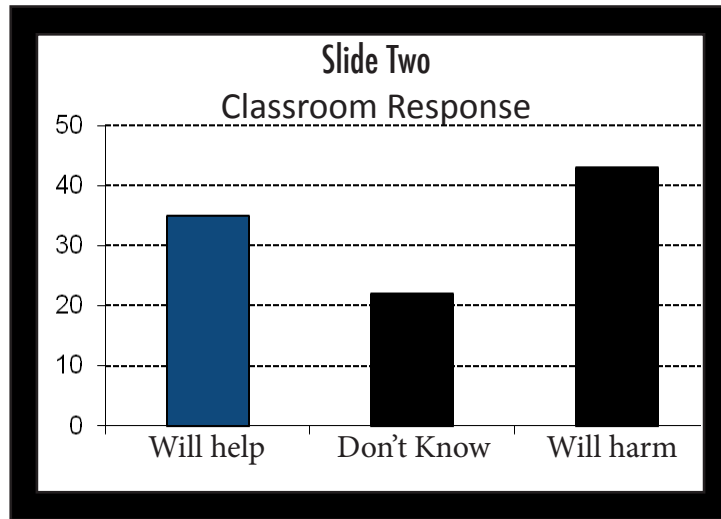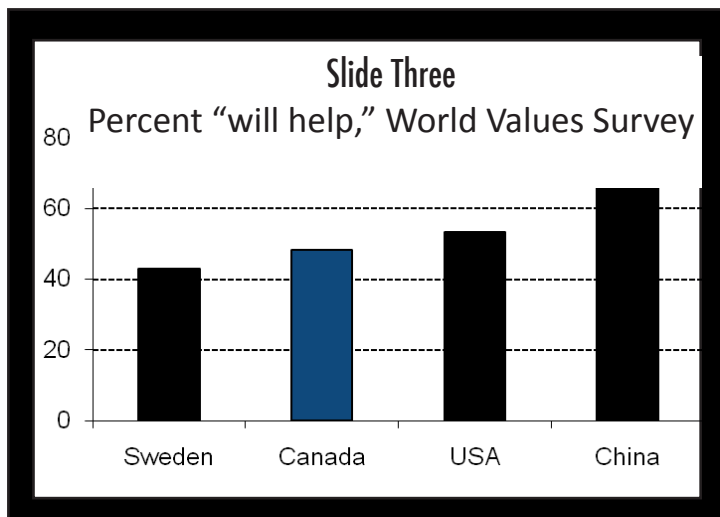
Attitudinal Questions

Explanation:
The attitudinal question in slide 1 elicited the classroom response in slide 2. The instructor then showed responses to the same question from representative national surveys in four countries (slide 3) and asked students a series of questions (listed in slide 4) requiring them to interpret slides 2 and 3.

Slide One
Clicker Question

In the long run, do you think the scientific advances we are making will help or harm humankind?

A. Will help
B. Don't Know
C. Will harm

Slide Two
Classroom Response

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Slide Three
Percent "will help," World Values Survey

Bar chart showing percentages for Sweden, Canada, USA, China (y-axis 0 to 80)

Slide Four
Discussion Questions
1. Why do a minority of students think scientific advances will help humankind?
2. Why is the percentage of "will help" students smaller than the percentage of "will help" Canadians?
3. Why is the percentage of "will help" Canadians smaller than the corresponding percentage for some countries and larger than the corresponding percentage for other countries?

Behavioural Questions

Explanation:
The instructor asked students a series of four behavioural questions (slides 1-4) below and recorded their responses in slide 5. Slide 5 also contains data on responses to the same questions by a sample of North American university students. Slide 6 lists questions the instructor asked to get students to interpret the data in slide 5.

Slide One
Clicker Question
Men: Do you identify yourself as gay?

1. Yes
2. No

Slide Two
Clicker Question
Women: Do you identify yourself as gay?

1. Yes
2. No

Slide Three
Clicker Question
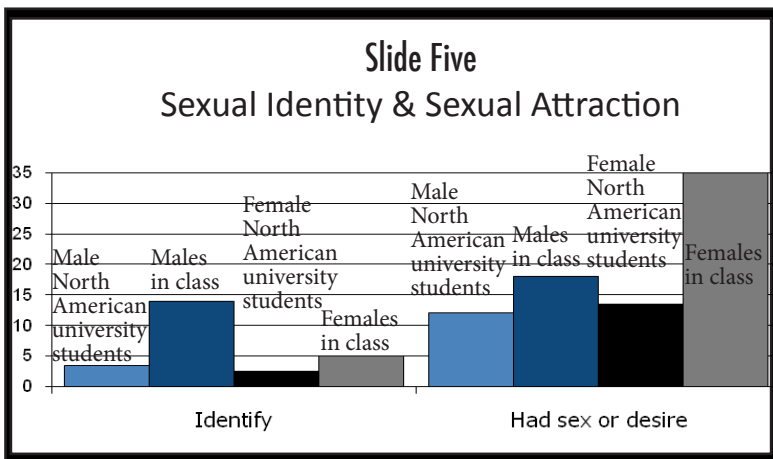Men: Since puberty, have you been sexually attracted to another man?
1. Yes
2. No

Slide Four
Clicker Question
Women: Since puberty, have you been sexually attracted to another man?
1. Yes
2. No

Slide Five
Sexual Identity & Sexual Attraction

Bar chart (y-axis 0 to 35) with categories "Identify" and "Had sex or desire" showing: Male North American university students, Males in class, Female North American university students, Females in class

Slide Six
Discussion Questions
1. Why are the identification percentages lower than the corresponding attraction percentages?
2. Why are the female identification percentages lower than the corresponding male identification percentages?
3. Why are the female attraction percentages higher than the corresponding male attraction percentages?
4. Why are the class percentages higher than the corresponding North American university student percentages?

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Application Questions

Explanation:

The exercise summarized by these slides allowed students to develop their skills in (1) reading 2- and 3-variable tables; (2) identifying independent, dependent and control variables; and (3) understanding spuriousness and causality. Starting with the hypothesis that more hours of watching TV results in more violent behaviour, slide 1 below cross-classifies hours of TV viewing by frequency of violent acts. Slide 2 shows the same cross-classification for men only. In order to answer the questions in slide 3, students had to be able to read and interpret slides 1 and 2.

Slide One
Acts of Violence by Hours of TV Viewing (%)

	Hours of TV Viewing		Percent Difference
	<10hrs/wk	10+hrs/wk	
<1 violent act/yr	52	46	6
1+ violent act /yr	48	54	6
Total frequency	130	70	
Total percent	100	100	

(Violence — row variable label)

Slide Two
Acts of Violence by Hours of TV Viewing (%; Men)

	Hours of TV Viewing		Percent Difference
	<10hrs/wk	10+hrs/wk	
<1 violent act/yr	40	40	0
1+ violent act /yr	60	60	0
Total frequency	50	50	
Total percent	100	100	

(Violence — row variable label)

Slide Three
Testing an Association for Spuriousness

1. What are the independent, dependent, and control variables in these tables?
2. How do you know whether an association exists between TV viewing and violence?
3. How do you know whether the association between TV viewing and violence is spurious?
4. How do you explain the association between TV viewing and violence in a way that is consistent with these tables?

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