

Designing Effective Surveys

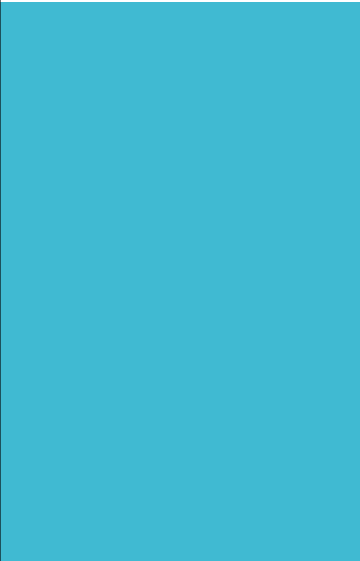
Tasha Chapman

1

Agenda

- Why survey design is important
- Know your question
- Know your population
- Survey administration
- Writing and Proofing questions
- Survey testing and piloting

2



Why is survey design important?

3



The Cost of a Survey

- Staff time
 - Defining the survey purpose
 - Writing the survey questions
 - Proofreading the questions
 - Writing the cover letter
 - Formatting the survey
 - Testing the survey
 - Generating the survey sample
 - Piloting the survey
 - Administering the survey

4

The Cost of a Survey

- Respondents' time
 - Answering questions
 - Survey fatigue
- More staff time
 - Reaching out to non-respondents
 - Collecting the data
 - Analyzing the data
 - Writing the final report
 - Disseminating the results

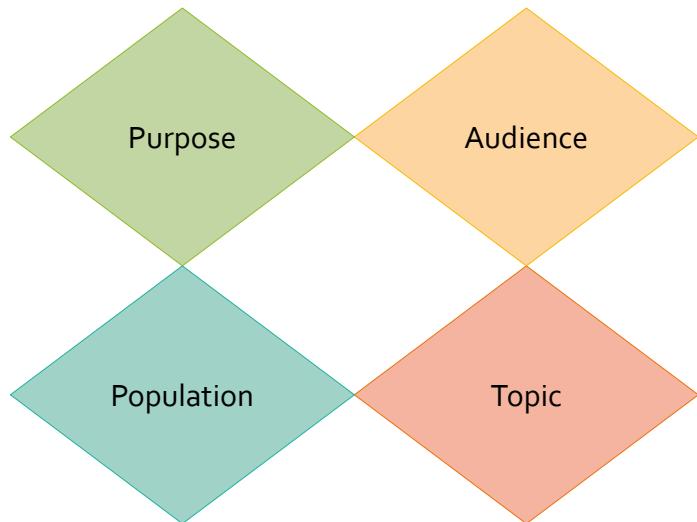
5

The Cost of a Survey

**Survey development is costly.
Take the time to do it right!**

6

When to reach
out for help...



7

Know Your Question

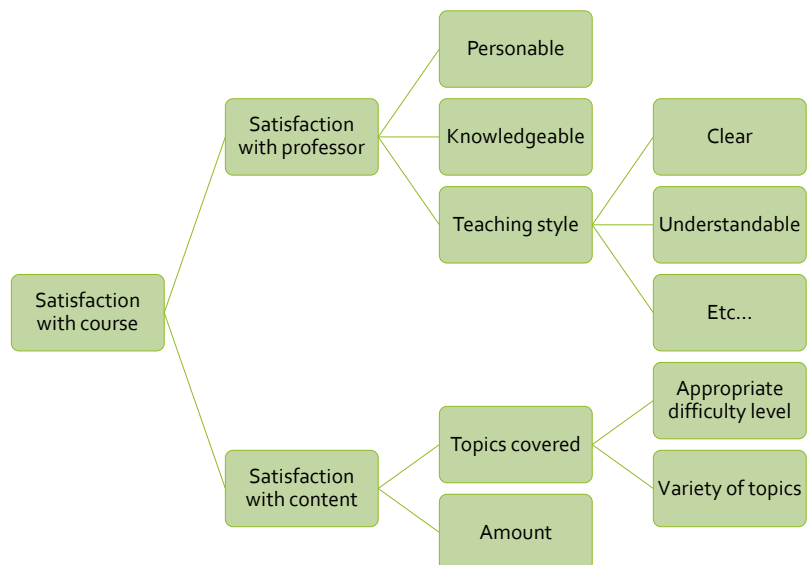
8

Know Your Question

- What do you want to know?
- How are you going to use the information?
- Is a survey the best method?

9

Concept Specification



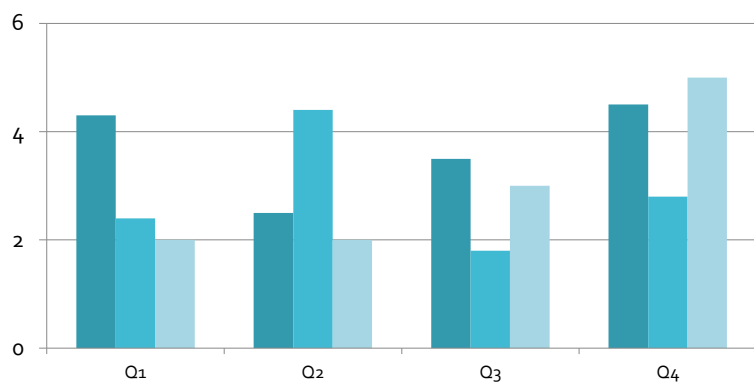
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How to use the information?



11

How to use the information?



12

Is a survey the best method?

- Surveys are best suited for
 - self-assessment
 - opinion gathering
 - collecting simple objective facts

**You are limited to what participants know
...or at least what they *think* they know.**

13

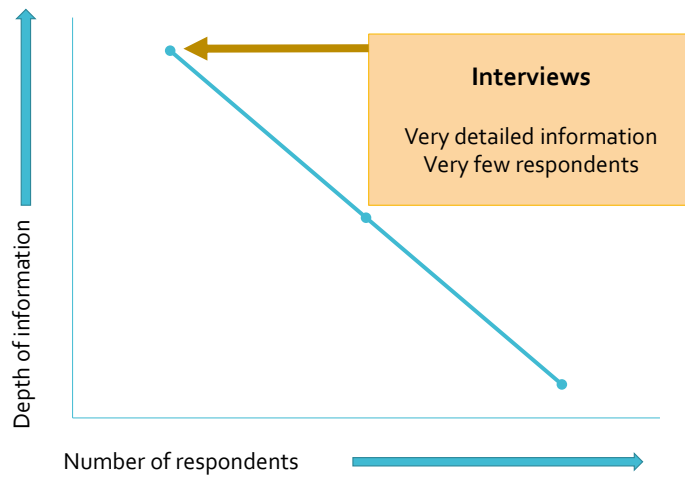
Is a survey the best method?

- Surveys work well for questions that are
 - quick
 - easy-to-answer
 - click-on-a-button

**Very few people like comment boxes.
Talking is easier than typing.**

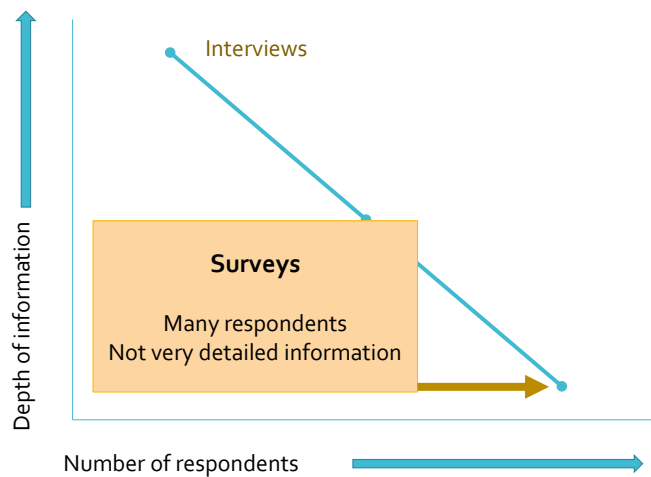
14

Is a survey the best method?



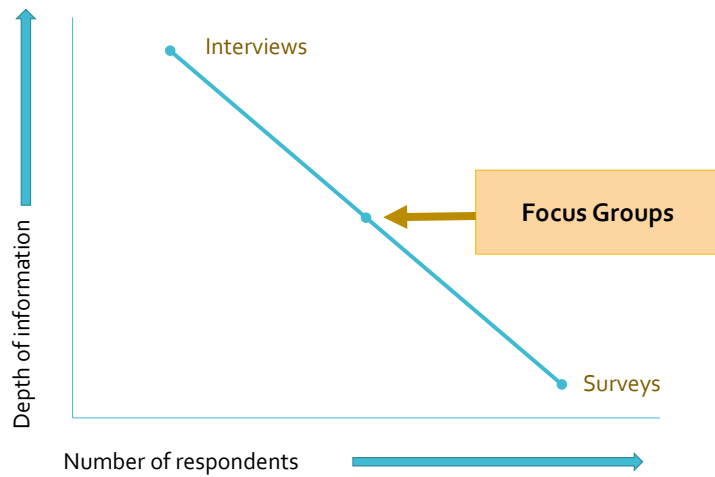
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Is a survey the best method?



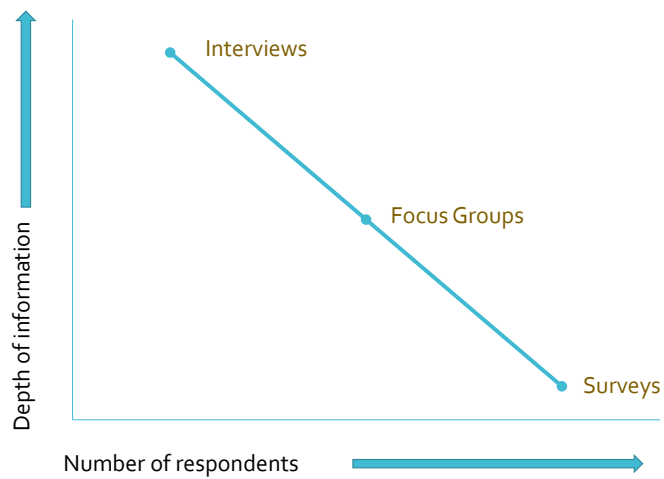
16

Is a survey the best method?



17

Is a survey the best method?



18

Know Your Population

19

Know Your Population

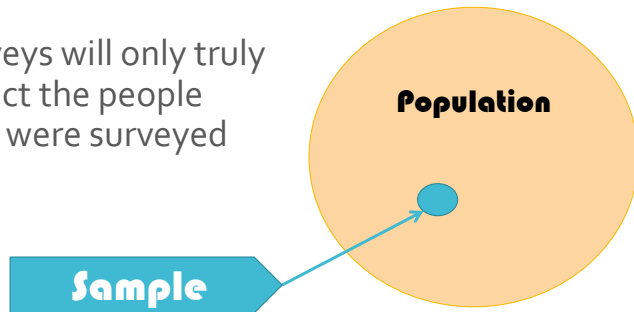
- Think about everybody this survey will represent.
- Examples:
 - All employees
 - All clients of a certain program
 - All elementary school teachers in one county
 - All Oregonians



20

Know Your Population

- Surveys will only truly reflect the people who were surveyed



If you want to know about a population, they have to be represented in your survey sample.

21

Defining a Representative Sample

To understand everybody's perspective...

...we have to survey everybody.

22

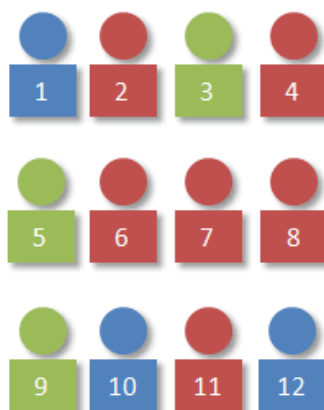
Defining a Representative Sample

To understand everybody's perspective...

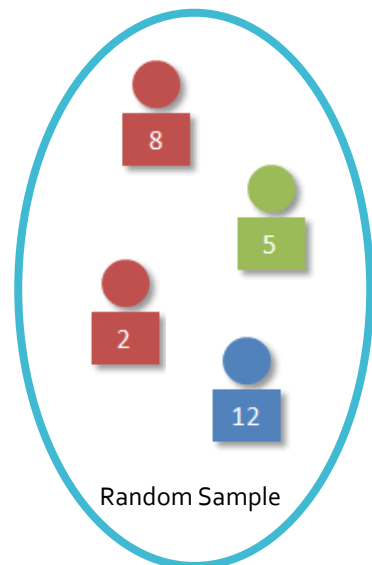
...our sample has to represent everybody.

23

Defining a Representative Sample



Population



Random Sample

Image taken from <http://faculty.elgin.edu/dkernler/statistics/cho1/1-3.html>

24

Defining a Representative Sample

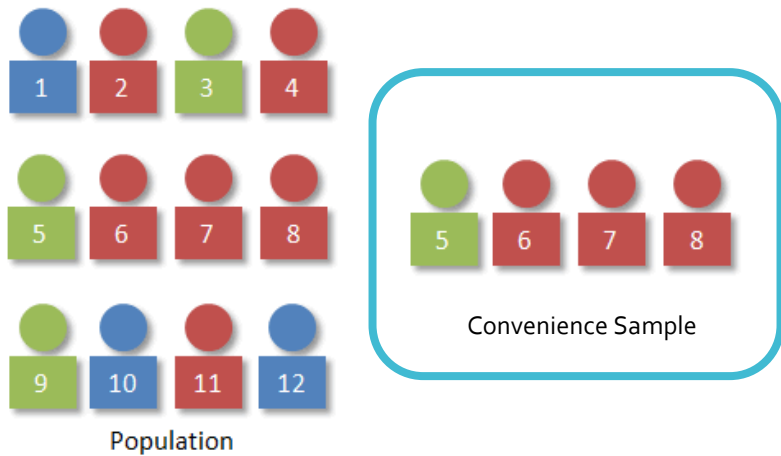


Image taken from <http://faculty.elgin.edu/dkernler/statistics/cho1/1-3.html>

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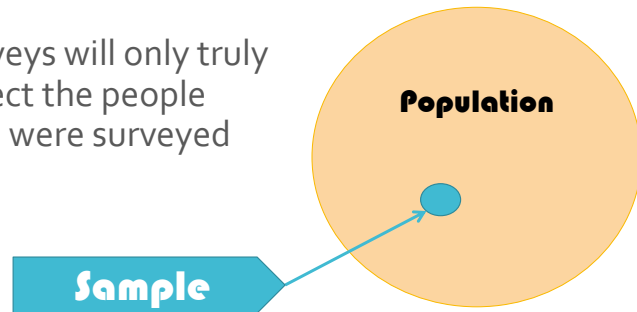
Why does representation matter?

The screenshot shows the Gallup website header with "GALLUP" and navigation links for "Topics" and "Services". Below the header is a large photo of Barack Obama and Mitt Romney at a campaign event. Below the photo, the date "NOVEMBER 5, 2012" is displayed, followed by the headline "Romney 49%, Obama 48% in Gallup's Final Election Survey". To the right of the headline are "PRINT" and "SHARE" buttons.

26

Non-respondents

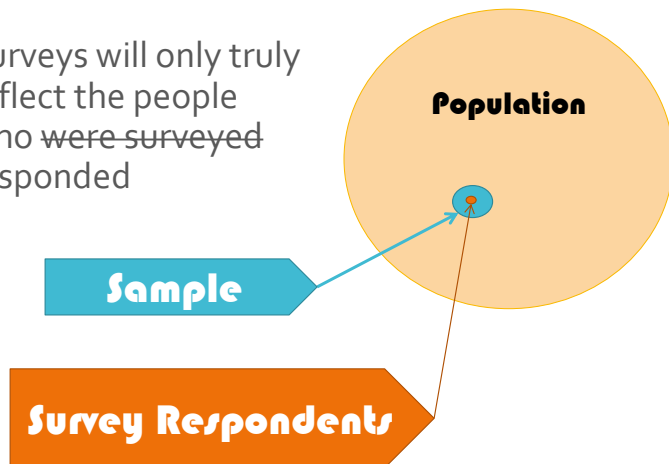
- Surveys will only truly reflect the people who were surveyed



27

Non-respondents

- Surveys will only truly reflect the people who were surveyed responded



28

Non-respondents

Randomly missing

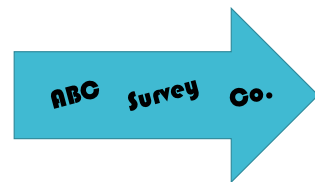
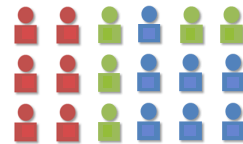


Systematically missing



29

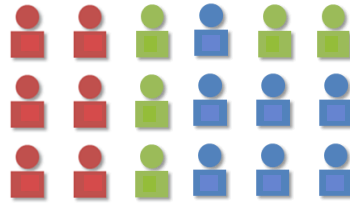
How to handle non-respondents



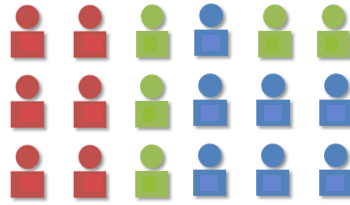
30

How to handle non-respondents

Respondents



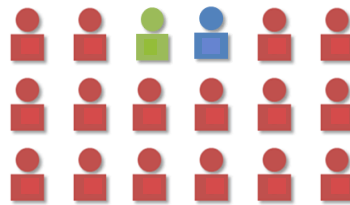
Non-Respondents



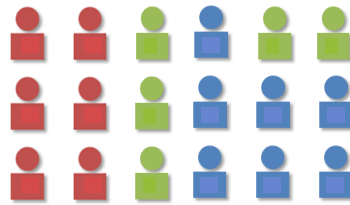
31

How to handle non-respondents

Respondents



Non-Respondents



32

Survey Administration

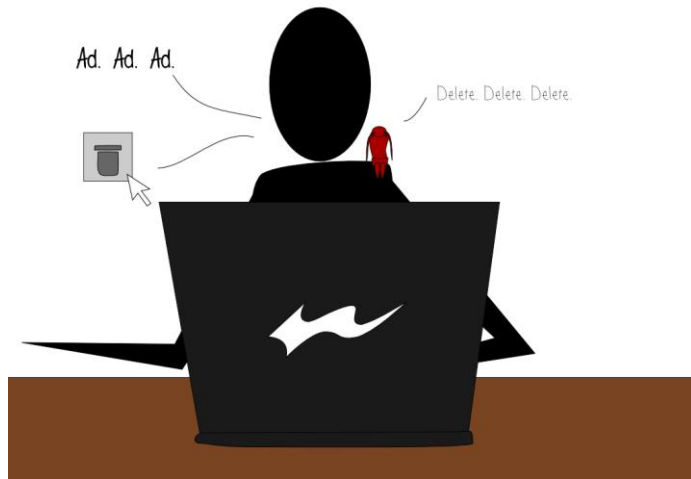
33

Survey Administration



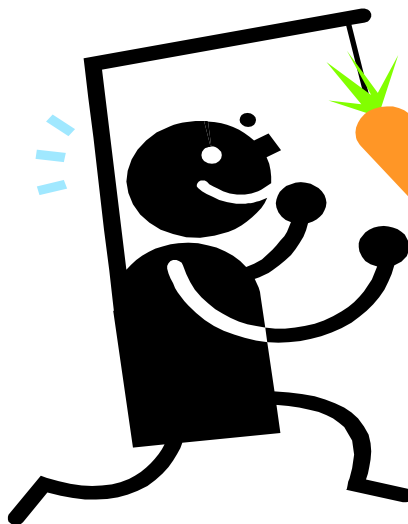
34

Cover letters



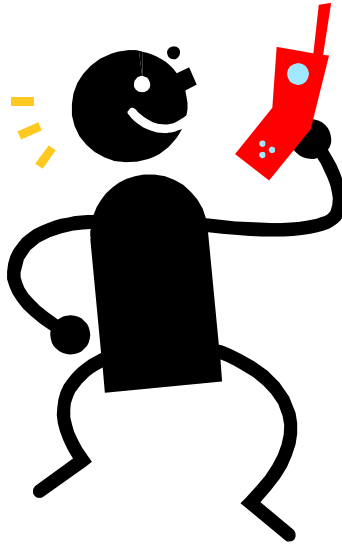
35

Incentives



36

Follow-up



37

Confidentiality



38



Writing Questions



39



Multiple Choice

- Can allow multiple responses or a single response

From the list below please choose your favorite color:

- ☐ Red
- ☐ Orange
- ☐ Yellow
- ☐ Green
- ☐ Blue
- ☐ Violet

40

Matrix table

- Use to reduce the length of your survey

Let us know how much you agree or disagree with the following statements:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Halloween is my favorite holiday of the year.	☐	☐	☐	☐	☐
My house was decorated for Halloween.	☐	☐	☐	☐	☐
Dressing up for Halloween as an adult is fun.	☐	☐	☐	☐	☐
I enjoy it when people in my office come to work in Halloween costumes.	☐	☐	☐	☐	☐
I wore a Halloween costume to work last week.	☐	☐	☐	☐	☐

41

Rank order

- Let respondents know which way the scale goes – *i.e.* is one (1) the top or bottom of the scale?

Please rank the following desserts from your favorite (#1) to your least favorite (#5).

Note: Drag and drop the desserts to change their location on the list.

Crepes	1
Chocolate chip cookies	2
Cheesecake	3
Cake	4
Churros	5

42

Text entry

- Use text entry to gather open-ended feedback or contact information

Please share any questions or comments you have about the course in the space provided below:

Retained Counsel Firm #1

Firm name:

City/State:

Retained counsel costs
(all costs billed to insurer
- in dollars):

43

Demographics

- Important for identifying sub-populations
- Put at the end of the survey

Possible Questions	
Gender	Work unit / Job title
Geography (e.g., county)	LGBT status
Primary language	Household income
Age	Education level completed
Race and ethnicity	Employment status
Disability status	Marital status

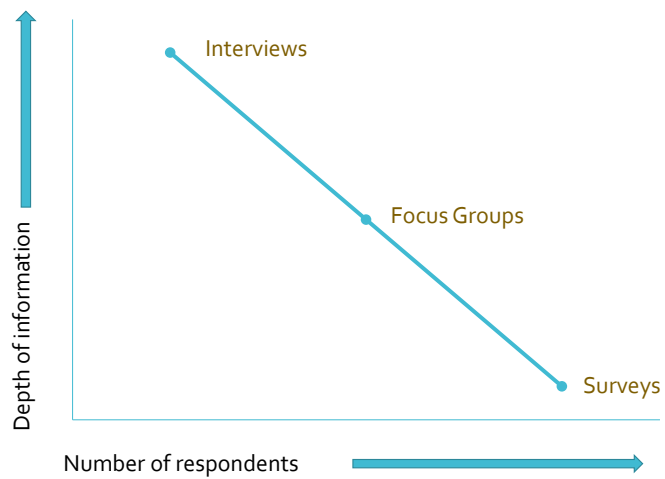
44

Survey length



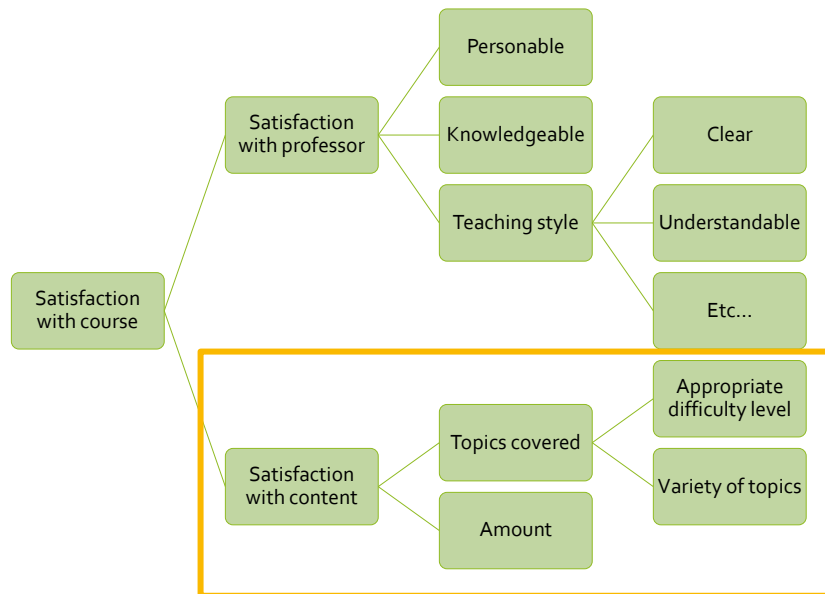
45

Alternative methods



46

Concept Specification

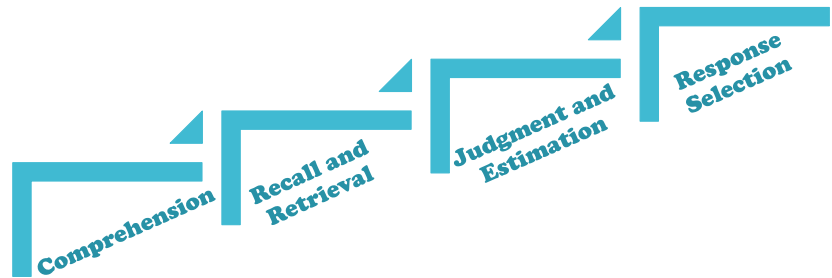


47

Proofing Questions

48

Response Process



Problems in any
one of these steps
can lead to
bad data

49

Response Process



50

Comprehension

Do you like ice cream?

☐ Yes

☐ No

51

Comprehension

Have you smoked at least 100 cigarettes
in your entire life?

☐ Yes

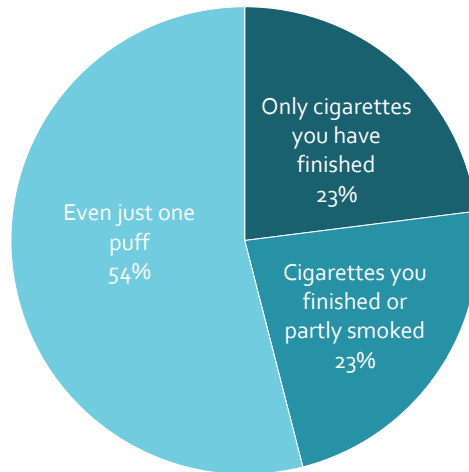
☐ No

* Suessbrick, Schober & Conrad (2000)

52

Comprehension

How do you define "a cigarette"?



* Suessbrick, Schober & Conrad (2000)

53

In this questionnaire you are asked to provide your opinion from two perspectives.

1. How you perceive the situation currently (IS)
2. How you would like to see the situation (LIKE)

For Example

To what extent do you feel that staff members are willing to use patient lift and moving equipment?

IS	1	2	3	4	5
LIKE	1	2	3	4	5

where 1 = not at all; 2 = a little; 3 = undecided; 4 = to some extent; 5 = to a great extent

Therefore, by answering "1" for the "IS" section, the respondent considers that staff members are totally unwilling to use patient handling equipment.

By answering "5" for the "LIKE" section the respondent is indicating that they would like to see staff members using patient equipment much more.

The discrepancy of -4 (1 minus 5) indicates that there is great room for improvement in willingness to use patient handling equipment. This result indicates the widest discrepancy between what is currently happening and those conditions or circumstances that the respondent would like to see.

Please circle the ONE best answer for each of the following questions using your understanding of the above example.

Remember: 1 = not at all 2 = a little 3 = undecided 4 = to some extent 5 = to a great extent

* Names have been changed to protect the not-so-innocent.

54

Remember: 1 = not at all 2 = a little 3 = undecided 4 = to some extent 5 = to a great extent

3.	To what extent are staff satisfied with the amount of sick leave and absenteeism on your unit?	IS	1	2	3	4	5
		LIKE	1	2	3	4	5
4.	To what extent are staff satisfied with levels of staff turn-over on your unit?	IS	1	2	3	4	5
		LIKE	1	2	3	4	5
5.	To what extent are staff satisfied that there is sufficient staff for lifting and moving patients?	IS	1	2	3	4	5
		LIKE	1	2	3	4	5

* Names have been changed to protect the not-so-innocent.

55

4.) Have you heard about the [redacted] effort/initiative?

☐ Yes

☐ No

21) What is your single greatest concern about the impact of [redacted] on clients? (please choose one)

☐ Managing my work load while I am learning to use new processes and systems

☐ Reduced face time with clients

☐ New processes will cause procedural delays

☐ New processes will slow down customer service

☐ Not all clients will be able to utilize the new processes

☐ Other (please describe)

[redacted]

* Names have been changed to protect the not-so-innocent.

56

Comprehension

Do you like carrots, cabbage,
green beans, and rutabagas?

☐ Yes

☐ No

57

Comprehension

Did the Emmy voters get it right this
year?

☐ No

☐ Yes

Vote

View Results

* Names have been changed to protect the not-so-innocent.

58

Improving Comprehension

- Clear terms
- Provide definitions
- One concept per question

59

Response Process



60

Recall and Retrieval

How many bowls of ice cream have you eaten...

Please enter a whole number:

Today	
This week	
This month	
This year	

61

Recall and Retrieval

How many bowls of ice cream have you eaten...

	0	1-2	3-5	6-10	11+
Today	☐	☐	☐	☐	☐
This week	☐	☐	☐	☐	☐
This month	☐	☐	☐	☐	☐
This year	☐	☐	☐	☐	☐

62

Recall and Retrieval

Tell us about your experience during your inspection on May 14, 2016.



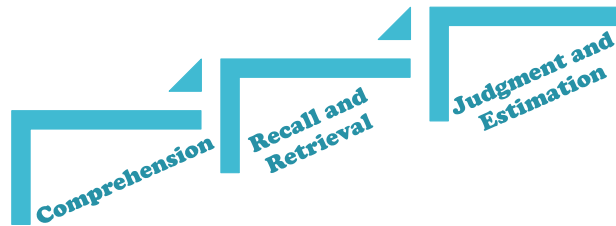
63

Improving Recall and Retrieval

- Brief time periods
- Use ranges
- Use a diary approach
- Ask additional questions
- Avoid pictures
- Take advantage of recognition

64

Response Process



65

Judgment and Estimation

Do you like ice cream?

☐ Yes

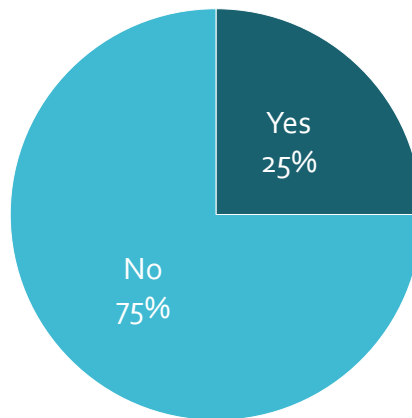
☐ No

People don't have stable
opinions stored in memory

66

Judgment and Estimation

Is the federal government spending too little on **welfare**?

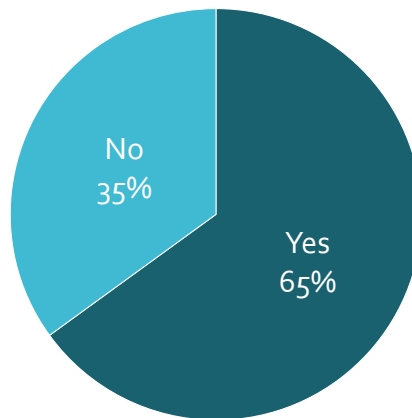


* Schuman & Presser, 1981

67

Judgment and Estimation

Is the federal government spending too little on **assistance to the poor**?



* Schuman & Presser, 1981

68

Judgment and Estimation

How trustworthy...

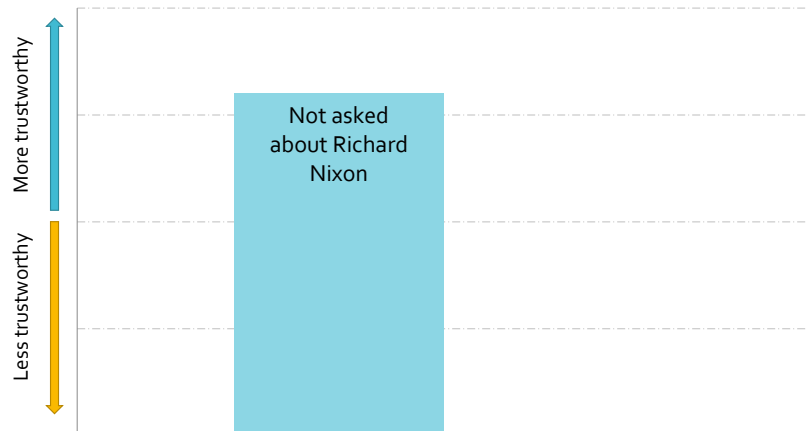
	Very trustworthy	Somewhat trustworthy	Somewhat trustworthy	Very trustworthy
...Is Richard Nixon?	☐	☐	☐	☐
...Are politicians in general?	☐	☐	☐	☐

* Bless & Schwarz, 2010

69

Judgment and Estimation

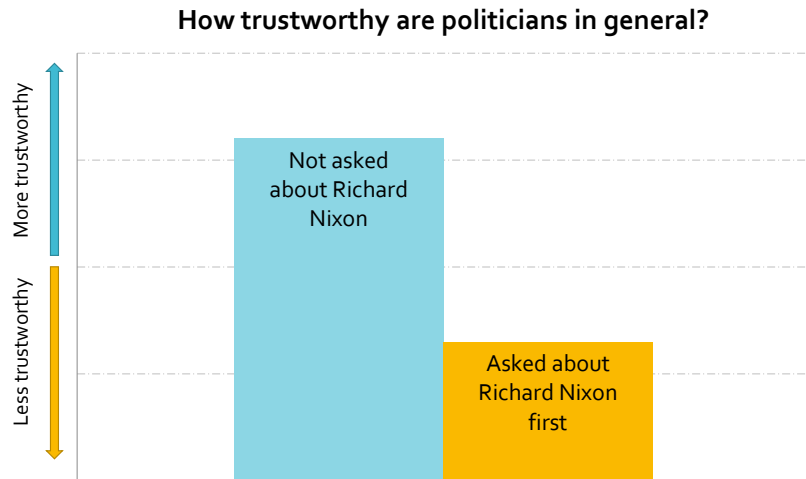
How trustworthy are politicians in general?



* Bless & Schwarz, 2010

70

Judgment and Estimation



* Bless & Schwarz, 2010

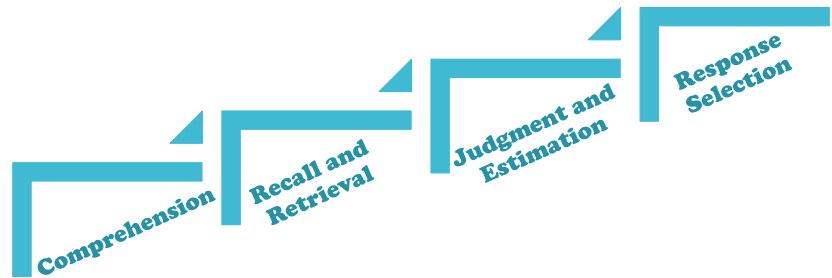
71

Improving Judgment and Estimation

- Be aware of context effects, such as
 - Question wording
 - Question order
 - Response order
 - Interviewer style
- Borrow vetted questions
- Pilot testing and analysis

72

Response Process



73

What Motivates Me?

I want to be honest

I want to be liked

I want to be accurate

I don't want to be bored



74

Response
Selection

What is your favorite flavor of ice cream?

- ☐ Vanilla
- ☐ Chocolate
- ☐ Strawberry

75

Response
Selection

What is your favorite flavor of ice cream?

- ☐ Vanilla
- ☐ Chocolate
- ☐ Strawberry
- ☐ Other

76

Response Selection

Which flavors of ice cream do you like? (Select all that apply)

☐ Vanilla	☐ Orange Sherbet	☐ Caramel
☐ Chocolate	☐ Huckleberry	☐ Cherry Fudge
☐ Strawberry	☐ Peaches & Cream	☐ Almond
☐ Neapolitan	☐ Pistachio	☐ Mango
☐ Rocky Road	☐ Double Fudge	☐ Coconut
☐ Lemon Sorbet	☐ Cotton Candy	☐ Rum Raisin
☐ Cookies & Cream	☐ Butter Pecan	☐ Praline
☐ Cookie Dough	☐ Cheesecake	☐ Heath Bar
☐ Bubblegum	☐ Moose Tracks	☐ Other

77

Response Selection

Please select the primary racial group you most closely identify with (Choose one)

☐ American Indian or Alaskan Native
☐ Asian
☐ Black or African-American
☐ White or Caucasian
☐ Native Hawaiian or Other Pacific Islander
☐ Decline to answer
☐ Unknown

78

Response Selection

Please select your gender

- ☐ Male
- ☐ Female

79

Response Selection

Our organization does not discriminate on the basis of gender identity or expression. In order to ensure we consider the needs of all our constituents, please consider the following optional question:

- ☐ Man
- ☐ Woman
- ☐ Non-binary
- ☐ Prefer to self-describe _____
- ☐ Prefer not to answer

* Human Rights Campaign - <https://hrc-prod-requests.s3-us-west-2.amazonaws.com/HRSI-SOGI-102122rev-1.pdf>

80

Can tiny houses be one solution to help support Portland's homeless population?

- ☐ Yes - This could be an innovative idea, and what we're doing isn't working. Let's do it.
- ☐ No - This is silly and neighborhoods won't support it. People need to be in apartment buildings with services.
- ☐ No Idea.

Vote

[View Results](#)

* Names have been changed to protect the not-so-innocent.

81

What
Motivates Me?

I want to be honest

I want to be liked

I want to be accurate

I don't want to be bored



82

Response Selection

Do you...	Yes	No
...wear a seat belt when you drive or ride in a car?	☐	☐
...avoid certain foods because they are high in fat or cholesterol?	☐	☐
...drink three or more alcoholic beverages per day?	☐	☐
...use illegal substances, or have you used illegal substances in the past?	☐	☐

83

Response Selection

Q1. In general, would you say that you:

- ☐ ...drink more than your friends
- ☐ ...drink less than your friends
- ☐ ...drink about the same amount as your friends

Q2. Think about the friend you know who drinks the most. About how many drinks per day would you say that person usually has?

Q3. And how about you? On days when you have any alcoholic beverages, about how many drinks do you have?

* Sudman & Bradburn(1982)

84

Response Selection

Many people would like to exercise, but have difficulty finding the time to do so. Would you say that you exercise on a regular basis?

☐ Yes

☐ No

85

Response Selection

Let's talk Likert...

Thinking about the bowl of ice cream you just had, how satisfied were you with its...

	Very satisfied	Somewhat satisfied	Somewhat unsatisfied	Very unsatisfied
Flavor	☐	☐	☐	☐
Texture	☐	☐	☐	☐
Price	☐	☐	☐	☐

86

Improving Response Selection

- Simple scales
- Simple responses
- “Other” responses
- Sensitive questions

87

Obtaining Actionable Results



88

Please rate the importance of the following qualities that a successful agency director should possess.

	Not important	Somewhat important	Important	Very important
Commitment to excellent customer service				
Extensive knowledge of agency mission				
Leadership skills				
Experience in managing the politics that impact the organization				
Experience in the legislative process				
Experience as a skilled consensus builder				

* Names have been changed to protect the not-so-innocent.

89

As agency budgets for management of this park decrease over time, we may be faced with difficult decisions related to service reductions.

Please indicate your level of opposition or support to these possible changes.

	Strongly Oppose	Oppose	Neither	Support	Strongly Support
Fewer hours open					
Fewer ranger patrols					
Fewer ranger-led programs					
Scaled down facilities (e.g., fewer restrooms, picnic shelters)					
Reduced janitorial services					
Reduced ground maintenance (e.g., mowing, landscaping)					

* Names have been changed to protect the not-so-innocent.

90

Comment
boxes

Do you have any other comments or
suggestions?



91

Obtaining
Actionable
Results

- Difficult choices
- Rankings, not ratings
- One (and only one) comment box

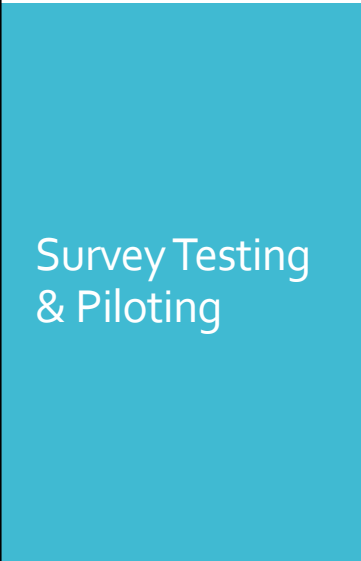
92



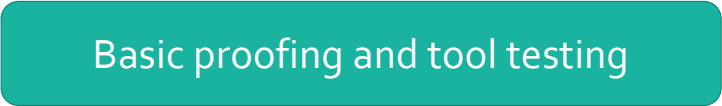
Survey Testing & Piloting



93



Survey Testing
& Piloting



Basic proofing and tool testing



94

Basic Proofing and Testing

- Spell-checking and proofreading
- Take out abbreviations and jargon
- Test electronic survey for problems

95

Survey Testing & Piloting

Basic proofing and tool testing

Expert item review

96

Expert Item Review



97

Survey Testing & Piloting

Basic proofing and tool testing

Expert item review

Pilot test with small sample

98

Pilot Test with Small Sample



99

Survey Testing & Piloting

Basic proofing and tool testing

Expert item review

Pilot test with small sample

Advanced analysis

100

Advanced Analysis

Does this match
similar surveys?

Criterion
Validity

Did our actions have the
intended consequences?

Decision
Validity

101

In Conclusion...

102

In Conclusion...

Good Luck Building Surveys!