


Questionnaire Design

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Outreach Evaluation Resource Center



RML Rendezvous
National Network of Libraries of Medicine
Pacific Northwest Region
March 16, 2011
1:00pm-2:00pm PT

Today's Topics

- Uses of questionnaires
- Guidelines for writing questions
- Example of combining quantitative with qualitative data in questionnaires

Why would you want to use a questionnaire?

- • Learn about characteristics of a group
- Evaluate quality of programs and services
- Document results of programs and services

Examples of learning about group characteristics

- MLA Disaster Information Specialization Marketing Survey
- 2011 PNC/MLA and NN/LM PNR Professional Development Survey
- University of Washington Libraries In-Library Use Survey
- NN/LM Emergency Preparedness Assessment

1. What best describes your current professional role:

- Medical librarian
- Hospital librarian
- Academic librarian
- Public librarian
- Special (non-medical) librarian
- Library staff (non-librarian)
- Healthcare provider
- Public health professional
- Disaster/emergency planner or responder
- Student
- Other (please specify)

Disaster
Information
Marketing
Survey:

Who is in the
audience?

Disaster Information Marketing Survey:

What are their interests and experiences?

3. I am interested in providing or using disaster information resources as part of my job.

Strongly disagree Disagree Neutral Agree Strongly agree

4. What is your current level of background knowledge about disaster preparedness, response, recovery and related topics?

None Minimal Basic Intermediate Advanced

5. Have you ever had training on participating in local disaster or emergency response at the level of a qualified community volunteer?

Yes

No

2011 PNC/MLA and NN/LM PNR Professional Development Survey:

What are their preferences?

7. What types of online or other distance learning formats do you prefer? Check all answers that apply.

- Webinar with live audio/slides (e.g. Adobe Connect)
- Online slide presentations (e.g. Slideshare)
- Online video presentations (e.g. YouTube)
- Telephone conference calls with downloaded slide printouts
- Online course management systems (e.g. Moodle, Blackboard)
- Podcasts (downloaded audio files)
- I don't prefer any type of distance learning
- Other (please specify)

University of Washington Libraries In-Library Use Survey (in development 3/11):

What did they do?

What did you do in this library today? (Please check all that apply)	
<input type="checkbox"/> Asked library staff for assistance	<input type="checkbox"/> Brought food or drink in
<input type="checkbox"/> Looked for books, journals, or other items in the library	<input type="checkbox"/> Studied individually
<input type="checkbox"/> Borrowed or returned material	<input type="checkbox"/> Studied or worked in a group
<input type="checkbox"/> Used scanner	<input type="checkbox"/> Used a library computer
<input type="checkbox"/> Made photocopies	<input type="checkbox"/> Used personal laptop or mobile device
<input type="checkbox"/> Printed from computer	<input type="checkbox"/> Met friends/someone else
Other (Please specify):	

Emergency Preparedness Assessment:

What do they need?

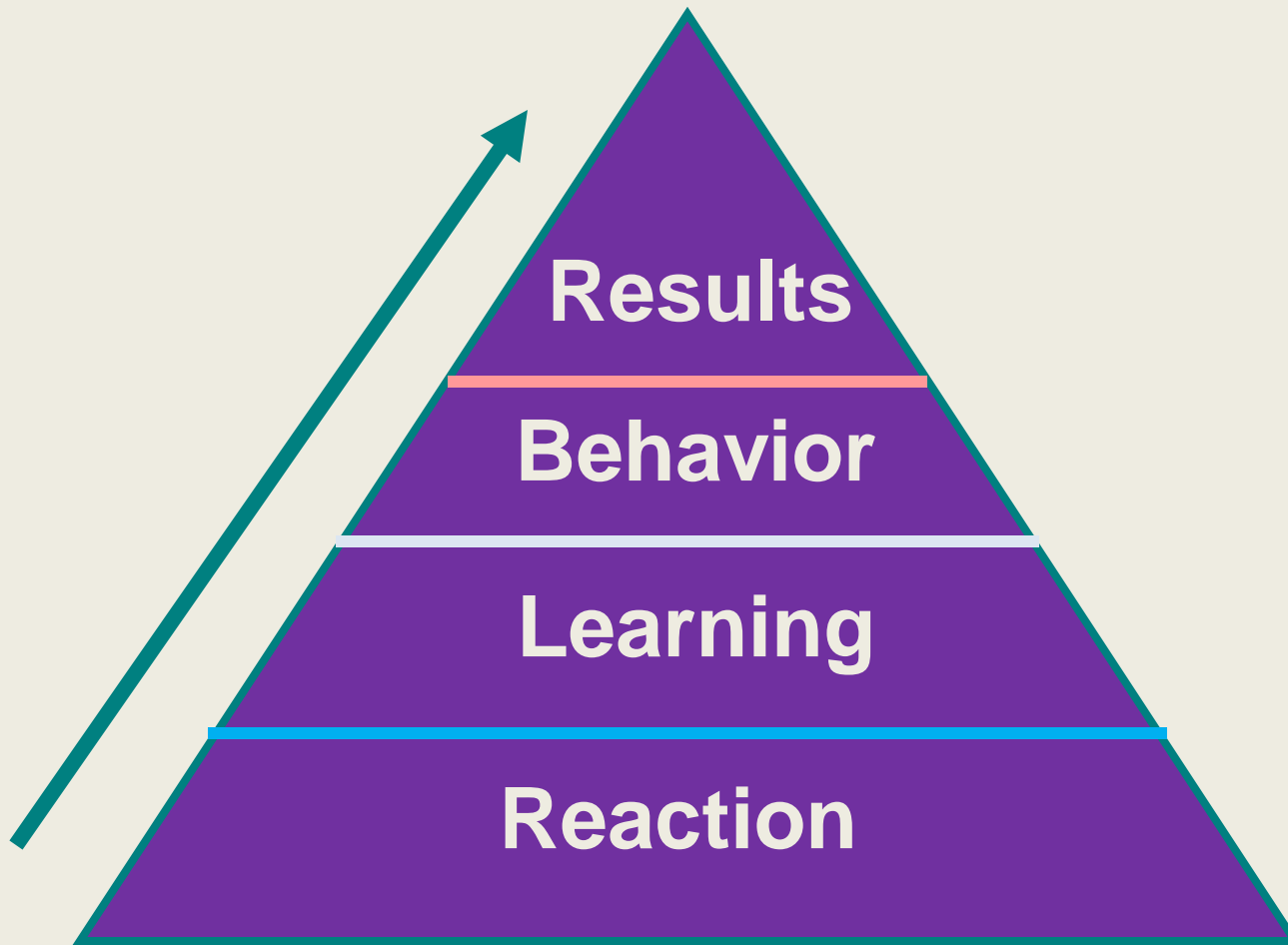
3. Have any of the following barriers had an effect on your library's ability to develop emergency plans? If you are unsure of an answer, please select "Don't Know."

	Yes	No	Don't Know	Not Applicable
Limited staff time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited staff knowledge about emergency planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not a priority for the parent organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Already under the parent organization's plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>			

Why would you want to use a questionnaire?

- Learn about characteristics of a group
- • Evaluate quality of programs and services
- • Document results of programs and services

Quality and Results: the Kirkpatrick Model



Evaluation of Quality: Examples

- MLA Course Evaluation
- MLA Health Information Literacy Project Training Evaluation

MLA Course Evaluation

1. On a scale of 1 to 4 (with 4 being the highest, best, or most, and 1 being the least or worst), rate the following instructor(s) or Presenter(s) by circling the number that applies.

Instructor(s) or Presenter(s) Name:	Knowledgeable				Well prepared/ organized				Effective presenter				Responsive to Questions			
	High		Low		High		Low		High		Low		High		Low	
1. Susan Barnes	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
2. Cindy Olney	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
3.	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
4.	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1

MLA Course Evaluation

2. Please check the appropriate rating for each of the following aspects of this session.

	Agree	Somewhat Agree	Somewhat Disagree	Disagree	N/A
Instructional Materials					
Were used effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were relevant/useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hands-on sessions were useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Session Objectives					
Met my expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Session Content					
Was well organized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length was appropriate for course content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Acquired					
Knowledge & skills I can use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facility was					
Conducive to learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MLA Health Information Literacy Project Evaluation

11. Please indicate the extent to which you agree or disagree with the following statements regarding training objectives. (Circle the number that represents your response)

Training Objectives	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I gained an understanding of the impact low health literacy has on patient health knowledge, practices, and outcomes	1	2	3	4	5
I gained an understanding of health information literacy and the challenges patients face	1	2	3	4	5
I became familiar with five health information literacy resources available to me and my patients	1	2	3	4	5
I learned how to use Information Rx to refer patients to MedlinePlus and to medical librarians for support	1	2	3	4	5
I learned how librarians can support the me and my patients' health information literacy needs	1	2	3	4	5

MLA Health Information Literacy Project Evaluation

7. Please rate how likely you are in the coming month to use the Information Rx pad you received at this training to refer patients to health information on the Internet.

(Circle the number that represents your response)

Likely

Not Likely

1

2

3

4

5

Not applicable

8. Please rate how likely you are in the coming month to use the Information Rx pad you received at this training to refer patients to the hospital library for help finding health information. (Circle the number that represents your response)

Likely

Not Likely

1

2

3

4

5

Not applicable

9. Please indicate the extent to which you agree or disagree with the following statement: This training session increased my knowledge of health literacy and its impact on patient care. (Circle the number that represents your response)

Strongly Agree

Strongly Disagree

1

2

3

4

5

10. What will you do differently as a result of attending this training?

MLA Health Information Literacy Project Evaluation

12. How effective did you find the following training activities?

(Circle the number that represents your response)



Training Activities	Very Effective	Effective	Neutral	Somewhat Effective	Not at all Effective
Lecture	1	2	3	4	5
Discussion	1	2	3	4	5
Video viewing	1	2	3	4	5
Demonstration of resources	1	2	3	4	5

13. May we contact you via email in two months about the impact this health literacy training session has had on your work?

 Yes. My email address is _____

 No. Please do not contact me.

Documenting Results: Examples

- MLA Health Information Literacy Pre- Post-Training Evaluation
- NN/LM National Emergency Preparedness Baseline and Follow-Up Assessment

MLA Health Information Literacy Pre- Post-Training Evaluation

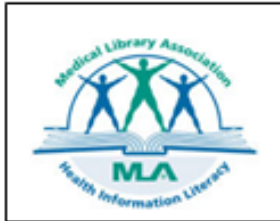


Health Literacy Resources and Library Services Pre-Training Evaluation

1. Have you ever used the following Internet-based health information resources?
(Circle the number the represents your response)

Internet-based health information resources	Yes	No	I do not know this resource
Familydoctor.org	1	2	3
HIVinSite.ucsf.edu	1	2	3
Kidshealth.org	1	2	3
MedlinePlus.gov	1	2	3
NIHSeniorHealth.gov	1	2	3
Other (please name):			

MLA Health Information Literacy Pre- Post-Training Evaluation



Health Literacy Resources and Library Services Post-Training Evaluation

6. In the coming month how likely are you to use the following Internet-based health information resources. (Circle the number that represents your response)

Internet-based health information resources	Likely	Not Likely	I do not know this resource
Familydoctor.org	1	2	3
HIVinSite.ucsf.edu	1	2	3
Kidshealth.org	1	2	3
MedlinePlus.gov	1	2	3
NIHSeniorHealth.gov	1	2	3
Other (please name):			

NN/LM Emergency Preparedness Baseline and Follow-Up Assessments

1. Please tell us about your library's emergency preparedness and response plans by answering the questions below. If you are unsure of an answer, please select "Don't Know."

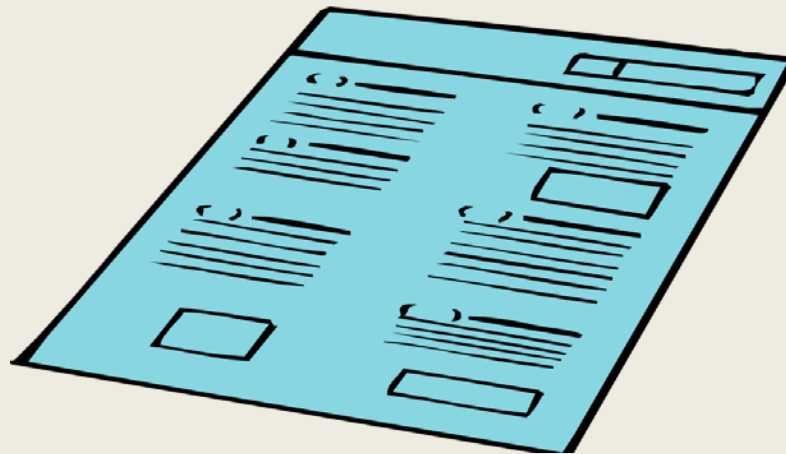
	Yes	In process	No	Don't Know
Does your library have a continuity of services/operations plan? (“Continuity of services” refers to procedures for continuing core library services in the event that your library must shut down due to some kind of emergency.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your library have a partnership with another library to provide services that your library cannot provide during emergencies?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your library have a salvage/recovery plan to mitigate emergency-related damages to library property (such as collections, equipment, facility)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does someone in your library have emergency preparedness and response responsibilities written into his or her job description?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is someone in your library in charge of a salvage/recovery plan?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

NN/LM Emergency Preparedness Baseline and Follow-Up Assessments

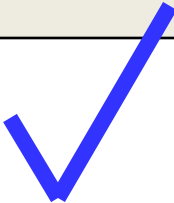
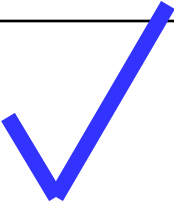

3. Have any of the following barriers had an effect on your library's ability to develop emergency plans? If you are unsure of an answer, please select "Don't Know."

	Yes	No	Don't Know	Not Applicable
Limited staff time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited staff knowledge about emergency planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Not a priority for the parent organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Already under the parent organization's plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)				
<input type="text"/>				

KEEP YOUR
QUESTIONNAIRES ON
THE MARK!



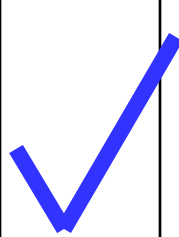
You have three goals when using questionnaires

	Collect just the right amount of data
	Write questions that get the information you want
	Get a high rate of participation from respondents (response rate)

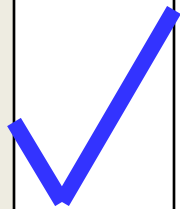
**GOAL 1: COLLECT JUST THE
RIGHT AMOUNT OF DATA**

Prevent getting too much data by only asking necessary questions

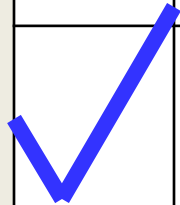
Ask yourself...



Can I get this information from other sources?



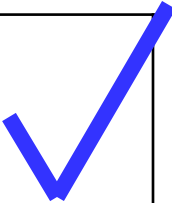
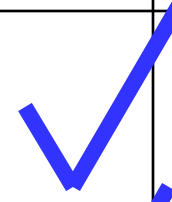

Who is interested in the answer to this question?



Where and how will I report the data from this questionnaire?

However, be sure to collect all the information you need!

Check if you're covered...

- | | |
|---|---|
|  | Compare the questionnaire to report outline and look for “holes” |
|  | Check award RFP, your proposal, or your report outline |
|  | Show your questionnaire to stakeholders |

GOAL 2: WRITE QUESTIONS
THAT GET THE INFORMATION
YOU WANT

Tips



Handout:
Writing Good Questions

http://nnlm.gov/pnr/training/Writing_good_questions.pdf

Tips

Handout

Writing Good Questions¹

Tips

1. Make sure your question is one dimensional (i.e., asks about one issue).
2. Check that your response options are all inclusive *but* mutually exclusive.
3. Be sure your question has no presuppositions about your respondents (e.g., their knowledge about an online resource).
4. Check that the question does not imply a desired response or imply that certain options are more socially desirable.
5. Avoid rank-ordered questions; use rating scales instead.

Tips

6. For rating scales

- Label for each response value.
- Use 5-point scales if you believe the respondents may have no opinion in either direction (positive or negative) about the issue under question. Use terms like “neutral” or “neither agree or disagree.”
- Have 4-point scales to force respondents to express a positive or negative position or opinion.
- Include a “don’t know/not applicable” option.
- Have an equal balance of positive and negative options. Avoid labeling your mid-point as “fair” or “adequate.” Neither term is completely neutral.
- Keep question layout linear (vertical or horizontal). Do not double-bank options to save room

7. Group questions by topic

- ## 8. Consider the flow of your questions – they should flow logically from one item to the next.

Make sure there is a response option for everybody

Have you ever taken a MedlinePlus training session offered by a regional medical library?

Yes

No

Do not know

Use caution with "Check All-that-Apply" questions

In the past year, have you used online health information resources to (check all that apply)

- Research a health concern?
- Find information for someone else?
- Look up something you heard in the news?
- Make a presentation?
- Find a health care professional?
- Other

Yes-No questions are better at forcing respondents' attention to the entire list

In the past year, have you used online health information resources to (circle yes or no)

- Y N Research a health concern?
- Y N Find information for someone else?
- Y N Look up something you heard in the news
- Y N Make a presentation?
- Y N Find a health care professional?
- Y N Other

"Best Options" should provide everyone's best option

Which of the following sources are you most likely to go to *first* when you have a question about your health? (Choose one)

___ The Internet

___ Print materials

___ Your doctor/health care provider

___ A family member

___ A friend

___ Other

___ I don't look up health information

Rating scales should have an equal number of positive and negative options

How would you rate the quality of retail shops available to you in the...area?

A=Excellent

B=Very Good

C=Good

D=Fair

E=Poor



A=Excellent

B=Good

C=Fair

D=Poor

E. Very Poor



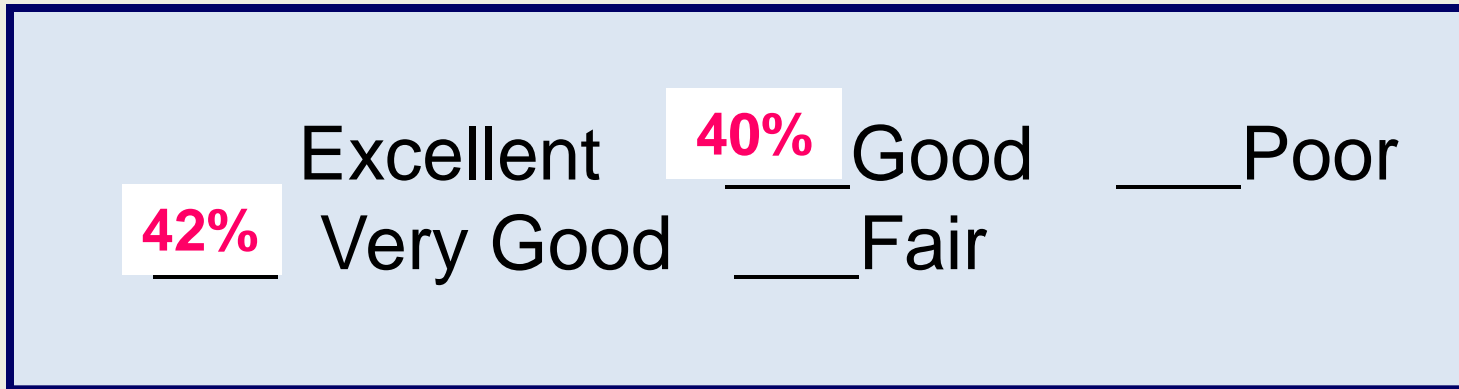
Source Dillman & Christian, (2002).

http://survey.sesrc.wsu.edu/dillman/papers/single_space_fig_table.pdf

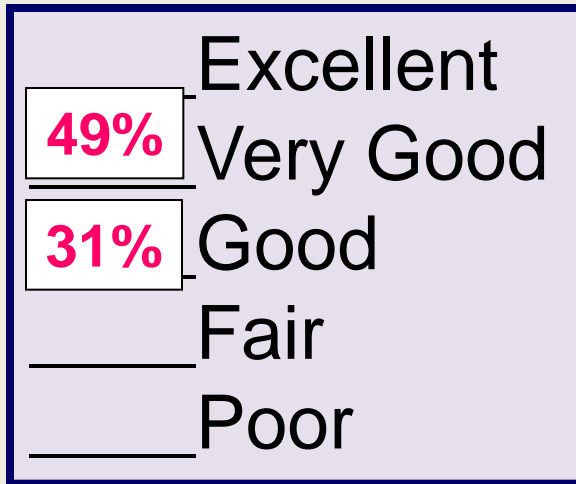
Use horizontal or vertical formats; don't "double bank"

"How would you rate the quality of education you are getting at WSU"

1



2



Source: Dillman & Christian, (2002).

Polar-point scales may be confusing visually

I am more likely to take workshops that offer continuing education credits

Strongly

Strongly

Agree

1

2

3

4

5

Disagree



Polar-point scales had more use of middle categories compared to fully labeled scales

Source Dillman & Christian, (2002).

http://survey.sesrc.wsu.edu/dillman/papers/single_space_fig_table.pdf

Equal spacing and numbers indicate "intervals"

I am more likely to take workshops that offer continuing education credits

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	2	3	4	5



Source Dillman & Christian, (2002).

http://survey.sesrc.wsu.edu/dillman/papers/single_space_fig_table.pdf

Be sure you aren't asking more than one question

How likely are you to run searches for the doctors and nurses at your hospital?

- Very Likely
- Somewhat likely
- Not sure
- Somewhat unlikely
- Very unlikely

Avoid rank-ordered questions - they are hard to analyze

Please rank the following habits in terms of how difficult they are for you to follow, with 1 being the *least* difficult and 5 being the *most* difficult

- ___ Eating 8 servings of fruits and vegetables daily
- ___ Exercising at least 30 minutes on most days
- ___ Not smoking
- ___ Avoiding sweets
- ___ Maintaining a healthy weight
- ___ Drinking alcohol in moderation (1-2 servings a day)



Choose demographic questions carefully and put them at the end

Your demographic questions should serve one of three purposes

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graph TD; A[Your demographic questions should serve one of three purposes] --> B[Compare sample profile to population]; A --> C[Allow grouping data for analysis]; A --> D[Screen respondents];
```

Compare
sample profile to
population

Allow grouping
data for analysis

Screen
respondents

Pre-test/Post-test designs are prone toward "response shift"

Pre-test/Post-Test question for a law enforcement workshop to a Neighborhood Watch Program

How would you grade your ability to protect yourself against burglary?

A	B	C	D	F
1	2	3	4	5

Retrospective Pre-test may protect against response shift

How would you rate your knowledge of how to protect your house from burglary?					
	Very Poor	Poor	Fair	Good	Excellent
<i>After this workshop</i>	1	2	3	4	5
<i>Before taking this workshop</i>	1	2	3	4	5

Post test/Retrospective question for a Neighborhood Watch workshop

Perceived change is an alternative to retrospective pre-test method

Compared to before you took this workshop today, are you...	Better Prepared 3	Equally Prepared 2	Less Prepared 1	...to protect yourself from burglary?
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Perceived change question for a Neighborhood Watch workshop

Brief Tidbits from Don Dillman's 2-day Class in 2010:

Design and Administration of Internet, Mail, and Mixed-Mode Surveys

**The Evaluators' Institute
San Francisco, CA**

Adapted from: Don A. Dillman,
Washington State University
The Evaluators' Institute, January, 2010

- Amount of space influences answers to open-ended questions
- A questionnaire is a conversation—responding requires comprehension, retrieval, judgment, reporting
- Social exchange theory and questionnaires—rewards, costs, trust

Adapted from: Don A. Dillman,
Washington State University
The Evaluators' Institute, January, 2010

Requiring responses is discouraged because

- Might “train” people to give bad answers where no “right” answer
- Encourages incomplete submissions
- Breaks “contract” with respondent—experience should be positive
- There are better ways to lessen item nonresponse

Pilot Your Questionnaires at Least Twice!

1. Ask a couple of colleagues to work through your questionnaire—actually fill it out—and provide feedback to you. Revise accordingly.

NOTE: Nikki Dettmar and Susan Barnes can help you with this!

2. Have a sample of five or six people who are members of the group you are studying (or who are very similar to them) fill out the questionnaire and provide feedback.

Enrich Your Questionnaires: Quantitative + Qualitative Data

1. **The Enhanced Technology Acceptance Model (TAM2)**—A “Standardized” rating scale from the Management Information Systems (MIS) literature

Measures influence of three factors on technology use:

- *Perceived Usefulness*
- *Perceived Ease of Use*
- *Social Influence*

2. **The Critical Incident Technique**—collects descriptions of significant positive and negative user experiences

TAM2: Perceived Usefulness Scale Items

- Using [IT artifact]

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Enhances my effectiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improves my performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increases my productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- I use [IT artifact] because they

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Are useful in my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TAM2: Perceived Ease of Use Scale Items

- Interacting with [IT artifact]

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Is clear and understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requires minimal mental effort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- I use [IT artifact] because they

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Are easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- When I am using [IT artifact]

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I find it easy to do what I want to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TAM2: Social Influence Scale Items

- What do other people think about [IT artifact]

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
People who influence my behavior think I should use them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who are important to me think that I should use them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who use them have more prestige than those who do not	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who use them have a high profile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Critical Incident Technique: Overview

- Participants asked to provide one or two significant positive and negative experiences with IT

Positive: “helped somebody solve a problem”

Negative: “solution failed, caused new problems”

- Help understand user behavior
- Either interviews or questionnaires
- Questions include
 - system name
 - description of incident
 - frequency and timing
 - feelings and perceptions
 - actions taken
 - any resulting changes in system use

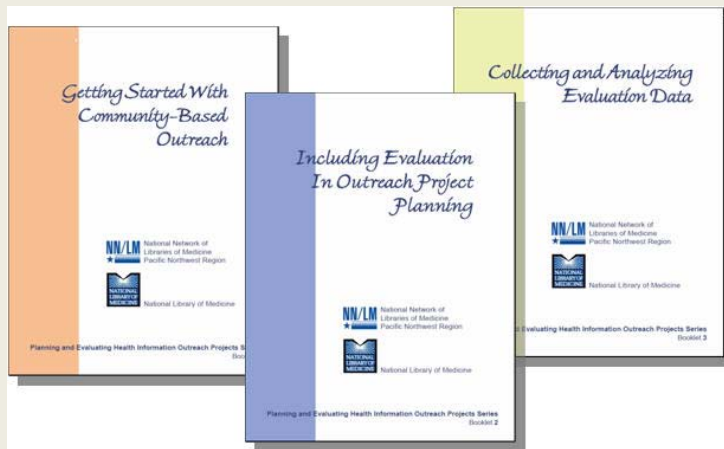
GOAL 3: GET A HIGH RATE OF PARTICIPATION FROM RESPONDENTS (RESPONSE RATE)

Tune in to the RML Rendezvous on June 15 at 1pm PT for Part 2:

“Increasing Response Rate”

For More Information:

Planning and Evaluating Health Information Outreach – Series of 3 booklets:



1. Getting Started with Community-Based Outreach
2. Including Evaluation in Outreach Project Planning
3. Collecting and Analyzing Evaluation Data

– <http://nnlm.gov/evaluation/booklets.html>

For More Information:

- Dillman, et al., *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method, Third Edition*. Hoboken: Wiley, 2010.
- Serenko, A., & Turel, O. (2010). “Rigor and relevance: The application of the Critical Incident Technique to investigate email usage.” *Journal of Organizational Computing and Electronic Commerce*, 20(2), 182-207.
- Shipman, et al. (2009). “The Health Information Literacy Project.” *Journal of the Medical Library Association*. 97(4): 293–301.
- Venkatesh, V., & Davis, F. (2000). “A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies.” *Management Science*, 46(2), 186-204.