

# Assessment Methodology in Higher Education

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## Differences between Assessment and Research

- **Resource limitations**
- **Time limitations**
- **Organizational contexts**
- **Design limitations**
- **Political contexts**

FR: Upcraft, M.L., & Schuh, J.H. (2002, March-April). *About Campus*, pp. 16-20.

# Assessment Strategies to Consider

Source: Suskie, *Assessing student learning*, 2009

If You Want To...	Consider Using...
Assess thinking and performance skills	Assignments or prompts planned and evaluated using scoring guides or rubrics
Assess knowledge, conceptual understanding, or skill in application and analysis	Multiple choice tests
Assess attitudes, values, dispositions, or habits of mind	Reflective writing, surveys, focus groups, or interviews
Draw an overall picture of student learning	Portfolios
Compare your students against peers elsewhere	Publishes tests or surveys

## The Role of Assessment in the Planning and Program Development Process

1. Strategic plan ➔ Informs unit goals
2. Unit goals ➔ Achieved by interventions
3. Interventions (programs/courses/experiences)  
➔ Desired outcomes
4. Outcomes ➔ Success is measured (assessment)
5. Assessment ➔ programmatic adjustments

# Methodological Issues

# Examples of Direct Evidence

Source: Suskie, *Assessing student learning*, 2009.

- Ratings on field experiences
- Scores on certification examinations
- Capstone experiences
- Other activities scored by a rubric
- Portfolios
- Scores on tests linked to learning outcomes
- Observations of student behavior using a scoring rubric

# Examples of Indirect Evidence

- Retention and graduation rates
- Admission rates in graduate programs and graduation rates from those programs
- Scores on tests required for further study (e.g., GRE)
- Placement rates of graduates into appropriate career positions and starting salaries
- Alumni/ae perceptions of career responsibilities and satisfaction
- Student ratings of their knowledge and skills
- Honors, awards and scholarships
- Voluntary gifts from graduates and employers

## Other Useful Information

- Needs assessments
- Satisfaction assessment
- Participation rates



# In Considering a Survey Design

- What do you want to measure by using a survey data collection method?
- Are the population and method identified for selecting a sample? Will it be a random or convenience sample?
- What is the size of the sample? Or is it a census survey?

Source: Cooper, R. M. (2009). Planning for and implementing data collection. In J. Schuh & Associates, *Assessment methods in student affairs* (pp. 51-75). San Francisco: Jossey-Bass.

# In Considering a Survey Design

- Will this survey be used at more than one point in time and over the course of time (for example, longitudinal)?
- What type of instrument will be used? A published instrument or an instrument developed locally?
- How will the survey be pilot tested?

Source: Cooper, R. M. (2009). Planning for and implementing data collection. In J. Schuh & Associates, *Assessment methods in student affairs* (pp. 51-75). San Francisco: Jossey-Bass.

# In Considering a Survey Design

- What is the time line for collecting data?
- How will the survey be implemented (for example, web-based or paper and pencil)?
- Will participants be compensated?

Source: Cooper, R. M. (2009). Planning for and implementing data collection. In J. Schuh & Associates, *Assessment methods in student affairs* (pp. 51-75). San Francisco: Jossey-Bass.

# Process and Outcomes

	<b>Process</b>	<b>Outcome</b>
	Efficiency (doing things right)--- productivity	Effectiveness (doing the right things)--quality
What to measure	<u>Inputs</u>	<u>Outcomes</u>
	Resources needed	Goals and objectives attained
	Resources used	
	<u>Outputs</u>	<u>Impacts</u>
	Services Rendered	Long term, socially beneficial results
Questions	Did it occur?	What was achieved?
	How often?	Did it accomplish what it was supposed to ?
	How much?	Does it make a difference?
	When?	
	Where?	Source: Cooper, p. 55

# Comparing and Contrasting Qualitative and Quantitative Research Strategies

## Qualitative

- *The purpose is to explain and gain insight and understanding of phenomena through intensive collection of narrative data*

### Approach to Inquiry

- Inductive, value laden (subjective), holistic, process oriented

### Hypotheses

- Tentative, evolving, based on particular study

### Review of Related Literature

- Limited; does not significantly affect particular study

### Research Setting

- Naturalistic (as is) to the degree possible

### Sampling

- Purposive: Intent to select small, but not necessarily representative sample to acquire in-depth understanding

FR: Borland, Jr., K. W. (2001). Qualitative and quantitative research: A complementary balance. In R. D. Howard & K. W. Borland (Eds.), Balancing

## Quantitative

- *The purpose is to explain, predict, or control phenomena through focused collection of numerical data*

### Approach to Inquiry

- Deductive, value free (objective), focused, outcome oriented

### Hypotheses

- Specific, testable, stated prior to particular study

### Review of Related Literature

- Extensive; does significantly affect particular study

### Research Setting

- Controlled to the degree possible

### Sampling

- Random: Intent to select large, representative sample to generalize results to a population

Qualitative and quantitative information for effective decision support (pp. 5-13. New Directions for Institutional Research no. 112. San Francisco: Jossey-Bass.

# A Quick Look at Qualitative Methods

# Qualitative Methods

- Qualitative methods typically consist of conducting focus groups or individual interviews,
- Observing subjects, and
- Reviewing documents.

# Are Focus Groups Right for You?

## *Use Focus Groups When:*

- **Your goal is to listen and learn from other people**
- **You can explore the topics that interest you through conversations among the participants**
- **You can obtain in-depth knowledge by listening as the participants share and compare their experiences, feeling and opinions.**

FR: Morgan, D. L. The focus group guidebook (No. 1). Thousand Oaks, CA: Sage.



# Are Focus Groups Right for You?

- **You can pursue interpretive questions about “how and why” through group discussions**
  - **Your purpose is to identify problems that you need to address**
  - **Your purpose is to plan for programs, survey questionnaires, quality initiatives and so on.**
  - **Your purpose is to improve the implementation of a project.**
- **FR: Morgan, D. L. The focus group guidebook (No. 1). Thousand Oaks, CA: Sage.**

# Are Focus Groups Right for You?

- **Your purpose is to improve the implementation of a project**
- **Your purpose is to assess the outcome of a program or intervention**
- **You are researching complex behaviors and motivations**
- **You want to understand diversity**
- **You need a friendly, respectful research method**

FR: Morgan, D. L. The focus group guidebook (No. 1). Thousand Oaks, CA: Sage.

# CHECKLIST FOR GENERAL PLANNING

- Define the purpose and outcomes of the project
- Identify personnel and budgetary resources
- Develop the timeline for the project
- Decide how structured the groups will be
- Decide who the participants will be
- Write the questions for the interview guide
- Decide how large the groups will be
- Decide how many groups there will be
- Choose the locations, dates and times for the session

FR: Morgan, D. KL. (1998). Planning focus groups. Thousand Oaks, CA: Sage.

# When Describing Discussion Guidelines

- We always include:
  - ↑ We are taping recording this session
  - ↑ No names are attached to any report
  - ↑ Who sponsors the study and why

# When Describing Discussion Guidelines

- We sometimes include:
  - ▲ You don't need to agree with others, but you must listen respectfully as others share their views
  - ▲ Rules for cellular phones and pagers
  - ▲ Who can listen to the tapes
  - ▲ Who sees the report and how the report will be used

# Wording of Questions

## Assume Nothing

***Why do you like being a major in this department? Do you like being a major in this department?***

**What do you think of courses in your major?**

## Neutral

***Do long wait times for appointments discourage you from going to your academic advisor?***

**What has been your experience in making appointments with your academic advisor?**

## Singular Questions

***How is the library collection in your major? Do you have trouble finding source materials?***

***What has been your experience in finding resource materials at the library?***

## Slang

***How do you like using the CL?***

**Please tell me about using the department's computer lab.**

# Classic Questions to Ask in A Focus Group

- Can you tell me five positive things about what you have learned as a major in this department?
- If you were to lead an ad campaign related to recruiting students to this department, what would you emphasize in the ad campaign?
- If you were in charge for one day, what would be the one thing you would not change about what you have learned in this department?

# Classic Questions to Ask in A Focus Group

- If you were the moderator, what be the next question you would ask the group?
- What would you tell a best friend or family member about what you have learned as a major in this department?
- If you could change one thing about your experiences in courses in this department, what would that be?
- What would it take for this department to get an A?



# All-Things-Considered Questions

- Suppose you had one minute to talk to \_\_\_\_\_ on the topic of \_\_\_\_\_. What would you say?
- Of all the things we discussed, which one is the most important to you?
- Jot down on a piece of paper the one phrase or sentence that best describes your thinking about what you have learned as a major in this department?

## Some Questions to Ask in Focus Groups Related to Outcomes Assessment

- What did you learn from the experience?
- How did the experience affect your thinking about\_\_\_\_?
- What have you done as a consequence of the experience?
- Have you applied what you learned in other situations, and if so, please give an example or two.

## Some Questions to Ask in Focus Groups Related to Outcomes Assessment

- What do you plan to do in the future as a result of the experience?
- What would you tell your friends about the experience?
- Would you want a sibling to participate in the experience?
- Knowing what you know now, would you have participated in the experience?

# Formative Program Evaluation

- Tell us how you participated in the experience.
- What have you liked best about the experience? (What has been the most helpful to you?)
- What have you liked least about the experience? (What has been the least helpful to you?)
- What should be changed?
- What should continue just as it is now?
- What should be continued but fine tuned?
- What should be dropped?
- Do you have any other advice about the experience?

# Formative Program Evaluation

- What should continue just as it is now?
- What should be continued but fine tuned?
- What should be dropped?
- Do you have any other advice about the experience?

FR: Krueger, R. A. (1998). Developing questions for focus groups. Thousand Oaks, CA: Sage

# Summary Questions

- Is this an adequate summary?
- Did I correctly describe what was said?
- How well does that capture what was said here?

# Question Sequence in a Focus Group

- Start with easy questions
- Move from general to specific
- Follow a standard sequence from introduction to ending questions

# Document Analysis

## *Some questions to ask:*

- **Is it personal or public?**
- **What is the history of the document?**
- **How did it come into my possession?**
- **Is it what it purports to be?**



## Document Analysis

- **Is it complete; has it been tampered with?**
- **Who was the author? Is there any way to know that this person was telling the truth about the content?**
- **What were the author's sources of information?**
- **Are there other documents that could shed light on this topic?**

## Document Study: More Questions to Ask

- **What is the title of the document?**
- **What were its purposes and by whom was it produced?**
- **By whom and for what purposes might it be used?**
- **What information does the document contain?**
- **What themes or patterns are gleaned from the document related to the research question?**
- **What is the significance of the document for this study?**
- **What further questions does the document generate?**
- **Is the document consistent or inconsistent with other sources of information about the setting?**

# Issues in Observation

- Are the times when you carry out your observation relevant?
- Do you need to develop a taxonomy of what you want to observe?
- If the answer to no. 2 is no, how will you organize what you have observed?
- Are your personal characteristics likely to affect your observations?
- How artificial is the setting? How visible are you as an observer? Does this matter?
- Is observation enough, or will you need to participate?
- Are there situations where observation is important, but you cannot gain access? How can you get backstage?
- If you are going to participate, how can you balance the demands of participating with observing?

FR: Blaxter & Tight. (1996). How to research. Philadelphia: Open University Press

A Brief Overview on Quantitative  
Methods: Sampling and  
Instruments

## Checklist for Developing a Sample

- Finalize data collection design, methods and survey tools and techniques to be used
- Identify the target population to be studied
- Secure list of the target population

Source: Gansemer-Topf, A. M., & Wohlgemuth, D. R. (2009). Selecting, sampling and soliciting subjects. In J. Schuh & Associates, *Assessment methods for student affairs* (pp. 77-105). San Francisco: Jossey-Bass.

# Checklist for Developing a Sample

- Describe the characteristics of the sample
  - Does the sample need to include individuals with certain characteristics such as academic skills motivation, demographic skills and so forth?
  - Would it be feasible and beneficial to survey the entire population? If so, there is no need to develop a sample.
- Determine the sampling technique that will produce the desired sample.

# Checklist for Developing a Sample

- Outline how you will contact the participants for the sample
- Consider factors that may enhance or detract from a person's ability to participate and revise sample criteria based on this.
  - Time of year
  - Length, accessibility and ease of survey instrument
  - Survey fatigue
  - Do certain subpopulations participate at higher or lower rates?
  - Why would students want to participate? Would incentives increase participation?
  - Focus groups—convenient time and location, non-threatening environment, little impact on time.

Source: Gansemer-Topf, A. M., & Wohlgemuth, D. R. (2009). Selecting, sampling and soliciting subjects. In J. Schuh & Associates, *Assessment methods for student affairs* (pp. 77-105). San Francisco: Jossey-Bass.

# Checklist for Developing a Sample

- Select your sample
- Invite members to participate
- Send reminders to increase participation
- Thank members for their participation

Source: Gansemer-Topf, A. M., & Wohlgemuth, D. R. (2009). Selecting, sampling and soliciting subjects. In J. Schuh & Associates, *Assessment methods for student affairs* (pp. 77-105). San Francisco: Jossey-Bass.



# Commonly Used Sampling Methods

## Probability Sampling

- Random
- Stratified random sampling
- Systematic sampling
- Cluster sampling

## Non Probability Sampling

- Convenience
- Snowball
- Quota

Source: Fink, A. How to sample in surveys (2nd ed.). The Survey Kit 2. Thousand Oaks, CA: Sage.

# How Many Are Enough???

<u>Population Size</u>	<u>+/- 2%</u>	<u>+/-4%</u>	<u>+/-10%</u>
3000	1234	517	97
20,000	2222	606	100
100,000	2439	621	100
1,000,000	2500	625	100
100,000,000	2500	625	100

Source: Dillman, D. A. (1987). Elements of success. In D. E. Johnson, L. R. Miller, L. C. Miller, & G. F. Summers (Eds.). *Needs assessment: Theory and methods* (p. 189). Ames, IA: ISU Press.

# How Many Are Enough???

Source: Suskie, *Assessing student learning*, 2009

<u>Number of students from which you are sampling</u>	<u>Random Sample Size</u>
1000	278
500	217
350	184
200	132
100	80
50	44

## Calculating Sample Error

- [http://nsse.iub.edu/html/error\\_calculator.cfm](http://nsse.iub.edu/html/error_calculator.cfm)

The link above provides a calculator for sampling error.

# Combating Nonresponsiveness

- Source: Porter, S.R. (Ed.). (2004). *Overcoming survey research problems*. New Directions for Institutional Research #121. San Francisco: Jossey-Bass.

## Paper vs. web

“Web survey response rates will depend very much on the institutional context as well as the ability of the researcher to conduct a well-designed electronic survey” (p. 10).

Multiple contacts. “While they often increase costs, multiple contacts with respondents are one of the best ways to ensure a good response rate. This is one reason that Web surveys are growing in popularity: three of four contacts with respondents can be costless, while three of four paper mailings can be quite expensive, especially if postage is required” (p. 11).

Length. “In general the experimental research on mail surveys indicates that shorter surveys do elicit higher response rates, but many of the differences are quite small” (p. 11-12).

Air Force Academy cadets: 22 questions and 13 minutes to complete a survey is ideal.

Another survey: Also 13 minutes are ideal.



## Incentives

“...small tokens are usually offered to invoke the norm of reciprocity. Yet, contrary to popular belief, only certain types of incentives affect response rates. Prepaid incentives (enclosed with the survey itself) consistently raise response rates, while postpaid incentives (paid upon completion of the survey) do not”  
(p. 13).

Survey salience. “Salience is an important factor in respondent behavior; unfortunately, it is also one aspect of a survey that is difficult to alter. This research suggests that, at a minimum, salience should be emphasized in messages accompanying a survey” (p. 14).

Confidentiality. “Statements of confidentiality affect response rates only when the survey contains sensitive questions; strong statements of confidentiality can actually decrease response rates for nonsensitive surveys” (p. 17)

## Requests for help

“Requests for help in the cover letter may increase response rates” (p. 17).

Sponsorship. “Research shows, in general, surveys sponsored by governmental or academic organizations achieve higher response rates than surveys conducted by commercial businesses” (p. 15).

# Tips to Boost Response Rates

- Direct Contacts with Students
- Call non-respondents a few days after the mailing of the replacement questionnaire. Say something like "other people have had questions about the survey and we wondered if you might also?" The idea is to have a personal and polite communication with the student about the survey.
- Offer incentives (e.g. long distance phone cards or tokens for free goods or services) for each respondent. These work best if the incentive is received in advance. For example you could send a voucher by mail or by postcard that can be "cashed in" after completing the survey.

# Tips to Boost Response Rates

- Send personalized announcement and reminder letters or postcards.
- Send personalized e-mail invitations and reminders. These work particularly well when they are from a popular administrator, someone with “name value.”
- Ask academic advisors to mention the survey when meeting with their advisees.
- Link completion of the survey to future course registration (i.e., students who don't complete the survey lose registration priority).

Source: [http://www.indiana.edu/~nsse/html/increase\\_rates.htm](http://www.indiana.edu/~nsse/html/increase_rates.htm) citing Salant, P., & Dillman, D. A. (1994). *How to conduct your own survey*. New York: Wiley.

# Tips to Boost Response Rates

- Indirect Contacts with Students

- \* Post flyers on campus.
- \* Draft a press release, and place an article or ad about the survey in the school newspaper.
- \* Place inserts in the school paper.
- \* Ask faculty and staff members to discuss the importance of the survey and encourage those who have direct contact with freshmen or seniors (in or out of class) to encourage students to fill it out.
- \* Write an editorial in the school paper, by a student or administrator, explaining why the survey is important, the meaning of the survey, how the survey can be used as a tool for change, and that the survey is sponsored by the university.
- \* Ask residence hall staff to mention it at floor meetings and hall functions.
- \* Ask student clubs and organizations to discuss it at meetings and functions.
- \* Place informational ads on the campus TV and radio station

Source: [http://www.indiana.edu/~nsse/html/increase\\_rates.htm](http://www.indiana.edu/~nsse/html/increase_rates.htm) citing Salant, P., & Dillman, D. A. (1994). *How to conduct your own survey*. New York: Wiley.



## Six Factor Comparison of Locally and Commercially-Developed Instruments

### Local

- Purpose

Allows thorough diagnostic coverage of local goals and content

- Match

Tailored to local goals and content

### Commercial

- Purpose

Allows for comparison to national norm group

- Match

Usually provides incomplete coverage of local goals and content

## Local

- **Logistics**

Availability: Takes time/resources to develop

Prep Time: Considerable amount of time for development

Expertise: Takes content and measurement expertise to develop instrument

Cost: Development costs

Scoring: Immediate

## Commercial

- **Logistics**

Availability: Only if the purchase price can be met

Prep Time: Short

Expertise: Can be administered after reading manuals

Cost: Purchasing/scoring/reporting

Scoring: Can be delayed if scored off campus

## Local

**Testing Time:** Flexible  
**Test Type:** Built for local needs  
**Ease in Administration:**  
Flexible  
**Norms:** Allows for intra-institutional comparison  
**Reporting:** Built for local needs

## Commercial

**Testing Time:** Fixed  
**Test Type:** Restricted to commercial availability  
**Ease in Administration:**  
Requires standardized administration  
**Norms:** Allows for national and inter-institutional comparisons  
**Reporting:** Restricted to commercial availability

## Local

- **Institutional Acceptance**
  - ✓ Local development can encourage local ownership and acceptance
  - ✓ Quality concerns may interfere with acceptance
- **Quality**

Lack of professional quality may affect results and influence institutional acceptance

## Commercial

- **Institutional Acceptance**
  - ✓ Professional quality and national use may enhance acceptance
  - ✓ Failure to completely cover local goals and content may inhibit acceptance
- **Quality**

Professional quality may compensate for incomplete coverage of local goals and content

## Local

- Student Motivation  
Local instrument may not “impress” or provide incentives for responding

Source: Ory, J. C. (1994). Suggestions for deciding between available and locally developed assessment instruments. In J. S. Stark & A. Thomas (eds.), Assessment & Program Evaluation (pp. 597-602). ASHE Reader Series. Needham Heights

## Commercial

- Student Motivation  
Can provide incentives such as a national comparison or practice for a future administration

# Developing Good Assessment Questions

- Questions must be reasonable
- Questions must be appropriate
- Questions must be answerable

Source: Rossi, P. H., Freeman, H. E., & Lipsey, M. W. (1999). *Evaluation: A systematic approach* (4th ed.). Thousand Oaks, CA: Sage.

## Guidelines for Using Conventional Language When Asking Survey Questions

- Use complete sentences
- Avoid abbreviations
- Avoid slang and colloquialisms
- Be careful of jargon and technical expressions
- Have the questions reviewed by experts
- Have the questions reviewed by potential respondents

## Guidelines for Using Conventional Language When Asking Survey Questions

- Adopt or adapt questions that have been used in other surveys, if copyright is not a problem
- Use shorter questions to save time
- Avoid biasing words and phrases
- Avoid asking two questions in one
- Avoid negative questions



## Questions to Address When Piloting a Survey

- Were the directions clear?
- Were there any spelling or grammatical errors?
- Were any items difficult to read because of sentence length, choice of words, or special terminology?
- How did the reviewers interpret each item?  
What did each question mean to them?

## Questions to Address When Piloting a Survey

- Did the reviewers experience problems with the item formats?
- Were the response alternatives appropriate to each item.
- Did reviewers encounter problems as a result of the organization of the instrument, such as how the items flowed?

Source: Cooper, R. M. (2009). Planning for and implementing data collection. In J. Schuh & Associates, *Assessment methods in student affairs* (pp. 51-75). San Francisco: Jossey-Bass.

## Questions to Address When Piloting a Survey

- On average, how long did it take to complete? What took the most time, and the least?
- For web-based instruments, did the respondents encounter any problems accessing the instrument from a computer or navigating the instrument once it was accessed?

## Questions to Address When Piloting a Survey

- Did any of the reviewers express concern about the length of the instrument?
- Did they have any concerns about confidentiality or how the questionnaire would be used?
- Did they have any other concerns?
- What suggestions do they have for making the instrument or individual items easier to understand and complete?

Source: Cooper, R. M. (2009). Planning for and implementing data collection. In J. Schuh & Associates, *Assessment methods in student affairs* (pp. 51-75). San Francisco: Jossey-Bass.

# Can We Trust Self-Report?

Self reported data are likely to be valid under five general conditions:

- (1) when the information requested is known to the respondents;
- (2) the questions are phrased clearly and unambiguously;
- (3) the questions refer to recent activities;
- (4) the respondents think the questions merit a serious and thoughtful response; and
- (5) answering the questions does not threaten, embarrass, or violate the privacy of respondents or encourage respondents to respond in socially desirable ways.

## Sources for Developing Internet Instruments

- Survey Monkey  
<http://www.surveymonkey.com/>
- Survey Pro  
<http://www.surveipro.com/>
- Snap Surveys  
<http://www.snapsurveys.com/>
- Zoomerang  
<http://info.zoomerang.com/>

# Potential Instruments

- NSSE
  - [http://nsse.iub.edu/html/quick\\_facts.cfm](http://nsse.iub.edu/html/quick_facts.cfm)
- CSEQ
  - [http://cseq.iub.edu/cseq\\_generalinfo.cfm](http://cseq.iub.edu/cseq_generalinfo.cfm)
- ACT
  - <http://www.act.org/path/postsec/promote.html>
- Noel Levitz
  - <https://www.noellevitz.com/default.htm?ReturnURL=%2fmyNoel-Levitz%2fMyHome.htm>
- HERI (Higher Education Research Institute at UCLA)
  - <http://www.heri.ucla.edu/herisurveys.php>

# Department Assessment/ Review Model

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# Department Assessment/Review Model

- Mission: How does the unit's mission fit with the mission of the division and the institution? How does it fit with institutional mission and goals of the institution? Annual
- Students/clients: Who uses the service? How often? What do you know about how often your service/program area is used and in what ways? How many phone calls do you receive in a week? What about walk-in traffic? Annual.
- Needs assessment: How do you know what the needs of your students are? How often do you measure their needs? Every third year.

# Department Assessment/Review Model

- Satisfaction: Are you students happy with your services? How do you know this? How do you measure client satisfaction? Every third year.
- Cost effectiveness: How do your costs compare with those of other universities? Off-campus service providers? Are there benchmarks you can identify that can be used for comparison? Annual.
- Outcomes: Do you influence students learning? Behavior? Thinking? Persistence? How do you know? Program specific.
- Issues for the future: What are the issues for the future for your unit? What do you need to do now to get ready for the future? How will things change in five years? How do you know? Annual.