

6

INDIRECT ASSESSMENT TECHNIQUES

The preceding chapter reviewed methods that directly assess student learning. Direct techniques require that students display the extent of their learning by doing something, such as responding to a test question or completing a homework assignment. In contrast, indirect techniques involve a report *about* learning rather than a direct demonstration of learning. Although most of us would prefer to have students show us rather than tell us about their learning, indirect measures often allow us to obtain information quickly and efficiently. For example, it might take only a few minutes for students to report how well they have mastered our learning objectives, but if they were asked to show this learning, much more time and effort would be required.

Indirect techniques also make unique contributions to program assessment because they allow us to pursue issues in depth and to solicit advice from important stakeholders. For example, faculty might learn that students are not mastering an important learning objective, but they may not know how to respond. They could use an indirect technique, such as interviews or focus groups, to explore this problem and develop an informed response.

Just as with direct techniques, results based on indirect techniques should be reliable and valid. Because what people say they know does not always correspond to what they do know, validity is of particular concern when we indirectly assess our objectives. One way to increase

our confidence in the validity of our findings is to compare them to other sources of information. For example, our confidence would be reduced if students report that they are highly skilled in writing, yet direct evidence suggests that their writing is weak. Although we would conclude that these student perceptions are inaccurate, this finding may be important. Opinions, regardless of their accuracy, guide decision-making. Providing optional tutoring in writing may be an ineffective response if students do not recognize their need for such assistance.

SURVEYS

Surveys elicit information about people's beliefs, experiences, or attitudes. Traditional program reviews relied heavily on surveys, but surveys now share the spotlight with a variety of other techniques. Here are a few examples of assessment studies that used surveys:

- The University of Arizona General Education Assessment Subcommittee used three open-ended questions to survey faculty about the general education (GE) program (University of Arizona, 2000). Questions asked for faculty comments about the GE goals, how the program could be improved, and the GE program's progress to date. Comments were summarized for each question and were categorized as "positive," "mixed," or "negative."
- Staff at California State University, Bakersfield conducted a survey to examine student reactions to their computer labs and email system (Noel, 2002). They emailed students to request their participation and provided a link to an online survey. Results included useful suggestions on how to improve the labs (e.g., changing hours of operation and providing better "how-to" assistance) and email system (e.g., making it easier for students to delete unwanted messages).
- Over 2,000 graduating seniors at George Mason University completed an exit survey that assessed their views on their educational experiences and future plans (George Mason University, 2001). Results were summarized for the entire university, each college, and each major.
- Faculty in the University of Illinois at Urbana-Champaign's Department of Electrical and Computer Engineering (2000)

asked three groups to assess student learning. Graduating seniors and alumni rated their level of achievement, and faculty rated the "amount of attention" needed for each of their 14 learning objectives. All groups also responded to open-ended questions about their views of the educational process. The online report provides extensive summaries of the findings.

- The University of North Carolina used surveys to assess student learning and various program characteristics (University of North Carolina, 1998). Questions were given to sophomores, seniors, and alumni on a variety of topics, such as instructional quality, personal growth, and academic support services. Results for departments and for the university as a whole are posted online.

Survey questions can be closed-ended or open-ended, and assessment surveys commonly use both formats. *Closed-ended* questions generally require a short response or an answer chosen from a list. *Open-ended* questions allow respondents to create their own answers within broad parameters set by the survey, and they allow faculty to uncover unanticipated results that would have been missed if only closed-ended questions were used. Occasionally closed-ended questions offer a dichotomous choice, such as "agree" versus "disagree" or "used" versus "did not use," but frequently questions provide a range of response options. For example, a *Likert scale* allows respondents to indicate their degree of agreement, with options usually ranging from "Strongly Disagree" to "Strongly Agree." The number of response categories depends on the extent to which respondents can make meaningful differentiations and the importance of reporting results with response gradations. Figure 6.1 provides examples of item formats and items that could be used for program assessment.

Surveys should be carefully designed. One common mistake is to include every question that anyone suggests, creating a hodgepodge of questions that are unrelated to project objectives. Faculty should create short, focused surveys that deliberately address specific issues, and each item should serve a purpose. Surveys generally end with a set of questions that identify respondent characteristics (e.g., age, gender), allowing faculty to describe the sample and to conduct subgroup analyses, such as comparing the responses of younger and older respondents. Faculty who create surveys should avoid questions that are ambiguous, biased, or

FIGURE 6.1
COMMON SURVEY FORMATS

Type of Item	Example
Checklist	Please indicate which of the activities you feel competent to perform. ___ Develop an investment plan. ___ Interpret a financial report. ___ Provide feedback about an employee's performance. ___ Write a case study.
Classification	Organization of the paper: ___ Confusing, unclear ___ Generally clear, minor points of confusion ___ Clear, logical, easy to follow
Frequency	In a typical term, I used the department's computer lab: Never Seldom Sometimes Often
Importance	How important is it for the department to provide career counseling? Unimportant Slightly Moderately Very Extremely Important Important Important Important Important
Likelihood	How likely are you to apply to a graduate program in the next five years? Very Unlikely Slightly Unlikely Uncertain Slightly Likely Very Likely
Linear rating scale	Ability to compose paragraphs in standard written English. Unsatisfactory ___ ___ ___ ___ ___ ___ ___ Excellent
Likert scale	I am able to write a research paper using MLA standards. Strongly Disagree Disagree Neutral Agree Strongly Agree
Open-ended	Please describe the most important concepts you learned in the program.

Type of Item	Example
Partially closed-ended	Please check the most important factor that led you to major in engineering. ___ Experience in a specific course ___ Experience with a specific instructor ___ Work experience in this or a related field ___ Advice from a career planning office or consultant ___ Advice from family or friends ___ Other: please explain
Quality	Please indicate the quality of instruction in the general education program. Very Poor Poor Good Very Good
Quantitative judgment	Compared to other interns I have supervised, this student's knowledge of the theory and principles of clinical practice is: 1 2 3 4 5 6 7 8 9 10 below average average above average
Ranking	Please indicate your ranking of the importance of the following student learning objectives by assigning ranks from "1" to "4," where "1" is most important and "4" is least important. ___ Computing ___ Critical thinking ___ Speaking ___ Writing

confusing. Allen (1995) offers these suggestions for writing effective survey questions:

- Avoid compound items. (*Did you like the courses and instructors? What about people who like the courses but not the instructors, or vice versa?*)
- For closed-ended questions, be sure to include all possible response categories. (This may require the use of an "Other" category.)
- Avoid vague questions. (*Did you learn because of your efforts or the efforts of the instructor?*)

- Avoid confusing wording. (*I rarely use the library. True ___ False ___*. Does a "False" answer mean that the person never, often, or always uses the library?)
- Sometimes you have to allow respondents to not answer questions. (*How often do you use your home computer to access online course materials? How should students without a home computer respond?*)
- Avoid wording that might bias responses. (*We expect students to study at least three hours outside of class for each hour in class—please estimate the number of hours you study outside of class for each hour in class.*)
- Avoid questions that threaten or alienate your respondents. (*How concerned are you that our efforts to increase campus diversity threaten academic quality?*)
- Be careful of order effects, when the response to one question influences the response to a later question. (*Have you ever plagiarized a source when preparing a paper or assignment?* followed by *To what extent have you followed departmental ethical guidelines while completing your degree?*)
- Consider specifying a timeframe. (*How many books have you read in the past six months that were not required for a class?*)
- Avoid negative wording. (*I received ineffective career advice. True ___ False ___*. Some respondents become confused about what their answers mean.)
- Remember cultural differences. (*If you had a personal problem while a student here, did you use the counseling center or did you consult a professional, such as a priest or therapist? What about a rabbi, minister, parson, elder, mullah, or other representative of a religion?*)

Faculty could survey various stakeholders, and Figure 6.2 suggests possible questions for different target groups. Although the questions are presented in an open-ended format, most could be translated into closed-ended questions. For example, instead of asking "What factors influenced your decision to major in this program?" you could ask "Which of the following factors influenced your decision to major in this program?" followed by a list of options.

FIGURE 6.2
POSSIBLE SURVEY QUESTIONS FOR
DIFFERENT GROUPS OF STAKEHOLDERS

Respondents	Examples
Entering students	<ul style="list-style-type: none"> • What factors influenced your decision to major in this program? • What do you expect to do with a degree in this area?
Current students	<ul style="list-style-type: none"> • How could we improve the advising in our program? • What could the department do to help you achieve the program's learning objectives? • How could we improve the tutoring center to better meet your needs?
Exiting students	<ul style="list-style-type: none"> • How effective was the major in preparing you for a career or for graduate school? • What were the strongest aspects of the major? The weakest? • Which of the department's learning objectives do you believe you have achieved? Which, if any, have you not achieved? What improvements could the department make to help students achieve the objectives?
Alumni	<ul style="list-style-type: none"> • Are you employed in the area of your major? • How effectively did the program prepare you for your current position? • Which of the department's learning objectives have been especially useful in your career? How well did you master them?
Employers	<ul style="list-style-type: none"> • Do graduates from our program have the skills and other characteristics necessary to work effectively in your organization? • What are the most important things for students to learn to become effective employees in your organization?

(continued on page 110)

Respondents	Examples
	<ul style="list-style-type: none"> In the next five years, in what ways should our program change to better prepare our graduates for positions in your organization?
Program faculty	<ul style="list-style-type: none"> What are the most important curricular changes for the department to make in the next five years? Which of the department's learning objectives are most important? Least important? Should any of the department's learning objectives be modified or deleted? Should any learning objectives be added to the program? Explain.

A variety of published surveys are available. Figure 6.3 describes the effective use of a published survey in general education courses at Portland State University. Such surveys can provide useful information about program support for student learning. For example, the National Survey of Student Engagement (NSSE; www.iub.edu/~nsse) collects information about undergraduate learning experiences and provides norms on student participation in activities known to enhance learning, such as active and collaborative learning. These norms are used as *benchmarks*, that is, criteria for assessing campus results compared to nationally-developed standards. For example, see Belchier (2000) for a report on NSSE findings at Boise State University. The Higher Education Research Institute (HERI) has collected college freshmen data for over three decades in the Cooperative Institutional Research Program (CIRP; <http://www.gseis.ucla.edu/heri/heri.html>) and has accumulated results from over 1,700 colleges and universities. HERI provides national norms for many variables of interest to campus planners, such as freshmen career interests and prior experiences with computers. Many campuses routinely use these surveys, but results are not always disseminated to faculty and other campus professionals. Potentially useful data which are not shared are unlikely to improve campus operations.

Faculty who conduct surveys should be careful to obtain reasonable samples. Most survey researchers consider the *response rate*, that is, the proportion of contacted individuals who complete the survey. Results can be biased when the response rate is low. For example, perhaps only

FIGURE 6.3
EFFECTIVE USE OF THE COLLEGE
CLASSROOM ENVIRONMENT SCALE

Portland State University faculty began using the College Classroom Environment Scale (CCES; Winston, et al., 1994) in 1994 (Jessen & Patton, 2002). This survey was developed to assess students' perspectives about the degree of "community" in specific classes, and it has six scales: Cathartic Learning Climate (high student engagement), Professorial Concern (faculty respect and empathy for students), Academic Rigor (academic challenge), Affiliation (mutual peer support), Structure (unambiguous alignment of course activities and grading criteria), and Inimical Ambiance (course atmosphere of hostility, rigidity, and competitiveness).

The general education program for most Portland State students is based on learning communities and an interdisciplinary curriculum, making the CCES scales particularly relevant to their mission. The program begins with a year-long interdisciplinary Freshman Inquiry course, and one of its major goals is to build a learning community among involved students. The CCES is administered annually in all sections of Freshman Inquiry.

Faculty who staff these courses receive reports on their results with normative data based on annual summaries of their courses and aggregated data collected in all Freshman Inquiry courses since 1995. This allows faculty to track feedback for their courses and to compare their courses to other sections.

Jessen and Patton (2002) report lessons they have learned over the years. Students are more likely to take the survey seriously if the faculty member or proctor supports its use and explains the reason for the survey and how data will be used. Data collectors should maintain a professional administrative environment by asking students to not talk during its administration and to share honest, thoughtful, and personal perspectives. Students report appreciating the opportunity to discuss results with their instructors, perhaps because this shows respect for their opinions and leads to changes that improve their educational experience. Faculty also found that responses can vary considerably across sections of classes, even when taught by the same individuals, presumably because of differences in student personalities and learning styles, and this has led to productive discussion of pedagogy with faculty development professionals.

In addition to providing formative feedback to individual faculty, program administrators combine CCES results with other assessment data from course evaluations and portfolio reviews. They use results to focus faculty development initiatives and individual consultations, they invite faculty with consistently positive results to share ideas with colleagues at faculty retreats, and they provide individual support to faculty who receive unusually low ratings. Faculty are encouraged to use CCES results to improve community-building in their courses, to assess the impact of changes in pedagogy, and to document teaching effectiveness during personnel reviews. Overall, CCES scores have exhibited positive trends at Portland State, and because these scores reflect an important component of their mission, they are proud of this accomplishment.

respondents with strong opinions or with negative perspectives return the survey. This concern is reduced if respondents appear to be typical of those who were contacted, and faculty could check to see if respondents' *demographic characteristics* (e.g., gender, age, ethnicity, class level, grades) match the population from which they were drawn. It is more important to obtain *representative* (unbiased) samples than large samples, but reasonably large samples are desired to ensure that the full range of opinions have been observed.

Several strategies may improve response rates. Potential participants should be convinced that their responses will be carefully considered and that ethical procedures are in place to protect their confidentiality. They are more likely to return short, professional-looking surveys than long, amateurish ones. Personal contacts with potential respondents can be helpful. For example, data collectors could collect survey data in classes, or they could hand deliver the surveys and arrange a convenient time for picking them up. Sometimes a reminder helps. Researchers who mail surveys frequently follow-up by mailing reminder postcards or second copies of the surveys to nonrespondents.

Online surveys are becoming increasingly popular (e.g., Noel, 2002). They provide quick, inexpensive access to respondents and automatic, reliable data recording. Faculty must find ways to invite possible respondents to complete the survey and motivate them to complete it, and this could be done in classes, newsletters, email messages, or postcards. Commercial software for constructing online surveys is available, and faculty also might make use of course management systems, such as WebCT or Blackboard. As with all surveys, faculty should be concerned about the representativeness of the sample, and there is a risk that such surveys will be biased in favor of those who have easy Internet access.

Surveys have served an important role in the review of academic programs for years, and they continue to be useful tools. They usually are the least expensive way to obtain feedback from large samples, they can easily collect information on many issues, they can be mailed to distant respondents, and results generally are straightforward to interpret. The analysis of open-ended questions can be difficult, but usually is manageable because answers tend to be short and focused. If surveys are periodically repeated, data can be tracked across time to assess the impact of program changes.

INTERVIEWS

As described in Chapter 5, faculty can conduct competence interviews to directly assess student learning. Traditional interviews also have a place in program assessment. Faculty can use them to indirectly assess student learning and to collect feedback on program characteristics. Interviews involve a conversation, or questions and answers, between interviewers and interviewees, and they provide a sense of immediacy and personal attention that often is lacking with surveys. Here are some assessment studies that used interviews:

- Boise State University freshmen were interviewed weekly to determine their reactions to the college experience (Boise State University, 2002). Interview information was combined with data from weekly journals and a year-end group meeting.
- Harvard University faculty and administrators conducted in-depth, open-ended interviews with approximately 1,600 Harvard seniors over a ten-year period (Light, 2001). Among other findings, Light concluded that students tended to be more productive studying in pairs than alone, that time management is one of the most important skills for students to learn, that significant learning occurs during supervised projects and internships, and that experiences with students of different backgrounds is a significant learning experience. This is an excellent example of a long-term unstructured interview study that led to rich findings about students' educational experiences.
- Seniors at the University of Hawaii, Manoa were interviewed about their experiences in writing intensive classes (Hilgers, Bayer, Stitt-Bergh, & Taniguchi, 1995). Student interviewers were guided by a set of 36 interview questions, and they used a semi-structured approach that allowed some interview flexibility to enhance the conversational flow. An extensive discussion of the methodology and results are included in the article.
- The University of Wisconsin-Oshkosh's Department of English (n.d.) uses a brief exit interview, conducted during the student's last term by the student's advisor and a member of the assessment committee. Students are asked their views about the major, the campus, extracurricular activities, and opportunities for their per-

sonal development. The advisor sets up and conducts most of the interview, and an assessment committee member takes notes.

- Truman State University conducts yearly interviews with randomly selected students from either the freshman or junior class (Truman State University, 2002). Topics vary each year, but are focused on curricular and co-curricular issues of interest to the university. The 30-minute interviews are standardized and consist primarily of open-ended questions. Interviewer teams consist of one faculty or administration representative and one student member. Results of the surveys are summarized and posted online.

Although interviews are similar to surveys, their distinguishing characteristic is the opportunity for interaction between interviewer and interviewee, which is both a potential strength and limitation. For example, if a respondent does not understand the meaning of a question, the interviewer can clarify any misunderstanding; however, the interviewer also can decrease the objectivity of the process by providing too much interpretation, by doing so inconsistently, or by inadvertently rewarding respondents for giving the desired or expected response. Faculty might not be the best people to interview students because their dual relationship might keep students from expressing criticism, and faculty might find it difficult to avoid biasing results in other ways. Neutral interviewers generally are preferred.

Structured interviews usually are used for program assessment because they provide consistent data across different interviewers and respondents. They are easier to administer than unstructured interviews, and students can be trained to conduct them. Unstructured interviews (e.g., Light, 2001) can produce rich, in-depth understanding of issues; however, they have questionable reliability and validity unless done by skilled interviewers, and they require considerable time for analysis, limiting their usefulness for most assessment projects.

Interview questions can be closed-ended or open-ended. Common closed-ended questions are dichotomous (e.g., “yes” or “no”), request ratings of magnitude (e.g., “How satisfied are you with your program?”), or include checklists (e.g., “Which of the following factors were most important for your educational success?”). Responses to closed-ended questions are relatively easy to record and analyze. In contrast, open-

ended questions provide few restrictions to the interviewee, so recording and analyzing the data are more difficult. Despite this concern, open-ended questions are often used because they can uncover unanticipated results.

Interviews can be conducted one-on-one or in small groups (see the focus group discussion in the next section), and they can be conducted face-to-face, by telephone, or by any other method that provides the opportunity for interaction between interviewer and interviewee. Much of the advice for writing good survey questions also applies to creating interview questions. Here are suggestions for constructing the interview script:

- Begin the interview with straightforward questions to help respondents feel comfortable.
- Be clear about what you want to learn from the interviews and match the questions to these objectives. For example, if you want feedback on improving student learning, you might ask, *What is one thing that the department could do to help you learn more effectively?*
- Encourage respondents to talk about their own experiences and perspectives rather than abstract concepts. For example, *What would help you better prepare for a career?* rather than *What are the most important things that the department should cover in a “careers” course?*
- Provide structure to guide the respondents’ answers. Instead of *What do you think about the program?* consider *How could the program be improved to help you prepare for graduate school?*
- Avoid closed-ended questions disguised as open-ended ones. For example, *Did you benefit from your advising sessions?* only requires a yes/no response. Instead, ask *Describe one of the most important benefits of your advising sessions.*
- Give the respondents an opportunity to discuss their most important issues or concerns. You may not have asked the most important questions, so include an all-purpose question at the end. For example, you could end the interview with *Is there anything you would like to tell us about the program that we haven’t asked about?*

- Pilot test your script with a small sample. You may discover that some of the questions are difficult to understand, that rephrasing is necessary, or that the flow of questions is difficult to follow. Questions that appeared to be appropriate when viewed in print may not be acceptable when spoken by an interviewer. Pilot testing also provides the opportunity to verify that the procedures, including data recording, are workable.

Because of the opportunity for the interviewer to influence the process, it is essential that interviewers be trained. Conducting mock interview sessions can help identify problems before actual interviews begin. For example, interviewers might introduce bias into the process if they are not aware of subtle aspects of their interpersonal dynamics. Practice sessions also allow interviewers to rehearse the process so that they can be relaxed and fluent when they conduct the actual interviews. Here are some tips for effective interviewing:

- Conduct the interview in an environment that allows the interaction to be confidential and uninterrupted.
- Demonstrate respect for the respondents as *participants* in the assessment process rather than as *subjects*. Explain the purpose of the project, how the data will be used, how the respondent's anonymity or confidentiality will be maintained, and the respondents' rights as participants. Ask if they have any questions.
- Put the respondents at ease. Do more listening than talking. Allow respondents to finish their statements without interruption.
- Match follow-up questions to the project's objectives. For example, if the objective is to obtain student feedback about student advising, don't spend time pursuing other topics.
- Do not argue with the respondent's point of view, even if you are convinced that the viewpoint is incorrect. Your role is to obtain the respondents' opinions, not to convert them to your perspective.
- Allow respondents time to process the question. They may not have thought about the issue before, and they may require time to develop a thoughtful response.

- Paraphrase to verify that you have understood the respondent's comments. Respondents will sometimes realize that what they said isn't what they meant, or you may have misunderstood them. Paraphrasing provides an opportunity to improve the accuracy of the data.
- Make sure you know how to record the data and include a backup system. You may be using a tape recorder—if so, consider supplementing the tape with written notes in case the recorder fails or the tape is faulty. Always build in a system for verifying that the tape is functioning or that other data recording procedures are working. Don't forget your pencil and paper!

Obtaining a representative sample is an important challenge. In contrast to surveys, interviews require interpersonal contact, and this can be difficult to arrange. Students who fail to show up for appointments can be a continuing source of frustration to interviewers who are working under tight schedules. One strategy is to pay students for their participation, but even this may not assure widespread participation. Students with exams, families, and jobs may decide at the last minute that showing up for the interview is not worth the small stipends usually available for this purpose. Interviewers might try to catch students in public places, such as the cafeteria or library. Interviews also might be administered in conjunction with other activities, such as advising sessions or club meetings. Interviews with faculty, staff, or alumni can be easier to arrange because it is possible to meet them at their offices or professional sites. Faculty should determine an effective way to secure respondents before investing time and effort in this process.

Phone interviews allow interviewers to reach distant respondents, but connecting with people rather than answering machines can be challenging. Phone interviewers frequently enter responses directly into a computer, and the script can be displayed on the screen as they work. This method of data collection has been hampered by the proliferation of commercially-sponsored "surveys" that are veiled sales pitches, and potential respondents may screen out calls from unknown sources or be suspicious when approached. People have learned that it's easy to hang up, so phone surveys should be short, focused, friendly, and professional. For example, Project Pulse (University of Massachusetts, 2002) has been in place at the University of Massachusetts since 1996, and they rou-

tinely administer short, targeted phone surveys on issues of current interest, such as gender equity and class size. Some have reported success using an 800 number. They leave a quick phone message on answering machines and invite potential respondents to call back during hours that the phone will be staffed. If addresses are known, this phone number and invitation also could be distributed via email messages or postcards.

Analyzing interview data requires a thoughtful review of what respondents said, and the summary should be succinct, but with sufficient detail to be useful. The report should be organized to respond to project objectives. For example, if the objective was to understand student views about research experiences in the program, the review could summarize positive experiences, negative experiences, and suggestions for improvement. Results that do not fit a pre-defined objective can be included in an "Other" category that summarizes interesting, but unanticipated findings. Chapter 7 contains more information on analyzing responses to open-ended questions.

Interviews are versatile techniques for obtaining feedback from respondents, and they allow interviewers to query for information and clarify questions. They can, however, be expensive and time-consuming.

FOCUS GROUPS

Focus groups are planned discussions among small groups of participants who are asked a series of carefully constructed questions about their beliefs, attitudes, and experiences. Like interviews, they provide personal interaction as data are collected and allow for probing questions and clarifications. In addition, group members can hear and respond to each other's opinions, and facilitators can uncover the degree of consensus on ideas that emerge during the discussion. Students and others generally enjoy participating in focus groups, especially if they believe their opinions will be respected by the faculty who review the report. Properly conducted focus group can provide in-depth, useful feedback about programs, as illustrated by these examples:

- Staff at California State University, Bakersfield used focus groups to examine their instructional television (ITV) program, and they conducted groups at the main campus and at a satellite campus

(Program Assessment Consultation Team, 2001). Results led to a number of improvements, such as offering a hands-on workshop to new ITV instructors, distributing an ITV frequently-asked-questions sheet to students, hiring student assistants to handle the technical aspects of the classroom, and improving communication links with distant students.

- Students at the California Maritime Academy participated in focus groups to determine their experiences in the general education program and their suggestions for improvement (Paine-Clemes, 2001). Students highlighted the need for hands-on activities, visual aids, positive instructor attitudes, and relevance to their personal goals.
- Staff at Georgetown University's Medical Center (2001) conducted a focus group of first-year medical students to assess student reactions to the orientation session. Results provided a number of suggestions for improving the session. The online report includes an executive summary, the facilitator's questions, and a transcript of student responses.

Effective focus group facilitation requires special skills. Although it often looks easy to an observer, conducting focus groups requires an understanding of group dynamics and the ability to mentally juggle content and process. Facilitators must be able to establish rapport with participants and generate their trust; and they must manage the discussion to engage all participants, elicit the full range of opinions, and keep the process focused on project goals. Credibility is essential for eliciting open, honest participation. Students might be intimidated if facilitators are instructors who could identify them and who hold significant power over them; and most faculty would find it difficult to hear complaints without becoming defensive. Neutral focus group leaders who are not program stakeholders are recommended. Most campuses have faculty who are experienced in qualitative research techniques, including focus groups, such as faculty in psychology, sociology, anthropology, business, nursing, and education. Faculty who want to include focus groups in their program evaluation plans should collaborate with colleagues who have focus group experience.

The facilitator conducts the focus group using a series of prepared questions. The session has three major phases. *Opening questions* in the *warm-up* phase involve everyone in the discussion and make them comfortable with the process; *issue questions* elicit information about the primary objectives of the project; and *closing questions* allow participants to clarify earlier comments and discuss topics not previously addressed, and they bring closure to the process. Examples of focus group questions are presented in Figure 6.4.

Focus groups can be implemented in a variety of ways, ranging from an unstructured, open-ended process to one that is highly structured (McMillin & Noel, 2001). Fewer skills are required to conduct highly structured group interviews, and more skills are required to conduct less-structured, traditional focus groups.

Traditional focus groups are free-flowing discussions among participants, guided by a skilled facilitator who subtly directs the discussion in accordance with predetermined objectives (Morgan & Krueger, 1998). This process leads to in-depth responses to questions, generally with full participation from all group members. The facilitator departs from the script to follow promising leads that arise during the interaction. The data are extensive transcripts of complicated group interactions, and the researcher must invest considerable time to interpret the transcription and write reports.

Structured group interviews are less interactive than traditional focus groups and can be facilitated by people with less training in group dynamics and traditional focus group methodology. The group interview is highly structured, and the report generally provides a few core findings rather than an in-depth analysis. This model is most often used for the formative assessment of specific courses, and standardized procedures have been suggested, such as the Small-Group Instructional Diagnosis (SGID; Bennett, 1987) and the Group Instructional Feedback Technique (GIFT; Angelo & Cross, 1993). Facilitators often are faculty development professionals, and they conduct these interviews in intact classes while the instructor is away. They generally ask three questions that invite students to identify what the instructor is doing well, what the instructor is not doing well, and what specific suggestions might improve the instructor's effectiveness.

FIGURE 6.4
FOCUS GROUP SAMPLE QUESTIONS

Purpose of Question	Examples
Warm-up	<ul style="list-style-type: none"> I'd like everyone to start out by stating a word or phrase that best describes your view of the program.
Issue 1: Career preparation	<ul style="list-style-type: none"> Please tell us what career you are interested in pursuing after graduation. How has the program helped you prepare for your career or future activities?
Issue 2: Advising	<ul style="list-style-type: none"> We are interested in your advising experiences in the program. Could you tell us about your first advising experience in the department? What did you find most useful in your interactions with your advisor? What would you like our advisors to do differently?
Issue 3: Curriculum	<ul style="list-style-type: none"> Thinking about the curriculum and the required courses, how well do you think they prepared you for upper-division work? What should be changed about the curriculum to better prepare you for your career or for graduate school?
Closing	<ul style="list-style-type: none"> We've covered a lot of ground today, but we know you might still have other input about the program. Is there anything you would like to say about the program that hasn't been discussed already?

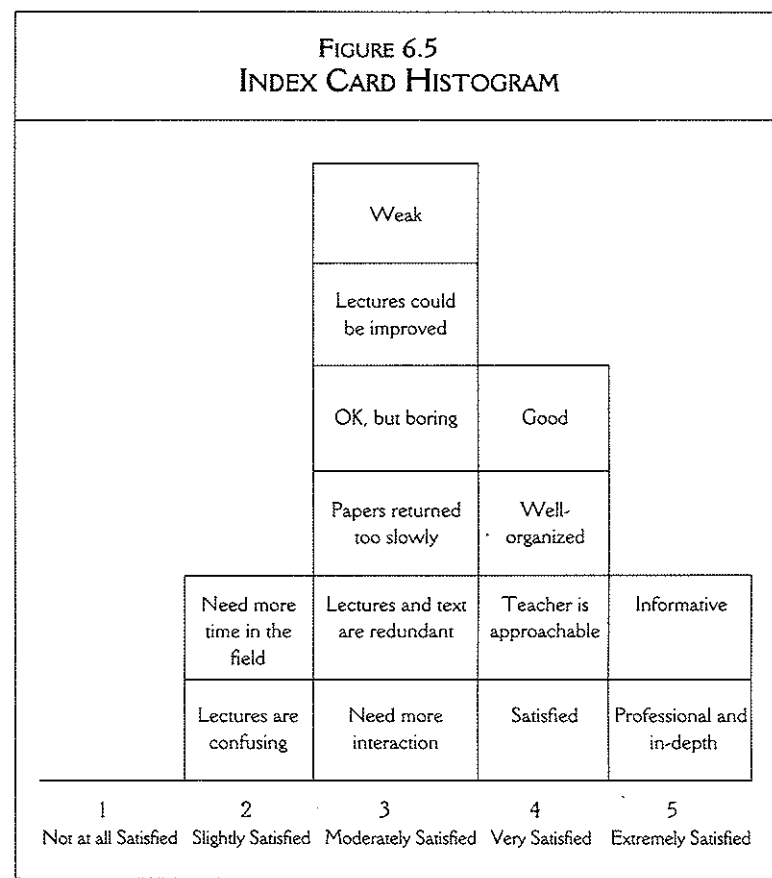
Millis (1999, 2001) and colleagues at the United States Air Force Academy conduct SGIDs and have augmented them with a brief survey and small-group exercise. The facilitator begins by giving each participant an index card and asking them to rate the quality of the course using a 5-point scale and to provide a word or phrase that describes their reaction to it. Students share what they have written with the group, fol-

lowed by a discussion of the focus group questions. Then the facilitator asks participants to form smaller groups (roundtables) that create two lists (the most positive aspects of the course and things that should be improved), and the small groups are asked to consensually rank order the top few items on each list. A report is provided to the instructor that summarizes the index card results in a histogram (see a simulated example in Figure 6.5), provides a transcript of the large-group interview, and presents the roundtable rank-ordered lists in a table. The entire process produces a quick turnaround of information, provides quantitative and qualitative results, and has proven to be useful for course improvement.

Noel (2001b) and his colleagues conduct program assessment focus groups that combine characteristics of traditional focus groups and the Air Force Academy group interviews. They use the index card and roundtable exercises, and they add a short questionnaire that collects demographic information and data on students' long-term goals. In addition, they survey students at the end of the session to collect feedback on the conduct of the group and to determine how well it allowed participants to freely contribute their ideas. Assessment center staff work with department chairs to identify the issues to be discussed, and assessment center student assistants conduct these modified focus groups using about an hour of class time. Facilitators probe for additional information during the whole-group discussion and encourage participants to discuss ideas with each other, but the process is shorter and the analysis is not as extensive as in traditional focus groups. Their reports include summaries of the surveys and index card and roundtable exercises, as well as major findings from the discussion. They usually conduct the focus groups in capstone courses, and, depending on the size of the class, they run several simultaneous groups. This allows them to avoid many of the scheduling and recruitment problems that often plague focus group projects. Noel and his colleagues train student assistants to facilitate the groups and work with them to develop and pilot test the focus group questions. This system provides a win-win situation for students and for the campus. Students receive valuable training and experience in qualitative research, and the campus receives a useful assessment service.

Although group interviews can be conducted with groups of any size, traditional focus groups usually involve from six to ten participants. Having fewer participants can limit the variety of expressed viewpoints, but having more than ten decreases the opportunity for everyone to participate. Groups can be larger if less interaction is required, as in structured group interviews, but traditional focus groups rely heavily on group

FIGURE 6.5
INDEX CARD HISTOGRAM



interaction. Group members should have a common level of experience that allows them to discuss the issues. For example, freshmen and seniors would not be a good mix because they would have very different perspectives, and the seniors would likely dominate the discussion. If the opinions of both freshmen and seniors are of interest, they should be interviewed in separate focus groups. It is important to select participants who have something to say about the relevant issues and who will be able to speak freely without being intimidated by others.

Facilitators often conduct more than one focus group to develop a thorough understanding of the issues being explored. A good rule of thumb is to continue collecting information until the groups become

repetitive, giving facilitators confidence in their conclusions (Morgan & Krueger, 1998). Personal experience using focus groups for program assessment suggests that two to four focus groups usually are sufficient.

Focus group reports vary considerably in the amount of presented information. The person who prepares the report must be able to work with extensive amounts of qualitative information and must be perceived as someone who is professional and fair in dealing with the collected information. Some provide only a summary of findings, while others provide a summary of findings, transcripts on which the findings are based, and suggestions for how the findings can be used to improve the program. In all cases, researchers must maintain the confidentiality of the participants, and this requires a careful editing of transcripts and quotations included in the report. How the report will be written, who will receive the report, and when it will be completed should be clarified in advance to avoid misunderstandings.

Although their implementation may be time-consuming and skilled facilitators are needed, focus groups can provide important insights about programs. They have the potential to uncover unanticipated information that would not be captured by other assessment techniques.

REFLECTIVE ESSAYS

Reflective essay assignments invite students to reflect on some aspect of their university experience. Reflective essays can be administered in a number of ways and can collect feedback about programs or about the entire campus. Open-ended survey questions and course journals often call for brief reflective essays, and longer essays could be collected as in-class or homework writing assignments. Some campuses have required examinations to certify general education writing requirements, and reflective essays could be used to assess writing competence as well as to collect student feedback on selected issues. Students often are asked to include reflective essays in portfolios to discuss their strengths and weaknesses, their development as students, and their preparation for their anticipated career.

Reflective essays should be based on carefully crafted, open-ended questions. Here are some examples of reflective essay questions that could be used for program assessment:

- Describe the most valuable thing you learned in our program, and explain how this will be useful to you in your future.
- Which of the program's learning objectives are the most and least important to you? Why?
- Explain how you have grown as a person and as a nurse during your experience in the program. To what do you attribute your growth?
- Thinking about your experience in our program, describe how the program could be improved to increase your learning.
- Many students are understandably interested in preparing for a career. How might our program be changed to better prepare you for your anticipated career?
- Faculty vary in their teaching styles. What types of teaching have been particularly effective in helping you learn?
- Faculty have asked you to complete a number of group projects and activities. What did you learn about effective teamwork and how did you learn these lessons?
- Faculty are concerned that too many students do not complete reading assignments before coming to class. If you were an instructor at this university, how would you motivate your students to complete reading assignments?
- Reflect upon your experiences with diversity on our campus. What have your experiences taught you about diversity?
- How might the psychology club be improved to better serve your personal interests and goals?
- Explain why you selected the items for inclusion in your portfolio and what they reveal about your growth.
- Reflect upon the process of preparing your portfolio. Did it help you better understand yourself or your education at our campus? Explain.

When students are asked to reflect on their learning (e.g., to "Discuss how well the program helped you develop critical thinking skills"),

reflective essays indirectly assess program learning objectives. Sometimes faculty can use reflective essays to directly assess student learning. For example, students could be asked to reflect on their service learning and to describe what they learned about themselves. Faculty could directly assess program learning objectives associated with the development of self-understanding by analyzing the depth of insight revealed in these essays.

Classroom assessment (Angelo & Cross, 1993) could be used to obtain student reflections about their programs. As mentioned in Chapter 5, classroom assessment techniques were designed to help faculty improve the instruction of specific courses, but they can be adapted for use in program assessment by aggregating results across the curriculum. For example, students could be asked to write an “exam or assignment evaluation” or to complete an “assignment reaction exercise” to help faculty improve the effectiveness of these activities, or students could participate in a “class opinion poll” to help faculty understand the impact of the curriculum on attitudes or values. Short email surveys with reflective essay questions might be valuable tools to collect quick feedback from students, and these might be particularly useful when class time cannot be devoted to assessment or when students are participating in distant learning courses. Responses could be sent to course instructors or to a neutral party if confidentiality is a concern.

Reflective essays provide students opportunities to make qualitative statements about their learning and to share ideas for program improvement, and they have the potential to help students clarify their opinions or develop personal insights. Because the assignments are open-ended, this technique allows faculty to discover new ideas that might otherwise have been overlooked.

SUMMARY OF INDIRECT ASSESSMENT TECHNIQUES

Each of the indirect assessment techniques described in this chapter has potential strengths and limitations, as summarized in Figure 6.6. This summary, combined with the one at the end of Chapter 5, might be useful to faculty as they select and implement assessment techniques.

FIGURE 6.6
STRENGTHS AND LIMITATIONS OF
INDIRECT ASSESSMENT TECHNIQUES

Technique	Potential Strengths	Potential Limitations
Surveys	<ul style="list-style-type: none"> • Are flexible in format and can include questions about many issues. • Can be administered to large groups of respondents. • Can easily assess the views of various stakeholders. • Usually have face validity—the questions generally have a clear relationship to the objectives being assessed. • Tend to be inexpensive to administer. • Can be conducted relatively quickly. • Responses to closed-ended questions are easy to tabulate and to report in tables or graphs. • Open-ended questions allow faculty to uncover unanticipated results. • Can be used to track opinions across time to explore trends. • Are amenable to different formats, such as paper-and-pencil or online formats. • Can be used to collect opinions from respondents at distant sites. 	<ul style="list-style-type: none"> • Provide indirect evidence about student learning. • Their validity depends on the quality of the questions and response options. • Conclusions can be inaccurate if biased samples are obtained. • Results might not include the full array of opinions if the sample is small. • What people say they do or know may be inconsistent with what they actually do or know. • Open-ended responses can be difficult and time-consuming to analyze.
Interviews	<ul style="list-style-type: none"> • Are flexible in format and can include questions about many issues. 	<ul style="list-style-type: none"> • Generally provide indirect evidence about student learning. <p style="text-align: right;"><i>(continued on page 128)</i></p>

Technique	Potential Strengths	Potential Limitations
	<ul style="list-style-type: none"> • Can assess the views of various stakeholders. • Usually have face validity—the questions generally have a clear relationship to the objectives being assessed. • Can provide insights into the reasons for participants' beliefs, attitudes, and experiences. • Interviewers can prompt respondents to provide more detailed responses. • Interviewers can respond to questions and clarify misunderstandings. • Telephone interviews can be used to reach distant respondents. • Can provide a sense of immediacy and personal attention for respondents. • Open-ended questions allow faculty to uncover unanticipated results. 	<ul style="list-style-type: none"> • Their validity depends on the quality of the questions. • Poor interviewer skills can generate limited or useless information. • Can be difficult to obtain a representative sample of respondents. • What people say they do or know may be inconsistent with what they actually do or know. • Can be relatively time-consuming and expensive to conduct, especially if interviewers and interviewees are paid or if the no-show rate for scheduled interviews is high. • The process can intimidate some respondents, especially if asked about sensitive information and their identity is known to the interviewer. • Results can be difficult and time-consuming to analyze. • Transcriptions of interviews can be time-consuming and costly.
Focus groups	<ul style="list-style-type: none"> • Are flexible in format and can include questions about many issues. • Can provide in-depth exploration of issues. • Usually have face validity—the questions generally have a clear relationship to the objectives being assessed. 	<ul style="list-style-type: none"> • Generally provide indirect evidence about student learning. • Require a skilled, unbiased facilitator. • Their validity depends on the quality of the questions. • Results might not include the full array of opinions if only one focus group is conducted.

Technique	Potential Strengths	Potential Limitations
	<ul style="list-style-type: none"> • Can be combined with other techniques, such as surveys. • The process allows faculty to uncover unanticipated results. • Can provide insights into the reasons for participants' beliefs, attitudes, and experiences. • Can be conducted within courses. • Participants have the opportunity to react to each other's ideas, providing an opportunity to uncover the degree of consensus on ideas that emerge during the discussion. 	<ul style="list-style-type: none"> • What people say they do or know may be inconsistent with what they actually do or know. • Recruiting and scheduling the groups can be difficult. • Time-consuming to collect and analyze data.
Reflective essays	<ul style="list-style-type: none"> • Are flexible in format and can collect information about many issues. • Can be administered to large groups of respondents. • Usually have face validity—the writing assignment generally has a clear relationship to the objectives being assessed. • Can be conducted relatively quickly. • Allow faculty to uncover unanticipated results. • Can provide in-depth information about participants' experiences, attitudes, and perspectives. • Can provide insights into the reasons for participants' beliefs, attitudes, and experiences. • Can provide direct assessment of some learning objectives. 	<ul style="list-style-type: none"> • Generally provide indirect evidence about student learning. • Their validity depends on the quality of the questions. • Conclusions can be inaccurate if biased samples are obtained. • Results might not include the full array of opinions if the sample is small. • What people say they do or know may be inconsistent with what they actually do or know. • Responses can be difficult and time-consuming to analyze.