

3

That Pesky Needs Assessment Survey



❖ INTRODUCTION

The needs assessment committee (NAC) decides a survey is necessary for Phase II. Surveys are prevalent in needs assessment and fit most local contexts and requirements. This chapter is not a substitute for the numerous survey texts dealing with virtually all aspects of design and implementation. The focus here is on what the NAC should understand about survey development and use in assessing needs. The NAC can accomplish much by thinking about suggestions in this chapter and using good common sense. In addition, most facilitators are familiar with the technique and its applications.

What are the key parameters for structuring and implementing successful needs assessment surveys? The principles from literature in the previous chapter provide essential guidance for the survey (Table 3.1).

Table 3.1 Overview of Principles for Needs Assessment Survey Design

<i>Principle</i>	<i>Comments</i>
1. Select content for the survey	It goes without saying that this is the most important decision in regard to surveys. Make sure that you are clear from your Phase I work and what has been learned from the literature when deciding upon content.
2. Include Levels 1, 2, and possibly 3	Nearly every needs assessment will routinely survey Levels 1 and 2. For reasons explained in the text, Level 3 is less often included.
3. Use other methods with the survey	When designing and implementing the survey, it is usually wise to think about employing other methods (qualitative ones) to enhance understanding of the area of needs.
4. Generate, if needed, within-method variations of the survey	Frequently missed in needs assessment is that surveys for different levels may have to be tailored to each level. This entails looking closely at the wording and order of questions.
5. Use at least two scales for survey questions	Maximize information yield by having two or more scales per item and carefully consider the sophistication of the audience when choosing the format of the scale.
6. Perhaps include statements about impediments and solutions in the survey	You may have only one opportunity to conduct the survey, so it may be desirable to have questions about barriers and solutions on it. Be cautious in doing so as the main purpose is to look at and explore needs.
7. Complete the survey with a few open-ended questions	Well-worded, prompted, open-ended questions can be very useful for needs assessment but may require extensive time for analysis. Use them judiciously.

❖ **PRINCIPLE 1: CAREFULLY SELECT
CONTENT FOR THE NEEDS ASSESSMENT**

What is the intent of the survey, and what content should be there to reflect it? What the need is about is where the process begins. What specific ideas and concepts would benefit the organization? What information would move the organization forward and fit its demand

for data about important concerns? Here are some examples of what might be included:

- respondents' behaviors, what are they doing, and what they should be doing in terms of skills, safety behaviors, activities of importance, and so on;
- attitudes toward some kind of situation;
- perspectives about that situation;
- perceptions of what might be needed to rectify a problem;
- perspectives of what others might be doing or need to do;
- shorter, more current, and longer-term, future-oriented needs;
- satisfaction with what is currently taking place in the organization;
- importance and value of services being provided;
- degree of achievement with respect to skills;
- the motivation of individuals to resolve problems or to take action;
- perceptions of the willingness of the organization to change;
- difficulties or issues the organization is facing;
- frequency with which services are used;
- how often some activities are performed;
- feasibility of resolving problems;
- barriers or impediments to offering/using services;
- ideas about solution strategies;
- theoretical issues as observed in the literature; and
- what aspects of the situation people are interested in and willing to describe.

Some areas of content may not be about discrepancies or gaps but deal with the environment and problems in it. Many of the above points have implications for the format and structure of needs assessment survey items. Additionally, while most items will be scaled, usually a small number of open-ended ones will be used. Example 3.1 is a description of one study that used open-ended and scaled surveys for current and future needs.

Example 3.1

What Can Be Done With Surveys?

Looking at shorter- and longer-term needs can be more involved than it appears at first glance. A scaled survey for an engineering field had two parts—short-term technical training needs that were currently seen and technical training needs that might have occurred 3 years or more into the future with the latter being more speculative. The items came from an analysis of open-ended responses provided by a broad spectrum of engineers in companies in the United States. They were asked to identify immediate training problems and ones that might appear or be increasing with the passage of time. (Using an open-ended survey to guide the development of scaled ones as in this case is a form of the Delphi technique.)

A small group of engineers housed in a national center helped to analyze and categorize open-ended results. This was good since the group began to think more deeply about needs, how the field was changing, and issues in delivering “cutting-edge” training. Consider having technical (subject matter) experts assist in the analysis. It leads to a healthy and lively exchange and may produce better syntheses of data.

The statements derived from the open-ended responses became the basis of the two scaled parts of the survey. The current- and future-needs focus made the needs assessment more complicated and increased the work, but the information had greater potential for an impact on organizational thinking, discourse, and decision making.

The scaled instrument was sent to engineers in middle management from a sample of mainly large companies. They examined the items, selected their top seven immediate and future needs, and then rank-ordered them. The highest-ranking items from each list were noted as well as how frequently they were chosen for ranking. The ranks and frequencies of choice are valuable pieces of information. The instrument demanded more thought by respondents, but because the goal was to identify the most likely training needs for a very important national industry, the strategy seemed reasonable. As the process unfolded, the needs assessors found that they had to go back to the literature more than anticipated for help in interpretation of results.

The national organization that commissioned the needs assessment wanted to develop training packages for the short term while considering what it might do in the longer haul. For the latter it could seize the initiative for future training, improve its leadership position in the country, and generate new business. The content of this assessment was obviously driven by organizational concerns. This was a needs-sensing activity, not needs assessment, since discrepancies were not actually obtained. On the other hand, what was learned in the assessment was benchmarked against trends in the field looking for discrepancies.

Returning to what to include in surveys, consider using scales like importance, satisfaction, and extent of actual behavior. This was done in a study conducted across 15 universities in Ohio for a minority-student retention project in science, technology, engineering, and mathematics (STEM) as profiled in Table 2.3. Students were asked about the importance of retention services for academic work and satisfaction with and frequency of use of same. Some of the content was further probed in a focus group interview. Don't lock into one method; instead, cross-pollinate. In most surveys, questions are usually clustered into labeled groups of related items, and those clusters could become the emphases of an FGI (focus group interview) or an individual interview. This underscores the interrelatedness of different data collection methods.

❖ PRINCIPLE 2: INCLUDE LEVELS 1, 2, AND 3,
IF POSSIBLE (ALSO SEE PRINCIPLE 4)

What individuals or groups should be sampled for the survey? Would they agree or have quite varied views of a topic, and can radically different perspectives be reconciled? How might such a result affect the assessment, and could it have a negative impact on Phase III (translating needs into solution strategies)? Wouldn't it be better to learn of this before prioritizing needs and recommending solutions? Obviously the inclusion of multiple levels is important. Consider the following:

- If the levels see how their participation had an impact on the eventual actions taken by the organization, ownership is enhanced. (Good communication and publicly crediting groups and individuals for their help are important in needs assessment.)
- Costs and the time for analysis and interpretation rise as data gathering is expanded (but in one study in Table 2.3, a single instrument was used for all constituencies, and via demographic data, they were compared at limited expense).
- When additional groups and constituencies are assessed, *within-method* variations may be necessary; thus more time is needed for item writing, and the needs assessment is more complex.

Including Levels 1 (receivers of services), 2 (deliverers of services), and 3 (the overall system) should be examined in-depth before making final decisions to do so. All the needs assessments in the prior chapter used representatives from multiple constituencies.

Should the responses of different levels be weighted equally? In one study in Chapter 2, responses from Level 3 were viewed as being of greater importance than those from Level 2. A solid rationale was made for doing that, but it may not hold for other settings. If needs assessment is thought of as a democratic process inside of an open and challenging work environment, serious consequences might occur in terms of morale, disenfranchisement, freedom of expression, loss of employees, and so on. Even a seemingly simple choice of what groups to sample could have major implications for the assessment.

Level 1—the direct recipients of services and goods delivered by organizations (businesses, schools, health departments, agencies, etc.)—is automatically a part of the needs assessment. It is the organizational *raison d'être*. Students, parents, clients, patients, and consumers are in the best position to provide perceptions about all aspects of what is delivered. Levels 2 and 3 are there to help Level 1. If an assessment is done only for Level 2, which may be the focus of a training needs assessment, the service deliverers could be thought of as a pseudo Level 1 group. This assumes that the needs of Level 1 are already understood.

Level 2—teachers, health care providers, social workers, and persons employed in businesses—has valuable insights about those being served and what is provided. But there can be problems with these data. In a training context, Holton, Bates, and Naquin (2000) cautioned that what Level 2 individuals say is needed might be *wants* rather than realistic *needs*. This is especially true for data from self-reports of behavior on surveys. Instead of getting at true needs (most needs are relative in nature), we might see what respondents want to get out of the assessment or what they think their supervisors want to hear. “Let’s get what we want as opposed to what is really needed!” This happens but can be partly eliminated by the careful wording of questions.

Furthermore, because organizations conduct needs assessments and usually assign the process to Level 2 personnel, there may be a subtle shift from Level 1 to Level 2 concerns. If the NAC strays in this way, the facilitator must get the group back on track. With that in mind, an outsider might review what is being done, looking for such shifting (not having Level 1 as the prime issue).

Level 3—higher administrators, auspice providers such as legislators, and governmental agencies or other groups—appears less often in Phase II. It may be better to have this level come into the picture toward the end of the phase or in Phase III when more is known about needs and actions being considered. This varies with each needs assessment. Another reason for cautiously excluding Level 3 is that the assessment might appear top-down (controlled) even when it is

not. If decisions appear to have already been made, it is difficult to get honest responses and perceptions from respondents. “Why put in your 2 cents when you sense it is a lost cause and everything has been decided beforehand?”

Lastly, in fields such as education and in community assessments and capacity-building efforts, think about external groups (concerned citizens, businesses with a stake in the community, senior citizens who do not have children in schools but who pay property taxes that support education). Society as a whole benefits from education—everyone has views on it and knows that it has an impact on many facets of life. When feasible, include broad audiences but take into account their contexts. Many individuals have not been inside of a school for a long time, so it may be wise to provide short descriptions in surveys about what schools currently do and have available for students and teachers.

Remember that obtaining the opinions of more groups and levels increases the cost and intricacy of data collection and analysis. The demands of collating, interpreting, and dealing with divergent viewpoints; finding coherent and communicative means for presenting data; and creating *within-method* variations escalate. Introducing more things into the needs assessment is fine but not necessarily easy and problem-free.

❖ PRINCIPLE 3: EMPLOY MULTIPLE METHODS

Needs assessments are not the province of a single-method mindset. Needs may be subtle with features and dimensions hidden beneath the surface. They must be examined from different angles; are there parts of the problem that should be explored in greater depth than a survey may allow? (This is to suggest not that surveys produce superficial information but that other data are useful for understanding and making decisions.) Or if one method is of a qualitative bent, consider how to combine quantitative procedures into the mix.

Combinations occur in epidemiology where surveys might be utilized with the analysis of records and databases to identify the perceptions of key decision makers. How serious is the problem now or in the future? What policies might have to change as a result of the epidemiological findings? What sort of information campaign should be employed to get information out about an impending problem? Another example of multiple methods is the use of group processes (small discussion groups, FGIs), individual interviews, and observations to round out

survey data. Replicate methods to ensure reliability, budget permitting. Two or three FGIs that yield similar results are more persuasive than one. If the NAC is of moderate size and participates in the interviews, do multiple interviews. When possible, allot some funds for replication purposes.

In multiple methods, one strategy might inform the development of another. Individual interviews and FGIs uncover emotions and thoughts about a topic and terms people use in referring to it. (This has been done with panels similar to seated juries to see reactions to different versions of oral arguments in trials.) The information generated is input for survey design and question wording. FGIs may be done after a survey to see how groups interpret and ascribe meaning to results. There are many fun ways to do these types of things.

❖ PRINCIPLE 4: VARY INSTRUMENTATION TO
FIT THE SUBTLE DIMENSIONS OF MULTIPLE GROUPS
(WITHIN-METHOD VARIATION)

The same question order and wording will not always work for different groups—the concept of *within-method variation*. Think of supervisors and employees in a company or of a needs assessment in a school system for the upper elementary and middle school grades where teachers, students, and administrators are surveyed about needs in science and mathematics education. Identical wording and order might not work. Will the same questions be applicable to fifth graders and students in the eighth grade or to employees and supervisors? Surveys have to fit the vernacular and thought processes of the groups being studied. This should improve response and item completion rates but requires more work of the NAC and its facilitator.

In Table 2.3, three of the entries had versions of a *within-method variation* as in the school dropout and violence prevention study where Hunt et al. (2001) described different versions of interview questions for students and teachers. Although done for interviews rather than surveys, the principle is clear. In the evaluation of the STEM program, Altschuld, White, and Lee (2006) examined retention services for minority students in universities. Students accessing or familiar with services and faculty/administrators of retention programs who knew about them through personal experience or interactions with students were the focus of the investigation. This information was sought from the two constituencies via altered versions of the questions. If that had not been done, the questions would not have had as much meaning for Level 2 (Table 3.2).

Table 3.2 Wording Differences Between the Two Surveys—A *Within-Method Variation*

	<i>Importance</i>	<i>Satisfaction</i>	<i>Frequency of Use</i>
Faculty Survey	Extent to which the service is important to the academic success of students	Your satisfaction with the service for students	Frequency of students' use of this service
Student Survey	Extent to which the service is important to your academic success	Extent to which you are satisfied with the service	How frequently do you use this service?

Source: Adapted from “Effects of the Participation of Multiple Stakeholders in Identifying and Interpreting Perceived Needs,” by Y.-F. Lee, J. W. Altschuld, and J. L. White, 2007a, *Evaluation and Program Planning*, 30, p. 3. Adapted with permission.

The *first* feature of the wording to note is that for students it is based on direct and intimate exposure to the service and knowledge and understanding deriving from that experience. *Second*, these questions are asked for personal perspectives, not those of a general group of students. Questions like these may be worded in two ways depending on the purpose of the assessment (personal perceptions or group-oriented ones).

Third, the structure of the questions for importance and satisfaction is intentionally similar. By similar wording and syntax, the subtraction of scores for importance and satisfaction to create a discrepancy score is reasonable. Compare that to more disparate variables such as importance and achievement, although such practice is relatively common in and not questioned in needs assessment. *Fourth*, the surveys have a not-applicable choice and a midpoint (neutral response) on the scale. On scales, “not applicable” is denoted by *NA*, which is not to be confused with the abbreviation as sometimes used to stand for *needs assessment*.

Some surveyors suggest that respondents should make a positive or negative selection and not have a noncommittal response. This may not be sensible in needs assessment where we are trying to learn what a group thinks about a topic and using what is learned for decision making. Mandating artificial choices could lead to erroneous conclusions. Why should a response be forced if respondents are really undecided? The recommendation is to have a neutral point, but others may

not agree. The concern is to get an honest view of where people stand on an issue instead of one that is arbitrary. If they have no opinion or they don't know or are unaware, let them state that. If a lot of respondents don't know about current status or don't have an opinion, then the NAC must take that into consideration. If there are highly different rates of these responses across different groups, it reveals a lot about the context. Respondents might not have been exposed to a program or service, they might have no impressions of it, or communication might not be very good. Imbed these rates into needs assessment reports.

One caution is in order about NA (not applicable) and DK (don't know) responses. For double- or triple-scaled items, they lead to different numbers of respondents for each scale. Generally, there are more respondents for importance and less for the other scales. How do you calculate discrepancies when the numbers for each scale differ? Using averages for an item, one scale would have one sample size whereas the other would be based on a smaller number of respondents. Should the discrepancy be just for those individuals who responded to both scales?

This would significantly reduce sample size, and only a subset would be determining the discrepancy score, not the entire group. Such a reduction can be noticeable and cause difficulty in interpreting results. This was observed in the minority retention study (Table 3.3). There were notable differences in NA responses within and across the two groups in the table. The faculty rates ranged from 0% to nearly 30%, and the students went from slightly over 5% to a very high 68% for the importance and satisfaction scales. The issue is apparent.

A statistician might impute (estimate) a substitute score from each group of respondents to get equal numbers for scales. In needs assessment this may distort results and is not seen as commensurate with what the data are telling the NAC. Perhaps a more appropriate way would be to report and explain the NA responses in reports as indicating where a respondent group is in terms of knowledge. Then determine discrepancy or gap scores from a subtraction of averages derived from different numbers of respondents. This is not an ideal solution, but it does not introduce artificiality into the results. (See Lee, Altschuld, & White, 2007a, 2007b.)

Fifth, returning to Table 3.2, look at the faculty version of questions, which takes into account that faculty members have not participated in any service and their views would be vicarious for student services. This underscores the fact that attention should be paid to question wording for different groups. Faculty members are an indispensable part of the culture and environment of the university and science disciplines. They are aware of many of the services, have had students or

Table 3.3 Frequencies and Percentages of NA Ratings for Services From Student and Faculty Surveys

<i>Category/Variable</i>	<i>Student Survey</i>		<i>Faculty Survey</i>	
	<i># of NA^a</i>	<i>%^b</i>	<i># of NA</i>	<i>%</i>
<i>Precollege Services</i>				
Recruitment to college	26	15.5	0	0
Campus orientation	11	6.6	0	0
Summer bridge programs	63	37.5	3	7.7
<i>Academic Services</i>				
Peer study groups	21	12.5	4	10.3
Tutoring	20	11.9	1	2.6
Supplemental instruction by student facilitators	32	19.1	3	7.7
Coenrollment in courses	61	36.3	6	15.4
Collaborative learning	43	25.6	4	10.3
Living learning program	71	42.3	7	18.0
Drop-in/study center	48	28.6	4	10.3
Glenn-Stokes Summer Research Internship	106	63.1	9	23.1
Summer Research Internship	88	52.4	3	7.7
Glenn-Stokes Academic Year Research Internship	113	68.3	11	28.2
Academic Year Research Internship	105	62.5	4	10.3
Faculty mentoring	55	32.7	0	0
Peer mentoring	58	34.5	2	5.1
Grad student mentoring	84	50.0	6	15.4
Industry representative mentoring	91	54.2	6	15.4

Table 3.3 (Continued)

<i>Category/Variable</i>	<i>Student Survey</i>		<i>Faculty Survey</i>	
	<i># of NA^a</i>	<i>%^b</i>	<i># of NA</i>	<i>%</i>
<i>Financial Support</i>				
Financial aid, grants, and loans	12	7.1	0	0
Scholarships	9	5.4	0	0
Work study programs	44	26.2	0	0
Internships	31	18.5	0	0
Assistance with on-campus employment	37	22.0	3	7.7
Assistance in locating off-campus employment	49	29.2	3	7.7

Source: From *Effects of Multiple Group Involvement on Identifying and Interpreting Perceived Needs*, by Y.-F. Lee, 2005, unpublished dissertation, The Ohio State University–Columbus, p. 92. Reprinted with permission.

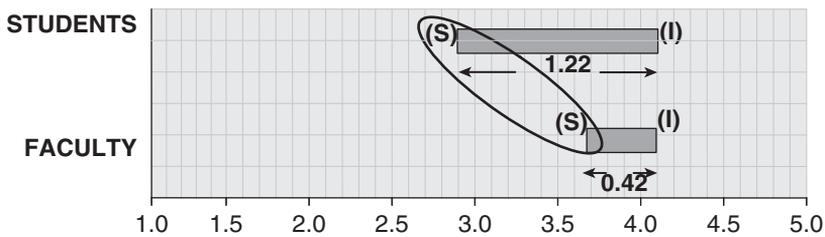
^aNumber of NA ratings on each service.

^bBased on total number of respondents (168 in the student group and 39 in the faculty group).

others talk to them about what is going on, and have opinions and impressions about services. They are key Level 2 respondents, and information from them is highly utilitarian for the needs assessment. The faculty items in Table 3.2 depict a *within-method variation*. It is important to consider where a respondent or his or her group might be coming from, what his or her typical involvement is, and how such factors influence the content/structure of questions. Needs assessments usually benefit from doing so.

The queries used in the study worked well, and students and faculty had relatively close perceptions for most areas in the survey. Items with differences and where the groups were knowledgeable about a service were selected for follow-up with a sample of members of the groups. If there are many items like this, only a subset can be looked at in this manner. In Figure 3.1, the structure of a question from that second,

Figure 3.1 An Example of a Chart Used in the Follow-Up Survey



Source: From "Effects of the Participation of Multiple Stakeholders in Identifying and Interpreting Perceived Needs," by Y.-F. Lee, J. W. Altschuld, and J. L. White, 2007a, *Evaluation and Program Planning*, 30(1), p. 3.

Note: The bars and circle in original survey were marked by different colors.

open-ended survey is shown. The loop in the figure was to focus respondent attention on group differences. Simple bar charts may have worked as well. The results indicated that the follow-up was worth the effort, but more costs were incurred. When groups differ, examining why is encouraged.

The open-ended data pointed to some varied understandings about the campus environment. Students did not particularly value or see the need for faculty mentoring, but faculty saw it as important for socialization into a field and career development. This may be expected because students have been in the sciences for a shorter time and may not in their psychological and occupational development have the whole context in view. The follow-up revealed a need for better counseling, guidance, and communication and was useful for thinking about needs.

Locating part-time employment was another area where students felt they were not receiving much help. They observed that faculty members were employed and less empathetic with one student, suggesting that faculty had been employed for many years and could not relate to or have understanding of where the students were. Students cited the poor quality of assistance for finding part-time employment. The faculty members were unaware of this, and the students may have been right about faculty perception of the topic. On the other hand, were students' expectations for the service unrealistically high? The complexity of survey responses is underscored.

The open-ended responses revealed different "world" perspectives that were helpful for explaining how some aspects of the environment

might be improved. Without the follow-up, it would have been difficult to fully understand the needs-related data; although it was more work for the NAC, costly, and time-consuming, it was also an interesting combination of two ways to conduct needs assessment surveys. One was quantitative, and the other one was open-ended, based upon initial quantitative results. Sometimes a follow-up is necessary. Other alternatives are to conduct individual and/or focus group interviews.

If many differences across constituencies are uncovered, how is the assessment to proceed? How could differences be reconciled? Are more resources needed to explore the lack of consensus? How many differences can be studied and at what expense? Simple needs assessment surveys may not be that simple, and the word *pesky* in the chapter title was purposeful.

Within-method variations and using multiple groups from the levels may take on varied shapes depending on the creativity of the needs assessors. Holton and colleagues (2000) had different questions for high-level administrators and direct-service providers about performance in a training needs assessment in a large state agency. Administrators may have a broader perspective of what might be needed to improve rather than a parochial one.

Service providers see needs, but there might be more of a wants flavor (see previous discussion) to their responses. Although an expansive view may reside at higher levels of an organization, care is again advised when limiting the input of some constituencies; the matter is delicate for it may reinforce a top-down perspective. If higher-ups are to be given differential consideration and if the facilitator of a needs assessment is external, he or she should tactfully raise some of the concerns that could occur as a result of this stance.

❖ PRINCIPLE 5: CONSIDER USING TWO OR MORE SCALES FOR ITEMS ON THE NEEDS ASSESSMENT SURVEY

Need is the measurable discrepancy between the what-is and what-should-be states, and the survey is a ready-made vehicle for double or even triple scaling. With more than one scale, the amount of information obtained is magnified, and it is easy to develop and format such scales, especially after the importance or what-should-be scale is created.

What is sometimes observed when single scales are used is that there are two patterns of wording; the first deals with the importance of items, and the second is when the word *need* is in a statement—that is, when a person or group needs this or that kind of a program. See Versions 1 and 2 below. Hamann (1997) referred to both patterns as preference scales, not needs-oriented ones. *Need* as a verb implies a solution; *need* as a noun stands for a discrepancy or gap. The distinction is important, and using the word *need* in items is to be discouraged.

Version 1

Rate the importance to you (or the organization) for the statements (what should be) included on this instrument. Use the scale where 1 = very low importance, 2 = low importance, 3 = average importance, 4 = high importance, and 5 = very high importance.

Version 2

Listed below are a number of needs—for each, indicate its importance as a need for you or this organization (*really two different versions of the question depending on whether an individual or organizational perspective is called for*) by using the five rating points where 1 = the lowest value and 5 = the highest. Respondents rate statements like these via five rating points in matrix form to the right of them.

These types of items are observed, but it would be better to extend one scale to two or three to collect more data about needs. If resources are directed toward their resolution, then why settle for less rather than more data? It's worth the extra effort to use more scales. In some entries in Table 2.3, discrepancies were not measured. This was compensated for by other information that was incorporated into the assessments. In every case, a deeply probing understanding of needs emerged from the process.

Going a little further, Table 3.4 is an example of the use of three scales in a needs assessment. The questions and scales are for students with a within-methods version for faculty. When multiple scales are employed, the data multiply per item. For 50 or 60 items of this type, there could be up to 180 data points. The instrument would not be too long, and the yield would indeed be very large.

Table 3.4 Three-Scale Version of the Student Instrument Used in the Minority Retention Study

Section III																	
Universities also provide other services as shown below. Rate them in terms of <i>importance</i> , <i>satisfaction</i> , and <i>frequency of use</i> . If you are not familiar with a service or your campus doesn't have it, denote <i>not applicable</i> under the importance column and move to the next item.																	
	Extent to which the service is <i>important</i> to your academic success.					Extent to which you are <i>satisfied</i> with the service.					How <i>frequently</i> do you use this service?						
	Strongly Disagree		↔			Strongly Agree		Not Satisfied		↔			Very Satisfied		Very Never ↔ Frequently		
	NA	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Financial aid, grants, and loans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Scholarships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Work study programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Internships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Assistance with on-campus employment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Assistance in locating off-campus employment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Source: Adapted from "Problems in Needs Assessment Data: Discrepancy Analysis," by Y.-F. Lee, J. W. Altschuld, and J. L. White, 2007b, *Evaluation and Program Planning*, 30(3), pp. 258–266.

Note: The circles in the table denote tabs or buttons that respondents selected when responding to the Web-based instrument.

There is another issue about scales that has not been covered. Many options are possible, including the following:

- Likert-type five-point scales using "strongly agree" to "strongly disagree" anchors;

- Likert-type scales ranging from 1 = lowest importance to 5 = highest importance;
- the above scales with values that are gradations such as none, 1%–20%, 21%–40%, and so on and/or similar numerical scales;
- a whole host of other five-point scales with different points on them;
- versions of the scales that use NA, DK, or a neutral or middle type of value and others that do not allow for neutral choices; and
- semantic differential approaches where the respondent chooses from a continuum that has polar-opposite anchors such as warm and cold.

A further alternative is a behaviorally anchored rating (BAR) scale. In work with children, Witkin and others (1979) devised such a scale for needs related to reading practices. A sample of what they did has gently been modified by the author. Students were asked to rate each item on what they could personally do and what students in their grade should be doing rated on an A–E scale (A–E are like grades, demonstrating the use of student terms and what students were used to seeing). Two responses were required for each item. There were unique behavioral anchors depending on the content of the question. The idea was to think about what children would be doing when visiting the library and what they would observe other children doing.

A Sample Item (Adapted Version)

In the library, I find books . . . (Students would choose a letter response.)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Only with someone’s help	Between A and C	By using catalogs and reference guides	Between C and E	By using catalogs, reference guides, and the computer

In the library, students in my grade should find . . . (Students would choose another letter response for this second question.)

It takes more time to write items with behaviors imbedded in them. But it is an interesting way to construct questions, and the scales are meaningful because of the anchor points.

Many choices are possible for item and survey design. Consider the educational and experience levels of participating samples and choose

formats accordingly. If you have the time, pilot test a couple of them. Challenge the group developing the survey. Could the BAR concept be adopted for adults? Look at the fun example of the follow-up survey shown in Figure 3.1; would it fit another needs assessment? What guidance does the literature provide for our survey? Would some formats work better in certain places, and would others be better in a different section of the survey? There are endless questions for the NAC as it produces the survey. Do not despair; ask a few of them and trust in good judgment!

If the audience has limited language ability, use simpler scales (yes, no, uncertain). The loss of information is compensated for by obtaining data from those who are less language proficient and might not answer more complex surveys. Lastly, keep items short and to the point and avoid jargon in the wording of questions.

❖ PRINCIPLE 6: CONSIDER PROCEDURES
TO COLLECT INFORMATION ABOUT BARRIERS
TO SOLUTIONS AND PREFERRED WAYS TO IMPROVE

Even though the main emphasis of Phase II is information about needs, the survey could have questions about barriers in the organization or how solutions could be implemented. These were prominent in one of the studies in the previous chapter.

In needs assessments conducted for training purposes, sometimes preferences for how training might be delivered, costs associated with it, the best times (days, months, seasons) for implementation, time available for employees to participate, where the training might take place, and motivation for learning are included. Use questions like these, especially if there is only one opportunity to reach the sample. Place them in the latter portion of the instrument, not earlier, except where the main intent is to uncover barriers to solutions or explore options regarding them. A few examples are in Table 3.5. They are helpful for thinking about solutions, so take advantage of the opportunity with perhaps 20% or so of the survey devoted to such issues.

About barriers or impediments to dealing with needs, some agencies, companies, and institutions may not truly support (funds, release time, encouragement) staff training. The demeanor is “Yes, we give lip service (tacit support for the activity), but in reality we don’t really want you to do much of it, or it takes time away from productive work.” In essence there is a disparity between what organizations say and what they do.

If in Phase I the NAC gets this sense of the environment, probe into it. Ask about the receptiveness of the organization to change, factors that might reduce the likelihood of improvements being successful, the nature of backing for new directions, and other similar topics. Serious

Table 3.5 Examples of Questions Regarding Purposes, Modes of Delivery, and Barriers in Training Needs Assessment Surveys

<i>General Focus</i>	<i>Sample Ideas for Questions</i>
How training might relate to one's work/career	Enhance job performance Lead to more job satisfaction Improve job security Give one a competitive advantage for promotion Credits (continuing education and the like) Other reasons for training supplied by respondent
Preferred modes of training	Traditional classes What locations would or would not work Self-study (distance) with practicum Distance program Time involved, preferred time periods for taking the training Most favorable times of year
Barriers to training	Level of employer support (dollars, time) Level of employer support (enthusiasm, encouragement) Personal cost factors Inability to use training on the job Motivation Family factors

problems might be detected this way. Be sensitive and careful in writing statements about how the organization functions, and the issue should be discussed with the NAC before decisions are made. The questions could be threatening; nevertheless, the survey is about needs and is a good way to gain such information.

There are many examples of surveys and needs assessments in many fields that focus primarily on the nature and delivery of training. Among other things, their questions deal with barriers, support for the activity in terms of value and budget, likelihood of participation, areas including maintenance of strengths, and relation to personal and professional development. A few references are provided to such assessments (ABLE Design and Evaluation Project, 2008; Conklin, Hook, Kelbaugh, & Nieto, 2002; University of North Carolina Center of Excellence for Training and Research Translation, 2006; Wilkie & Strouse, 2003). While

needs are a concern of these studies and others like them, the general intent is more of a combination of the assessment of need, the feasibility of potential solutions, and an examination of contextual factors.

❖ **PRINCIPLE 7: CREATING THE NEEDS
ASSESSMENT SURVEY AND OPEN-ENDED QUESTIONS**

Examples of open-ended issues that require careful thought from respondents include the following:

- giving illustrations of problems they are seeing that need attention;
- describing potential solution strategies for gaps;
- indicating if the survey was a meaningful way to capture information about problems;
- describing barriers to improvement; and
- providing other thoughts and ideas about conditions and what it might take to improve them.

Use such questions with one proviso: Even with programs for analyzing qualitative data, interpretation can be tricky, and experience in connecting thoughts and concepts in responses is needed. Most facilitators have a background in doing so, and hopefully some members of the NAC will as well. What are the key variables in the data? What are the main themes in the data and overarching ones that link the main themes? What is the explanatory power of the latter for understanding of needs? Have several members of the NAC examine and analyze open-ended data independently. Do the independent summaries agree?

Well-framed open-ended questions can lead to valuable responses. If we ask people “what if” or “what might another person see” if he or she looked at an issue or to describe how the organization might respond to a specific circumstance, replies may be voluminous and rich. Usually, probes are included with items to prompt in-depth consideration of ideas. Think about including between two and four such questions. Strive for a balance of mostly scaled items and open-ended ones. Balance makes the survey a workable proposition. Remember that open-ended questions do not directly lead to discrepancies, so integration of results with those from other sources is necessary.

The seven principles with the examples in the text provide guidelines for an NAC as it begins the survey process. In Table 3.6 we return to them in more of a checklist way. They are helpful, but note surveys are in reality partly art.

Table 3.6 The Needs Assessment Survey Checklist by Principle (Translating Principles Into Action Steps)

<i>Principle</i>	<i>Steps</i>
Decide upon content	<p>Review prior work (Phase I) and reports for ideas.</p> <p>Consult the literature for theory and for survey work in other needs assessments like yours.</p> <p>Make decisions as to what is relevant to your local needs assessment.</p> <p>If there is too much content to cover, consider prioritizing it or if alternative versions of surveys might be developed.</p>
Inclusion of samples from Levels 1, 2, and 3	<p>Carefully identify the samples to include from Levels 1, 2, and possibly 3.</p> <p>Are there subgroups within levels that should be in the needs assessment such as younger and older students, upper and middle management staff, and so on?</p> <p>Select levels in accord with the purpose of the needs assessment, budget, time, and human resources available for the job of developing and implementing instruments.</p>
Employ multiple methods	<p>Are there areas where the survey process might be augmented by other methods?</p> <p>Might it be best to conduct individual interviews, FGIs, or observations prior to designing/implementing the survey?</p> <p>If the survey may not yield the depth of information desired, should it be followed up to provide more understanding of needs?</p> <p>Consider, before undertaking multiple methods, how the data could be integrated into a holistic picture of needs.</p>
Multiple versions of surveys (within-method variation)	<p>Look at the samples for the survey process to see if subtle versions of wording and orders may be necessary.</p> <p>The NAC should put itself in the shoes of respondents to see if the situation requires different versions.</p> <p>Pilot test the versions, if time permits, to see if the wording is appropriate.</p>

(Continued)

Table 3.6 (Continued)

<i>Principle</i>	<i>Steps</i>
Use multiple scales	<p>See examples in the earlier text.</p> <p>In general, use response categories with NA, DK, and neutral points on the scale.</p> <p>To create discrepancy scores, have wording in item stems that is fairly similar to enhance the rationale for subtraction.</p> <p>As in the prior principle, think about respondents' comfort zones in responding.</p> <p>Have two or more scales to increase the information obtained.</p>
Include questions about barriers to solutions and/or preferences especially for training needs assessments	<p>In training needs assessments, ask about preferred modes of training, impediments/barriers to training, support for the endeavor, and so forth.</p> <p>Word such questions in a sensitive, nonthreatening manner.</p> <p>Place such questions near the end of the survey so as to not confuse purposes.</p> <p>It may be possible to have some questions on the survey about solution strategies, but this is not the most common of needs assessment procedures.</p>
Assemble the final survey and plan for distribution	<p>Make a draft of the survey to get a sense of what respondents might see.</p> <p>The NAC should, individually and as a group, critically review the draft with an eye toward improving it.</p> <p>Think about the best means to deliver the survey to potential respondents.</p> <ul style="list-style-type: none"> - If respondents are geographically dispersed, computer literate, and connected to the Web, look into Web-based surveys (many commercially available survey mechanisms are fairly inexpensive). - If respondents are in naturally occurring groups such as schools, companies, agencies, and/or conferences, think of distributing the survey at a group meeting where in all probability it will be completed at the time of distribution.

Highlights of the Chapter

Given that Table 3.6 is like a checklist, the highlights are brief.

1. The chapter was intended as a framework for surveys in needs assessment.
 2. Hopefully the principles will help needs assessors to produce quality surveys.
 3. The survey is not usually the sole needs assessment method. Coupling data together enriches understanding and makes for a better assessment.
 4. Use the examples of scales, formats, and questions in the text to your best advantage.
 5. In Chapter 4, there is an introduction to epidemiology as applied to the needs assessment context. It, along with surveys, is one of the major quantitative methods employed in needs assessment.
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