
Alternate Models of Needs Assessment: Selecting the Right One for Your Organization

Doug Leigh, Ryan Watkins, William A. Platt, Roger Kaufman

Needs assessment seems intuitively attractive to planners. Virtually all authors recommend that needs assessment be the first step in any organizational or human resource development intervention. Planners sensibly recognize the importance of building a foundation grounded in data-based needs, and see data produced by needs assessment as justifying organizational planning and accountability. They also see the usefulness of needs assessments for obtaining and allocating resources for projects. In their best use, needs assessments ensure that resources (Inputs) and methods (Processes) deliver useful results, that their value-added can be demonstrated. Unfortunately, the wide and varied usage of the term *need* often spurs heated discussions that can hinder the usefulness of so-called needs assessments. Unfortunately, just about any approach to finding direction gets called needs assessment, thus leaving in question what the technique really includes and what it can do and deliver.

Definition of Needs Assessment

In the past three decades, dozens of models for needs assessment have been suggested and implemented with varying success (Watkins, Leigh, Platt, and Kaufman, 1998). The proliferation of models, however, has also been accompanied by conflicting usage of key terminology by proponents of the differing models. Due to this ambiguity, needs assessment can now mean, in the popular lexicon, nearly anything for both theorists and practitioners alike. It is perhaps a bit like Alice at the Mad Hatter's tea party, where "words mean anything I want them to, nothing more and nothing less." So that the models we provide here can be considered from a common perspective, we offer a precise and holistic definition of *need* and *needs assessment*:

Needs assessment is the formal process of identifying needs as gaps between current and desired results, placing those needs in priority order based on

FORUM is a nonrefereed section inviting readers' reactions and opinions.

HUMAN RESOURCE DEVELOPMENT QUARTERLY, vol. 11, no. 1, Spring 2000 © Jossey-Bass Publishers

the cost to meet each need versus the cost for ignoring it, and selecting the most important needs (problems or opportunities) for reduction or elimination [Kaufman 1992, 1998].

This definition differs from other, more generously worded definitions of needs assessment in a number of ways. First, it emphasizes that needs are gaps in results rather than gaps or deficiencies in processes or resources. Thus, according to this definition, the perceived lack of personnel, finances, or training are not needs. Instead, needs are gaps in individual, small group, organizational, or societal results. Second, this precise definition of needs asks the user to assess the discrepancy between what is and what should be in terms of results, and to compare the magnitude of these gaps in results against the cost to close or ignore them. When approached in this manner, informed decisions can be made as to the prioritization of problem resolution, the identification of redundancies, and the discovery of previously unforeseen opportunities for providing services and meeting currently unmet needs.

Third, this recommended approach to needs assessment identifies, prioritizes, and selects needs that have impacts on both internal and departmental clients as well as those external to the organization, such as partners, customers, and societal clients. Thus, rather than focusing exclusively on process efficiency, this definition and related approach to needs assessment couples productivity with effectiveness—in other words, value-added.

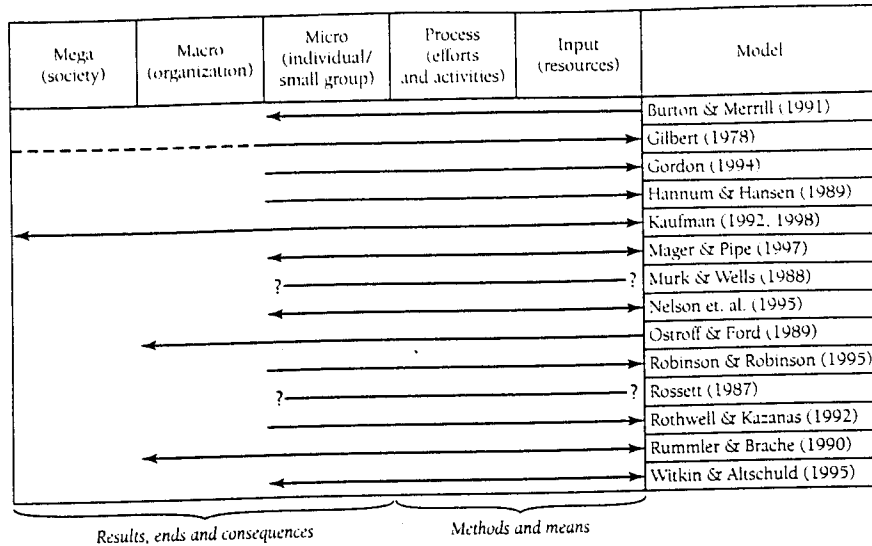
Models and Scope

Figure 1 compares several models of needs assessment according to five organizational emphases and illustrates linkage between the levels of results addressed. Models are differentiated on the basis of the ends or means formally addressed: societal (Mega), organizational (Macro), and individual or small group (Micro) results; efforts and activities (Processes); and resources (Inputs). These elements are arrayed according to the presence or absence of these organizational emphases addressed by each approach, as well as by linkage between levels: projection of organizational purposes and efforts downward through other results, organizational purposes, and efforts, or upward to anticipated future results. Comparing the levels you and your organization currently formally address to those that you and your organization must formally address in the future assists in the identification of the most appropriate approach, or combination of approaches, for you and your organization.

Some Popular Alternative Needs Assessment Models

Over the past four decades, a variety of methods have been suggested to assist professionals in examining the problems and opportunities facing their organizations. Each of the models proposed over the years serves a particular

Figure 1. Comparison of Multidisciplinary Models of Needs Assessment and Needs Analysis Characterized by Results Focus Formally Addressed and the Direction of Linkage Between Levels



KEY:

	Linkage of results downward through other results, organizational purposes, and efforts
	Projection of organizational purposes and efforts upward to anticipated future results
	Simultaneous downward and upward linkage of results
	Linkage across levels, not explicitly identified
	Level of result discussed but not formally addressed

purpose, is intended for a specific audience, and employs differing definitions of need and needs assessment that, although not always made explicit, drive the form and function of each model. Many of these models are based in instructional design and curriculum development while others have been derived from organizational development and managerial planning.

One of the first attempts to go beyond behavior to the achievement of internal accomplishments that are necessary for the delivery of useful individual and small group results appears in Thomas Gilbert's *Human Competence: Engineering Worthy Performance* (1978). For years trainers in a variety of disciplines employed his *Performance Matrix* to sort out organizational and individual performance in terms of effectiveness and efficiency in decision making.

As the performance improvement movement continues to temper knee-jerk decisions to train employees, a variety of models have been developed that serve to distinguish between training and nontraining solutions. Perhaps due to its relatively early entry into the field, Allison Rossett's (1987) *Purpose-Based Assessment* has become one of the most widely used training analysis models

currently in use by business and industry. In *Training Needs Assessment*, Rossett details a process whereby the source of problems are identified as opinions and ideas about training issues are gathered through techniques such as interviews, focus groups, and surveys. Although findings are to be used for decision making, many practitioners find it difficult to demonstrate how individual and small group results affect desired organizational and societal payoff.

Soon after Rossett's book was published, Murk and Wells (1988) introduced the *Systems Approach Model* as a broad nonlinear model of instructional design that features needs assessment as a component. Although the authors do not appear to have fleshed out the model in subsequent writings, the approach they advocate has been found useful for defining learner entry skills, knowledge, attitudes, and abilities; but it leaves one wondering how to demonstrate that desired consequences flow from such activities.

Starting in 1972 with *Educational System Planning*, Kaufman developed a definition of need as a gap in results, and of needs assessment as the process for identifying and selecting needs on the basis of the cost to meet them versus the cost to ignore them. Further, he recommends that needs, or gaps in results, should be identified and related to three types of primary clients and stakeholders: societal and external, organizational, and individuals and small groups (Kaufman, 1992, 1998).

The available needs assessment models of the 1990s have tended to be responsive to planners in government, business, and education alike who are increasingly required to demonstrate value added or return on investment for the interventions they propose. This new focus has been characterized by recognition of both internal and external clients, such as in Burton and Merrill's (1991) Four Phase Needs Assessment Model. The following year, Rothwell and Kazanas (1992) issued their seminal text *Mastering the Instructional Design Process*, which introduced the Needs Assessment Process and Product Model. Although this approach has been useful in devising management and implementation plans in organizational settings, the authors have not yet demonstrated how to evaluate whether the skills learned on or off the job measurably affect performance and effectiveness. Similarly, Gordon's (1994) Front-End Analysis Model of Needs Assessment from *Systematic Training Program Design* does not so much assess gaps in results as it provides a means by which to analyze the inputs and processes that organizations can employ when prescribing training and nontraining solutions to their employees. Most recently, Robinson and Robinson (1995) have introduced the Performance Relationship Map in their book *Performance Consulting: Moving Beyond Training*, which emphasizes both training and nontraining solutions to individual and team performance discrepancies, and advocates involving a wide variety of stakeholders in defining performance problems. Although this approach is internally efficient, many practitioners have found that it is not sufficient to link individual performance causally to organizational or societal success.

As these models were rising and falling in popularity, a countercurrent was forming in the literature that emphasized the impact of planned interventions on individual and small group results. The models of Gilbert (1978), Burton and Merrill (1991), Robinson and Robinson (1995), and Rossett (1987) are examples of some instructional approaches that were also attentive to this issue. More recent texts, such as Hannum and Hansen's (1989) *Instructional Systems Development in Large Organizations*, support beginning with a top-down societal needs assessment and then projecting downward to organizational and individual results. The authors, however, elect in their model to examine only gaps in results at the level of the individual performer and they suggest that their model be used solely to document process inefficiencies.

In 1995, Nelson, Whitener, and Philcox introduced their Content-Levels Framework for Training Needs Assessment, employing a modified version of Ostroff and Ford's 1989 content-level-application matrix, which as its predecessor focused primarily on individual, small-group, and organizational processes and inputs rather than on organizational and external results. This tendency to emphasize process over accomplishments has recently manifested in Witkin and Altschuld's (1995) Three-Phase Model of Needs Assessment from *Planning and Conducting Needs Assessments*. This model tends to focus on process improvement and the achievement of the organization's goals for individuals and small groups—a worthwhile activity if demonstrably linked to external consequences.

Over the years, Mager and Pipe's (1997) Performance Analysis Flow Diagram has served as a catalyst for analyzing performance discrepancies and making adjustments at the level of the individual and the small group. Models that directly address results at an organizational level are few and far between. Notable exceptions are Ostroff and Ford's 1989 Levels Perspective on Training Needs Assessment, and the following year's Relationship Map proposed by Rummier and Braché (1990). Although these authors' recognition of work flows, organizational objectives, and external clients shows the influence of the quality management, continuous improvement, and customer satisfaction movements, only Kaufman's (1992, 1996, 1998) Organizational Elements Model, or OEM, formally addresses the linkages between societal, organizational, small group, and individual results with organizational resources and activities. The OEM framework suggests that a needs assessment should begin with a focus on societal results (referred to as Mega level results) and roll down to organizational (Macro level) and individual or small-group (Micro level) results before interventions (such as training) and resources are selected.

Conclusions and Recommendations

Although organizational requirements differ, we recommend that practitioners consider the strengths and weaknesses of the various approaches to needs assessment prior to selecting any model. First, they should consider both the

target audience, or the intended practitioner or user of the model and its consequences, and the client focus, or primary recipient and beneficiary of needs assessment results. Given that almost all organizational activities have implications not only for immediate clients but also for society and external clients both now and in the future, the emphases on internal and external results and consequences should be discussed in terms of societal, organizational, small-group, or individual payoffs. We suggest that the Organizational Elements Model (the data-driven needs assessment approach introduced by Kaufman, 1998; and Kaufman, Rojas, and Mayer, 1993) provides the most holistic model by linking what organizations use, do, produce, and deliver to the value-added that all of these elements have on external clients and society. Second, we should recognize the degree to which models assess the application and acquisition of skills, participants' reactions to interventions, and resource availability or quality. Third, attributes that may help practitioners make better-informed decisions about where their organization should be headed and how to know when it has arrived—including responsiveness, coherent linkage of results, guidelines for prioritization, responsiveness, and tools and methods—should also be examined. Finally, the criteria for performance data should be identified, ranging from “fuzzy” goals or intents to measurable performance objectives, the latter being preferable.

In summary, the model you and your organization select as a basis for needs assessment initiatives should emphasize the difference between ends and means, focusing on the *what* before selecting the *how*. It should be applied in the service of internal as well as external clients and beneficiaries of the organizational actions. The model should also be malleable in order to facilitate revisions to processes informed by data rather than solely by preferences. Employing this framework will provide you and your organization with a suitable set of guidelines with which to identify and select a model most appropriate for your organization.

References

- Burton, J., & Merrill, P. (1991). Needs assessment: Goals, needs and priorities. In L. J. Briggs, K. L. Gustafson, and M. H. Tillman (Eds.), *Instructional design: Principles and applications* (2nd ed.). Englewood Cliffs, NJ: Educational Technology.
- Gilbert, T. (1978). *Human competence: Engineering worthy performance*. New York: McGraw-Hill.
- Gordon, S. (1994). *Systematic training program design: Maximizing effectiveness and minimizing liability*. Englewood Cliffs, NJ: Prentice Hall.
- Hannum, W., & Hansen, C. (1989). *Instructional systems development in large organizations*. Englewood Cliffs, NJ: Educational Technology.
- Kaufman, R. (1972). *Educational system planning*. Englewood Cliffs, NJ: Prentice-Hall.
- Kaufman, R. (1992). *Strategic planning plus: An organizational guide* (Rev. ed.). Thousand Oaks, CA: Sage.
- Kaufman, R. (1998). *Strategic thinking: A guide to identifying and solving problems* (Rev. ed.). Arlington, VA: American Society for Training & Development; Washington, DC: International Society for Performance Improvement.

- Kaufman, R., Rojas, A. M., & Mayer, H. (1993). *Needs assessment: A user's guide*. Englewood Cliffs, NJ: Educational Technology.
- Mager, R. F., & Pipe, P. (1997). *Analyzing performance problems* (3rd ed.). Atlanta, GA: Center for Effective Performance.
- Murk, P. J., & Wells, J. H. (1988). A practical guide to program planning. *Training & Development Journal*, 42 (10), 45-47.
- Nelson, R., Whitener, E., & Philcox, H. (1995). The assessment of end-user training needs. *Communications of the Association for Computing Machinery*, 38 (7), 27-39.
- Ostroff, C., & Ford, J. K. (1989). Assessing training needs: Critical levels of analysis. In I. L. Goldstein (Ed.), *Training and development in organizations*. San Francisco: Jossey-Bass.
- Robinson, D. G., & Robinson, J. C. (1995). *Performance consulting: Moving beyond training*. San Francisco: Berrett-Koehler.
- Rossett, A. (1987). *Training needs assessment*. Englewood Cliffs, NJ: Educational Technology.
- Rothwell, W. J., & Kazanas, H. C. (1992). *Mastering the instructional design process: A systematic approach*. San Francisco: Jossey-Bass.
- Rummler, G. A., & Brache, A. P. (1990). *Improving performance: How to manage the white space on the organization chart*. San Francisco: Jossey-Bass.
- Watkins, R., Leigh, D., Platt, W., & Kaufman, R. (1998). Needs assessment: A digest, review, and comparison of needs assessment literature. *Performance Improvement*, 37 (7), 48-53.
- Witkin, B. R., & Altschuld, J. W. (1995). *Planning and conducting needs assessments: A practical guide*. Thousand Oaks, CA: Sage.

Doug Leigh is a research associate with Florida State University's Learning Systems Institute in Tallahassee and associate director of Roger Kaufman & Associates.

Ryan Watkins is assistant professor of instructional technology and distance education in the Fischler Graduate School of Education at Nova Southeastern University in Hollywood, Florida, and associate director of Roger Kaufman & Associates.

William A. Platt is a training system specialist for employee development and training within the Veterans Benefits Administration of the U.S. Department of Veterans Affairs, Chuluota, Florida.

Roger Kaufman is professor and director of the Office for Needs Assessment and Planning at Florida State University in Tallahassee and director of Roger Kaufman & Associates.

