DEVELOPMENT AND VALIDATION OF AN INSTRUMENT FOR ASSESSING MANAGEMENT DEVELOPMENT NEEDS

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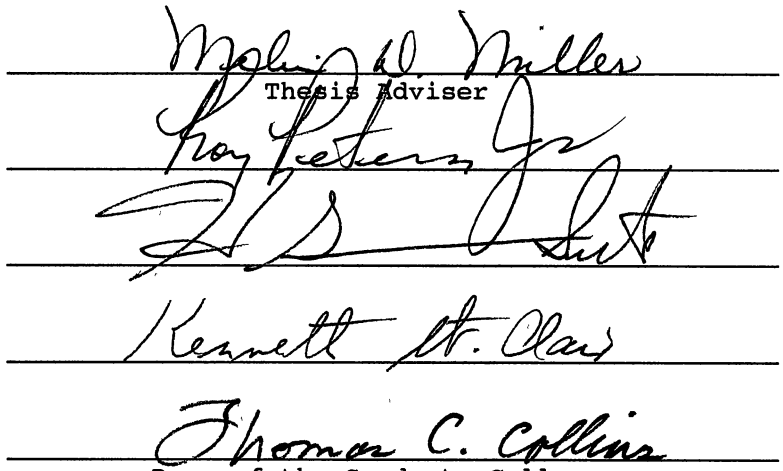

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This study is dedicated to Sherry, Sammie and John. They always knew.

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CHAPTER I

THE PROBLEM

Introduction

Peters (1987) wrote that organizations must improve continually to be competitive in the 1990s. He also emphasized the importance of training and retraining employees in this improvement effort. A number of factors will add to this increased demand for training in the private sector, but according to Koestenbaum (1990), two are paramount: the emergence of the global economy, with its pressure for increased quality and efficiency; and increasing technological and social change.

Respondents in Training magazine's annual survey of U.S. training and development efforts reported that the "Total dollars budgeted for formal training this year was 45.5 billion," Lee (1990, p. 29). Since this figure is limited to the respondents of this survey, the actual expenditure may be much higher.

Gordon (1990) found that 56.4% of organizations with 100 or more employees provide some type of development activities for their managers. Although it is admirable that these organizations are willing to provide this training, some of it may be in vain. Mussett (1990) stated that training, especially management training, is sometimes based upon faddish trends and is not tied either to the

business strategy or to participant needs. In either case, the training is a waste of valuable resources and may generally have a negative, rather than positive, effect on the organization's bottom line.

Kee (1991) described two instances where management or supervisory training is warranted: (1) when an individual assumes a new role or position and must acquire additional skills in order to be successful in the new role, and (2) when training will help solve a performance problem. In either scenario, needs must be assessed and the training/development activities custom-designed to help meet those needs if the training is to be effective.

Training/development activities are not always the answer to performance problems. Bowman (1987, p. 32) wrote that, "Not all performance deficiencies are training problems. These will not be solved by training." Rossett (1990, p. 36) agreed and described four impediments to optimal performance: "skill and knowledge discrepancies, flawed incentives, flawed environment, and lack of motivation." Rossett (1990) continued that training will help overcome only one of these: skill and knowledge discrepancies. In order for that training to increase knowledge or skill and thereby move the participant toward optimal performance, the proper training must be prescribed. Needs assessment provides the data for that prescription.

Properly conducted needs assessment is to the training professional what "cautious and data-driven diagnosis" is to the physician, Rossett (1990, p. 36). Bowman (1987, p. 30) wrote that

"needs assessment is the essential first step in planning a training program; the academic literature treats needs assessment as a given in any acceptable methodology."

Even though needs assessment is widely recognized as essential to the successful training intervention, it is not always used. Bowman (1987, p. 30), noted that "62% of respondents in an October 1985 survey did not perform a formal, structured needs assessment for all training projects." Rossett (1990, p. 36) concurred: "Despite the best of intentions, needs assessment is still more of a goal than reality."

A number of techniques exist which are useful in determining these development needs. Rossett (1987) listed five: review of extant data, interviews, observations, focus groups, and questionnaires. In addition, she stated that questionnaires are useful in many situations, and are especially well suited when assessing the needs of large populations.

A number of sources have described some of the assessment instruments which are currently available. Smith (1989) described the needs assessment system (questionnaire) available from one commercial source, but stated that it was very complicated to administer; furthermore, the completed questionnaire had to be sent to the source's headquarters in California to be scored by computer. He stated that approximately three weeks were required for results to be tabulated and returned by mail. Also, this system was relatively expensive to use.

Parry (1990) produced a management needs assessment questionnaire for use in a broad range of organizations, but this instrument also required computer-scoring by Parry's New Jersey-based Training House.

Bice (1990), Koestenbaum (1990), and Mussett (1990) all stated that there is a shortage of simple, easily scored and interpreted management development needs assessment instruments, specifically questionnaires. They also stated that a need exists for an instrument that would be general enough that it could be used with a broad range of managers and organizations.

Statement of the Problem

The problem leading to this study is that there is a shortage of simple, easily administered, management development needs assessment instruments which may be used in a wide range of organizations.

Purpose of the Study

The purpose of the study is to develop and validate a management development needs assessment instrument. Koestenbaum (1990) stated that, if a generic, inexpensive tool for assessing management development needs existed, the process (needs assessment) would be greatly simplified. He continued that the incidence of needs assessment prior to training could increase as a result. An increase in needs assessment activities should result in more effective training and improved management skills and organizational

competitiveness, Bowman (1987), and Rossett (1989).

Importance of the Study

There is a distinct shortage of management development needs assessment instruments which are general enough to be used in the broad spectrum of organizations, Mussett (1990). She also stated that the lack of a simple, easily administered and scored instrument frustrated many attempts at needs assessment. The product of this study, a valid instrument, should help satisfy this lack and make needs assessment simpler for training and development practitioners. This provided the initial impetus for this research.

As a management development professional, the researcher is often required to carry out assessments of the training needs of the managers of client organizations. With small groups of managers, individual interviews or focus groups are often sufficient to determine development needs, Callahan (1985). When surveying large groups of managers, these techniques are not practical due to time constraints.

In 1989, the researcher was preparing to carry out a needs assessment of approximately 125 managers of a manufacturing firm which was preparing its annual training and development plan. A needs assessment instrument which could be administered to the members of this population to determine their training needs was required. A search of the various catalogs and directories of training and development vendors did not produce an acceptable instrument.

Dissertation Abstracts, however, yielded a needs assessment methodology developed by a student at Oregon State University as part of his doctoral studies. Akyeampong (1986, p. 98) developed and validated an instrument which was simple, easily administered and scored. Akyeampong recommended that "Replication of the study should be made with management personnel in other organizational settings (private and public sector)." The sample for his study was "first-line and middle management personnel of selected companies in the High-Tech industry in the State of Oregon," (p. 40).

In addition, Akyeampong (1986), after developing and validating a survey instrument, recommended that specific changes be made in the format of that instrument. Recent changes in training technology and terminology suggest that Akyeampong's instrument may need to be updated and altered for use with a broader population.

The Akyeampong instrument seemed to fit the need of the organization which sought to determine the development needs of its 125 managers, who ranged from first line supervisors to the chief officer on site. The researcher made the changes which Akyeampong recommended and administered the instrument to this group of managers.

While the instrument yielded satisfactory results (a priority ranking of development needs), comments from those managers made it obvious that additional improvement should be made to the Akyeampong (1986) instrument.

Objectives of the Study

Four research objectives guided the study. These were:

1. The Akyeampong (1986) survey instrument will be revised.

2. The content validity of the revised instrument will be determined.

3. The reliability of the revised instrument will be determined.

4. The effectiveness of the revised instrument in developing a priority ranking of the development needs of managers will be evaluated.

Research Methodology

The revision of the Akyeampong (1986) instrument (Objective 1) will be accomplished in accordance with data obtained from these sources: (1) Akyeampong (1986) made specific recommendations for the revision of the instrument he developed in his study; (2) the revised instrumentation will be administered to a group of managers during an actual needs assessment; (3) a review of the current literature concerning both the needs assessment process with specific attention to instrumentation; The group's reactions and specific comments for improvement of the instrument will be solicited; (4) the instrument will be revised based on the comments of this group, if revisions are warranted; and (5) the revised instrument will be presented to a panel of experts for final revision.

That panel of experts will also perform another function. They will satisfy the second Objective of the study. Through study, discussion, and further revision, the panel will determine if the content validity of the questionnaire is acceptable.

The methodology by which the third Objective will be satisfied is quantitative. The test-retest procedure will be used to determine the reliability of the survey instrument. Spearman's rho statistic will be used to determine the correlation coefficient and to determine significance of that correlation.

The fourth and final stage of the study uses the quantitative data generated earlier in a qualitative setting. In each of four independent focus groups, a priority ranking of survey items will be presented to the respective groups. The groups will determine the effectiveness of the questionnaire in generating this ranking and thereby satisfy the study's fourth Objective. Group members will also discuss the list and determine what specific training topics might satisfy those particular development needs.

This qualitative procedure essentially closes the needs assessment loop. A priority ranking was developed from data generated through the use of a questionnaire. This list was translated by a focus group into specific training topics which the group determined would meet given development needs through formal training.

Population

The population for this study included managers and chief executive officers of both private (manufacturing and service) and public sector (a state service agency) organizations.

Limitations of the Study

Since the primary purpose of the study is to develop and validate the instrument, and not to determine the training needs of a state-wide or larger population, selection of subjects was restricted to managers within a cluster of organizations in north central Oklahoma.

The basic tenets of needs assessment, like any type of research, dictate that findings may be generalized only to the population which was assessed. Therefore, the instrument must undergo wider usage before generalization to a larger population is appropriate.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The review of literature is presented in five sections. Following the introduction, the first section contains information from the current literature on consulting. The second examines needs assessment, while the third explores related studies. The fourth section surveys the literature on written questionnaires. The fifth and final section overviews trends in management development. A summary completes this chapter.

The Consulting Process

Process Consultation

Schein (1969, p. 19) tells us that needs assessment is a process within a process. He calls the more global effort "Process Consultation." These are the stages in his Process Consultation model:

1. Initial contact with the client organization;
2. Defining the relationship, formal contract, and psychological contract;
3. Selecting a setting and a method of work;
4. Data gathering and diagnosis;
5. Intervention;
6. Reducing involvement;
7. Termination (pp. 77-78).

Schein's early work in the organizational development field certainly had an impact on the consulting process Block (1981) later developed and describes:

Phase 1. Entry and Contracting
  A. Consultant and client negotiate wants/needs for the project.
  B. The problem is defined.
Phase 2. Data Collection and Diagnosis
  A. Begin needs assessment
Phase 3. Feedback and the Decision to Act
  A. Results of needs assessment are presented to management.
  B. Management makes decision as to course of action.
Phase 4. Implementation
  A. Training or development activities begin.
Phase 5. Extend, Recycle, Terminate
  A. After evaluation, the decision about further action is made (p. 154).

In describing a critical point in the process he developed and used successfully, Block (1991) cautioned that the error many training professionals make is to bypass the first three phases and begin the intervention by implementing some training or development activity. In that case, there is an assumption that, without any structured investigation, the training professional understands both the problem and its causes and is therefore able to prescribe the proper solution. If that assumption is invalid, both the consultant and the client lose. The training did not improve performance, which resulted in a waste of the client organization's resources; the credibility of the training professional suffers because the intervention did not change anything. The problem will continue to exist after the training is completed.

Organizational Development

Another process which is related to the consulting process, and which includes needs assessment, is the emerging discipline titled Organizational Development. Gibson, Ivancevich, and Donnelly (1991, p. 641) offered that organizational development, as used in contemporary management practice, has distinctive characteristics.

Gibson, et al., described that the first characteristic of Organizational Development (OD) is that it is planned and long term. OD is a data-based approach to change which includes all of the ingredients of managerial planning: goal setting, action planning, implementation, monitoring, and corrective action when necessary. Because of this nature, no quick changes should be anticipated.

The second characteristic is that it is problem oriented. "OD attempts to apply theory and research from a number of disciplines, including behavioral science, to the solution of organizational problems," (Gibson, Ivancevich, and Donnelly, 1991, p. 641).

These same authors offered the third characteristic: that OD attempts to link the resources and potential of the human side of an organization to its "technology, structure, and management processes," (p. 641).

The fourth characteristic of OD is that it is action oriented. Gibson, et al., state that, "OD focuses on accomplishments and results. Unlike approaches to change that tend to describe how organizational change takes place, OD emphasizes getting things done," (p. 641).

This trio of authors tell us that Organizational Development involves the use of "change agents," (p. 641). The proper use of the process requires the use of a facilitator to help the organization "redirect its functioning," (p. 641).

The sixth and final characteristic of Organizational Development is that it involves learning principles since it relies on "reeducation as the way to bring about change," Gibson, Ivancevich, and Donnelly (1991, p. 641). The application of these fundamental principles is what makes OD work. People learn a better way.

The process used by organizational development change agents is best understood through the use of the model that Kilmann (1989, p. 19) provides.

Organizational Development Model

1. INITIATING the change--typically undertaken by a change agent who may be internal or external to the organization and who may act alone or with a group to spearhead the program.

2. DIAGNOSING the problem--identifies the evidence and specific causes of problems, resulting in recognition of target(s) of change.

3. IDENTIFYING the intervention(s)--that will cause the targets to change in the desired direction.

4. IMPLEMENTING the intervention at the appropriate time and scope to ensure the highest probability of successful change.

5. EVALUATING the outcomes to gauge the magnitude and direction of changes in the targets.

Needs assessment enters the organizational development picture during the second step--Diagnosing the problem. Gibson et al., (1991) offer that the diagnosis of the problem should always precede any action to resolve it. "No formula exists for accurate diagnosis, but the following questions point the manager in the right direction. (1) What is the problem as distinct from the symptoms of the problem? (2) What must be changed to resolve the problem? (3) What outcomes (objectives) are expected from the change, and how will those outcomes be measured?" (p. 651).

In attempting to answer Questions (1) and (2) above, the organizational development change agent performs a type of needs assessment. He or she seeks to determine what must be done in order to affect the desired change. Gibson et al., (1991, p. 651) offered five methods for gaining this information:

1. Questionnaire data can be collected from large numbers of people.

2. Direct observations can be taken of actual workplace behavior.

3. Selected individuals in key positions can be interviewed.

4. Workshops can be arranged with groups to explore different perceptions of problems.

5. Documents and records of the organization can be examined for archival and current information.

Gibson et al., (1991, p. 652) described a problem that seems to be prevalent in the organizational development field. Some practitioners have not separated their pet intervention from the diagnosis. In other words, their intervention or methodology of choice may influence the diagnosis both of the problem and the best possible remedy, sometimes even when evidence that another intervention is more appropriate. These authors provided two examples: Robert R. Blake and Jane S. Mouton implemented their Managerial Grid program across different companies; Stanley Seashore and David Bowers implemented an action program based upon participative management for the Banner organization. Both of these occurred without diagnosis of specific problem areas. "Instead of a 'canned' approach in which the diagnosis and intervention are the same for different companies, a more 'tailored' approach to change is needed. That is, interventions should fit the particular problems of an organization," Gibson, Ivancevich, and Donnelly (1991 p. 652-653). Data collection, or needs assessment provides information by which development programs may be tailored to an individual or an organization.

Needs Assessment

What is needs assessment? Rossett (1989) described that needs assessment should be the first step in any strategy to increase the employee's skill or knowledge level; assessment of needs should be accomplished before any training or development activities take place. The concept that needs assessment is based upon is simple:

it attempts to define the gap between the desired performance level and the actual performance level. Once the performance gap has been defined, the next step is to determine if the gap may be closed with training. In other words, will training solve the problem or are organizational roadblocks inhibiting performance? If training or development activities will help solve the problem, then it should be arranged. If organizational roadblocks are the problem, then strategies must be developed to dismantle and remove them.

Agreement exists in the literature concerning the importance of properly conducted needs assessment to the success of training and development activities. Bowman (1987), Duncan (1989), Rossett (1987), Rossett (1990), Schneier, Guthrie, and Olian (1988), and Talagrand (1989) all noted that needs assessment provided the needed focus for successful training.

Bowman (1987, p. 31), in describing a two-year study at a Wisconsin children's hospital, stated that several additional benefits could be realized from a properly conducted needs assessment. In addition to determining the training needs of the potential participants, the process also generated participant commitment, and increased the level to which the hospital management supported the training effort. It also raised the Human Resource Department's credibility within the organization.

The most important finding in Bowman's study, however, was that those trainees who participated in the needs assessment process were significantly more satisfied with the training than those who did not participate in the needs assessment.

Knowles (1970) offered some basis for this increase in satisfaction among those trainees who participate in the needs assessment prior to training. In providing his definition of Andragogy, he stated that, "great emphasis is placed on the involvement of adult learners in a process of self-diagnosis of needs for learning," (p. 42).

This process, has three phases. In the first phase, a model of the characteristics of ideal performance is developed and presented to the learner so that they have a vision of this performance. The learner is provided some method of self-diagnosis to assess their performance in light of the ideal performance in the second step. In the third step, the learner measures the gap between their performance and the ideal, creating a feeling of dissatisfaction or tension in themselves. This dissatisfaction drives the learner to learn. Knowles stated that,

> Learning is described psychologically as a process of need-meeting and goal-striving by the learner. This is to say that an individual is motivated to engage in learning to the extent that he feels a need to learn and perceives a personal goal that learning will help to achieve; and he will invest his energy in making use of available resources (including teachers and reading) to the extent that he perceives them as being relevant to his needs and goals (p. 50).

Knowles (1970) also stated that, "learners accept a share of the responsibility for planning and operating a learning experience, and therefore have a feeling of commitment toward it" (p. 53).

Tied closely to the importance of managers participating in needs assessment and planning of the development activities, the timing of the learning experience is important, Knowles (1970,

p. 39). Proper timing can be assured by properly conducted needs assessment, assuming that only a reasonable period of time elapses between the needs assessment and the development activity. Zemke and Zemke (1988) described that the sooner after a promotion to a supervisory position that training was received by the new supervisors, the greater the impact the training had upon actual job performance. Knowles (1980) stated that adults learn significantly only those things they perceive to maintain or enhance the structure of self.

Rossett (1987) offered these additional purposes for conducting needs assessment: attempting to determine problems and their causes; seeking employee feelings toward performance problems; seeking management priorities; training management in ways of attempting to alleviate performance problems; and increasing the buy-in of all parties to the training which may result from the needs assessment.

Hiebert and Smallwood (1987, p. 76) stated that there are two approaches to needs assessment, the objectivist and the interpretive. They explained the Objectivist approach. Key managers are interviewed and, based upon the results of these interviews, objectives which will hopefully be met by the training are established. A training program is then developed, and is mandated to participants.

This method is not very effective in a dynamic environment. Because of the rate of change and increases in technology, the training needs of employees at all levels change rapidly. If

managers are the only source of data in a dynamic environment, only some of the employee's development needs will be met--those which line up with management's perceptions. These authors contend that individual employees are the best source of data concerning their individual training needs; therefore, they should be included in any needs assessment.

Hiebert and Smallwood (1987) continued by explaining the Interpretive approach. Information concerning employee training and development needs is obtained from several sources, including the employees themselves; it is then interpreted and redefined. A training program is then identified or developed and offered to participants to meet individual needs. The problem with this methodology is that the results are primarily subjective. Objective, quantifiable results are more desirable.

These same authors also emphasized that a combination of the two (the Objectivist and the Interpretive), known as the Integrative approach, was superior to either the Objectivist or the Interpretive (Hiebert and Smallwood, 1987, p. 76-77).

The goal of the Integrative approach is to use Objectivist language and processes while thinking in the Interpretive mode. In other words, the Integrative approach uses objective language and methodology to survey a wider range of sources; the data is then interpreted in light of corporate strategy and training is selected or developed to meet individual needs.

Bowman (1987) agreed with Hiebert and Smallwood (1987): neither the employee's perceptions of their training needs, nor

management's perception of employee training needs, nor the Human Resource Department's perception are, in themselves, valid. A combination of inputs from these groups, when interpreted in the light of corporate direction, yields the most favorable result.

Rossett (1989, p. 56) listed four different types of information which should be gained from needs assessment. They are: determining optimal performance; determining the actual performance level; determining employees' feelings about the subject, skills, a new system, or technology; or determining the cause or causes of problems.

Other authors have described general methodologies for assessing needs. Callahan (1985) listed the following basic steps for determining training needs in Be A Better Needs Analyst, which was published by the American Society for Training and Development:

1. Define the objectives for improvement
2. Identify the necessary data
3. Choose or design a method for gathering data
4. Collect the data
5. Analyze and confirm the data
6. Prepare final report (p. 2).

Rossett (1987) described the steps in her needs assessment process:

1. Select sources for needs assessment
2. Determine stages of assessment
3. Select and use training needs assessment tools
4. Create items (questions)
5. Consider critical incident analysis (p. 69).

Kirkpatrick (1978) described a number of investigations which may provide information about development needs. They include:

1. Analysis of the supervisor's job
2. Analysis of the problem (such as high turnover, production costs, accident rate)
3. Questioning the supervisors themselves
4. Seeking input of targeted trainee's superiors
5. Asking trainee's subordinates
6. Testing knowledge and/or competencies
7. Observation of supervisor's work behavior
8. Analysis of information contained in performance appraisal
9. Exit interviews
10. Use of advisory committees
11. Study of what other organizations are doing 12. Examination of universal training needs (p. 17.)

Techniques

Rossett (1987) noted that a variety of techniques exists for determining individual training needs. They include: review of extant data, interviews, observation, focus groups, and questionnaires.

Extant data is that information which is usually available in any organization and which may shed light on performance problems. For example, this data may be found in personnel records, production records (both quality and quantity), union records, or financial performance records.

Interviews and focus groups are very similar in nature (the obvious difference is the number of subjects the researcher works with at any given time). A trained facilitator or interviewer, working from an interview schedule, questions individual subjects as to their development needs. Both the interview and focus group techniques, while yielding valid results, are time consuming and therefore expensive.

Spruell (1986) described that the focus group is, "ideal when the issue to be explored is vague and undefined. The group can provide insights necessary to follow up with a focused survey as part of studies such as needs analyses," (p. 3). Venable (1988) and Spruell (1986) described that focus groups may be used with additional quantitative needs assessments. These authors provided tips for conducting focus groups: (1) keep the size of the group manageable--eight to twelve; (2) use a round table and comfortable chairs; placing people closely together will develop an intimate atmosphere; (3) provide refreshments; (4) use an interview schedule.

Rossett (1987) and Venable (1988) provided advantages to using focus groups: (1) the facilitator can observe nonverbal feedback to specific items; (2) opinions, ideas, and questions may be clarified; (3) organizational rapport is enhanced; and (4) verbal interchanges are enhanced by the relaxed group atmosphere.

Rossett (1987) and Venable (1988) also listed disadvantages to using focus groups: (1) tabulating and analyzing focus group data is difficult; (2) these groups may be used only in conjunction with quantitative needs assessment techniques; (3) data may be misleading if the group is not representative of the target population; (4) focus groups require trained facilitation; and (5) the data obtained is qualitative, not quantitative.

Observation of the work being performed by the researcher often provides insight into the deficiency, but again is extremely time consuming. Usually, a trained observer watches employees as they

perform. Data generated often relate to time and motion, the work flow, or a particular work process.

Written survey instruments, questionnaires, are often used when attempting to gain responses from large samples. Spruell (1986) stated that written questionnaires should be used when seeking to determine employee opinions concerning training and development opportunities, or when attempting to gain information about broad, quantifiable data which is not sensitive in nature.

Although Rossett (1989) stated that standard sampling techniques should be used when determining development needs, she advised caution. Despite the fact that representative samples may be used to survey larger populations, the population should be the sample in many cases. The reason for this is that individual needs vary greatly from level to level, and from organization to organization.

Holstead (1988) determined that there was no direct relationship between hierarchical level in and the learning needs of the managers in the Fortune 500 company she studied. Wagner-Westbrook (1989) determined that there were significant differences among the training needs of managers at varying ages, position titles, and lengths of tenure in their position.

Venable (1988) described that best results are usually obtained when a combination of two or more of these techniques are employed. For example, questionnaires may be combined with focus groups or individual interviews.

Spruell (1986) provides additional focus to the combination of these techniques. When asking sensitive or exploratory questions, he recommends that two techniques be used in tandem. For example, the written questionnaire (with forced choice items) and the face-to-face interview (in which open-ended questions are asked) may be combined.

After the questionnaires have been completed and the results tabulated, a small portion of the sample should be selected for inclusion in the interviews. During the interview, the results of the questionnaire may serve as a springboard to initiate the discussion.

Related Studies

A number of studies have been conducted which attempted to determine management development needs. Using a 23-item survey, Culbertson and Goldstein (1983) surveyed 400 supervisors and middle managers for the Kentucky Department of Human Resources. In developing their instrumentation, they divided managerial competencies into these four constructs: (1) Personnel, (2) Communication, (3) Motivation/leadership, and (4) Management method. In designing and administering their questionnaire, these researchers used a 3-point scale in which: 1=little need, 2=some need, and 3=great need. Mean scores for each item were calculated and rank ordered. The categories ranked in this order: motivation/leadership, employee development, communication, and human relations.

In conducting an assessment of management development needs for the Bell System, Barr (1980) compared the skills of newly appointed supervisors to those of competent experienced supervisors. The instrument he used segregated competencies into three clusters: (1) Survival skills: planning, controlling, problem solving and giving feedback; these skills were similar to the traditional tenets of Scientific Management and were prerequisite to the basic success of all managers. (2) Facilitative skills: coaching, motivating, time management, communication and informal communication; these skills were closely related to the leadership aspect of management, and involved getting work accomplished through others. (3) Least essential skills: Barr included self-development, written communication, knowledge of agency, career counseling, and formal oral communication.

Batley (1990) used a combination of techniques in determining the development needs of the membership of a professional society of engineers in New Zealand. He first interviewed several members of the society, and then developed a questionnaire based upon the information gained during those interviews. Batley then sent copies of the survey instrument to a representative sample of the population. Development needs in business management subjects were identified by the majority of respondents. Management skills most often selected were: (1) Personal and interpersonal management skills; (2) General management and decision making; (3) Individual, group, and organizational behavior; (4) Finance and accounting; (5) Personnel management; and (6) Project management.

In a national survey of 62 senior executives in Canada, Green (1987) established the top ten management and executive development priorities. They are, in order of importance: (1) Communication systems and skills; (2) Creative, transformational, or inspirational leadership; (3) Management development; (4) Management of change; (5) Strategic planning and management; (6) Business-government relations; (7) Managing technology; (8) Marketing strategy; (9) Organizational effectiveness; and (10) the Basics.

Thomas and Sireno (1980), using a 115 item instrument, completed a study which sought to compare management development needs across various industries. They grouped competencies into these categories: (1) Communications, (2) Leadership, and (3) Control (p. 49). These researchers determined that managers in different organizations and industries had varying development needs; because of this variation, training programs must be custom-designed in order to be effective. The key to this customization is properly conducted needs assessment.

Thomas and Sireno (1980) added that the results of a needs assessment is specific to the organization sampled. Parrish (1986) stated that, "The source for collecting needs assessment information is usually the managers for whom the programs are being planned and designed" (p. 37). The sample is the population.

A popular theory of the division of managerial work, however, was posed by Katz (1980) in his book, The Study of Organizations. He determined that the competencies which are necessary for the success of managers varied among the different levels of management.

Those management levels are: (1) First line supervisors--those who supervise the employees who actually perform the work for which the organization receives its income; (2) Middle managers--those to whom first line supervisors report and who report to either other middle managers or to those who make up the executive level; (3) Top managers--the executive level (those who set policy and strategy).

Katz (1980, p. 122) wrote that managerial competencies fall into three broad categories: Technical (production methods, processes, and special knowledge in a given field), Human (the ability to build cooperative effort within the team one leads; the way managers behave toward peers, subordinates and supervisors), and Conceptual (the ability to see the enterprise as a whole; to see how various functions are interdependent; to see how the business relates to the industry as a whole; and to coordinate this knowledge with activities of the organization toward a common goal).

He described that while the need for competency in Human skills remains high at all levels of management, the needs for Technical and Conceptual skills change, Katz (1980, p. 122). As the manager progresses upward in the organization, the need for conceptual skills increase while the need for technical skill, which was quite high at lower levels of management, decreases.

Although more recent research, including studies by Parrish (1986) and Holstead (1988), did not substantiate Katz' findings as to the most pressing development category for each of the three levels of management, his categorization of management competencies (Technical, Human, and Conceptual) stands, and has been the basis

for subsequent research.

In Parrish's (1986) study, she chose to segregate management competencies using Katz' (1980) divisions: technical, human, and conceptual. Managers in her study ranked technical skills in the order shown in Table I.

Managers in the Parrish (1986, p. 65) study ranked human skill needs in the order shown in Table II.

Managers in Parrish's (1986, p. 67) study ranked development needs in the conceptual skill area in the order portrayed in Table III.

In summarizing the findings of her study of the development needs of managers, Parrish (1986) found no significant relationships between the type of learning needs that Katz (1980) described (technical, human, and conceptual) and level in the organization. In other words, her study also failed to corroborate Katz' theory. One interesting conclusion she reached is that, when considering the development needs of managers at all three organizational levels, their greatest learning needs were in the area of human skills.

Using Katz' (1980) work as a foundation, Holstead (1988) studied the learning and development needs (technical, human, and conceptual) of three levels of managers in a Fortune 500 company. Her findings were inconsistent with Katz' results.

Results from Holstead's (1988, p. 79) study supported Katz' contention that first line managers reported the greatest need for technical skills. But from that point, her results produced different priorities.

TABLE I

MOST FREQUENT LEARNING NEEDS FOR TECHNICAL SKILLS

Program Topic	Percent Stating Need N = 180
Managing Stress	26.7
Information Systems	25.0
Using Software Applications	25.0
Presentation Skills	24.4
Budgeting/Financial Management	23.3
Writing Technical Reports/Proposals	22.8
Designing/Managing Data Bases	22.8
Platform Skills/Public Speaking	22.8
Cost/Benefit Analysis	22.2
Forecasting	22.2
Computer Competence	21.7
Managing Time	21.1
Artificial Intelligence	15.6
Robotics	15.6
Office Automation	14.4
Telemarketing	12.8
Local Area Networks	11.1
Salary/Wage Administration	7.2
Compensation Benefits	3.3
Affirmative Action/EEO	.6

TABLE II

MOST FREQUENT LEARNING NEEDS FOR HUMAN SKILLS

Program Topics	Percent Stating Need N = 180
Training/Developing Subordinates	23.9
Leadership	23.9
Problem Solving	22.8
Decision Making	21.7
Listening Skills	21.1
Team Building	21.1
Communication Skills	20.6
Motivation	17.2
Conflict Management	17.2
Interpersonal Skills	16.7
Assertiveness	16.7
Group Dynamics	16.1
Delegating	15.6
Negotiating	15.6
Productivity	15.6
Performance Appraisal	15.0
Negotiating Skills	13.3
Interviewing Skills	12.2
Coaching/Counseling Employees	10.6
Customer/Client Relations	9.4
Labor/Management Relations	9.4
Neurolinguistic Programming	9.4
Quality Circles	8.9
Public Relations	8.3
Employee Discipline	7.8
Employee Assistance	6.1
Recruiting	5.6
Sexual Harassment	2.2

TABLE III

MOST FREQUENT LEARNING NEEDS FOR CONCEPTUAL SKILLS

Program Topics	Percent Stating Need N = 180
Strategic Planning	26.1
Goal Setting	18.9
Organization Planning	17.2
Image Self/Corporate	16.1
Securing/Managing Resources	16.1
Future/Futuring	15.0
Organization/Transformation	13.9
Developing Policies/Procedures	13.9
Succession Planning	13.9
Change Management	13.3
Program Design	13.3
Corporate Culture	11.1
Human Resource Planning	11.1
Evaluation	10.0

Katz stated that middle managers' highest development needs were in the area of human skills. In her study, Holstead (1988) determined that middle managers' greatest development need was in the area of conceptual skills.

Holstead's (1988, p. 79) findings of the predominant development needs at the executive level also did not substantiate Katz' (1980) work. Katz stated that executives' greatest need was in the area of conceptual skills. Holstead determined that executives reported that their greatest development need was in the area of human skills.

Holstead (1988, p. 80) also determined that significant differences existed when comparing the development needs of female versus male managers. Female managers, as a group, indicated a greater need for technical skills, while male managers reported a significantly greater need for human skills.

Digman (1980, p. 34), in his study of managers in 84 medium-sized organizations, found that a difference existed among the development needs of individuals at the three levels of management. His findings for all levels of managers are illustrated in Table IV.

In his study, Akyeampong (1986) developed and validated a 23-item management development needs assessment instrument. For each item, respondents marked two scales: (1) the importance of the competency; and (2) the extent to which specific development needs are being met. The greater the difference between the two responses, the greater the development need. This difference (between the "importance of the competency," and the "extent to

TABLE IV

ORDER OF MANAGEMENT DEVELOPMENT NEEDS
(ALL THREE MANAGEMENT LEVELS)

Ranking	Development Area
1.	Evaluating and appraising employees
2.	Motivating others
3.	Understanding human behavior
4.	Oral communication
5.	Setting objectives and priorities
6.	Managing time
7.	Organizing and planning
8.	Leadership
9.	Team Building
10.	Written communication
11.	Developing and training subordinates
12.	Decision making
13.	Selecting employees
14.	Role of the manager
14.	Counseling and coaching
14.	Delegation
17.	Labor/management relations
18.	Holding effective meetings
19.	Discipline
20.	Self analysis
20.	Styles of management
22.	Presentation skills
23.	Coping with stress
24.	Managing conflict
25.	Problem solving
26.	Budgeting
27.	Management control
28.	Public relations
29.	Financial management
30.	Salary administration
31.	Management theory
32.	Information systems
33.	Developing strategies and policies
34.	Analytic ability
34.	Marketing
34.	Finance
37.	Accounting
38.	Economics

which specific development needs are being met," is the factor by which these competencies are rank ordered. The factor in Table V is the mean difference between these two responses in Akyeampong's research (pp. 52-60).

The Akyeampong (1986) study yielded the following results: the instrument was valid; the instrument made possible the comparison of the organization's perceptions of development needs to those of the respondents; that there was general consensus among respondents on the importance of the individual competencies; and that, when grouped by organization, individuals placed significantly different emphasis on the competencies.

Bryant (1988) reported the results of a two-part study; the first part was needs assessment, the second was training based upon the results of the assessment. She administered a written questionnaire to a group of 126 school food service directors and managers. Twelve possible training areas were included. They were: Leadership, Training, Human relations, Motivation, Communication, Discipline and control, Performance management, Counseling, Problem solving and decision making, Planning and organizing, Work assignments, and Time management. The four areas most often reported were: Leadership, Human relations, Counseling, and Work assignments.

Training was the second phase of Bryant's (1988) study. Thirty-four subjects participated in the training and subsequent evaluation of the training. Data from the evaluation showed that the mean post-test achievement score of the treatment group was

TABLE V

ORDER OF MANAGEMENT DEVELOPMENT NEED

Mean Ranking	Title of Competency	Factor
1	Listening skills	1.29
2	Employee evaluation skills	1.12
3	Leadership skills	1.08
4	Human relations skills	1.04
5	Conflict management skills	1.02
5	Productivity monitoring	1.02
7	Stress management skills	.97
8	Time management skills	.92
8	Cost-effective planning skills	.92
10	Written communication skills	.89
11	Counseling skills	.78
12	Program planning skills	.77
13	Public speaking skills	.72
13	Knowledge of productivity issues	.72
15	Industry understanding	.47
16	Knowledge of adult learning theory	.33
17	Computer literacy	.32
17	Cross cultural communication skills	.32
19	Occupational health & safety	.15
20	Sex equity practices	.10
21	Basic math skills	.02
22	Age equity practices	.00
23	Sensitivity to the handicapped	-.21

significantly higher than that of the control group. Therefore, those who participated in the pre-training assessment gained more from the training than did those who did not participate in the assessment.

Chaney (1980) conducted a study to determine if a sample of managers in a health services setting would identify the same development needs as a panel of experts in that field. This researcher also sought to determine what similarities and differences existed between these two groups. Using the Delphi technique, each of the 117 managers and the 15 experts listed their opinions. After three rounds, the two groups mentioned 82% of the same items. The development needs which were most often identified were: (1) Communication; (2) Understanding the organization's rules and regulations; (3) Developing motivational skills; (4) Leadership process; and (5) Financial management.

Chaney (1980) also concluded that, when compared with a group of experts, individual managers identify their own training and development needs with a greater degree of specificity, and they name a greater variety of those needs.

Boyatzia and (1982) studied 2000 working managers in order to determine which skills and abilities competent managers possessed. Their work generated a list of twenty-one competencies. Those competencies are: Accurate self-assessment, Conceptualization, Concern with close relationships, Concern with impact, Developing others, Diagnostic use of concepts, Efficiency orientation, Logical thought, Managing group process, Memory, Perceptual objectivity,

Positive regard, Proactivity, Self-confidence, Self-control, Specialized knowledge, Spontaneity, Stamina and adaptability, Use of oral presentations, Use of socialized power, and Use of unilateral power.

Horak (1988) studied the management development needs of 90 hospital department and service chiefs (e.g., Chief of Pediatrics, Chief of Obstetrics, Chief of Radiology, etc.) in the U. S. Army. In this study, the most critical development needs were (in order of importance): Accepting the managerial role; Confronting problems and colleagues; Using power and influence; Managing time; Problem solving; Delegating; Team building and negotiating; Understanding the health care system; Planning; Motivating staff; Procuring supplies and equipment; Obtaining personnel; Controlling costs; and Improving productivity. The methodology used by this researcher included the use of a survey followed by face-to-face interviews.

In this same study, Horak (1988) determined that the following conditions were most often cited as supporting individual development: management training, supervisory and peer group mentoring, preparatory assignments, an adequate number of knowledgeable support staff, and a career development policy.

Akyeampong (1986) and Horak (1988) used a survey instrument (questionnaire) in an assessment of management development needs. He surveyed administrators in the Marblehead, Massachusetts, Public Schools, and found that the development needs of the subject administrators were (in order of importance): Skills for developing programs; Staff evaluation; Communicating effectively; Decision

making; Working with groups; Formulating position descriptions, Developing communication channels; and Managing conflict and crisis.

Management and executive development programs cover a variety of topics. Also, these educational events take a number of forms. Harcharik (1989) surveyed senior human resource managers in corporations with more than 1,000 employees in the greater Los Angeles area. She explored development efforts which fell into two categories: internal and external. She found that external programs generally took the form of tuition aid for university programs. Internal programs, on the other hand, tended to be more specific: individualized curricula for specific executives. The topics most often reported for these internal programs were: Leadership, Interpersonal skills, Management process, Decision making, and Strategic planning. This author determined that executives spent an average of approximately 40 hours per year in some type of development activity.

Harcharik (1989) reported that, although executive development programs were expected to aid individual and, therefore, corporate growth, the results of most of these programs was unclear. There was a general feeling that they were of benefit, but this benefit was not measured in most cases. The investment in executive development was sustained in many cases because there was a general feeling that it was something that was important to do.

Several policy recommendations also emerged from Harcharik's (1989) research. She recommended that executive development follow

a systems approach. This design should include units such as Succession planning, Strategic planning, and Career development. She felt that it was critical that participants see how their individual development fit into and supported the larger vision of organizational direction. She added that guidelines should be developed to ensure that program review is increasingly rigorous and consistent.

Written Questionnaires

Spruell (1986, p. 3) outlined some of the advantages to using written questionnaires. Since the questions are presented uniformly (in written form) to the respondent, the responses should be unaffected by any bias the interviewer may unwittingly introduce to the process. In addition, the responses obtained by the questionnaire are much more easily tabulated and analyzed than those obtained by some other methods, notably the interview or focus group. The written questionnaire is the least time consuming to the researcher; this often permits sampling a larger sample. It is also the simplest of the techniques from the respondent's point of view; the accuracy of the responses should therefore be greater. In addition, the atmosphere in which the respondent completes a written questionnaire usually contains less tension than many of the other survey methods.

Spruell (1986) described some disadvantages to using the written questionnaire. The questionnaire is one-way communication. Without the researcher present to interpret complex questions or

statements, the corresponding response may be less than accurate. Whereas a focus group or face-to-face interview is viewed by many respondents as a personal experience, written questionnaires are viewed as impersonal and often irritating. The results obtained by questionnaires when used as a stand-alone technique may be skewed since, many times, only those respondents with a particular interest in the topic of the questionnaire respond and return the completed survey. The main shortcoming of the written questionnaire remains that it is one-way communication; no avenue for clarification or further inquiry by either the respondent or the researcher exists.

Developing Written Questionnaires

Rossett (1987, p. 203) stated that "The foremost challenge of surveying through print is getting it just right for public consumption." In order to accomplish this, she listed the following stages for developing a questionnaire:

1. Figuring out what you need and from whom
2. Writing effective items
3. Writing good directions
4. Writing good cover letters
5. Applying a writer's checklist
6. Piloting the instruments (p. 203).

Several authors have provided guidelines for developing effective instruments. Venable (1988) suggested that a Likert-type scale using an even nu mber of choices, preferably either 4 or 6, reduces the incidence of central tendency in responses.

Venable (1988) also emphasized that both instruments and scoring systems should be as simple as possible. Callahan (1985,

p. 4) concurred that, "Complex systems may cause confusion and frustration."

Callahan (1985, p. 3) also suggested the use of "Semantic differential" as a simpler alternative to the Likert scale. The Likert scale usually includes an explanation of each numerical response; Semantic differential uses definitions at each end of a numerical continuum.

Spruell (1986) suggested that space for respondent comments should be included on questionnaires.

Isaac and Michael (1981) described that "Instrumentation is the process of selecting or developing measuring devices and methods appropriate to a given evaluation problem," (p. 101). Needs assessment is a form of instrumentation. These authors also stated that, "While a variety of approaches to the problem of measurement have been developed, two principal questions confront them all:

1. Is it reliable? Is it an accurate, consistent, and stable measuring instrument?

2. Is it valid? Is it really measuring what it claims to measure? and, Is it relevant?"

Reliability of the Instrument

The reliability of an instrument is the degree to which the data generated by the instrument is consistent and stable over a period of time, Borg and Gall (1983). Huck, Cormier, and Bounds (1974), and Isaac and Michael (1981) stated that reliability was the accuracy of measurement; that accuracy included both consistency and

stability. "Any direct measurement of such consistency obviously calls for a comparison between at least two measurements. The two measurements may be obtained by retesting an individual with the identical test," Isaac and Michael (1981, p. 125).

These authors continued that one error that researchers often make is administering the retest either too soon or too long after the initial test. If the intervening period is too short, recall will skew the result; if too long, outside factors (training, experience, etc.) may intervene and affect responses.

There are three types of correlations: positive correlations, negative correlations, and zero correlations, Isaac and Michael (1981). Huck, Cormier, and Bounds (1974) stated that, "The closer the coefficient is to either +1.00 or -1.00, the higher or stronger the correlation is; the closer the coefficient is to zero, the lower or weaker the correlation" (p. 31).

These authors provided some examples of correlation coefficients:

Score	Correlation
+.95, +.85, +.93, +87	high positive
+.23, +.17, +.18, +.20	low positive
+.02, +.01, .00, -.03	no relationship
-.21, -.22, -.17, -.19	low negative
-.92, -.89, -.90, -.93	high negative, (p. 31).

Linton and Gallo (1975) provided additional information concerning the calculation of correlation coefficients: (1) correlation coefficients require paired measurements; and (2) correlation coefficients may be used when there are two sets of scores (each subject has two scores for each variable).

Huck, Cormier, and Bounds (1974) described two statistical techniques which may be employed to determine the correlation between two tests using the same instrument.

> The two most common correlation techniques are the Pearson product-moment correlation coefficient and Spearman's rho. The Pearson product-moment correlation (R) is a parametric technique using continuous data, such as height and weight. Spearman's rho is a non-parametric technique using data in the form of ranks (p. 31).

One assumption of parametric statistics is that the populations from which the samples are drawn are normally distributed. Huck, Cormier, and Bounds (1974) also stated that the variance of these populations should be homogeneous.

Non-parametric statistical procedures specify neither homogeneity nor normality.

> Some researchers prefer to use nonparametric statistics when they feel that these two assumptions are violated. Other researchers feel that most parametric statistics are robust against violations of normality and homogeneity and they prefer to use parametric tests in almost any situation Huck, Cormier, and Bounds (1974, p. 197).

There are similarities, as one might expect, between the two statistical treatments which may be used to describe the relationship between two variables: the Pearson product-moment correlation, and Spearman's rho (Rank-Difference Correlation Coefficient). According to Huck, Cormier, and Bounds (1974, p. 199) these similarities are: (1) both are reported as a two-digit decimal; both may report either a positive or negative correlation (+ or -); both express the degree of the relationship (high positive, low positive, zero, low negative, or high negative).

Huck, Cormier, and Bounds (1974, p. 199), explain that, in addition to the obvious difference that the Pearson statistic should be used when the assumptions for parametric statistics are observed, other differences between the two techniques also exist. The two treatments are calculated differently. Also, the Pearson R uses the actual frequency score (continuous data) in the calculation, while Spearman's rho uses the rank order of the mean responses to individual items.

Isaac and Michael (1981), provide an additional thought concerning the selection of a statistical treatment for comparing data sets (correlations). The Spearman Rank-Difference Correlation (rho) is "often used instead of product-moment when number of cases is under 30" (p. 168).

Validity

Isaac and Michael (1981) stated that when referring to instrumentation, "Validity information indicates the degree to which the test is capable of achieving certain aims," (p. 120). These authors offer three aims of such testing:

(1) The test user wishes to determine how an individual performs at present in a universe of situations that the test situation is claimed to represent.

(2) The test user wishes to forecast an individual's future standing or to estimate an individual's present standing on some variable of particular significance that is different from the test.

(3) The test user wishes to infer the degree to which the individual possesses some hypothetical trait or quality (construct) presumed to be reflected in the test performance, (p. 120).

Based upon these three aims of testing, Isaac and Michael (1981) described these three types of validity: content validity, criterion-related validity, and construct validity.

These authors (1981, p. 121) described that content validity seeks to answer the question, "Does the instrument measure what it is supposed to?" In other words, does the needs assessment instrument determine the sample's needs with completeness and accuracy?

Content validity exists when the instrument samples the subject matter about which conclusions are to be drawn. Isaac and Michael (1981) stated that evaluating the content of an instrument or test is the same as recognizing the adequacy of a definition.

A common method of establishing content validity is the use of outside experts to evaluate the survey instrument. Barr (1980) utilized a panel of experts to validate the instrument he used in a study of management development needs for the Bell System. Thomas and Sireno (1980) used a parallel approach in validating their survey instrument.

Akyeampong (1986) also followed this course in establishing the validity of his survey instrument. In addition to the use of a panel of experts, he also field-tested his questionnaire, and then revised it before presenting it to his dissertation committee for their approval.

Criterion-related validity is demonstrated by comparing test scores with some other measure of the characteristic or behavior in question. Isaac and Michael wrote that this comparison may take the form of relating the test score to some other criterion measurement. "A simple procedure for investigating what a test measures is to correlate it with other tests" (p. 121). They also described that the comparison of the written measurement and some other criterion may or may not take place concurrently, depending upon "whether the test is recommended for prediction or for assessment of present status" (p. 121). If the purpose is for assessment of present status, the comparison should be performed concurrently.

Construct validity measures which explanatory concepts or constructs account for performance on the test. "Essentially, studies of construct validity check on the theory underlying the test," Isaac and Michael (1981, p. 121).

Trends in Management Development

Contemporary organizations are undergoing tremendous change in their management and organizational structure. Layers of management are being removed. Peters (1987) predicted that this trend would become more widespread as we approached the year 2000. He also described that the primary function of middle management was to gather and disseminate information, and, in most cases, they did a poor job of it. Each time an additional link was added to the communication chain, information was often distorted and/or diluted. In his view, middle management was not effective as an information

gathering and disseminating device. He compared the effectiveness and profitability of two organizations: Sears (with 13 levels of management between the consumer and the Chief Executive Officer), and Wal Mart (with 4 levels between the consumer and the CEO). While Wal Mart was growing and very profitable, Sears was experiencing great difficulty and had just placed the Sears Tower in Chicago, which housed their corporate headquarters, on the real estate market because of financial problems.

Whether driven by the need to be more competitive and cost effective as an organization, or to increase production and quality, these trends add up to one thing: the managerial span of control (number of employees per manager) is increasing, Block (1991).

Span of control is a measure that originated with the military model; many of our modern organizations are based upon this model. Historically, the military span was four. For example, four infantrymen make up a fire team, the basic organic unit. There are four fire teams per infantry squad, four squads per platoon, four platoons per company, and so forth.

Martin (1991) noted that the current span of control at Atlantic Bell is 27, and is increasing in many organizations. Gwaltney (1991) agreed that the trend was toward greater spans, and stated that one of the organizations he consulted with had recently expanded their span to 24. DeGeorge (1991) described that the current span in the manufacturing facility he manages is approximately 20.

This increasing span forces today's managers to supervise larger numbers of people while continuing to produce a high quality product or service more efficiently. With relatively small spans (six to eight), managers were able to control their subordinates. In many cases, they knew what each of their subordinates was doing at any given minute.

Block (1991) noted that it is impossible to maintain traditional control over subordinates as organizations downsize, shedding layers of management, therefore increasing the span of control. In addition, Block offered that in order to live with today's greater spans, managers must delegate some of this "control" to those subordinates. They must empower these employees, allowing them to begin to manage themselves. The empowerment initiative is appearing in organizations of all sizes and types as described by Orsburn, Moran, Musselwhite, and Zenger (1989).

The challenge of maintaining and improving quality and productivity as the span of control widens is generating new development needs for managers. Block (1991) described that these managers must learn to influence rather than control; they must use input from their employees in their decisions, in fact, they should begin to let those employees make some of those decisions; they must teach their subordinates to move toward an entrepreneurial spirit and away from dependence upon the patriarchal organizations of the past.

When managers begin to make these changes, their subordinates also become faced with a host of new challenges, Orsburn, Moran,

Musselwhite, and Zenger (1989).

Individual contributors must learn management skills if they are to successfully participate in decision making. And, like the managers who are sharing responsibilities and decision making with them, their needs will vary tremendously. Properly conducted needs assessment is the key to providing these employees with the training they need.

Therefore, the further that decision making is pushed downward in organizations, the greater the need will be for the type of training and development activities which were formerly reserved for management. According to Block (1991), with empowerment, everyone will become a manager of sorts. With this greater need for management training, a correspondingly greater need for needs assessment will emerge.

Summary of Review of Literature

Needs assessment is a process within the consulting process. The purpose of needs assessment is to determine the cause of performance problems; once the root cause of the problem has been identified, possible solutions are identified. The temptation for many training professionals is to bypass the beginning steps in the consulting/needs assessment processes and simply deliver training that is either: (1) what the client asks for; or (2) what the trainer thinks will solve the problem.

Written questionnaires are one of the tools available for needs assessment. Questionnaires are useful in situations where: a number

of subjects are to be polled; quantifiable data is desired; and resources for needs assessment are limited. The reliability and validity of instrumentation should be established.

A number of authors have attempted to categorize managerial competencies or skills. Katz (1980) determined that managerial competencies, and therefore development needs, may be grouped into one of the following categories: technical, human, or conceptual. Individual needs, however, vary greatly among managers as they progress upward in organizations.

The empowerment movement in American business and industry is affecting development needs. Managers must learn to manage in a different way in order to be successful in implementing these employee involvement processes. Also, their subordinates' needs are changing; they must learn to perform some tasks formerly carried out by their managers. In order to do this, employees at all levels must develop management skills. Formal training is one method by which employees gain these skills.

As the need for management development increases, the need for properly performed needs assessment increases correspondingly. If the training/development program is not targeted to a specific problem or need, valuable resources will be wasted.

CHAPTER III

METHODOLOGY

Design of the Study

The purpose of the study is to develop and validate a management development needs assessment instrument. The study was completed in three phases: (1) the Akyeampong instrument (Appendix A) was revised; and (2) the validity and reliability of the revised instrument were established; and (3) the effectiveness of the instrument in developing a priority ranking of development needs was evaluated.

Revision

The revision phase, which satisfied the first and second Objectives of the study, was accomplished following these steps: (1) changes recommended by Akyeampong (1986) were made to his instrument; (2) the revised instrument was administered to a population of managers during an actual needs assessment; (3) the instrument was further revised using feedback from the respondents in (2) above; (4) the current literature concerning needs assessment instruments was reviewed, and, based on this review, additional amendments were made to the instrument; (5) the instrument was reviewed by a panel of experts to determine content validity; and

(6) as a result of that review, the instrument underwent a final revision.

Content Validity

In order to establish the content validity of the questionnaire, and satisfy the second Objective of the study, a panel of five experts was identified. A copy of the revised survey instrument (Appendix D) was mailed to each member ten days before the panel convened.

The panel met and evaluated the content, clarity, and format of the instrument. The alterations recommended by the panel were implemented. Panel members included:

1. one (1) practicing manager from a private sector service organization
2. one (1) practicing manager from a private sector manufacturing organization
3. one (1) practicing manager from a public sector service organization
4. one (1) training and development professional
5. one (1) university professor with both needs assessment expertise and consulting experience.

Reliability

A test-retest procedure was used to establish the level of reliability for the survey instrument. The test and retest administrations were approximately eight days apart. This procedure

was in accordance with guidelines recommended by Linton and Gallo (1975) and Isaac and Michael (1981) for determining reliability. None of the subjects received any formal training during the intervening time period.

Authors, including Linton and Gallo (1975), Isaac and Michael (1981), described that there were two statistical treatments which could be employed to determine the relationship between sets of paired data: the Pearson Product-Moment Correlation (R), and the Spearman Rank-Difference Correlation (rho).

Consideration was given initially to using Pearson's (R), but, after further investigation, the decision was made to use Spearman's rho because of these factors: (1) the design was non-parametric (the sample was purposive), and the Pearson R was a parametric statistic; (2) the score data was not part of a continuous scale; (3) the purpose of using the instrument was to rank-order the individual items to serve as a basis for further discussion using either the focus group or individual interview technique to determine specific training topics. The Pearson R compared mean scores of individual survey items, while Spearman's rho compared differences in rank orders of scores between the test and retest administrations of the instrument; (4) Isaac and Michael (1981, p. 168) stated that Spearman's calculation is often used in the place of the Pearson R when the number of cases is less than 30. There are 30 individual items on the questionnaire.

With this information in mind, the Spearman's Rank-Difference Correlation (rho) was used to determine the correlation between the two data sets and thereby establish the reliability of the survey instrument (and satisfy the third Objective of the study). This procedure compared the difference in rank order of the mean responses from two administrations of the instrument to the sample. Linton and Gallo (1975, p. 352) provide the formula for Spearman's rho:

$$p\ (\text{rho}) = 1 - \frac{6(\Sigma D^2)}{(N^3-N)}.$$

After reviewing the literature on acceptable levels of reliability as expressed as a correlation coefficient, it was decided that the revised instrument should yield a factor of .70 or greater using the Spearman statistic.

Spearman's rho calculation may also be used as a measure of significance (at either the .05 or .01 level), Isaac and Michael (1981, p. 172), and Huck, Cormier, and Bounds (1974, p. 201).

It was decided that the correlation between the test and retest administrations of the questionnaire, in order to be acceptably reliable, should be significant at the .05 level.

Effectiveness

In order to demonstrate the effectiveness of the survey instrument to generate a rank ordered list of their collective development needs and to satisfy the study's fourth Objective, four subsamples were selected from the sample to form focus groups.

Mean responses for each survey item were calculated and individual items ranked for each group. The focus groups were assembled and, after presenting the priority rankings to the group, a prepared interview schedule (Appendix G) was used to initiate discussion which ultimately resulted in both the specific training and the order in which the group wished to receive that training. The focus groups evaluated the effectiveness of the questionnaire in generating the priority ranking of development needs as well as its effectiveness in accomplishing one step in the needs assessment process.

The Sample

The purposive sample (n = 98) for this study was made up of managers of manufacturing and service organizations served by Indian Meridian Vocational-Technical School, located in Stillwater, Oklahoma. They ranged from first-line supervisors to top management.

Purposive sampling met the requirements of this research since the purpose was not to generalize the results (management development needs of the sample) to the greater population, but rather to validate the survey instrument.

Summary

The purpose of this study was to develop and validate a management development needs assessment instrument. A survey instrument developed and validated by Akyeampong (1986) was selected and revised based upon: (1) Akyeampong's recommendations; (2) input

from a population of managers who completed the questionnaire; (3) a review of the literature concerning questionnaires; and (4) recommendations of a panel of experts, thereby accomplishing the study's first Objective. The panel also established the content validity of the questionnaire, thereby satisfying Objective 2.

The survey instrument was then administered twice (test-retest) to a purposive sample of managers employed by organizations in the north central Oklahoma area, approximately eight days apart. Spearman's Rank-Difference Correlation (rho) was performed to determine the correlation between these test and retest scores in order to determine the reliability of the instrument, and satisfy Objective 3. In addition, the significance of the correlation (at the .05 level) was also calculated using Spearman's rho.

In order to establish the effectiveness of the questionnaire in generating a priority ranking of actual development needs, four groups of subjects met and, using the priority ranking generated by the questionnaire, created a list of specific training topics and the order in which the group members wished to receive the training. This satisfied the fourth and final Objective of the study.

CHAPTER IV

RESEARCH OUTCOMES AND FINDINGS

Introduction

The purpose of the study was to develop and validate a management development needs assessment instrument. This chapter describes the process and reports the findings from this research.

The chapter contains five sections. The initial section outlines the demographic analysis of the sample. The four succeeding sections each explain the process by which a particular objective of the study was met. More specifically, the second section describes Objective 1: the revision of the Akyeampong (1986) survey instrument (questionnaire). The third section outlines both the process by which the content validity of the questionnaire (Objective 2) was established, and the results of that process. The fourth section presents the results of the test of reliability (Objective 3). The fifth and final section describes the process by which the effectiveness of the survey instrument in generating a priority ranking of development needs was established, thus accomplishing the fourth Objective of the study.

The Akyeampong (1986) instrument was revised, validated, its reliability was calculated, and its effectiveness in producing a valid priority ranking of survey items was established. That priority ranking served as the initial point for focus groups whose

charge it was to take the ranking, discuss it, and produce a list of specific training topics.

Demographic Analysis of the Sample

The purposive sample (n = 98) for the study was selected from managers who were employees of seven organizations located in the Indian Meridian Vocational-Technical School district in north central Oklahoma. Those organizations were training and development clients of the Management Services Group of the Vocational-Technical School. Organizations represented in the sample included: Armstrong World Industries, Inc.; Amoco Pipeline, Inc.; Central Rural Electric Cooperative; Indian Meridian Vocational-Technical Center; MerCruiser, Inc.; Moore Business Forms, Inc.; and National Standard, Inc.

Initially, 107 subjects were polled, but nine failed to participate in the retest administration of the survey. The response rate was 91.6%.

Revision of the Akyeampong (1986) Instrument

From the outset, a number of factors lead to the conclusion that the Akyeampong (1986) instrument should be revised before it was used to determine the development needs of managers. The first was Akyeampong's recommendation that improvements should be made to the questionnaire's scoring system. He also recommended that changes be made to the numerical values of the scales for each item.

More specifically, he recommended that the 5-point scale should be abandoned in favor of a 4-point scale (p. 155). Furthermore, he recommended that the descriptors for the scale be improved, and that a section for comments be added.

These changes represented the initial phase of Objective 1, the revision of the Akyeampong (1986) instrument (Appendix A).

Further evaluation of the instrument occurred during a needs assessment conducted in April and May, 1990 for managers at the MerCruiser, Inc., manufacturing facility in Stillwater, Oklahoma. The purpose of the needs assessment was to assist MerCruiser's Human Resource Manager in determining the development needs of management in order to prepare the company's annual training plan. One-hundred eighteen of the one-hundred twenty-two managers (97%) were surveyed in five separate groups. The combined results from that assessment are presented in Table VI.

Although the purpose of this needs assessment effort was to determine some direction for the annual training plan for these managers, comments made by the MerCruiser managers in the first and second assessment groups made it clear that the questionnaire needed further improvement.

Possible improvements to the methodology were discussed and recorded with each of the five groups of MerCruiser managers immediately following administration of the instrument. A summary of those comments is listed below:

TABLE VI

PRIORITY RANKING OF DEVELOPMENT NEED BASED ON 1990 MERCRUISER MANAGERS ASSESSMENT

Mean Ranking	Title of Competency
1	Industry Understanding
2	Time Management
3	Listening Skills
4	Public Speaking
5	Computer Literacy
6	Cost-Effective Planning Skills
7	Conflict Management Skills
8	Human Relations Skills
9	Leadership Skills
10	Adult Learning Theory
10	Stress Management Skills
12	Employee Evaluation Skills
13	Occupational Health & Safety
14	Age Equity
14	Sex Equity
16	Counseling Skills
17	Written Communication
18	Productivity Monitoring
19	Awareness of Productivity Issues
20	Sensitivity to the Handicapped
21	Program Planning Skills
22	Cross-cultural Communication Skills
23	Basic Math Skills

1. Akyeampong's competency Program Planning Skills should be included in the broader competency of Planning.

2. Akyeampong's competencies Awareness of Productivity Issues and Productivity Monitoring should be consolidated into one competency titled Process Improvement.

3. Akyeampong's competencies Listening Skills, Counseling Skills, and Human Relations Skills should be consolidated into one competency titled Interpersonal Skills.

4. Akyeampong's competency Cross-cultural Communication Skills should be included in the broader competency of Communication Skills.

5. Akyeampong's competencies Sensitivity to the Handicapped, Age Equity, and Sex Equity should be consolidated into one competency titled Personnel Practices.

6. Akyeampong's competency Basic Math Skills should be dropped.

7. Akyeampong's competency Adult Learning Theory should be included in a competency titled Developing Others.

8. Akyeampong's competency Cost-effective Planning should be included in the broader competency of Budgeting and Financial Management.

9. Akyeampong's competency Public Speaking should titled Business Presentations.

10. The following competencies should be added to the instrument: Negotiating, Progressive Discipline, Technical Skills, Recruiting, Team Building, Meeting Leadership, Problem Solving, and Management Styles.

In addition, subjects recommended that Akyeampong's (1986) two-column scoring system should be improved. His methodology required that the response from Column 2 (Extent to which the need was being met) be subtracted from Column 1 (Competency Evaluation). It was possible, and often happened, that the response for Column 2 was

greater than Column 1, resulting in a negative number.

It appeared that directions for completing the scoring were confusing to the subjects. Many of them failed to complete the computation correctly. Consequently, it was necessary to rescore each of the 23 items for each of the 117 participants.

As a result of the comments made by the MerCruiser managers, several additional changes were required to accomplish the first objective of the study--to revise the Akyeampong (1986) instrument. The first involved the scoring system. Both the literature, Spruell (1986) and Venable (1988), and the managers who provided feedback, recommended that any scoring system should be as simple as possible. On that basis, the two Akyeampong (1986, p. 115) scales, "Competency Evaluation," and "Extent to Which Need is Being Met," were replaced by a single semantic differential scale:

DEVELOPMENT NEED IS:

Small 1 2 3 4 Great.

Changes in the wording of individual assessment items were made in accordance with respondent feedback. These revisions resulted in the 26 items that were incorporated as a part of the next revision (Appendix D). Table VII lists the 26 items in comparison with Akyeampong's 23 original items.

Establishing Content Validity

Establishing content validity of the revised survey instrument, the second Objective of the research project, was accomplished

TABLE VII

COMPARISON OF REVISED ASSESSMENT ITEMS AND AKYEAMPONG'S ORIGINAL LIST

Revised survey items	Akyeampong (1986) items
1. Budgeting and Financial management	Cost-effective Planning Skills
2. Computer Literacy	Computer Literacy
3. Business Presentations	Public Speaking
4. Process Improvement	Productivity Monitoring Awareness of Productivity Issues
5. Managing Stress	Stress Management Skills
6. Time Management	Time Management Skills
7. Technical Skills	
8. Negotiating	
9. Progressive Discipline	
10. Meeting Leadership	
11. Performance Appraisal	Employee Evaluation Skills
12. Written Communication	Written Communication
13. Conflict Management	Conflict Management Skills
14. Developing Others	Adult Learning Theory
15. Recruiting	
16. Team Building	
17. Understanding Motivation	
18. Communication Skills	Cross-cultural Communication Skills
19. Interpersonal Skills	Listening Skills Counseling Skills Human Relations Skills
20. Management Styles	
21. Planning	Program Planning Skills
22. Industry Understanding	Industry Understanding
23. Work Health and Safety	Occupational Health and Safety
24. Problem Solving	
25. Leadership	Leadership Skills
26. Personnel Practices	Sensitivity to the Handicapped Age Equity Sex Equity

through study, discussion, and further revision of that instrument by a panel of experts (Appendix B) selected from both private and public sector organizations (manufacturing, food service, education, and a state service agency).

The panel's assignment or task was to evaluate, improve, and reach consensus on: the comprehensiveness of the subject matter; the clarity of the individual titles and descriptions; and to ensure that both the instructions and format of the questionnaire were simple and easily understood.

The instrument (Appendix D) was mailed to each of the five panel members ten days prior to the date they were scheduled to convene. The cover letter (Appendix C) reminded panel members that the instrument was designed to be used in a broad range of organizations with managers at all levels. Panel members were also advised in the cover letter that the instrument was not intended to be used as a stand-alone methodology. As described in the literature, the questionnaire was intended to be followed up with either a focus group or individual interviews.

The panel met, discussed the survey instrument, and suggested several changes. The panel advised that the directions for completing the questionnaire should be improved. Two members of the panel stated that, in their opinion, managers in the organizations in which they worked would not be able to successfully complete the questionnaire using the instructions as presented. Consequently, the panel offered suggestions resulting in simplification of the directions for completing the instrument. The panel members who had

raised the issue of the effectiveness of the instructions were satisfied that the improved instructions would allow subjects in their respective organizations, and in other organizations, to complete the survey instrument successfully.

Changes were recommended by the panel to both the titles of some individual management competencies and to their descriptions. The panel also recommended a change to the order in which the competencies were presented on the questionnaire.

The conceptual base of the original Akyeampong (1986) instrument, including all the competency areas, was preserved. The panel did, however, recommend splitting the competency titled "Process Improvement" into two items: "Improving Productivity," and "Improving Quality," in the interest of focus and clarity. The panel also added three additional items: "Personal Influence," "Business Environment," and "Ethics." As a result, the number of survey items increased from 26 items to 30. The final survey instrument, which reflects the recommendations of the panel of experts, is included as Appendix F.

Table VIII compares the survey items as presented to the panel of experts with the survey items as revised based upon the recommendations of the panel of experts.

TABLE VIII

COMPARISON OF SURVEY ITEMS AS PRESENTED TO PANEL OF EXPERTS WITH ITEMS CHANGED AS RECOMMENDED BY THE PANEL

	Column 1. Items as Presented to Experts:	Column 2. Items Reflecting Changes Panel of Recommended by Panel:
1.	Budgeting and Financial Management	Managing Stress
2.	Computer Literacy	Budgeting and Financial Management
3.	Business Presentations	Computer Literacy
4.	Process Improvement	Business Presentations
5.	Managing Stress	Improving Quality
6.	Time Management	Time Management
7.	Technical Skills	Technical Skills
8.	Negotiating	Contract Negotiations
9.	Progressive Discipline	Employee Discipline
10.	Meeting Leadership	Improving Productivity
11.	Performance Appraisal	Effective Meetings
12.	Written Communication	Performance Appraisal
13.	Conflict Management	Written Communication
14.	Developing Others	Conflict Management
15.	Recruiting	Developing People
16.	Team Building	Employee Selection
17.	Understanding Motivation	Team Building
18.	Communication Skills	Understanding Motivation
19.	Interpersonal Skills	Organizational Communication
20.	Management Styles	Interpersonal Skills
21.	Planning	Individual Styles
22.	Industry Understanding	Organizational Planning
23.	Work Health and Safety	Organizational Understanding
24.	Problem Solving	Work Health and Safety
25.	Leadership	Problem Solving
26.	Personnel Practices	Personal Leadership
27.		Personnel Practices
28.		Personal Influence
29.		Business Environment
30.		Ethics

Determining Reliability

The third Objective of the study was to determine the reliability of the revised survey instrument (Appendix F). A test-retest procedure was used to meet this objective. The instrument was administered to the sample twice, approximately eight days apart. It was determined that none of the members of the sample participated in formal training or development activities during the period between administrations.

Mean responses for each of the thirty items for both the first (test) and the second administrations (retest) were calculated (See Table IX). Using mean scores, a priority ranking of individual survey items for both the test and retest administrations was prepared (See Table X).

Differences in rank for the two administrations were determined and squared (See Table X), as a part of the procedure for calculating Spearman's Rank-Difference Correlation (rho) (Isaac and Michael, 1981, p. 172, and Hamburg, 1987, p. 577).

Isaac and Michael (1981, p. 172) stated that when scores in a data set are tied, "Simply assign the mean rank to all the tied scores based on the span of rank positions equal to the number of tied scores." This was accomplished on the data set which is displayed in Table X.

The formula for calculating rho is (where d = the difference between ranks for the paired observations, and n = the number of paired observations):

$$p\ (\text{rho}) = 1 - \frac{6(\Sigma D^2)}{(N^3-N)}.$$

TABLE IX

MEAN SCORES OF SURVEY ITEMS FOR TEST AND RETEST ADMINISTRATIONS

Item No.	Title of Competency	Test Mean	ReTest Mean
1.	Managing Stress	2.649	2.432
2.	Budgeting & Financial Management	2.500	2.297
3.	Computer Literacy	2.851	2.703
4.	Business Presentations	2.514	2.500
5.	Improving Quality	2.541	2.419
6.	Time Management	2.527	2.473
7.	Technical Skills	2.391	2.108
8.	Contract Negotiations	2.230	2.311
9.	Employee Discipline	2.351	2.649
10.	Improving Productivity	2.487	2.608
11.	Effective Meetings	2.581	2.622
12.	Performance Appraisal	2.541	2.446
13.	Written Communication	2.500	2.811
14.	Conflict Management	2.865	2.932
15.	Developing People	2.905	2.311
16.	Employee Selection	2.570	2.770
17.	Team Building	2.905	2.554
18.	Understanding Motivation	2.770	2.284
19.	Organizational Communication	2.459	2.284
20.	Interpersonal Skills	2.432	2.405
21.	Individual Styles	2.419	2.270
22.	Organizational Planning	2.811	2.730
23.	Organizational Understanding	2.284	2.216
24.	Work Health and Safety	2.162	2.135
25.	Problem Solving	2.622	2.527
26.	Personal Leadership	3.000	2.811
27.	Personnel Practices	2.365	2.311
28.	Personal Influence	2.892	2.622
29.	Business Environment	2.662	2.405
30.	Ethics	2.135	2.176

TABLE X

COMPARISON BASED ON PRIORITY RANKING OF SURVEY ITEMS BETWEEN TEST MEANS AND RETEST MEANS, SHOWING DIFFERENCE (D) AND DIFFERENCE SQUARED (D2)

Item Number	Test Rank	Retest Rank	D	D2
1	12	16	-4	16
2	18.5	24	-5.5	30.25
3	6	6	0	0
4	17	13	4	16
5	14.5	17	-2.5	6.25
6	16	14	2	4
7	24	25.5	-1.5	2.25
8	29	30	-1	1
9	26	21	5	25
10	20	7	13	169
11	13	10	3	9
12	14.5	8.5	6	36
13	18.5	15	3.5	12.25
14	5	2.5	2.5	6.25
15	2.5	1	1.5	2.25
16	11	21	-10	100
17	2.5	4	-1.5	2.25
18	8	11	-3	9
19	21	23	-2	4
20	22	18.5	3.5	12.25
21	23	25.5	-2.5	6.25
22	7	5	2	4
23	27	27	0	0
24	28	29	-1	1
25	10	12	-2	4
26	1	2.5	-1.5	2.25
27	25	21	4	16
28	4	8.5	-4.5	20.25
29	9	18.5	-9.5	90.25
30	30	28	2	4
	E = 465	E = 465	ED = 0	ED2 = 611

The Spearman rank-difference correlation coefficient between the test and retest administrations of the questionnaire was calculated (rho = .864). This was determined to be a high positive correlation using the guidelines set forth by Huck, Cormier, and Bounds (1974, p. 31), and above the value of rho set earlier as an acceptable correlation coefficient (rho = .70).

Rho was also used to determine if the correlation between the test and retest administrations was significant. It was determined that the correlation was significant at the .05 level. In fact, the correlation was significant at the .01 level.

Effectiveness of the Survey Instrument in Generating a Priority Ranking of Development Needs

In order to determine the effectiveness of the questionnaire in generating a priority ranking of individual and group development needs, and to meet the fourth Objective of the study, four groups of subjects (focus groups) were convened after their survey results had been tabulated. The purpose of these groups was both to perform one phase in the group's needs assessment and to determine if the questionnaire did provide the data necessary to initiate the needs assessment process.

Although there was some variation, the procedure for each of the focus groups was: at the beginning of each of the group meetings, the priority ranking of the group's needs as determined from the test administration of the questionnaire was displayed;

the group discussed their individual perceptions and agreement/ disagreement with the priority ranking; the groups then responded to the questions outlined in the interview schedule (Appendix G); the discussion that followed produced the specific training topics shown in Tables XII, XIV, XVI, and XVIII.

The groups agreed that the survey instrument accurately provided the first step in the needs assessment process, the priority ranking of items which was presented to each of the focus groups.

Focus Group 1. A priority ranking of this group's (n = 5) development need scores (test administrations of the questionnaire) is shown in Table XI. The group met and studied the data. Following this activity, they responded to the questions on the interview schedule. The discussion that followed resulted in the specific training topics shown in Table XII.

The high ranking for Developing People and Personal Leadership on the ranking generated by the questionnaire lead to the scheduling of the Basic Principles of the FrontLine Leadership program. Other high ranked items lead to workshops on the Problem Solving Process and Time Management being scheduled. Since these managers lead weekly team meetings, they determined that a workshop on Conducting Information Exchange Meetings was also warranted. This latter workshop correlates with the team building item tied as the fourth highest need.

As a result of the assessment of these managers' development needs, utilizing both the written survey and the focus group, a

total of twenty-one hours of training was scheduled, all of which correlated with the highest ranked needs established through use of the needs assessment instrument.

It should be noted that similarities exist between the list of survey items (Table XI), which was generated from the questionnaire, and the priority ranking of specific training topics (Table XII). The focus group served as a vehicle which refined the priority ranking of items generated by the questionnaire and yielded a rank-ordered list of specific training topics.

In this case, Focus Group 1, the survey instrument was effective in providing the initial step in assessing the development needs of this group of managers.

Focus Group 2. A priority ranking of this group's (n = 11) development need scores (test administration of the questionnaire) is shown in Table XIII Group members met and studied the data. Additionally, the group responded to the questions on the interview schedule, resulting in the three training topics listed in Table XIV.

Because the rank-ordered survey items showed a high interest in both Personal Leadership and Personal Influence, a one-day workshop was scheduled which would address both issues. Two topics were to be included: (1) Situational Leadership, with feedback for participants from their superior, peers and direct reports; and (2) a discussion of both personality and management styles.

TABLE XI

PRIORITY RANKING OF DEVELOPMENT NEED SCORES
(TEST ADMINISTRATION) FOR FOCUS GROUP I
(n = 5)

Priority Rank	Title of Competency
1	Developing People
2	Personal Leadership
2	Improving Productivity
4	Time Management
4	Team Building
4	Understanding Motivation
7	Managing Stress
7	Effective Meetings
9	Budgeting and Financial Management
9	Work Health and Safety
9	Problem Solving
12	Organizational Planning
12	Personal Influence
12	Interpersonal Skills
12	Employee Selection
12	Technical Skills
12	Employee Discipline
12	Improving Quality
12	Computer Literacy
12	Performance Appraisal
21	Conflict Management
21	Organizational Communication
21	Personnel Practices
24	Business Environment
24	Individual Styles
24	Contract Negotiations
27	Business Presentations
27	Ethics
29	Organizational Understanding
29	Written Communication

Table XII

PRIORITY RANKING OF SPECIFIC TRAINING TOPICS
RESULTING FROM FOCUS GROUP I (n = 5)

Priority Rank	Training Topic
1	Front Line Leadership-Basic Principles
2	Problem Solving
3	Conducting Information Exchange Meetings
4	Time Management

TABLE XIII

PRIORITY RANKING OF DEVELOPMENT NEED SCORES
(TEST ADMINISTRATION) FOR FOCUS GROUP 2
(n = 11)

Priority Ranking	Title of Competency
1	Employee Discipline
1	Understanding Motivation
1	Personal Influence
4	Personal Leadership
5	Conflict Management
5	Developing People
7	Organizational Planning
7	Improving Quality
7	Performance Appraisal
7	Computer Literacy
11	Written Communication
11	Individual Styles
11	Problem Solving
14	Team Building
15	Budgeting and Financial Management
15	Business Presentations
15	Technical Skills
18	Time Management
18	Improving Productivity
18	Interpersonal Skills
18	Personnel Practices
22	Business Environment
23	Organizational Communication
24	Managing Stress
24	Employee Selection
26	Contract Negotiations
26	Work Health and Safety
26	Ethics
29	Effective Meetings
29	Organizational Understanding

TABLE XIV

PRIORITY RANKING OF SPECIFIC TRAINING TOPICS
RESULTING FROM FOCUS GROUP 2
(n = 11)

Priority Rank	Training Topic
1	Strategic Planning
2	Awareness of EI/Workteams
3	Personal Leadership

This group discussion also surfaced an interest in self-managed workteams; as a result, a one-day workshop to explore this concept was also scheduled.

Organizational issues were also considered when planning this group's development activities. For example, a strategic planning session has been scheduled previously for this organization's Board of Directors. The General Manager expressed an interest in such a session for his managers prior to the Board meeting so that the managers would better understand the planning process and therefore be better able to provide input to the Board of Directors. He felt that while this specific need was not any more important than any of the others (it ranked seventh on the list generated by the survey [Table XIII]), he felt that, because of the upcoming board of directors meeting, it was more urgent. It was scheduled.

It should also be noted that the focus group took the priority rankings generated by the questionnaire and, through discussion, produced a more specific training topic. A case in point is the evolution of the item "Organizational Planning," (Table XIII) which is mentioned in the previous paragraph. The specific training topic which emerged from the focus group was "Strategic Planning" (Table XIV). Strategic planning, according to Mussett (1991), is a type of organizational planning.

As a result of the assessment of this group of managers' development needs, utilizing both the written survey and the focus group, a total of 24 hours of training was scheduled.

These managers chose to set "Employee Discipline," which was the highest ranking item generated by the questionnaire (Table XIII) aside temporarily. The group reached consensus that, after discussion, other items (Table XIV) were more pressing.

Similarities exist between the product of the group, the priority ranking of specific training topics (Table XIV), and the priority ranking of survey items which was generated by the questionnaire (Table XIII).

The focus group served as a vehicle which refined the priority ranking of items generated by the questionnaire and yielded a rank-ordered list of specific training topics. In this case, Focus Group 2, the survey instrument was effective in providing the initial step in assessing the development needs of this group of managers.

Focus Group 3. A priority ranking of the group's development need scores (test administration of the questionnaire) is shown in Table XV. The group met and studied the data. Following this activity, they responded to the questions on the interview schedule as a group; training topics generated from this discussion are listed in Table XVI.

Since "Performance Appraisal" was ranked highest by this group, they scheduled the five units of the FrontLine Leadership program which are designed around the performance appraisal and progressive discipline systems. Those units are: Basic Principles, Giving

TABLE XV

PRIORITY RANKING OF DEVELOPMENT NEED SCORES
(TEST ADMINISTRATION) FOCUS GROUP 3
(n = 9)

Priority Ranking	Title of Competency
1	Performance Appraisal
2	Improving Productivity
2	Organizational Planning
4	Time Management
4	Effective Meetings
4	Understanding Motivation
4	Organizational Understanding
8	Business Presentations
8	Improving Quality
8	Team Building
8	Problem Solving
12	Managing Stress
12	Contract Negotiations
12	Organizational Communication
12	Personal Leadership
12	Personal Influence
12	Business Environment
18	Budgeting and Financial Management
18	Computer Literacy
18	Written Communication
18	Conflict Management
18	Developing People
23	Interpersonal Skills
23	Ethics
25	Employee Discipline
25	Employee Selection
25	Work Health and Safety
28	Individual Styles
29	Personnel Practices
30	Technical Skills

TABLE XVI

PRIORITY RANKING OF SPECIFIC TRAINING TOPICS
RESULTING FROM FOCUS GROUP 3
(n = 9).

Priority Rank	Training Topic
1	FrontLine Leadership--Basic Principles
2	Giving Constructive Feedback
3	Establishing Performance Expectations
4	Taking Corrective Action
5	Dealing with Emotional Behavior
6	Facilitating the Team Building Process
7	Time Management
8	Effective Meetings

Constructive Feedback, Establishing Performance Expectations, Taking Corrective Action, and Dealing with Emotional Behavior.

The group decided that a program titled "Facilitating the Team Building Process," which is offered by the Management Services Group at Indian Meridian Area Vo-Tech Center, would satisfy three of the items which received high ratings: Improving Productivity, Organizational Planning, and Team Building.

As a result of both the survey ranking and the discussion that followed, the group also scheduled training on these topics: Time Management and Effective Meetings.

As a result of the assessment of this group of managers' development needs, utilizing both the written survey and the focus group, a total of 36 hours of training were scheduled.

It should be noted that similarities exist between the list of survey items (Table XV), which was generated from the questionnaire, and the priority ranking of specific training topics (Table XVI). The focus group served as a vehicle which refined the priority ranking of items generated by the questionnaire and yielded a rank-ordered list of specific training topics.

The results of Focus Group 3, which paralleled the priority ranking generated by the questionnaire, showed that the survey instrument was effective in providing the initial step in assessing the development needs of this group of managers.

Focus Group 4. A priority ranking of the group's development need scores (test administrations of the questionnaire) is shown in Table XVII. The group (n = 7) met and studied the data. Following

this activity, they responded to the questions on the interview schedule as a group; training topics generated from this discussion are listed in Table XVIII.

This group opted to schedule Personal Leadership initially, to help meet the need identified both by the written survey and by the focus group. Personal Influence was the highest ranked item and Personal Leadership was ranked third.

Because their organization is one composed of developing teams, these managers chose to schedule a workshop entitled "Facilitating the Team Building Process." They also elected to attend a workshop on personnel practices and another on the current business environment. Arrangements were also made for the group to attend a workshop to enhance their computer literacy.

As in Focus Group 3, similarities exist between the product of the group, the priority ranking of specific training topics (Table XVIII), and the priority ranking of survey items which was generated by the questionnaire (Table XVII).

The focus group served as a vehicle which refined the priority ranking of items generated by the questionnaire and yielded a rank-ordered list of specific training topics. In this case, Focus Group 4, the survey instrument was effective in providing the initial step in assessing the development needs of this group of managers.

In each of the four focus groups there was a strong relationship between the lists generated by the survey instrument and the final list of specific training topics which were the end products of each of the four groups.

TABLE XVII

PRIORITY RANKING OF DEVELOPMENT NEED SCORES
(TEST ADMINISTRATION) FOR FOCUS GROUP 4
(n = 7)

Priority Ranking	Title of Competency
1	Personal Influence
2	Business Environment
3	Computer Literacy
3	Team Building
3	Personal Leadership
3	Personnel Practices
7	Developing People
7	Organizational Planning
7	Work Health and Safety
10	Managing Stress
10	Time Management
10	Understanding Motivation
13	Budgeting and Financial Management
13	Business Presentations
15	Technical Skills
15	Conflict Management
15	Interpersonal Skills
15	Individual Styles
15	Problem Solving
20	Employee Discipline
20	Employee Selection
20	Organizational Communication
20	Ethics
24	Performance Appraisal
24	Written Communication
26	Improving Quality
26	Organizational Understanding
28	Improving Productivity
28	Effective Meetings
30	Contract Negotiations

TABLE XVIII

PRIORITY RANKING OF SPECIFIC TRAINING TOPICS
RESULTING FROM FOCUS GROUP 4
(n = 7)

Priority Rank	Training Topic
1	Personal Leadership
2	Business Environment
3	Facilitating the Team Building Process
4	Computer Literacy
5	Understanding Personnel Practices

Summary

Each of the four Objectives of the study were met. It is possible to develop, validate and establish the reliability and effectiveness of a survey instrument.

The survey instrument underwent three levels of revision: (1) it was revised based upon Akyeampong's (1986) recommendations; (2) it was revised based upon comments from subjects who participated in the initial administration of the instrument as revised in (1) above, and upon information gained through a review of literature; and (3) it was revised based upon recommendations from a panel of experts.

Content validity was established by this same panel of experts through study and discussion of each survey item.

The reliability of the survey instrument was determined using Spearman's rho statistic ($r = .864$). Also, the correlation between the rank ordered means of the test and retest administrations of the questionnaire was determined to be significant ($p = .05$).

Four separate groups of managers determined that the instrument was effective in generating a priority ranking of development needs, which would serve as the starting point for a focus group discussion of specific training topics. Each of those groups scheduled specific training as a result of discussion that was initiated using the data from administration of the questionnaire.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to develop and validate a management development needs assessment instrument. In accomplishing this purpose, four objectives were met: (1) the Akyeampong (1986) survey instrument was revised; (2) the content validity of the revised instrument was determined; (3) the reliability of the revised instrument was determined; and (4) the effectiveness of the revised instrument in generating a priority ranking of the survey items was determined.

In accomplishing Objective 1, the revision of the Akyeampong (1986) survey instrument, several steps were accomplished. The initial changes to the questionnaire were made in accordance with Akyeampong's (1986) own recommendations.

When those changes had been made, the revised instrument (Appendix A) was administered to a group of managers in the course of a management development needs assessment. While the administration of the revised questionnaire yielded the desired product, a priority ranking of competencies for which training was needed, the managers who completed the assessment indicated that the questionnaire should be improved before further use.

The next amendment to the questionnaire resulted both from comments of the managers who participated in the initial administration (needs assessment), and from information gained through a review of the literature on survey instruments (written questionnaires).

The revised questionnaire (Appendix D) was then evaluated for comprehensiveness of content, clarity of instructions and of individual items, and general format, by a panel of experts (Appendix B). This evaluation by the panel satisfied Objective 2, the determination of the content validity of the instrument.

The panel recommended that the instructions be altered to reduce ambiguity, that a number of changes be made to the existing survey items, and that four additional competencies be added to the list of twenty-six. When these changes had been affected, the panel reached consensus that the content of the final instrument (Appendix F) was valid for the initial step in assessing the management development needs of managers.

Objective 3, the determination of the reliability of the revised instrument, was accomplished through the test-retest method. The sample (n = 98) completed the questionnaire twice, approximately eight days apart. None of the subjects participated in any training or development activity during the interim. Spearman's rho statistic was calculated from priority rankings of both the test and retest administrations of the survey.

Rho was determined to be .864, which exceeded the level established as acceptable (.70). This indicated a high positive

correlation between the priority rankings generated by the test and the retest administrations of the questionnaire. The questionnaire produces a reliable product.

The correlation coefficient (rho = .864) between the test and retest administrations was significant at the .05 level. In fact, the correlation between the two administrations was significant at the .01 level.

The determination of the effectiveness of the survey instrument in generating a priority ranking of the 30 survey items (which would constitute the basis for further discussion of a group's development needs by a focus group), was the fourth Objective of the study.

This was accomplished when four independent focus groups, which had previously completed the survey instrument, met and concurred that the instrument did indeed provide a representative ranking of the group's development needs. Furthermore, each of these groups scheduled a significant amount of training as a result of the discussions which were initiated using the rank-ordered list.

Conclusions

Based on this study, the following conclusions were drawn:

1. Highly detailed, computer-scored needs assessment instruments are not necessary in order to identify development needs, especially when used in conjunction with a focus group or other follow-up process.

2. A simplified assessment instrument is useful in assisting managers in moving from general to specific in determining specific

development needs.

Recommendations

Recommendations, based on the results of this study, are offered under two headings: (1) Practice and (2) Further Research.

Practice

1. The instrument developed and revised in this study should not be used as a stand-alone methodology since the survey items are general in nature. It should be used in conjunction with either a focus group activity or individual interviews to provide needed specificity.

2. While the administration and scoring of the instrument itself are fairly straightforward, skilled facilitation is required for the focus group process, where a priority ranking of survey items must be shaped into specific training topics.

3. During the course of the study, it was noted that considerable differences existed among the priority rankings of development needs generated by the various groups. Because of this, random sampling of large populations is not advised. Those populations should be broken down into groups of 15-20. The needs of those groups could then be assessed using the methodology described in this study.

4. Because the scoring of the instrument is very simple, scoring may be accomplished by the subjects immediately following administration. The focus group may then be convened. The

following steps for this process are recommended: (1) Describe the purpose for the needs assessment; (2) Administer the instrument; (3) When all subjects have completed the instrument, ask for volunteers to score the instruments and rank the items. This may be accomplished while the remainder of the subjects are taking a break (assuming there are approximately 20 or fewer subjects); (4) Reconvene the group; (5) Present the priority ranking of topics; and (6) Use the focus group process to develop specific training topics.

Further Research

1. It is recommended that further research be conducted using the revised and validated survey instrument to compare the development needs among the various components of the management population (i.e., male vs. female, various ages, various management levels, various amounts of experience, various ethnic groups, and various types of organizations).

2. The purpose used in this study should be used to develop and validate a needs assessment instrument for use with non-management personnel. The format of the survey instrument developed in this study could be adapted and serve as a basis for this additional assessment tool.

Implications

The instrument developed and validated in the study has a number of important implications for practice in the field of human resource development. More specifically, this instrument has the

potential of modifying practice in determining training and educational needs of personnel in business and industry.

Both the instrument, which was developed and validated in this study, and the focus group technique used to provide specificity, were designed to maximize the involvement of those who will ultimately participate in the training. When participants enter training knowing the content as well as the reason the training was scheduled, a greater return on the training investment should be realized.

There is a difference between individual development wants and organizational needs. Subjects express their individual development wants when they complete the survey instrument. The focus group serves as a method by which individual wants and organizational needs may be combined, resulting in specific training which will hopefully meet both individual and organizational needs.

Finally, the availability of the instrument developed and validated in this study should improve the practice of human resource development. There were few, if any, simple instruments available when this study was initiated, according to Koestenbaum (1990) and Mussett (1990). Bowman (1987) points out that 62 percent of the training professionals included in her study did not perform a needs assessment for all training projects. The use of the simplified instrument developed and validated in this study offers hope that more needs assessment will be performed. If the incidence of needs assessment improves, it should result in more effective and efficient use of training dollars.

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APPENDIXES

APPENDIX A

REVISED AKYEAMPONG (1986) INSTRUMENT

MANAGEMENT DEVELOPMENT
NEEDS ASSESSMENT PROJECT

Introduction

Adequate information exists relative to the skills and knowledge necessary for successful performance as a manager. However, no mechanism exists that allows an organization, whether in public or private sector, to examine the level of competence of its managers and to identify their need for continuing training and development.

Instructions

Section A: For each item, you are asked to give two responses.

Column 1 - Competency Evaluation

For each item, circle on number which represents your judgement of that item's importance to your position:

1 - Very unimportant
2 - Unimportant
3 - Important
4 - Very important

Column 2 - Extent to Which Need is Being Met

For each item, circle one number which represents the extent that the need is being met in your organization:

1 - Very inadequate
2 - Inadequate
3 - Adequate
4 - Very adequate

EXAMPLE

	Column 1 COMPETENCY EVALUATION (Circle one)	Column 2 EXTENT TO WHICH NEED IS BEING MET (Circle one)
Item: Written Communication	1 2 3 4	1 2 3 4

Column 1: By circling "3," the rater indicates that the ability to use written communication is important to job performance.

Column 2: By circling "2," the rater indicates that the need (written communication) is not being met adequately.

ANSWER ALL ITEMS. ALL INFORMATION WILL BE KEPT CONFIDENTIAL AND ANONYMOUS.

MANAGEMENT DEVELOPMENT NEEDS ASSESSMENT INSTRUMENT

Column 1 - Competency Evaluation

1 - Very unimportant
2 - Unimportant
3 - Important
4 - Very important

Column 2 - Extent need is being met

1 - Very inadequate
2 - Inadequate
3 - Adequate
4 - Very adequate

	Column 1 COMPETENCY EVALUATION (Circle one)	Column 2 EXTENT NEED IS BEING MET (Circle one)
1. Written Communication - preparing written material for clarity and conciseness	1 2 3 4	1 2 3 4
2. Public Speaking - presenting material orally in a fluent and organized manner	1 2 3 4	1 2 3 4
3. Basic Math Skills - computing basic mathematical operations correctly	1 2 3 4	1 2 3 4
4. Computer Literacy - using computers effectively	1 2 3 4	1 2 3 4
5. Human Relations Skills - maintaining effective interpersonal communication with others	1 2 3 4	1 2 3 4
6. Listening Skills - making a conscious effort to understand what others say.	1 2 3 4	1 2 3 4
7. Leadership Skills - using effective techniques to influence activities of others toward achieving organizational goals	1 2 3 4	1 2 3 4
8. Cross-cultural Communication Skills - communicating effectively with a broad range of employees with different cultural backgrounds.	1 2 3 4	1 2 3 4
9. Sensitivity to the Handicapped - changing the work climate/environment to accomModate the handicapped	1 2 3 4	1 2 3 4
10. Age Equity - treating employees of all ages equally	1 2 3 4	1 2 3 4
11. Sex Equity - giving equal treatment to all employees regardless of sex	1 2 3 4	1 2 3 4
12. Conflict Management Skills - applying problem-solving techniques to assist in the resolution of conflict.	1 2 3 4	1 2 3 4
13. Counseling Skills - helping others explore strategies to overcome their problems and to meet their goals.	1 2 3 4	1 2 3 4
14. Adult Learning Theory - understanding the dynamics of how adults acquire knowledge or skills	1 2 3 4	1 2 3 4
15. Awareness of Productivity Issues - knowing the concepts and strategies of productivity in your company.	1 2 3 4	1 2 3 4
16. Industry Understanding - knowing the structure, systems, and goals of your organization	1 2 3 4	1 2 3 4

GO TO THE NEXT PAGE

17.	Productivity Monitoring - coordinating employees efforts to reach your organization's goals.	1	2	3	4	1	2	3	4
18.	Employee Evaluation Skills - evaluating employees' job performance with fairness	1	2	3	4	1	2	3	4
19.	Program Planning Skills - identifying program needs, goals, objectives, and activities to implement goals. . .	1	2	3	4	1	2	3	4
20.	Cost-effective Planning Skills - planning organizational goals in a cost-effective manner	1	2	3	4	1	2	3	4
21.	Stress Management Skills - applying preventive strategies as well as solutions to overcome stress (yours).	1	2	3	4	1	2	3	4
22.	Time Management Skills - planning activities to ensure efficient use of time	1	2	3	4	1	2	3	4
23.	Occupational Health and Safety - taking appropriate measures to maintain a healthy and safe work environment	1	2	3	4	1	2	3	4

Comments: In the space provided below, write any comments you may have concerning your training/development needs.

APPENDIX B

LIST OF MEMBERS--PANEL OF EXPERTS

Mr. Dan Armstrong
Human Resource Manager
Moore Business Forms
3100 North Husband
Stillwater, OK 74075

Dr. Paul Harper, Chairman
Speech Communications Department
Oklahoma State University
109 Morrill Hall
Stillwater, OK 74078

Ms. Sarah Mussett
Coordinator, Planning
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

Mr. Jim Owens
Manager, Stillwater Bay
308 East Rogers Drive
Stillwater, OK 74076

Mr. Leo Presley
Assistant State Director
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

APPENDIX C

INITIAL LETTERS TO MEMBERS

OF PANEL OF EXPERTS

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Supenntendent

September 22, 1991

Mr. Dan Armstrong
Human Resources Manager
Moore Business Formsy
3100 North Husband
Stillwater, OK 74078

Dear Mr. Armstrong:

Thank you for consenting to serve on the panel which will evaluate the needs assessment instrument which is the centerpiece of my research project. The meeting will be held in Room A101 at Indian Meridian Area Vo-Tech School at 1:30 p.m. on October 3.

Enclosed find a copy of the instrument. Our challenge will be to evaluate the content, format, and clarity of the questionnaire. This instrument will not be used as a stand-alone assessment tool, but is designed to be followed up by either a focus group or face-to-face interviews in order to determine specific training topics.

I hope that you enjoy our meeting and that our efforts contribute something to the field of organizational development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

September 22, 1991

Dr. Paul Harper
Speech Communications Department
Oklahoma State University
109 Morrill Hall
Stillwater, OK 74075

Dear Dr. Harper:

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Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

September 22, 1991

Ms. Sarah Mussett
Coordinator of Planning
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

Dear Ms. Mussett:

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I hope that you enjoy our meeting and that our efforts contribute something to the field of organizational development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

September 22, 1991

Mr. Jim Owens
Manager, Stillwater Bay
308 East Rogers Drive
Stillwater, OK 74075

Dear Mr. Owens:

Thank you for consenting to serve on the panel which will evaluate the needs assessment instrument which is the centerpiece of my research project. The meeting will be held in Room A101 at Indian Meridian Area Vo-Tech School at 1:30 p.m. on October 3.

Enclosed find a copy of the instrument. Our challenge will be to evaluate the content, format, and clarity of the questionnaire. This instrument will not be used as a stand-alone assessment tool, but is designed to be followed up by either a focus group or face-to-face interviews in order to determine specific training topics.

I hope that you enjoy our meeting and that our efforts contribute something to the field of organizational development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

September 22, 1991

Mr. Leo Presley
Assistant State Director
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

Dear Mr. Presley:

Thank you for consenting to serve on the panel which will evaluate the needs assessment instrument which is the centerpiece of my research project. The meeting will be held in Room A101 at Indian Meridian Area Vo-Tech School at 1:30 p.m. on October 3.

Enclosed find a copy of the instrument. Our challenge will be to evaluate the content, format, and clarity of the questionnaire. This instrument will not be used as a stand-alone assessment tool, but is designed to be followed up by either a focus group or face-to-face interviews in order to determine specific training topics.

I hope that you enjoy our meeting and that our efforts contribute something to the field of organizational development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

APPENDIX D

SURVEY INSTRUMENT AS PRESENTED TO MEMBERS OF PANEL OF EXPERTS

SECTION 1: Needs Checklist

DIRECTIONS: Use the following scale to rate your training or development need in each of the areas listed below:

TRAINING/DEVELOPMENT NEED SCALE

LITTLE	1	2	3	4	GREAT

For example: If your need for Managing Stress is little, write "2" in the space provided to the right of the "Managing Stress" statement.

TRAINING/DEVELOPMENT NEED AREA	NEED RATING
1. **Budgeting and Financial Management** - understanding, preparing, and using financial reports	_____
2. **Computer Literacy** - using computers effectively	_____
3. **Business Presentations** - preparing and delivering effective oral reports, etc.	_____
4. **Process Improvement** - improving quality and quantity of output	_____
5. **Managing Stress** - applying preventive strategies to overcome the effects of stress	_____
6. **Time Management** - making the best use of time	_____
7. **Technical Skills** - knowledge or skills unique to your position	_____
8. **Negotiating** - getting the most out of negotiations	_____
9. **Progressive Discipline** - understanding the discipline process	_____
10. **Meeting Leadership** - making meetings more productive	_____
11. **Performance Appraisal** - evaluating job performance	_____
12. **Written Communication** - preparing effective letters, reports, and proposals	_____

13. **Conflict Management** - resolving conflict with and between others _____

14. **Developing Others** - coaching and training for improved performance _____

15. **Recruiting** - selecting the best person for the job _____

16. **Team Building** - increasing effectiveness of work groups _____

17. **Understanding Motivation** - applying motivation techniques to increase satisfaction and performance _____

18. **Communication Skills** - understanding and using the communication process _____

19. **Interpersonal Skills** - maintaining business relationships _____

20. **Management Styles** - understanding and working with individual styles _____

21. **Planning** - creating the vision, mission, and goals of your organization or team _____

22. **Industry Understanding** - knowing the structure, systems, and goals of your organization _____

23. **Work Health and Safety** - creating a healthy and safe work environment _____

24. **Problem Solving** - generating creative solutions to everyday problems _____

25. **Leadership** - understanding the dimensions of leadership _____

26. **Personnel Practices** - includes gender equity, sexual harassment, age equity, and sensitivity to the handicapped _____

COMMENTS: In this space make any comments about your training needs.

APPENDIX E

SECOND LETTER TO MEMBERS

OF PANEL OF EXPERTS

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

October 10, 1991

Mr. Dan Armstrong
Moore Business Forms
3100 North Husband
Stillwater, OK 74075

Dear Dan:

Enclosed find a copy of the questionnaire as revised by the panel of experts. If you have any further suggestions for improving it, please call. I plan to begin collecting data with this instrument October 15.

I want to thank you again for serving on the panel. You helped me personally and, hopefully, contributed something to the field of organizational and management development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

October 10, 1991

Mr. Jim Owens
308 East Rogers Drive
Stillwater, OK 74075

Dear Jim:

Enclosed find a copy of the questionnaire as revised by the panel of experts. If you have any further suggestions for improving it, please call. I plan to begin collecting data with this instrument October 15.

I want to thank you again for serving on the panel. You helped me personally and, hopefully, contributed something to the field of organizational and management development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

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Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

October 10, 1991

Dr. Paul Harper
Speech Communications Department
Oklahoma State University
109 Morrill Hall
Stillwater, OK 74075

Dear Dr. Harper:

Enclosed find a copy of the questionnaire as revised by the panel of experts. If you have any further suggestions for improving it, please call. I plan to begin collecting data with this instrument October 15.

I want to thank you again for serving on the panel. You helped me personally and, hopefully, contributed something to the field of organizational and management development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School

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Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

October 10, 1991

Ms. Sarah Mussett
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

Dear Sarah:

Enclosed find a copy of the questionnaire as revised by the panel of experts. If you have any further suggestions for improving it, please call. I plan to begin collecting data with this instrument October 15.

I want to thank you again for serving on the panel. You helped me personally and, hopefully, contributed something to the field of organizational and management development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

Indian Meridian Area Vocational-Technical School
1312 South Sangre Road, Stillwater, OK 74074
Phone (405) 377-3333 Fax (405) 377-9604

Dr. Fred A. Shultz, Superintendent

October 10, 1991

Mr. Leo Presley
Oklahoma Department of Vocational and Technical Education
1500 West Seventh Street
Stillwater, OK 74074

Dear Leo:

Enclosed find a copy of the questionnaire as revised by the panel of experts. If you have any further suggestions for improving it, please call. I plan to begin collecting data with this instrument October 15.

I want to thank you again for serving on the panel. You helped me personally and, hopefully, contributed something to the field of organizational and management development.

Sincerely,

Bob Hughes
Director, Management Services

BH:cp

Enclosure

APPENDIX F

FINAL SURVEY INSTRUMENT

Purpose

The purpose of this questionnaire is to provide some direction in determining what training will be available to you in the future. After the questionnaires have been completed, the group will discuss these training needs in greater depth.

Think about your job. Which skills are most important to you? Which skills really determine your success? Which skills could be improved through training? Keep the answers to these questions in mind as you complete this questionnaire.

Directions

Use the following scale to rate your training needs in each of the areas listed below:

TRAINING/DEVELOPMENT NEED SCALE

Little Need			Great Need
1	2	3	4

For example: If your need for Managing Stress is little, write "1" in the space provided to the right of the "Managing Stress" statement.

TRAINING/DEVELOPMENT NEED AREA	NEED RATING
1. **Managing Stress** - operating successfully in stressful environments	_____
2. **Budgeting and Financial Management** - understanding, preparing, and using financial reports	_____
3. **Computer Literacy** - using computers effectively	_____
4. **Business Presentations** - preparing and delivering effective reports (includes use of audiovisuals)	_____
5. **Improving Quality** - process techniques for improving quality	_____
6. **Time Management** - making the best use of your time	_____

7. **Technical Skills** - knowledge or skills unique to your position _____

8. **Contract Negotiations** - skills for negotiation _____

9. **Employee Discipline** - understanding the disciplinary process _____

10. **Improving Productivity** - process techniques for increasing quantity of output _____

11. **Effective Meetings** - making meetings more productive _____

12. **Performance Appraisal** - evaluating employee performance _____

13. **Written Communication** - preparing effective letters, reports, and proposals _____

14. **Conflict Management** - resolving issues/conflict with and between others _____

15. **Developing People** - coaching, counseling, and training for improved performance _____

16. **Employee Selection** - choosing the best person for the job _____

17. **Team Building** - increasing the effectiveness of work groups _____

18. **Understanding Motivation** - techniques to increase employee satisfaction and performance _____

19. **Organizational Communication** - understanding and using your organization's communication channels _____

20. **Interpersonal Skills** - developing and maintaining effective relationships _____

21. **Individual Styles** - understanding and working with different personality styles _____

22. **Organizational Planning** - creating the future of your team; vision, mission, values, and goals _____

23. **Organizational Understanding** - knowing the structure, systems, and climate of your organization _____

24. **Work Health and Safety** - creating a healthy and safe work environment _____

25. **Problem Solving** - generating creative solutions to everyday problems _____

26. **Personal Leadership** - strategies for becoming a more effective leader _____

27. **Personnel Practices** - includes gender equity, sexual harassment, age equity, and sensitivity to the disabled (legal issues) _____

28. **Personal Influence** - techniques for affecting the behavior of your peers, supervisors, and subordinates _____

29. **Business Environment** - understanding the factors that affect your organization's market _____

30. **Ethics** - exploring ethical practices in your business environment _____

==========

COMMENTS: Use this space to make comments about your training needs.

APPENDIX G

FOCUS GROUP INTERVIEW SCHEDULE

1. What is your most pressing development need?

2. Will training help meet that need?

3. What type of training?

4. If there is more than one pressing development need, which has the highest priority?

5. What specific skills or topics do you wish to learn?

6. How will you know if the training is successful?

VITA

Robert Joseph Hughes Jr.

Candidate for the Degree of

Doctor of Education

Thesis: DEVELOPMENT AND VALIDATION OF AN INSTRUMENT FOR ASSESSING MANAGEMENT DEVELOPMENT NEEDS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Pittsburg, Kansas, August 4, 1947, the son of Robert J. and Margaret F. Hughes.

Education: Graduated from Lee's Summit High School, Lee's Summit, Missouri in May, 1965; received Bachelor of Science in Agriculture from the University of Missouri in December, 1973; received Master of Science Degree in Agriculture from Northwest Missouri State University in December, 1979; completed requirements for the Doctor of Education degree at Oklahoma State University in May, 1992.

Professional Experience: Vocational Agriculture Instructor, Savannah, Missouri High School, 1973-1976; Vocational Agriculture Instructor, Nodaway-Holt, Missouri High School, 1976-1979; Instructor, Agricultural Education, Texas A & M University, 1979-1980; Vocational Agriculture Instructor, Hooker, Oklahoma High School, 1980-1982; Vocational Agriculture Instructor, Shattuck, Oklahoma High School, 1982-1988; Graduate Assistant, Occupational and Adult Education, Oklahoma State University, 1988-1989; Independent Consultant, 1988-1989; Director, Management Services, Indian Meridian Vocational-Technical Center, Stillwater, Oklahoma, 1989-present.