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FROM GENERIC TO ORGANIC COMPETENCIES

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EXECUTIVE SUMMARY

A study was performed to determine whether an "organic" set of competencies might be beneficially derived for a specific managerial population based upon the use of a prior "generic" competency instrument. The organic set differed substantially but was found to be useful as an indicator of performance of the day-to-day operating duties of the managers. The data from the organic instrument were found to be particularly valuable as a thermometer of developmental needs. The study suggests that generic competency instruments might not be consistently interpreted by local users nor commensurate with workplace dimensions. Thus, deployment of off-the-shelf instruments may prove unreliable and invalid without situational customization.

FROM GENERIC TO ORGANIC COMPETENCIES

Frederick Taylor, the father of scientific management, is making a comeback in the latter part of the 20th Century (Taylor, 1911). His ideas, developed in the 1920's, though largely discredited by the Human Relations School of the 1930s, have re-appeared under a new rubrique called the Management Competencies movement. According to Taylor, we could study management as a science just like other familiar disciplines within the physical sciences. Essentially the scientist breaks down the subject into its component parts and analyzes each part. Then, the analysis proceeds to examine how the parts might be inter-connected and integrated. The job of management then becomes one of pulling together the various motions in a job, or on a grander scale, the various elements of an enterprise, in order to make both jobs and enterprises run at their maximum efficiency.

In the case of competencies, the intent of the movement is to identify and develop competencies or behavioral characteristics of managers which are specific, observable, and verifiable (Jacobs, 1989; Schroder, 1989). Once in practice, competencies are thought to lead to superior managerial performance if performed well (Albanese, 1989). Although some competency apologists, such as Boyatzis (1986), understand that these competencies need to be adjusted for contextual factors, such as environmental and internal organizational conditions, most competency writers believe that there are certain tasks required of all managers in any organization. Competencies labelled "generic" are thought to be applicable to an entire class of managers across organizations and positions (Powers, 1983). Schroder (1989), for example, advocates that all *(sic)* managers possess a common set of basic competencies where basic competencies represent the skills needed to understand and perform the tasks of managing in any organization.

This study takes the view that it is not only impossible but inadvisable to attempt to build a generic competency list to be applied to managers in any kind of managerial position. Rather, we should be devoting our time to building "organic" competencies that apply to particular managerial

jobs and are specific to the context and language of the organization. Only organic competencies can have the specificity and fluidity to represent meaningful categories of managerial work which can be used for assessment and developmental purposes. Accordingly, the paper returns to a brief review of the generic competency approach and attempts to reveal the logical flaw in relating competencies to performance. The movement to organic competencies is then described, followed by an account of a study which demonstrates how a generic instrument was used to construct an organic set of competencies for supervisory managers in a medium-sized high technology company. Some results from the use of the competency instrument developed as a basis for 360^0 feedback are shared to demonstrate the viability of the organic approach. The paper concludes by citing some applications of the organic competency model including follow-up actions undertaken within the company.

The Flaw in Generic Competencies

The generic competency movement seems to be operating, unfortunately, under an inherent logical flaw. To develop this view, we start with an assumption that management is not essentialist, that is, it is not a science that can be broken down into a set of definable skills applicable to all managers in all organizations. Essentialist science is science of the premodern era. Postmodern science emphasizes chaos and complexity and is more appropriate to not only much of the behavior of today's complex organizations but to today's environment which can be characterized as unpredictable, uncertain, and even uncontrollable (Freedman, 1991).

Today's managers need to respond with an unabiding commitment to learn. Rather than emphasize predictability, they need to look for patterns that lurk beneath seemingly random behavior. Hence, causal links, such as the one proposed between competencies and performance, are unlikely to be tenable and, in this case, subject to the methodological flaw of multiple causality. Specifically, although some competencies might contribute to effective managerial performance, surely there are other attributes, tangible and intangible, controllable and uncontrollable, which

also cause effectiveness. Gilbert (1978) warns that we would be remiss to focus excessively on competencies before we measure exactly what we hope to accomplish. Just because we can identify and measure some competencies, it does not follow that these competencies alone cause effective performance wherever they may be found. Looking at the parts sometimes misses a view of the whole and managers need to know the whole so that they can nurture or introduce self-correcting elements into their operations.

There are also signficant problems with the actual definition of competency. On one hand, it can refer to job-related, functional attributes, e.g., planning a new site for a building. On the other, it can be person-related, referring to the dimensions of behavior that lie behind actual performance, such as solution finding, that is, thinking through a problem and translating its resolution into practical terms (Woodruffe, 1991). Beyond the confusion that muddle tends to produce, the lack of precision in the word "competence" can compound the cause-effect error cited above. If competence is referred to as a functional state characterizing competent behavior, then it can become synonymous with performance. However, ascribing competence to someone who is performing well does not suggest that the particular functional attribute in question predicts performance in others (Collin, 1989).

The real issue at the heart of the generic competencies debate is whether competency attainment is necessary to be a good manager. Competencies that might lead to effective behavior for one job in one company may not translate into effectiveness for that job in a different organization or even for a similar job in the same organization. Indeed, competency assessment tends to fall into the familiar trap of selecting only those competencies which are observable and hence easily measured, this in spite of the advances made in cognitive task analysis (CTA) (Ryder and Redding, 1993). CTA attempts to analyze the knowledge and performance requirements for jobs that involve complex cognitive skills, such as skill automaticity (Shiffrin and Schneider, 1977; Myers and Fisk, 1987). Nevertheless, the practicality of CTA has to be called into question given its highly specialized information procedures (Redding, 1989).

The standard which has become most practical in choosing among competencies is selecting those which are most "teachable" (Bigelow, 1983). What about those characteristics of people which are less observable, i.e., inventiveness, sensitivity, intuition? How do we operationalize what Harold Leavitt (1989) refers to as "pathfinding" behaviors, including such domains as vision - thinking about long-term direction and purpose, values - possessing a sense of duty and responsibility beyond immediate concerns about one's personal career, and determination - displaying energetic and unrelenting purposiveness. Finally, as Burgoyne (1989) advises, can we discern collective or team competency from the individual competency of managers?

Peter Vaill (1983) contends that generic competency lists focus too much on the concrete, on action per se. Although cognitive task analysis has extended task classification into complex cognitive skills, it hasn't sufficiently tapped such intangibles as artistry, subtlety, and specialness which might contribute a great deal to managerial performance. We know from studies of performance appraisal (see, for example, Wohlers and London, 1989) that rater judgment is far more unstable when raters have to evaluate so-called "difficult" items, namely items which are less observable. Furthermore, management as a practice is not always rational (Anthony, 1986). Occasionally we want the manager to not so much create order but disorder. Yet, few competencies seem to address this proclivity of disarming standard practices. Generic competencies also suffer the risk of concentrating more on past or present performance than future performance; hence, one wonders whether a competent manager today can continue to be competent tomorrow if he or she continues to behave in the same way. In other words, competency taxonomists would be remiss if they excluded a "learning to learn" competency in their lists.

There is also a strategic dimension to competency taxonomy that is often overlooked. It is one thing to link competencies to outcomes but the outcomes ought also to connect to the strategy of the organization. Once the strategy of the organization has been formulated, it is critical to align the strategy with the competencies of its present and future executive staff (Gupta and Govindarajan, 1984; Van Clieaf, 1992). For example, a mandate to increase corporate diversification might be

better executed by CEOs who have predominant financial and legal competencies as compared to manufacturing or marketing competencies (Gupta, 1992).

Finally, it has become increasingly clear that in managerial work, skills vary both by level and by function (Kraut et al., 1989). The competencies which apply at the executive level may not apply at the SBU general manager level or at the middle and entry levels of management and may not be commensurate from marketing, for example, to project management. Jaques (1989) has identified seven distinct levels of task complexity from shop or office floor work to CEO. At the top, it is even questionable whether there is a single executive skill set (Smith, 1992). Differences have also been found in competencies between private and public sectors (Boyatzis, 1982).

Toward Organic Competencies

Given the foregoing, we begin to see that different activities and settings require different competencies. Even one of the founders of the competency movement, Richard Boyatzis (1982), has stated that generic competencies can probably only account for a third of the variance in managerial performance, the other ingredients being organization-specific competencies and day-to-day situational factors. Therefore, assessment of competencies is being recognized as an extremely delicate and complicated exercise.

Assuming one can identify relevant competencies for a given managerial job, the applications within management education can be legion. Competency models have been used in all phases of human resource strategy including recruitment, selection, performance management, team development, process improvement, and compensation, as well as development and training. Lawler (1994) contends that competencies rather than jobs should guide the very structure and reward systems of organizations of the future. Indeed, competencies are thought by some managers to represent the language of their strategic human resource policy allowing the organization to match its available human resources against its strategic needs (Woodruffe, 1991). They thus constitute the very dimensions against which people might be appraised and developed. It is the latter

element, the development function, however, which has drawn the most attention from competency proponents and scholars. Research is beginning to emerge suggesting that learning job-specific management competencies appears to relate to both task accomplishment and personal/professional development.

The question is how to identify the competencies which constitute the proper developmental dimensions. Many companies have decided that they need to tailor their competencies if they are to become useful for training and development. A major health authority in the UK., for example, in developing its "management rating scale," excluded items from a generic scale which were "seen as irrelevant by the senior managers sponsoring the programs" (Newman and Milne, 1992). Fourteen of 40 competencies used by food retailer Safeway were specific to retail operations (Crabb, 1991). At New England Telephone, executive competencies were molded by an extensive data gathering process (Smith, 1992).

The development function in particular benefits from tailoring competencies to one's own environment. Development here does not refer merely to positioning oneself for a rapid ascent up the managerial hierarchy. It refers to learning those skills which will inspire both individual and team performance. Competencies used for development, however, need to take context into consideration. They should be "organic," arising from the specific context of the individual, job, and organization rather than from an artificial list. Organic competencies offer a language for purposes of feedback discussions. By preserving the local idiom, managers can recognize identifiable categories of performance. Particularly valuable would be the opportunity to receive feedback in this way from a wide variety of sources, not only as a means of validating the data but to reduce defensiveness. The study to be reported here used so-called 360^{O} feedback which gathers data from subordinates, peers, and superiors.

The Study

A project team was assembled to construct a developmental competency model dedicated for the managers at the supervisory level of a division in a New England medium-sized high technology company. The team consisted of six members, five of whom were internal consultants associated with an in-house management development unit, and one outside consultant. The process began with individual surveys of a sample of the supervisory managers using behavioral event interviewing (BEI) (Flanagan, 1954; McClelland, 1976). The interviews were conducted by the project leader in conjunction with a principal from the Center for Creative Leadership, an international, nonprofit education institution founded to develop creative leadership and effective management. The interview questions were designed to elicit the competencies which make for effective management at the supervisory level within this division.

The raw data from the BEI were compiled according to categories and competencies used in a generic competency instrument known as "Benchmarks," a CCL product considered to be a reliable 360-degree, multi-rater feedback instrument. In total, 130 competencies were disaggregated from the data and clustered into 13 categories used in Benchmarks.

Two experts in research methods were then brought together to customize the competency list in terms of size and language. They first developed a manageable list appropriate for the administration of a profile questionnaire to all supervisors and their colleagues within the division. It was also deemed critical to phrase the questions in the idiom of the respondent group to enhance the reliability of the instrument.

Accordingly, the experts were able to reduce the instrument to 88 items. It was then pretested on two former supervisors from the division who had moved on to other jobs. After completing the instrument, they were asked to review each item for content and for wording. Their recommendations resulted in further changes in phraseology as well as the deletion of 6 items. They also recommended that two new items be added, bringing the total number of questions to 84.

The project team was now ready to "run" the revised instrument, entitled, "The Profile Development Questionnaire."

Questionnaire Administration

Since the focus of this project was on development, the instrument was distributed not only to each supervisor in the division but also to their subordinates, peers, and managers (i.e., their immediate boss). The colleagues' responses would serve as a basis of meaningful feedback to the supervisor regarding his/her strengths and developmental needs on critical division-wide managerial competencies. The supervisor, or focal respondent, was given the discretion to distribute the colleagues' questionnaires. The project team asked that minimally five subordinates, three peers, and two managers be selected. In some instances, supervisors gave questionnaires to their entire department. Once the questionnaires were distributed, a number of careful procedures were put into effect to insure not only the smooth administration of the survey but the preservation of confidentiality of all respondents. For example, the questionnaires were sealed in coded envelopes which were mailed to an outside consultant who never learned of the respondents' identity. Although responses were coded, follow-up calls were made to focal respondents urging them in turn to contact their colleagues and encourage them to complete the questionnaire. Fortunately, 95% of the respondents successfully returned and filled out the questionnaire. The final tally was: 31 supervisors (representing all available supervisors in the division at the time of the survey), 192 subordinates, 126 peers, and 87 managers, for a total of 436 respondents.

As indicated earlier, the questionnaire contained 84 items which described the behaviors expected of supervisors in the division. Each item was rated according to a 6-point rating scale asking merely the extent to which the supervisor performed each of the 84 behaviors. Seven additional questions of a demographic nature (i.e., "how long have you worked in the company?") were also included.

The data were submitted to a factor analysis in an attempt to cluster the 84 questions into meaningful categories. Factor analysis is a statistical technique which serves to reduce data on the basis of underlying linear patterns. Once the categories or factors are statistically formed, it is up to the researcher to label these factors on the basis of the theoretical linkage discerned among the component variables. In this study, fourteen factors emerged, some of which were complex (made up of many of the questions), others simple (made up of only one or two questions). These factors represent the final list of managerial competencies that appeared to have been fundamental to the work of supervisor in the respective division within this company. Table 1 provides a list of these fourteen competencies with their definitions. The definitions were derived from the specific questions underlying each of the factors. It is interesting to note that these factors bore little resemblance to the generic Benchmarks categories which were initially used as a basis for organizing the original inteview data, suggesting how divergent generic competencies might be without customization to particular work cultures.

Approximately two months after the administration of the profile development questionnaire, 23 of the 31 supervisors as well as 14 of their managers were administered a short "importance" questionnaire. This questionnaire asked respondents to indicate on a 6-point scale the importance they would attach to the 14 factors as representing the competencies considered critical to the work of supervisor in the division.

Results

Table 2 and Figure 1 illustrate the results of the data analysis for all respondents broken down by respondent type. Turning first to the table, note that the competency factors are listed on the left-most column. The scores in the columns are based again on a rating scale of 1-6, but since the factors are normally constituted of several questions, the factor scores represent averages. Further, to compute a score for each of the respondent types, we again computed an average or mean

for all respondents of a given type. For example, the score of 4.56 under self for the "managing work" competency indicates that the average score of all of the 31 supervisors on the managing work factor was 4.56. The scores for the next column, "all observers," represents an unweighted average of scores for the three principal colleagues - subordinates, peers, and managers. The actuals represent the scores for all 436 respondents (including the supervisors themselves). Finally, the importance column represents the importance scores tabulated for the 37 respondents who filled out the "importance questionnaire" on the 14 factors.

Since the data represent averages, the scores may not seem to vary greatly, but the chart, represented by Figure 1, is able to pick out some meangingful patterns and deviations. In particular,

(1) the flow from one competency to another shows a fairly uniform pattern - lending credibility to the data as being relatively distinct with respect to the division or perhaps even to the company.

(2) the ethics competency receives the highest overall score with the managers perceiving the supervisors as being even more ethical than the supervisors' perception of themselves.

(3) supervisors regard their financial management ability as far lower than the perception of that ability on the part of their colleagues.

(4) supervisors see themselves as engaging in extra effort far more than do their colleagues, although extra effort receives the second highest overall actual rating.

(5) the lowest rating is recorded for innovation/change, for which there was very wide agreement among respondents.

With regard to differences between the actual and importance scores, the most important differences were found between the factors, client relations and financial management. This outcome can be explained by noting that client relations was perceived as being the most important competency for supervisors in this division whereas financial management was seen as the least important competency.

Finally, although not reported out in the charts, a separate analysis of the entire data revealed that time in the company was the single most important predictor of 9 of the 14 competency factors. In other words, suggesting that these competencies are culture-bound, the more time one has spent in the company (whether as a manager or as an individual contributor), the more one is likely to learn how to function effectively as a first-line supervisor. This finding again sustains the organic nature of the competency list disclosed in Table 1. The language of competencies appears particularistic to one's work culture.

Discussion and Applications

Besides reporting the division-wide data, the project team provided the supervisors with an individual report which tabulated all the data furnished by their colleagues and, of course, by themselves. The division-wide data, moreover, provided a base of comparison to help them interpret their scores. Indeed, the data served as the basis of a day-long developmental workshop during which the supervisors were exposed to a variety of methods to both interpret and use the information. For example, supervisors were asked to compare their scores not only against the division results but by respondent type. The supervisors also worked on development plans which encouraged their meeting with colleagues to expand the feedback process beyond the numbers. The project team emphasized the value of triangulating the data in order to assess its validity; hence, survey results would need to be compared to colleague feedback and performance appraisals. In some instances, performance reviews conflicted with the individual profile scores. The managers were encouraged to bring up these inconsistencies in development discussions with their bosses.

Subsequent workshops and "brown bag" sessions were also conducted to support ongoing development efforts. Sessions have focused on such issues as: how to make time for development, how to challenge the corporate culture which seems at times to only give lip-service to development; and how to handle the sensitive matter just mentioned of resolving performance appraisal and profile data inconsistencies.

The survey results have generated a lot of curiosity from other managers within the company. Some managers, for example, have asked whether the new instrument could be modified for use in different divisions or different levels. Moreover, the study has altered the views of managers within the division and, to some extent, company-wide regarding the deployment of generic competencies. The "organic" list is sufficiently different from any standard instrument that management has now begun to question the value of using off-the-shelf instruments, at least without some local tailoring. To the extent the process described herein could be systematized, a number of managers indicated a preference for developing their own competency list for their own divisions. The project leader responded to this need by consulting with these managers on the development of organic competency models based upon their respective unit's performance data.

The organic competency list developed in this case by the project team initially benefitted from a generic instrument to help construct a competency profile. However, the ultimate profile bore little resemblance to the generic competencies nor were the categories commensurate. This suggests that the deployment of a generic instrument without tailoring could at a minimum be quite unreliable since its language might not be consistently interpreted. At worse, a generic list might prove not to be valid since its content might not match workplace dimensions. Consider an example. A common generic competency that has positive connotations in management is flexibility, but how should that concept be interpreted in government contract work wherein regulations frequently stipulate inflexibility?

Although the organic competencies constructed for this division may not have captured all the competencies required for success as a supervisor (for example, the list still suffers from focusing more on concrete as opposed to abstract and behavioral as opposed to cognitive categories), these

competencies are nevertheless situational and specific. They thus have "face" validity to their users since they arise from perceptions of what constitutes effective performance of day-to-day operating duties. They are also expressed in the company's own idiom and are consequently recognizable. Hence, their application to categories of performance is understandable and, though not always easily digested, capable of inspiring learning.

The data from an organic instrument such as the one reported in this article can serve as a thermometer of developmental needs. For individuals, training or other development experiences might be recommended in cases where differences exist between one's current competency and those of one's peers, especially in instances where the competency is deemed important to department and division-wide performance. For the entire management team, development becomes critical where a gap may exist between competency deemed important versus the current provision of that competency. For example, in this division, a significant gap was discovered between client relations, viewed as the most important competency, and its current provision.

The organic competency approach delineated in this article has applications beyond the human resource training and development functions. For instance, it can be used in selection, succession planning, compensation, total quality management, and strategic planning. Consider two examples: When it comes to executive succession, it has been found that the drivers can no longer be some uniform set of executive competencies but rather very specialized competencies which tie specifically to the respective business unit's performance objectives. Van Clieaf (1992), for example, believes that executive competencies need to evolve from the intended strategy of the business, its stage of organizational development and complexity, its values, and its critical success factors (i.e., an effective distribution system, world class R&D, efficient manufacturing capability, responsive service). It might be pointless, for example, to search for merely a generically excellent manager currently at a direct competitor since the candidate may not have commensurate competencies to match the requirements of the business which might see its marketplace and success factors differently from its competitors.

Concerning the strategic management process, organic rather than generic competencies align with the othewise distinct strategic concept known as "core competencies." As conceived by Prahalad and Hamel (1990), core competencies are not human resource skills per se as much as the essential design and development components of a firm's product/market strategy. Once identified, their exploitation can give a firm a competitive advantage. The set of core competencies associated with any organization should be unique so that it can establish market dominance. Clearly, then, the skills and behaviors associated with the organization's strategic direction ought also to be unique and organic though consistent with its core competencies. The association between organic and core competencies reinforces a collaboration long sought for the hr field, namely, the very partnership between human resources and business needs.

In conclusion, this study has lent support to the view that off-the-shelf generic competencies cannot serve as a proper model to guide the human resource planning process. Most corporate organizations exist in such rapidly changing environments that uniform competencies do not align well with flexible performance demands. As Jacobs (1989) has reported, life in many organizations is akin to "living out of tents." Competencies vary depending on the social situation and the time in which the manager is operating. Managers typically find themselves operating at multiple levels of performance - individual, job, team, organizational, and societal (Rummler and Brache, 1995). Effective application of competencies in one situation may not fit in another. New frames are often required to adjust competency development and application. Hence, organic competencies are consistent with the need for organizational renewal based on unremitting learning.

References

Albanese, R. "Competence-based Management Education," Journal of Management Development, Vol. 8, No. 2, 1989, pp. 66-76.

Anthony, P.D. The Foundations of Management. London: Tavistock, 1986.

Bigelow, J. "Teaching Action Skills: A Report from the Classroom," Exchange: The Organizational Behavior Teaching Journal, Vol. 8, No. 2, 1983, pp. 28-34.

Boyatzis, R. The Competent Manager: A Model for Effective Performance. New York: Wiley, 1982.

Burgoyne, J. "Creating the Managerial Protfolio," Management Education and Development, Vol. 20, Part 1, 1989, pp. 56-61.

Crabb, S. "Certified Competent," Personnel Management, Vol. 23, No. 5, May 1991, pp. 57-58.

Collin, A. "Managers' Competence: Rhetoric, Reality and Research," Personnel Review, Vol. 18, No. 6, 1989, pp. 20-25.

Flanagan, J. P. "The Critical Incident Technique," Psychological Bulletin, Vol. 51, No. 4, 1954, pp. 327-358.

Freedman, D. H. "Is Management Still a Science?" Harvard Business Review, Vol. 70, No. 6, November-December, 1992, pp. 26-38.

Gilbert, T. F. Human Competence: Engineering Worthy Performance. New York: McGraw-Hill, 1978.

Gupta, A. "Executive Selection: A Strategic Perspective," Human Resource Planning, Vol. 15, No. 1, 1992, pp. 47-61.

Gupta, A., and Govindarajan, V. J. "Business Unit Strategy, Managerial Characteristics, and Business Unit Effectiveness at Strategy Implementation," Academy of Management Journal, Vol. 7, No. 1, 1984, pp. 25-41.

Jacobs, R. "Getting the Measure of Management Competence," Personnel Management, Vol. 21, No. 6, June 1989, pp. 32-37.

Jaques, E. Requisite Organization: THE CEO's Guide to Creative Structure and Leadership. Kingston, NY: Cason Hall, 1989.

Kraut, A. I., Pedigo, P. R., McKenna, D.D., and Dunnette, M. D. "The Role of the Manager: What's Really Important in Different Management Jobs," Academy of Management Executive, Vol. 33, No. 4, 1989, pp. 286-293.

Lawler, III, E. E. "From Job-based to Competency-based Organizations." Journal of Organizational Behavior, Vol. 15, 1994, pp. 3-15.

Leavitt, H. J. "Educating our MBAs: On Teaching What We Haven't Taught," California Management Review, Vol. 31, No. 3, 1989, pp. 38-50.

McClelland, D. C. A Guide to Job Competency Assessment. Boston: McBer & Co., 1976.

Myers, G. L., and Fisk, A. D. "Application of Automatic and Controlled Processing Theory to Industrial Training: The Value of Consistent Component Training. Human Factors, Vol. 29, 1987, pp. 255-268.

Newman, S., and Milne, D. "Measuring Management Training: Two New Instruments," Journal of Management Development, Vol. 11, No. 3, 1992, pp. 18-23.

Powers, E. A. "The AMA Management Competency Programs: A Development Process," Exchange: The Organization Behavior Teaching Journal, Vol. 8, No. 2, 1983, pp. 16-20.

Prahalad, C. K., and Hamel, G. "The Core Competence of the Corporation," Harvard Business Review, Vol. 69, No. 3, 1990, pp. 79-91.

Redding, R. E. "Perspectives on Cognitive Task Analysis: The State of the State of the Art." In 33rd Annual Proceedings of the Human Factors Society (pp. 1348-1352). Santa Monica, CA: Human Factors Society, 1989.

Rummler, G. A., and Brache, A. P. Improving Performance: How to Manage the White Space on the Organization Chart. San Francisco: Jossey-Bass, 1995.

Ryder, J. M., and Redding, R. E. "Integrating Cognitive Task Analysis into Instructional Systems Development." Educational Technology Research and Development, Vol. 41, No. 2, 1993, pp. 75-96.

Shiffrin, R. M., and Schneider, W. "Controlled and Automatic Human Information Processing: II. Perceptual Learning, Automatic Attending, and a General Theory. Psychology Review, Vol. 84, 1977, 127-190.

Schroder, H.M. Managerial Competencies: The Key to Excellence. Dubuque, Iowa: Kendall/Hunt, 1989.

Smith, M. E. "The Search for Executive Skills," Training and Development Journal, Vol. 46, No. 9, 1992, pp. 88-95.

Taylor, F. W. Shop Management. New York: Harper & Brothers, 1911.

Vaill, P. "The Theory of Managing in the Managerial Competency Movement," Exchange: The Organizational Behavior Teaching Journal, Vol. 8, No. 2, 1983, pp. 50-56.

Van Clieaf, M. S. "Strategy and Structure Follow People: Improving Organizational Performance through Effective Executive Search," Human Resource Planning, Vol. 15, No. 1, 1992, pp. 33-46.

Wohlers, A. J., and London, M. "Ratings of Managerial Characteristics: Evaluation Difficulty, Co-Worker Agreement, and Self-Awareness," Personnel Psychology, Vol. 42, 1989, pp. 235-261.

Woodruffe, C. "Competent By Any Other Name," Personnel Management, Vol. 23, No. 9, September 1991, pp. 30-33.

Table 1

DEFINITIONS OF COMPETENCY FACTORS

1. **Managing Work** - Organizes and manages work to achieve results using tools such as planning - laying out work in a planful and organized manner - or monitoring - tracking performance so that problems are detected early or prevented entirely.

2. **Managing People** - Demonstrates interest in development and ability in interpersonal communication; for example, exhibits sensitivity to work and nonwork needs, provides positive feedback, is approachable and open to criticism, builds morale, is tolerant of differences.

3. **Technological Leadership** - Uses judgment to provide choices and recommendations for upper management and client based upon broad industry/technical knowledge.

4. **Innovation/Change** - Demonstrates a creative approach to individual, organizational, and technical changes through innovation and learning.

5. **Client Relations** - Tunes in to clients; for example, involves them, listens, anticipates future needs, wants systems/products to meet needs and expectations.

6. **Ethics** - Rewards ethical behavior. Is widely seen as fair and truthful.

7. **Communications** - Effectively presents ideas orally and in writing.

8. **Team Orientation** - Selects people to add new skills to the team. Is sensitive to issues of staff work load and provides visibility for individual contributors.

9. **System Integration** - Delivers technical capability based on a vision of the big picture; for example, can spot integration and modernization opportunities and understands the impact of one part of the system on the whole.

10. **Financial Management** - Applies financial/budgetary concepts to project management.

11. **Extra Effort** - Devotes extra time when necessary to complete a job.

12. **Crisis-Handling** - Acts flexibly and calmly in a crisis.

13. **Practical Orientation** - Demonstrates a real world, practical approach to problems.

14. **Quality Commitment** - Shows commitment to continuous improvement.

Table 2

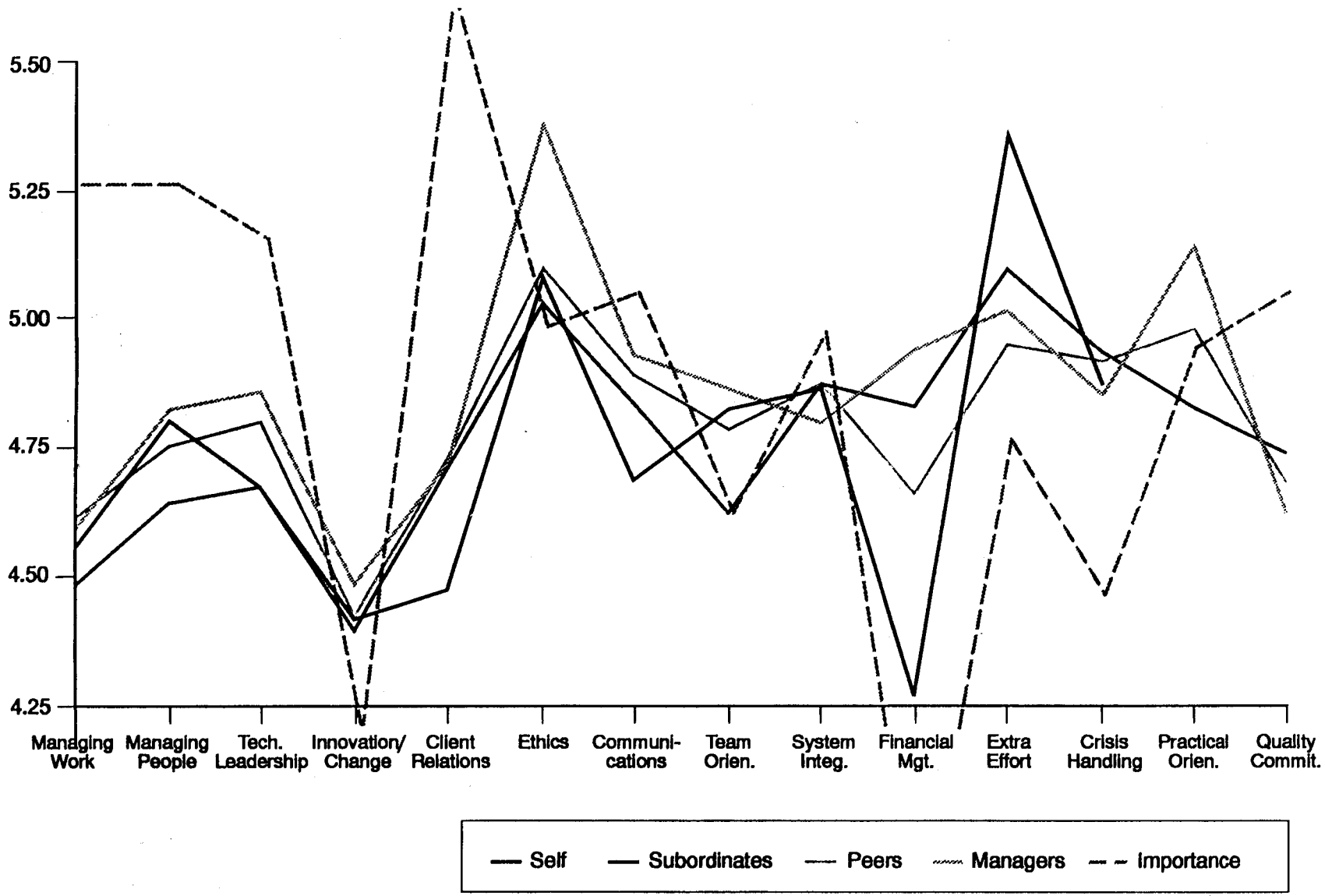
Report of Division-Wide Scores of the Competency Factors

	Group Leaders					Division Totals	
Group Leader Competency Factors	**Self**	**All Observers**	**Subordinates**	**Peers**	**Managers**	**Actuals**	**Importance**
Managing Work	4.56	4.55	4.48	4.62	4.59	4.55	5.29
Managing People	4.80	4.71	4.64	4.75	4.82	4.72	5.29
Tech. Leadership	4.67	4.75	4.68	4.80	4.86	4.75	5.15
Innovation/Change	4.41	4.42	4.39	4.42	4.48	4.42	4.21
Client/Relations	4.47	4.72	4.71	4.73	4.72	4.70	5.62
Ethics	5.07	5.12	5.03	5.10	5.37	5.12	4.97
Communications	4.68	4.87	4.84	4.89	4.93	4.86	5.06
Team Orien.	4.82	4.72	4.62	4.78	4.86	4.73	4.62
System Integ.	4.86	4.85	4.87	4.87	4.79	4.85	4.97
Financial Mgt.	4.26	4.80	4.83	4.66	4.93	4.76	3.82
Extra Effort	5.35	5.03	5.09	4.95	5.01	5.05	4.76
Crisis-Handling	4.87	4.90	4.93	4.92	4.85	4.90	4.50
Practical Orien.	–	4.94	4.83	4.98	5.14	4.96	4.94
Quality Commit.	–	4.69	4.73	4.68	4.62	4.70	5.06

* Rating Scale, 6 (highest) - 1 (lowest)

Figure 1

Chart of Division-Wide Competency Scores



* Rating Scale, 6 (highest) - 1 (lowest)