



**Assessing Managerial Skills
With The
Management Effectiveness Profile
System (MEPS)**

A Validity and Reliability Study

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FORWARD

We at Human Synergetics strongly believe in supporting our assessments with sound academic research. MEPS is no exception. As a result of the research undertaken on MEPS we have made some significant changes since the original was first published.

The first major change was the reclassification of some items. The research showed (as mentioned in the Discussion section of this paper) that “many items are strongly associated with categories beyond their own”. Dr. Cooke suggests that some of this is “due to the content of certain items ...(and that) the instrument could be strengthened by deleting, modifying or reclassifying these items”.

Two sections in the original MEPS (Identifying Problems and Making Decisions) were subsequently joined into the one category now found in the current MEPS (Problem Solving: Recognizing and Solving Problems). A new MEPS skill was added (Participation: Sharing Power and Involving Others). And one skill was dropped (Results Orientation & Asset Control).

Today’s MEPS was further strengthened by adding an additional two items to each of the remaining fourteen skills. This means that there is now 98 items describing the fourteen skills (versus 90 describing 15 skills). These extra questions allowed us to expand on the original definition of each of the remaining skills. The new skills and their corresponding original skills are listed on the following page.

One of the best enhancements of MEPS was the development of norms. In the research, Dr. Cooke noticed that, “the average scores along each category tend to be high. Their feedback might not be as positive as the raw scores indicate. Furthermore, given the differences in the mean scores across categories, the same score along two different skill areas can have different implications.... Thus, normed profiles would nicely complement the raw-score profiles currently used for feedback purposes.” (Discussion section of this paper.)

The modern MEPS provides scores that are normed against those of 5,000 managers. These are presented in the Visual Comparison Profile section of the new report.

MEPS is now computer scored. The original self-scoring instrument required a separate answer sheet. This caused concern among clients about accuracy and confidentiality.

As a result of ongoing research we are able to constantly upgrade our products. We hope that you will find these changes beneficial.

Allan Stewart
President, Human Synergetics Canada

Original MEPS Skill	Existing MEPS Skill
Task Skills	Task Skills
Identifying Problems } Making Decisions }	Problem Solving: Recognizing and Solving Problems
Time Effectiveness*	Time Management: Allocating Time and Using it Effectively
Planning Effectively	Planning: Providing Direction and Scheduling Activities
Setting Goals and Objectives	Goal Setting: Establishing Goals and Objectives
Evaluating Performance**	Performance Leadership: Motivating Performance and Personal Development
Organizing	Organizing: Assigning Responsibilities and Coordinating Tasks
People Skills	Interpersonal Skills
Building Teams	Team Development: Promoting Teamwork and Cooperation
Delegating	Delegation: Decentralizing and Empowering Others
	Participation: Sharing Power and Involving Others
Managing Conflict	Integrating Differences: Accepting and Resolving Conflicts
Developing Subordinates	Providing Feedback: Facilitating and Encouraging Growth
Personal Factors	Personal Skills
Stress Reactions	Stress Processing: Managing Crises and Reducing Stress
Trust Level	Managing Integrity: Gaining the Trust and Confidence of Others
Commitment Level	Commitment: Demonstrating Loyalty and Responsibility

* Time Effectiveness was moved from the Personal Factors section and placed in the Task Skills one.

** Evaluating Performance was moved from People Skills to Task Skills

Assessing Managerial Skills With The Management Effectiveness Profile System

OVERVIEW

The Management Effectiveness Profile System (MEPS) provides managers with feedback on fifteen different task skills (e.g., decision making, planning), people skills (e.g., managing conflict, developing subordinates), and personal factors (e.g., time management, commitment level) hypothesized to be related to their overall job performance. Self-descriptions are profiled against descriptions by others along the 90 items comprising the instrument as well as the fifteen categories. Data on 404 managers who recently received such feedback were used to assess the reliability and validity of the Profile System. The results indicate that the internal consistency reliability of the scales is fairly high, though many of the items correlate with other scales almost as strongly as they do with their own. Inter-rater agreement among other people describing each manager is acceptable and, for many scales, is greater than the agreement between the others' and the managers' own reports. The criterion-related validity of the instrument is supported by a small but significant relationship between the task skills and personal factors and an independent measure of the managers' effectiveness. It is concluded that the instrument is useful for identifying relevant areas for self-development, but that managers should focus on item-level as well as scale results and should be sensitive to discrepancies between their self reports and the descriptions by others.

The Management Effectiveness Profile System (MEPS) is designed to provide participants in management development programs with feedback on their job skills and behaviors (*Lafferty and Associates, 1983*). The instrument is completed by the manager and five people who are in a position to accurately evaluate his or her work. The combined reports of the five 'others' (including superiors, peers, and subordinates) are profiled against the manager's own responses to identify strengths and weaknesses and provide a base for professional and personal development efforts.

The core of this profiling system is a set of 90 questions which were identified through interviews with managers about managers. The interviewees were asked to describe the ways that otherwise effective people failed as managers. "What kinds of things did they do that caused them problems?" Responses to questions of this type were sorted and the most frequently-mentioned dysfunctional behaviours were identified. Each such behaviour was then paired with an opposite or corrective behaviour. These sets of behavioural descriptions were used to anchor the endpoints of 7-point scales along which managers in various organizational settings could be rated.

The ratings are fed back to the manager on an item-by item basis. Item-level results are emphasized given the highly descriptive and behavioural nature of the statements. Items of this type are not only easily understood, but also serve as a guide or model for change and development efforts (*Bernardin, 1977; Kinicki and Bannister, 1988*). Feedback is also provided at the scale level - along fifteen categories of items reflecting distinct managerial skills or personal factors. While these categories have face validity and correspond to accepted typologies of managerial functions (*see, for example, Yukl, 1981*), it is noted that the lines of demarcation between categories are not always clear and that there is substantial overlap in skills (*Lafferty, Webber and Associates, 1984*). Nevertheless, these categories effectively organize and summarize the results for managers and provide an appropriate set of conceptual scales on which to base the statistical analysis of the instrument.

THE MEPS INSTRUMENT

Skill Categories

The categories of skills measured by the instrument are organized into three general areas:

Task Skills	Setting Goals and Objectives
	Identifying Problems
	Planning Effectively
	Organizing
	Making Decisions
People Skills	Delegating
	Building Teams
	Evaluating Performance
	Developing Subordinates
	Managing Conflict
Personal Factors	Time Effectiveness
	Stress Reactions
	Commitment Level
	Trust Level

The final category of items, Results Orientation and Asset Control is treated separately and considered by the authors to be outside the context of these general areas (*Lafferty and Associates, 1983*).

Two parallel forms of the instrument are provided: “Self-Description” and “Description by Others”. Except for the instructions, the forms are identical. Both forms consist of a booklet containing the 90 managerial skill items (and some supplementary questions pertaining to, for example the overall effectiveness of the manager) and a separate answer sheet.

Item Format

The following exemplifies an item and its anchors from the Setting Goals & Objectives category:

- “Generally, objectives for the work group are ...”**
- a. “... totally unrealistic; either far too high or well below people’s abilities to perform.”
 - b. “... challenging but realistic; they generally require people to stretch their capabilities a bit.”

Unlike standard behaviourally-anchored rating scales which provide descriptions along every point of the scale (*Landy and Farr, 1980*), the MEPS items provide descriptions for the endpoints only and ask respondents to select from the following options:

- 1. Almost exactly like a.
- 2. Much more like a than b.
- 3. Somewhat more like a than b
- 4. A and b are about equally descriptive.
- 5. Somewhat more like b than a.
- 6. Much more like b than a.
- 7. Almost exactly like b.

Six items are associated with each of the categories. These items are dispersed (in pairs) throughout the instrument to avoid the creation of response sets.

PROCEDURES

Sample

A group of 404 subjects was selected from a larger population of managers whose “self-description” and “descriptions-by-others” forms were scored by the publisher of the inventory. The cases selected for analysis were those that had been processed most recently and that had no missing data on the self-description form. The research group includes mid- and upper-level managers from a computer manufacturing and sales organization, an insurance company, a number of banks and financial service organizations, a major food processor, a chemical company, a public utility, a food wholesaler/retailer, and various supermarket chains. The majority of these organizations are located in the Midwest and Southern regions of the United States.

Descriptions of a subset of these managers (312) were provided by a total of 1476 others (an average of 4.7 per manager). In relation to the managers they described, 621 of these respondents were subordinates, 342 were peers, and 375 were superiors. The remaining described the nature of their relationship with the focal manager as “friend” (33) or “adversary” (101).

Analysis

Scale scores were computed by taking the average of the responses to the six items associated with each personal factor or task or people skill. Means and standard deviations were obtained separately for each category for both “self-descriptions” and “the descriptions by others”. Internal consistency reliability was estimated for each category, using both self and others’ reports, by means of Cronback’s Alpha. Inter-rater agreement was assessed using Analysis of Variance (ANOVA) and the Eta-Squared statistic (stratifying the others by focal manager). Descriptions by others were then aggregated to the focal manager level. These aggregated (averaged) descriptions were correlated with the self-descriptions to test for consensual validity.

Item-total correlations were run at the respondent level to ascertain whether the MEPS items correlated more strongly with their own categories than with any of the other categories. Finally, the concurrent criterion-related validity of the instrument was tested using an estimate of the managers’ overall effectiveness based on the responses to two supplementary items. The first directly focuses on the effectiveness of the manager’s performance in his/her current position; the second evaluates the manager’s suitability for promotion to a position with greater responsibility. This effectiveness rating was regressed on factor scores obtained through a Principal Components Factor Analysis with Varimax Rotation carried out at the item level. The regression analysis was run first with descriptions-by-others data provided by all respondents aggregated to the manager level for both the criterion and the MEPS measures. A similar analysis was then conducted using effectiveness data from superiors only and MEPS data from the remaining respondents (e.g., peers, subordinates) to achieve independence of data sources.

RESULTS

Descriptive Statistics

The descriptive statistics for the 15 scales or categories show that responses by the managers as well as the other respondents are skewed toward the favourable side (**Table 1**). Mean scores for self-descriptions range from 5.35 (Planning Effectively) to 6.25 (Trust Level); means for descriptions by others range from 5.19 (Planning Effectively) to 5.88 (Commitment Level). For all scales the mean of the managers' self-descriptions is slightly higher (i.e., more favourable) than the mean of the descriptions by others. However, the standard deviations for the others' descriptions are consistently greater than those for the self-descriptions.

Reliability

The internal consistency reliability of the scales is fairly high, ranging from .77 to .88 as measured by Cronbach's Alpha (**Table 1**). Items within each scale are highly inter-correlated; as indicated below, however, items across certain scales also correlate strongly.

Inter-rater agreement is acceptable with Eta-Squared statistics ranging from .34 for Organizing to .42 for Stress Reactions (see **Table 2**). Analyses of Variance indicate that the variance between respondents describing different managers is greater than that between respondents describing the same managers. The F-statistics are fairly high (**Table 2**) – particularly given the different positions and perspectives of the respondents rating each manager.

Consensual Validity

The amount of agreement between the managers and the others describing them is moderately low (**Table 2, third column**). Correlation coefficients range from .0729 (not significant) to .3031 ($p < .001$). Strongest agreement between self and others is along Building Teams and Delegating (People Skills), which are relatively behavioural and observable (by subordinates and others). The lowest correlation is for Commitment Level – a personal factor that can manifest itself in different ways that can possibly be misinterpreted.

Convergent / Discriminant Validity

Item-total analyses indicate that 89 of the 90 items correlate more strongly with their own scales than with any of the other scales (data not shown). The one item that does not is from the Planning Effectively category; it shows a higher correlation with the Delegating scale than with its own one. It is noted, however, that the correlation coefficients for the items and their own scales are inflated since the scale totals would result in a greater number of items correlating more strongly with scales other than their own.

Concurrent Criterion-Related Validity

The Principal Components Procedure produced three factors corresponding to the three general managerial skill areas described above – Task Skills, People Skills and Personal Factors. However only half the 90 items loaded most heavily on the expected factor and 17% of them (15 items) showed multiple loadings (i.e., loadings greater than .40 on two or more factors). Nevertheless the three factors explained 46.6% of the common variance in responses and appeared to be useful for criterion-related validity purposes. Factor scores based on others' responses to all 90 items, including those with multiple loadings, were obtained and aggregated to the focal manager level.

Results of the regression analysis, run on data provided by all those responding to the descriptions-by-others form, are shown on the top half of **Table 3**. All three factors enter significantly into the regression equation, with Task Skills and Personal Factors showing the larger coefficients. While the R-squared is quite high (.56), this is partly due to common method variance. The bottom half of the table shows the results obtained by regressing the effectiveness rating by superiors on the MEPS scores based on the responses of peers, subordinates, and others. The total amount of variance explained is much lower (R-squared = .05) but the pattern of the results parallels that obtained in the first analysis. In both cases, the results indicate that Personal Factors and Task Skills are more strongly related to the effectiveness criterion used here than are People Skills.

DISCUSSION

MEPS provides managers with feedback on 90 inter-related behaviours that can potentially inhibit or enhance their performance. The strength of the instrument lies in the richness and diversity of the items, which tap not only the people- and task-related skills traditionally associated with managerial roles (*House, 1971*) but also personal skills and factors such as stress and time management. Additionally, the behavioural terminology of the items sets the stage for individual improvement (which is also facilitated by a self-development guide and follow-up readings and exercises).

Though MEPS scales or categories demonstrate high internal consistency reliability, many items are strongly associated with categories beyond their own. This is partly due to the nature of managerial work, as the authors note: “It is difficult to distinguish when effective planning stops and organizing begins.” (*Lafferty, Webber and Associates, 1984, page 5*). **This is also due however to the content of certain items.** For example, an item in the Identifying Problems category (a Task Skill) focuses on whether the manager makes people feel free to offer suggestions. While this particular behaviour is critical to effective problem identification, its interpersonal focus almost ensures that the item will correlate with the people-oriented scales. **Given the prevalence of such items, the category scores profiled for managers are not as differentiated as would otherwise be the case. The instrument could be strengthened by deleting, modifying or reclassifying these items.**

The feedback received from others promises to be useful to managers and, in many cases, a surprise. There is moderate agreement among the others describing particular managers and the combining of their answers for feedback purposes is warranted. At the same time, agreement between the others and the focal manager is minimal along certain categories. Self/other agreement is particularly low for personal factors such as commitment and trust level. Thus, a manager who feels personally committed to the organization might not be perceived that way by others. While these inconsistent perceptions can be partly tied to the difficulties inherent in assessing others’ commitment, this type of feedback lets managers know that they are not coming across to others the way they think they are.

When interpreting their results, managers should be advised that the average scores along each category tend to be high. Their feedback might not be as positive as the raw scores indicate. Furthermore, given the differences in the mean scores across categories, the same score along two different skill areas can have different implications. For example, a score of 5.5 on Trust Level would represent a below average rating while the same score on Planning Effectively would be above average. **Thus, normed profiles would nicely complement the raw-score profiles currently used for feedback purposes.**

Finally, the different skills measured by the inventory are strongly related to managerial effectiveness as evaluated by the same raters. This is the case for all three general skill areas – Task Skills, Personal Factors, and People Skills. Managers are therefore justified in accepting the feedback as being related to their overall performance. However, when the skill areas are evaluated by peers and subordinates and overall effectiveness is evaluated by superiors, the relationship between these variables is not as strong. Task Skills and Personal Factors are weakly related to effectiveness and People Skills fall out of the equation. This is most likely due to the tendency of different raters to vary somewhat in their evaluations of a particular manager along the skill areas.

However, these lower correlations might also be explained by the differential importance people in different positions place on the factors influencing judgements about the overall effectiveness of managers. For example, people-oriented skills might not have a strong influence on the way a manager is evaluated by superiors, who may be primarily concerned with task-oriented factors. However, these interpersonal skills (e.g., team building, conflict resolution) are likely to be more relevant to peers and subordinates and should have a greater influence on their evaluations of a manager's overall effectiveness. In addition to suggesting an important issue for future research, this alternative explanation suggests that feedback along all the areas assessed by the inventory, including the People Skills, should be considered by managers in making decisions regarding the direction of self-development efforts.

TABLE 1**MEPS Scales: Descriptive Statistics and Internal Consistency Reliability**

Scale	Mean (Self/Others)	Standard Deviation (Self/Others)	Alpha*
Task Skills			
Setting Goals & Objectives	5.63/5.44	0.57/0.83	.8294
Identifying Problems	5.75/5.48	0.55/0.84	.8322
Planning Effectively	5.35/5.19	0.63/0.88	.7712
Organizing	5.80/5.46	0.56/0.88	.8399
Making Decisions	5.76/5.40	0.60/0.92	.8201
People Skills			
Delegating	5.70/5.37	0.62/0.89	.7997
Building Teams	5.69/5.33	0.65/0.93	.8343
Evaluating Performance	5.64/5.38	0.58/0.88	.7907
Developing Subordinates	5.56/5.21	0.63/0.94	.8233
Managing Conflict	5.54/5.20	0.69/1.05	.8759
Personal Factors			
Time Effectiveness	5.56/5.38	0.62/0.91	.8324
Stress Reactions	5.74/5.47	0.66/0.99	.8680
Commitment Level	6.09/5.88	0.57/0.82	.8273
Trust Level	6.25/5.87	0.54/0.96	.8741
Results Orientation & Asset Control	5.72/5.54	0.60/0.85	.8087

* Cronbach's alpha internal consistency reliability coefficient

TABLE 2**MEPS Scales: Inter-Rater Agreement and Convergent Validity**

Scale	Eta-Squared	F(ANOVA)^a	F^b
Task Skills			
Setting Goals & Objectives	.3523	2.036***	.1821**
Identifying Problems	.3579	2.086***	.1221*
Planning Effectively	.3857	2.350***	.2173***
Organizing	.3434	1.958***	.1795**
Making Decisions	.3577	2.085***	.1292*
People Skills			
Delegating	.3528	2.040***	.2905***
Building Teams	.3558	2.067***	.3031***
Evaluating Performance	.3494	2.010***	.1737**
Developing Subordinates	.3624	2.127***	.2414***
Managing Conflict	.3732	2.228***	.1600**
Personal Factors			
Time Effectiveness	.3856	2.349***	.1601**
Stress Reactions	.4164	2.670***	.2615***
Commitment Level	.3754	2.250***	.0729
Trust Level	.3744	2.240***	.1405*
Results Orientation & Asset Control	.3804	2.300***	.2097***

a n = 1476 others stratified by 312 managers

b n = 300 managers (self descriptions correlated with aggregated desc. by others)

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

TABLE 3**Regression Analysis: Managerial Effectiveness and MEPS Factors**

	Beta	P	R-Squared	N
Independent variables (all raters)				
Task Skills	.5697	.0001	.5642	312
People Skills	.3194	.0001		
Personal Factors	.6174	.0001		
Independent Raters				
Task Skills	.1543	.0172	.0507	240
People Skills	.0262	.6876		
Personal Factors	.1653	.0107		

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