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# Characteristics of Effective GSS Facilitators

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## Abstract

As businesses increase their use of groups to solve problems, the importance of strong group facilitation skills has increased. This paper investigates the characteristics of high-performing group facilitators versus low-performing group facilitators. The characteristics investigated represent two broad areas of interest: general facilitator background and skills possessed by the facilitator. The facilitator background factors that proved to be good predictors of high performance included: overall experience and number of computer-supported meeting facilitated. The skills possessed by high performers included: plans and designs meetings, demonstrates flexibility, and listens to, clarifies, and integrates information. The analysis provides a rule for accurately predicting whether a facilitator is a high-performer or a low-performer more than 77% of the time.

## Introduction

Many companies have found that they need to rely on teams in order to solve their business problems. As these teams try to coordinate their efforts they find themselves participating in more meetings. Meetings can consume anywhere from 30 to 80 percent of executives' time (Mintzberg, 1973), and often the meetings' outcomes and processes are dissatisfying and unproductive experiences (Mosvick and Nelson, 1987). One way to improve the efficiency and effectiveness of meetings is to enlist the aid of a skilled facilitator (Grohowski, et al., 1990; Bostrom, Anson, and Clawson, 1993).

Clawson and Bostrom (1995) argue that given the increased demand for group work, strong facilitation skills will be critical for successful business interaction. A number of researchers and practitioners suggest two possible paths to improving meeting interactions: use of appropriate computer-based technology and the enhancement of group facilitation skills.

One way to improve the knowledge of what makes one a good facilitator is to model the behavior and characteristics of facilitators. In this paper we look at one particular type of facilitator, a facilitator who uses group support systems (GSS) technology. One important aspect of facilitator efficacy is the mastery of appropriate skills. This aspect of GSS facilitator performance has been well studied. For example, Clawson, Bostrom, and Anson (1993) produced a list of 146 unique GSS facilitator behaviors. These 146 unique behaviors were then reviewed by three facilitation experts and categorized into 16 critical role dimensions. These dimensions are exhibited by the facilitator through the mastery of a set of skills. These 16 critical facilitator skill sets were then ranked by experienced GSS facilitators from most to least important. Overall ranks for the 16 critical skill sets were established based on the average ranking of the roles across the 50 GSS facilitators who participated in this study. The five skill sets deemed most important by these experienced GSS facilitators were (in order):

1. plans and designs the meeting
2. listens to, clarifies, and integrates information

3. demonstrates flexibility
4. keeps group outcome focused
5. creates and reinforces an open, positive, and participative environment

Another possible dimension of GSS facilitator performance that has not been studied is the background and experience of the GSS facilitator (Hoffman and Maier 1959). Therefore, we included in our analysis the following variables (in no particular order):

1. years of overall facilitation experience
2. years of computer-supported facilitation experience
3. number of computer-supported meetings facilitated
4. education level
5. gender

A predictive discriminant analysis was performed on the selected variables. The results provide partial validation for Clawson et al.'s facilitator dimensions. In addition, a rule is created which provides a hit rate estimate of how well the combination of experience, background and skills mastery predicates high performance among a group of GSS facilitators.

# Methodology

## Participants

The study was purposely directed at experienced GSS facilitators. Of the 109 participants, 49% were seasoned GSS facilitators with over seven years of experience. Over one-third (36%) had facilitated more than 100 meetings. Because our sample was not totally random, some unintentional bias may exist. However, effort was made to construct a sample that was representative of experienced GSS facilitators.

## Data Collection

Clawson et al.'s 16 skill sets were placed on index cards - one skill set per card. Each card contained an extensive description of the skill set. The participants were asked to first review all the skill set descriptions. Then they were asked to sort through the cards and identify the top five skill sets they currently perform well. Ranks 1 through 5 were assigned to the five performance choices. A value of 11 was assigned to all other skill sets because this is the average rank for slots 6 through 16. Only participant responses for the five skill sets previously identified were used for this analysis.

The grouping variable values were collected by asking the participants to rate themselves as a GSS facilitator on a nine point scale where 1 is poor and 9 is great. Not surprisingly, given our experienced sample, no one rated his or her own performance as poor (i.e., 1). It is possible that the self-reporting of performance may be a biased measurement, to overcome this bias fence-riders (self-reporting a 6) were thrown out and 2-5 were considered low performers and 7-9 were considered high performers. Whether a GSS facilitator reported performance modestly or inflated it a bit, this grouping should still place him or her in the right group. Finally, experience and background information was collected and recorded as ranked categorical data.

# Results

## Variable Selection

The variable selection procedure started with 10 variables and employed all possible subsets methods using the Morris program to identify the top sets of variables (Huberty 1994, p. 126). The final subset selected was based on hit rate, previous research, and a desire to include both experiential and skill characteristics. The subset selected was:

1. years of overall facilitation experience
2. number of computer-supported meetings facilitated
3. listens to, clarifies, and integrates information
4. demonstrates flexibility
5. plans and designs the meeting

### Data Analysis

Prior probabilities (priors) are used in predictive discriminant analysis to take into consideration the likelihood of population membership. Thus, priors in this study should reflect the distribution of GSS facilitators in general and not only those that took part in this study. Whether to use equal priors is a judgment call on the part of the researcher (Huberty, 1994, pg. 65). This judgment is typically based on some knowledge of the population being sampled. Our experience suggests that more than half of all GSS facilitators are high performers. Accordingly, we have set priors, conservatively, at .65 for the high-performing group, and .35 for the low-performing group.

The SAS DISCRIM procedure was used. A test of group covariance homogeneity was performed. The group covariance matrices were found to be homogenous ( $\chi^2 = 16.309$ ,  $df = 15$ ,  $p = 0.3618$ ) so a pooled covariance matrix and linear classification rule were used.

The results of analysis can be found in Table 1. These results were determined using a cross-validated linear classification rule (Huberty, 1994, pg. 88-90).

Table 1: External Classification results using Cross-validated Classification Method

From Group	LP	HP	Total	% correctly classified
LP	23	15	38	60.53%
HP	10	61	71	85.92%
Total	33	76	105	77.06%

LP = low performing HP = high performing

### Hit Rate Assessment

Using the maximum chance criterion, 65% of the GSS facilitators could be classified correctly due to chance. Using a standard normal test statistic (Huberty 1994, p. 105) we find our rule to be significantly better than chance ( $Z = 2.64$ ,  $p = .000$ ). How much better can be determined using the following index (Huberty 1994, p. 107):

$$I = [.7706 - .65] / [1 - .65] = .3446$$

The rule will produce approximately 34% fewer classification errors than would be made if classification were done by chance.

## Variable Ordering

Variable ordering was accomplished using the p (p-1) reanalysis approach (Huberty 1994, p. 127). This is accomplished by running the predictive discriminant analysis 5 times, deleting each variable in turn. The hit rate estimate is then examined, and the lowest resulting hit rate indicates the variable that contributes the most to predictive accuracy. The results of these analyses are presented in Table 2.

Table 2: Hit rates and variable ranks

Variable deleted	L-O-O Hit Rate	Rank
demonstrates flexibility	<b>63.33%</b>	<b>1</b>
overall experience	<b>68.81%</b>	<b>2</b>
listens to, clarifies and integrates	<b>73.39%</b>	<b>3</b>
plans and designs meeting	<b>76.15%</b>	<b>4.5</b>
number of computer-supported meetings facilitated	<b>77.06%</b>	<b>4.5</b>

This provides some interesting results. Flexibility seems to contribute the most significantly to hit rate accuracy. Overall experience also contributes considerably to accuracy, but this is not surprising. Removing the number of computer-supported meetings variable from the analysis would provide a rule with a hit rate equal to the one created with it included (77.06% in both cases). We could consider leaving this variable out because it is not improving the overall hit rate of the rule, but from a theoretical perspective it makes more sense to leave it in given that we are studying experienced GSS facilitators.

## Discussion

The results of our analysis provide support for Clawson and Bostrom's GSS facilitator skill sets and their suggested importance. The skill sets plus experience variables can be used to predict GSS facilitator performance. In addition, our results provide a rule for predicting GSS facilitator performance.

An interesting result of this study is the variable ordering. For the skills, it was not the most important skills which added the most explanatory power to the rule, but it was the skill ranked 3<sup>rd</sup> in importance, flexibility, that added the most explanatory power to the rule. One explanation for this unexpected ordering is the basic need for the top ranked skills. Some of the highest rated skills may be so important to effective facilitation that even lower-performing GSS facilitators must be proficient at them, e.g., plans and design meetings.

Future research may explore the accuracy of the grouping method. Having meeting participants rank their GSS facilitators instead of the GSS facilitators ranking themselves may impact the original group assignment. Another point of interest would be to use quality of meeting outcome as the grouping variable and skills as the predictor variables.

Practical implications of this research includes the designing of GSS facilitator training programs. These programs may be designed to focus on the most critical skills for predicting that a person will be a good GSS facilitator. In addition, experienced GSS facilitators could use these results to focus their attention on

these particular skills while facilitating. They can benchmark their improvement along these skill sets and continually hone their skills.

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