

Pre-Appointment Training for Top Level Managers

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This paper discusses the development of employees eligible for appointment to civil service positions as upper middle or lower top management in the California Division of Highways. It concludes that formal training immediately prior to appointment is desirable for the objective of changing the orientation of the appointee. For persons about to be appointed as upper middle managers, it was found that what was needed was a focus away from roles that had been predominately as supervisors and as technical experts, to roles which encompassed management planning, control, resource utilization and program evaluation. For persons about to be appointed as lower top management, what was needed was a broadening from short-range to long-range goals and from functional area to organization-wide concerns. Above all, complacencies needed dispelling and realization achieved that organizational improvements could and should be made. Findings were primarily through interviews with persons now at these levels and their supervisors. Interviews focused on problems, not on what training was needed.

The paper proposes that short small-group workshops, if properly designed, can meet the expressed objective. Proper design focuses on using actual problems in the training. At upper middle management levels this was accomplished through simulation of the problems within training groups, and careful evaluation and feedback of the results to the persons being trained. At lower top management levels, it was through assigning the trainees in small groups to analyze and report on assigned problems which were of current paramount interest to the organization, and to use the results to actually influence the course of action taken by the organization. These methods have proven effective with three upper middle management groups and two lower top management groups. The division intends to continue and expand this program.

•ON three separate occasions in 1965, 1966 and 1967, special teams of managers from the California Division of Highways sat down to operate a highway district. Each team had many of the major problems of a typical district—budgets to prepare, sizable program changes to master, claims to settle, routes to recommend, speeches to give—and each team was judged on its performance in competition with every other team. The districts existed only on paper. The performance and evaluation were a training exercise for people who were soon to be considered for promotion to positions where they would be expected to make the kinds of decisions required in the exercise.

Again, once in 1965 and again in 1967, other teams of managers began work on some of the most critical overall managerial and philosophical problems facing the California Division of Highways. Their objective was to report to the state highway engineer, giving him proposed guidelines and recommended courses of action. The problems were real, as were the requirements for reports. Yet again, this was primarily a training conference whose main reason for existence was the development of the conferees.

These two types of workshops, the pre-appointment training of persons currently eligible to become the division's upper middle or lower top management, are a portion of the management development program of the California Division of Highways. These workshops, our Management Conference—Supervising Level, and our Management Conference—Principal Level, are given whenever circumstances require. The objective of this paper is to provide information about them that may help other organizations to design, develop or expand their own management development programs.

As our workshops are keyed to our organizational structure, promotional system and student group, we will first place them within the context. Also we will (a) briefly enumerate other phases of our management development program, as these are prerequisite to these workshops; (b) discuss how the needs for the workshops were determined, and what these needs are; (c) discuss workshop objectives and constraints, development and implementation, content, methods, and instructors; (d) give our conclusions as to how well the workshop objectives are met; and (e) discuss future workshop plans, including intended changes.

ORGANIZATIONAL CONTEXT

Organization

The Division of Highways is a relatively large, full-functioning organization within the California Department of Public Works. Its primary mission is the planning, design, construction and maintenance of the California State Highway System, including the appraisal and acquisition of required right-of-way. It has more than 17,000 employees and an annual budget of approximately one billion dollars.

The division is directed by the state highway engineer. Reporting directly to him are three headquarters staff deputies and 11 line district engineers each of whom is responsible for the entire program in a geographic area of the state.

The district engineers are at the principal engineer level in the 7 smallest districts (350 to 1,000 employees) and above this level in the remaining 4 (1,200 to 4,000 employees). In the two largest districts, the district engineers have several principal engineer level subordinates. In headquarters (approximately 2,500 employees) the principal level bears the title of department head and generally reports to the immediate subordinates of the deputies. These department heads have divisionwide staff responsibilities for a program area (construction, design, right-of-way acquisition, etc.). In both districts and headquarters, the next level down is the supervising level.

Principal and supervising level positions are responsible management jobs. For example, a principal serving as a district engineer has up to 1,000 direct subordinates and a total annual budget of up to 52 million dollars. District supervisory level employees may have well over 200 employees and direct line supervision of several major district programs. In headquarters, the level of responsibility is comparable. The workshops discussed in this paper are for all persons eligible for promotion to positions at these two levels.

Merit System

All division employees are under the California State Civil Service, which is a merit system. Promotion is by competitive examination and is almost always from within. To qualify to compete, an employee must meet minimum educational or registration requirements and have a specified amount of experience in lower grades.

The examination includes a written test and an oral interview. Persons who pass both phases are given an overall score and assigned a position on an eligible list, which stays in effect for up to four years. The division may choose any one of the top three people on the appropriate list when it has a vacancy it wishes to fill.

Student Group

The promotional ladder narrows rapidly in the division. We have approximately 4,500 employees in professional and other positions requiring a college degree and extensive training. These are the people potentially eligible for positions at the super-

vising and principal levels. About 2,900, or 63 percent of the 4,500, are in entry and sub-journeyman level jobs. Another 1,100, or 24 percent, are full journeymen or first line supervisors. Four hundred, or 9 percent, are second level supervisors. Only 3 percent, or 150, of those potentially eligible are at the supervising level, and less than 1 percent, are at the principal level. The workshops are directed toward these 4 percent of the positions. The persons eligible to attend them are on the Civil Service lists for positions at the supervising or principal level.

As this is an engineering organization, a large proportion of these people are required to be engineers. The state highway engineer, his deputies and the district engineers are all registered civil engineers. In headquarters, 2 of 11 persons reporting to the deputies are from other disciplines—an accountant and a right-of-way agent. There is a similar percentage of non-engineers at the principal and supervisory levels in the districts and at headquarters. All positions at these levels, however, are in merit system classes that require either registration as an engineer or a college degree, plus special training and experience.

From our records, a picture may be drawn of the average candidate for the supervising and principal level. He is a college graduate with years of varied, meaningful division experience. He has been developed by carefully planned rotation and reassignment augmented by extensive in-service training in his occupational specialty, management and supervision. Generally, because of the broad base of the promotional pyramid, only those employees who have performed well and have shown considerable promise promote through the lower levels to qualify for the higher level positions.

The typical person appointed to the supervising level is a 42-year-old college graduate with 18 years of division service. The new principal averages 6 additional years at the supervising level, which makes him 48 years old with 24 years of experience. These factors must be considered in deciding whether additional training is necessary and desirable, and what kind of training should be given, if any.

MANAGEMENT DEVELOPMENT PROGRAM

For more than 10 years, the division has augmented the education and experience of potential management employees with an extensive in-service training program. Entry and sub-journeymen employees are given extensive, planned rotation through the major functions in which the division uses their occupational specialties—two years' rotation, for example, for junior engineers. Rotation is supplemented by evaluation and counseling, and by on-the-job and classroom training.

At the first line supervisory level, these employees participate in basic supervisory management training—40 hours plus in small group seminars, 80 hours plus of outside reading and homework. At the second line supervisory level, most participate with their peers in small-group, team-training, leadership laboratories to sharpen their interpersonal/supervisory/communications/problem-solving skills. The 60 small group hours are supplemented by planned reading and homework assignments. These programs are mandatory for persons at the appropriate organizational levels.

Throughout these years of the employee's career, this basic training is reinforced with refresher and special purpose training courses as needed. Both the employee and his management are required to assess the employee's experience and potential at frequent intervals. The high-potential employee is frequently reassigned to constantly broaden his experience. Thus, persons qualifying by experience and examination for supervising and principal level positions should be well prepared.

NEED FOR ADDITIONAL DEVELOPMENT

Despite this extensive training and experience, top management had some feeling that many persons on supervising and principal level lists were not as well prepared as they should be. The impressions, somewhat vague and ill-defined, centered around a wish that new supervising level employees would adjust to their new management jobs a little faster and a little less hesitantly. For the principal level, the wish was for the newly appointed person to take a broader viewpoint of his job, be less inclined to sub-optimize in his decisions, have a better sense of priorities, contribute more to overall division policy and plan formation.

How Need Was Determined

To find out what caused these impressions, the division undertook an extensive study. First, questionnaires were sent to supervising and principal level employees to determine what kinds of things had given them the biggest problems when they were first appointed. Second, other questionnaires were sent to the immediate superiors of principal and supervising level employees. These asked for a frank expression about problems they had with new employees at these two levels, and what kind of performance changes in these employees they would find desirable. Third, the results of both questionnaires were analyzed, and promising areas were identified. We then interviewed a sample of existing supervising and principal level employees and their superiors. The interviews, like the questionnaires, focused on problems and their causes, not on suggestions for training or development. Finally, desk audits were performed on a number of supervising and principal level jobs to determine what the jobs actually comprise, how the work time was spent, and what caused the most difficulty.

What the Need Was

Without going into the specific problems identified, it is possible to generalize about our findings. For both levels, it was found that the major requirements were to help the newly promoted employee change his orientation. For those promoting to the supervising level, the prior orientation had been that of the supervision of professional men and the performance of the role of the technical expert. The majority of the new positions required far more interest and skill in management planning, control, resource utilization and program evaluation. The problem was not a lack of knowledge; it was primarily an attitudinal and skill problem. The new supervisor had to recognize more rapidly what was expected of him and to gain confidence in his skills to meet these new requirements.

We found the new principal needed a better concept of what was important. This entailed long-range as opposed to short-range thinking; a divisionwide rather than a functional or geographic area viewpoint. The new principal had to concern himself more with divisionwide goals, objectives and problems.

This was the information we needed to develop in the people about to be appointed to these two levels. We chose to do this through the pre-appointment workshops. Their development and implementation is discussed in the following.

WORKSHOPS

Objectives and Constraints

With the type of need determination previously discussed, it was relatively easy to spell out objectives. For the supervising level, we wanted a training experience that would help the newly appointed supervisor understand and accept his new job responsibilities, recognize his current skills to perform these, and identify his skill and knowledge shortcomings so he could do something about them. It was all pointed toward helping the new supervisor perform more effectively on his new job from the start, thus shortening a costly learning period.

We wanted the new principal to accept that the division comprised more than his assigned area, and that his responsibilities extended to helping shape the division's overall course. We wanted to create anxieties and with them recognition that the division could be improved. This required that we dispel complacencies and raise questions about old, tested and true solutions to problems.

We recognized that these objectives were extensive and that we could only expect minimal achievement through any one development activity. On the other hand, even minimal accomplishment would be very worthwhile. It was, therefore, necessary to look at our constraints.

The Civil Service System and administrative expediency imposed one set of constraints. It would be unwise to select for special training some of the competitors for top positions and not others, as this would give an edge in the examinations. Yet, we

did not wish to spend the money required to train the entire competitive group. If we waited until after appointment to give the training, there would not be enough promotions at one time to make group methods feasible, and it would be hard on the division to release the promoted employee to attend the training. On the other hand, the training should be as close in time to promotion to the new job as possible.

An ideal solution was to limit participation to those people who had qualified by examination for positions at the two levels, to make the training mandatory for these employees, and to hold the training as soon after the lists were established as possible. As the supervising and principal highway engineer lists are ordinarily the largest and the most used lists at their respective levels, the workshops are keyed to the examinations for these classes. At the supervising level, the lists are long enough so that they can be divided into thirds and the workshops given as each one-third becomes reachable for promotion. This solution satisfied our first set of constraints. It perhaps should be said that even though all persons on the lists are eventually trained, not all are subsequently promoted. Appointment may take place as early as at the time of training, as late as two years after the list is out, or in some cases, not at all. Those who are trained and promoted are generally very stable in the organization; turnover at the principal and supervising level is very, very low, the primary reason for leaving being retirement.

Another set of constraints involved actual time to be used. This necessarily had to be limited so the persons in attendance would not be away from their jobs too long. We decided to make the most out of actual workshop time in three ways:

1. Knowledge inputs would be by pre-reading/correspondence courses. In this manner, we would know that all persons who attended were amply prepared, and valuable workshop time would be saved for activities that are best performed in groups.
2. The workshops would be live-in, and would encompass 12 to 14 hours per day. As the workshops were to be of a relatively short duration (4-5 days) and were of an active, participative type, we felt that the long hours would be advantageous and not excessively hard on the participants. These expectations proved to be true.
3. The workshops had to be well planned. Extensive staff time—more than $\frac{1}{2}$ man-year each—was required for preparation, but this amount does not seem excessive in light of both the expense of having the workshops and the importance of the objectives.

A final set of constraints evolved from the amount of training and development the participants had completed in the past, and the direct tie between the workshop objectives and those of the division. It seemed unlikely that we could achieve our objectives through an academically developed, theoretically oriented approach. Rather, we felt that we needed real problems from the real world of the California Division. Hence, we decided that all workshop development and instruction should be done with our own staff resources, rather than relying on outside consultants, and that all content must be concerned directly with the operation of the division.

It was with these objectives and constraints that development of the two programs was begun. The workshop approaches outlined below are those that seem to fit our guidelines best.

METHOD, CONTENT AND INSTRUCTIONAL STAFF

For the supervising level our objective was to get better job performance as soon after appointment as possible, for the principal level our objective was to get better understanding of and meaningful involvement in overall broad-gauge division problems. Each set of objectives required a different approach and different content.

Supervising Level

For the supervising level we had discovered a number of pressing job problems when desk audits of the positions were performed. It was decided to use these problems as the basis for a simulation.

We constructed a paper highway district, complete with assigned territory, roads, deficiencies, budget, planning program, staff, and even telephone books. It was located within the real California Division of Highways with the existing management and headquarters staff.

At the supervising level conference, we divided the total number of conferees into five teams of five members each. These five represented the top staff of the artificial highway district. During the conference, each rotated through the roles of district engineer, assistant district engineers for administration, planning and operations, and district right-of-way agent. Each team was given office space, telephones, and all of the documents needed to run its district.

Problems were fed in by mail, by telephone, and by personal visits. It was the responsibility of each team to decide at any given moment what its most pressing problems were, to work out solutions to these problems, and to feed in answers to the workshop staff.

The staff was carefully selected from persons who held positions of the kinds that the participants were role-playing. Members were selected because of excellence of performance in their current jobs, and they had three functions at the workshop, as follows:

1. To play the roles of district subordinate staff, headquarters staff, and interested outsiders. In these roles they made and answered telephone calls to and from the teams, made personal visits to the teams, input information on the problems, and answered questions from the context of their role.
2. To evaluate the output of each team and to assign it a score.
3. At the conclusion of each time period, to feed back to each team an evaluation of how well it did, why, and how it could have done better.

The problems used at the supervising level workshops were in the following areas:

1. A major unexpected increase in the district right-of-way program.
2. An attempt to lower preliminary engineering costs.
3. A disputed contractor claim.
4. A billing problem with a county for maintenance work.
5. Revising procedures for a right-of-way relocation program.
6. To make a speech on Equal Opportunity Employment to a community group.
7. To rate their men for possible promotion.
8. Troubles with their junior engineer rotation program, and the development of improvements.
9. Preparation of an annual budget request.
10. Analysis of management reports and a plan to improve indicated weaknesses.
11. Planning a resident engineer's meeting.
12. Several public relations problems involving the Legislature.
13. Advice to the state highway engineer with respect to how to handle anticipated federal cutbacks.

On each problem, each team competed with every other team, and scores were posted. The spirit of competition was high, yet each group generally felt that the standards used by the evaluators were fair and were equitably applied. Learning came from both the problem-solving experience and from the feedback of the staff to the participants.

Principal Level

At the principal level a different format was used to meet the different objectives. The state highway engineer and his deputies are always concerned with a number of current problems facing the division. At the time of the last conference, for example, the following problems were among the most pressing:

1. The establishment of effective management controls.
2. The most efficient allocation of personnel in the face of changes in program size between districts.

3. The development of meaningful work norms and standards.
4. The extent of division involvement in and with other transportation modes.

For this workshop, extensive pre-reading on each of these problem areas was sent to the conferees. Also, they were given and expected to complete a brief correspondence course on problem solving.

At the workshop, the conferees were divided into three six-man groups. Each group, within allocated times, was asked by the state highway engineer to arrive at recommendations on each of the foregoing problem areas. While they worked on the problems, they were both assisted and evaluated by assigned resource people, again selected from within the division from among the experts in each problem area.

At the conference conclusion, one member from each group was assigned to a special task force for each problem. The task force's job was to arrive at a consolidated report on the assigned problem, and to submit it to the state highway engineer. Subsequently, these reports have been used along with other inputs to guide the division's course of action in these areas.

HOW WELL WERE OBJECTIVES MET

Our evaluations of the first three Supervising Level Management Conferences and the first two Principal Level Conferences are quite encouraging, although not scientific.

The first evaluation took place at the conferences themselves. It was universally evident at all five conferences that the participants performed much better on each succeeding problem. This was despite the fact that the level of difficulty of the problems also increased. Hence, there was some development of the skills and attitudes required for the conferees to function together effectively.

The second evaluation took place through interviews of the superiors of newly appointed supervising level employees who had attended the conference. They expressed satisfaction with how these people were performing on the new jobs, and indicated that performance seemed to improve faster than they would ordinarily expect.

A third evaluation took place through using some of the principal conference graduates on special management problem-solving task forces. Their performance evidenced they had learned through the training they had received.

Spin off, that is, the achievement of secondary objectives, is high. In the first place, there seems to be a better understanding between district and headquarters people and among the employees in various disciplines who were at the conferences together. Cooperation is good and there seems to be excellent rapport. In the second place, lasting, meaningful work relationships have developed between the conferees and the conference staff, and there has been much informal consultation and advice giving.

An unanticipated result is that the conference staff seems to have developed at least as much as the conferees did. The same rapport noted between conferees and staff has developed staff to staff. As the staff members are relatively high level division managers, this is a most meaningful development.

Conference participation by persons eligible for promotion has also allowed management to get another look at these employees' performance, which has aided us in determining additional individual training needs for the participants and recognizing other divisionwide needs. For example, a current training program for all division managers in "The Systems Approach to Problem Solving" has arisen directly from principal level workshop findings.

As a last benefit, the reports submitted to the state highway engineer from the principal level conference task force have been extremely useful to the division in planning its current management improvement programs.

From the foregoing, it is our conclusion that conference objectives for both programs were achieved to a degree greater than expected when the conferences were planned. Spin off has added to the value we are receiving and has resulted in a very favorable cost-benefit ratio.

FUTURE CHANGES

The changes that we will make in the workshop format are minimum. Of course, each time new workshops are held, new problems will be in the foreground and will be substituted for those used in past workshops.

Other changes involve the evaluation process. We find that an evaluator should be present with each team at all times to evaluate the group problem-solving process. This will entail additional expense, but the immediate feedback to the group will be worth it.

Also, longer periods than we have allowed in the past should be used to give more extensive evaluations of the end products. This will mean either lengthening the conferences, reducing the number of problems or increasing the number of people assigned as evaluators. We will probably attempt some of each.

With these minimum changes, we expect to continue the workshop program, as in the past, each time new lists are established at the principal or the supervising level.