

UNANTICIPATED RETURNS OF TRAINING

*study indicates some
new directions and
benefits of training*

Every business has problems and most problems can be traced to or are irritated by people. Difficulties stemming from incomplete communications, misunderstandings and outright incompetence plague all business organizations and exact an economic cost of billions of dollars in profit each year and a psychological cost of worry, frustration and diverted energies.

Training is one of the most frequently suggested ways to reduce or eliminate these human problems. "Train your management staff and the business will run smoothly" is the all-too-quickly proffered panacea. In the past, too many cost-conscious, hard-headed businessmen have blindly accepted the premise that in training "trying equals results." Certainly in no other area of the business operation has there been such a philanthropic attitude. In recent years, however, there has been an increasing crescendo of questions raised about supervisory and management training. It has become fashionable now in management circles to ask the question, "But did the training do any good?" and to expect a substantive response.

In an effort to look at the effectiveness of supervisory and management training, we trained the entire supervisory staff - 258 supervisors at all organizational levels - of a large organization in upstate New York and then rigorously evaluated the effects of that training. In the management training area such a rigorous evaluation is relatively rare. While evaluation is the only way by which management can ever know how effective a training program has been, less than one per cent of the on-going training programs are systematically evaluated. Furthermore, even in those relatively rare cases where evaluation is attempted, it is usually undertaken with designs and methodology which are inadequate to the task. This article discusses the results of our efforts to answer the following questions, "What changes are associated with training?" and "How can the

probability of successful results be improved?"

THE TRAINING PROGRAM

The training program utilized a conference leadership case discussion pattern. The difficult problem employee situation was used to shed light on the process of general supervision. The supervisory decision-making process was thereby slowed down in order to emphasize for the trainee that the basic job of supervision was taking action based on only fragments of information. The inevitable mixture of the hard line, representative of the authoritarian organizational requirements, and the soft line, symbolic of the human element, was stressed throughout the six two-hour meetings.

The following specific training objectives were defined in advance.

1. More knowledge about specific kinds of employee behavior and methods for handling that behavior.
2. More favorable attitude towards problem situations.
3. More willingness to identify, confront, and take constructive action towards problem situations.

Several paper and pencil questionnaires were devised which essentially asked the supervisor, "What is your attitude towards problem situations?" "What do you know about why employees behave the way they do?" and "What do you do in a problem situation?"

EVALUATION PROCEDURES

For the first time in the management training area, we employed the most sensitive evaluation instrument - the Solomon four-group evaluation design. Table I shows how the four groups were used in the study.

With this four group design we were able to get a better look at the effectiveness of training alone, as well as an estimate of the effectiveness of training when it is combined with the evalua-

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Table I
PROCEDURES FOR IMPLEMENTING
THE FOUR WAY RESEARCH DESIGN

	Experimental Group A	B	Control Groups C	D
Pretest	Yes	No	Yes	No
Training	Yes	Yes	No	No
Post Test	Yes	Yes	Yes	Yes

tion program. As an example, we determined the possible effectiveness of changes introduced by training by comparing the post training results of Group B (which has been trained but not given the questionnaires before

training) and Group D (which had been neither trained nor tested previously).

Figure I shows the differences between the trained group (Group B) and the untrained group (Group D) as indi-

cated by responses on the knowledge, attitude and action questionnaires. The chart graphically shows that there was a clear difference between the two groups in knowledge with Group B answering better than 13 out of the 30 questions correctly while Group D only answered 10 questions correctly. The small differences in both attitude and action are also apparent in the chart. Group B's (the training group) answers to the attitude questions indicated a slightly less favorable attitude towards problem situations (3.3 out of a possible 7 as compared with the untrained group's responses which were 3.5).

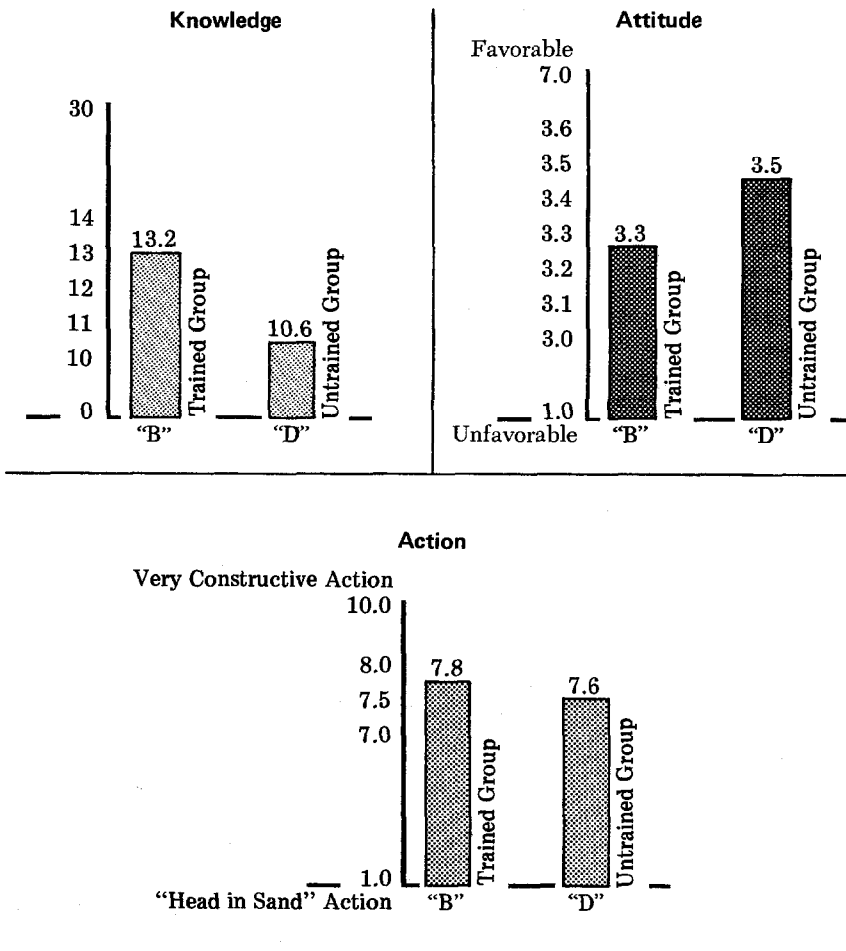
The trained group's answers to the action questions indicated a slightly more constructive "I'll do something about the problem" action pattern, though once again the differences (7.8 out of a possible 10 for the trained group as compared to 7.6 for the untrained group) were very small. In a similar manner, we deduced the effectiveness of the administration of the questionnaires alone and the combination of the questionnaires and the training.

RELATIVE IMPOTENCE OF TRAINING

Our findings suggest the following conclusions about the effectiveness of training: (1) the changes associated with training alone are small; (2) training serves many unintended ceremonial functions; (3) the administration of questionnaires before training "opens up" the supervisor and makes him more receptive to the training material; (4) testing is a potent change agent independent of training; (5) one way to improve the probability of change associated with training is through the selection of individuals for training on the basis of the match between their predispositions and the demands of training.

Our information confirms what most practicing managers have long suspected: that, taking the entire manage-

Figure 1. The Training Effect



ment staff as a whole, training produces only minor changes. In our study, the major impact of training was in the knowledge area, where training was associated with a statistically significant improvement. In both attitude and action, however, training was associated with only some minor changes towards more constructive action and attitudes, but the magnitude of these changes rarely reached the level of statistical significance.

To be certain that the questionnaires did not miss any significant changes which might have been associated with the training, we interviewed all supervisors several weeks after the training program. This interviewing revealed that, by and large, the supervisors also felt greater awareness of the subject matter. Alternatively, some supervisors stated that while they really did not learn anything *new*, the training did remind them of things they "already knew." In addition, most supervisors felt this learning would be permanent - that is, they learned something which would stay with them.

The relative impotence of the training, while discouraging to some, was not totally unexpected. These findings are typical of those reported by previous researchers such as Fleishman, Canter and Mahler.

THE CEREMONIAL ASPECTS OF TRAINING

The training did have several unanticipated effects. Interviewing at the conclusion of training indicated that, from the supervisor's point of view, what they learned was purely secondary. Rather, participation in the training provided an opportunity to share problems with other similarly situated individuals. Even if the supervisor disagreed with the opinions of the others, he generally felt relieved to know he was not the only one who was not confident about the "right thing to do." Many supervisors discovered that others shared their own feelings of frustration and aloneness. The thera-

peutic value of these sessions is best illustrated by the persistent request for the formation of a "supervisors anonymous," where supervisors could meet periodically and discuss mutual problems.

In addition, the training also served to indicate that the organization cared about the problems of its supervisors. By asking supervisors to attend a training program and all that went with it, (e.g., having formal memorandums sent to them, placing telephone calls to their place of work and presenting graduation certificates) the organization indicated that, despite the feelings of many supervisors to the contrary, the organization really did know that they existed.

This feeling of inclusion served to increase the identification of the individual supervisor with the organization. Attendance at these sessions, the formal memos, the telephone calls, and the certificates, all were visible symbols to everyone of the importance of the supervisor. At the same time, the training helped to convince supervisors that they really were supervisors with an important job to do.

One of the writers recalls that in his own industrial experience, the most successful training program was the program which followed on the heels of a sharp reduction in personnel. Coming as it did in a period of economic austerity, the training program was visible proof of the organization's interest in the supervisor and its long run commitment to them.

MANAGEMENT AWARENESS

Management should be aware of and concerned with these ceremonial aspects. The actual content of the training may be of secondary importance, whereas, the opportunity to participate in the training, in its own right, may be most important. Furthermore, the existence of these ceremonial effects also suggests that management take steps to increase the probability of their occurrence. One way to encour-

age more identification with the company, for instance, might be through an increase in the difficulty of a training program. A good deal of evidence indicates that, within reason, the more difficult something is to attain, the more desirable it is. Therefore, increases in rigor of the program, thereby making completion more difficult, may render the program itself more desirable. A good example of this notion might be pre-supervisory training. By making pre-supervisory training more difficult, it might well make the job of supervisor seem more attractive.

This increased rigor is an important part of the training process, not only for the individual but also for his significant others, such as the immediate superior and fellow supervisors from whom he derives a good deal of the guidelines for his behavior. These significant others probably share a great faith in education, as do vast segments of our society. Therefore, a supervisor who attends a training course should be "better" at the end of that course. The taking of a test and the awarding of a certificate (suggesting the passing of that test) may well provide highly visible "proof" to the boss and others that the supervisor really has improved. Regardless of whether this improvement is real or in name only, other persons are likely to treat this individual differently and expect him to act differently. The change in the expectation of the significant others, may be the most important change associated with training.

This strongly suggests that other training programs should include long reading lists, lectures, difficult exams and, most of all, someone who does not pass. These devices increase the rigor of the training, therefore, making it more desirable. At the same time, these devices heighten the ceremonial effects of training and may increase the effectiveness of training. Over and over again, supervisors told us, "I may not have learned anything new, but I

feel much better about my job since I went to the training." These slippery, but crucial changes in self-concept, morale and identification with the company, may represent the most significant changes associated with a training program and, as our supervisors indicated in the interviews, may be far longer lasting than other skill or information learning which takes place. The presence and potency of these ceremonial aspects of training is the second major conclusion of this study.

OPENING SUPERVISORS UP WITH TESTING

We discovered that those supervisors who completed the questionnaires *before training* actually performed better than those supervisors who did not complete the questionnaires. This suggests that the effectiveness of training may be augmented by the administration of questionnaires before training. There are two possible explanations for this occurrence. The most obvious is the saliency effect of the questionnaires. The questionnaire items themselves may have established a perceptual "early warning system" to either the correct answers and/or important areas to be discussed in the training. This selective perception either may have facilitated actual learning or made the supervisors "test wise" so that they knew what answers to give at the second administration of the questionnaires.

A second possible explanation arises out of the supervisor's desire to reduce the anxiety created by the test. Because of the anxiety concerning both the "correct answers" to give on the test and the "proper thing to do" in actual situations, the supervisors probably were receptive to information which could resolve this anxiety. The training program provided just such information. In other words, the testing may have "opened up" the supervisors and made them more receptive to the information presented in the training program.

TESTING BY-PRODUCTS

Whatever the explanation, the fact is clear that the combination of testing and training is more effective in producing change than training alone. This observation may be useful in a wide range of training programs. In training foremen, for instance, in interpreting the language of collective bargaining agreement, a test before training not only sensitizes the foremen to important information to be reviewed in the training, it also creates some anxiety concerning the right answers. Both by-products of the testing probably increase the effectiveness of the training program.

Testing may be useful not only when the training deals with new information, as in the example above, but also where it reviews information presumably already possessed by the supervisor. For example, taking a test reviewing the work simplification techniques which had been taught years ago probably would increase the saliency of these techniques to the supervisor. This reminder probably also would induce some re-thinking of these work simplification techniques and possibly even result in some new work simplification ideas.

TESTING AS AN INDEPENDENT CHANGE AGENT

In contrast to training, our information indicated that the completion of the questionnaires, *alone*, was a far more effective change agent. These questionnaires, it should be recalled, are not the typical personnel or personality type of test. Rather, they were the yardsticks we developed to measure change. The sharpest, most dramatic and most consistent changes were those which were associated with the testing experience. For instance, testing alone produced statistically significant changes across the board in both attitude and action. This dramatic questionnaire effect had not been reported in previous training studies, possibly because previous studies did not employ as rigorous an evaluation design.

These dramatic changes, induced by testing, may have been the result of increased saliency and anxiety. There is no doubt that asking questions about a subject stimulates some thinking about that subject. Supervisor after supervisor told us that the questions forced them to think about the subject intensively for perhaps the first time. This made the supervisors much more aware of the subject and its ramifications. This increased saliency, in at least some individuals, probably led to an introspective re-examination and re-thinking of current attitudes and behavior. This re-examination and doubt concerning correctness of current modes of behavior, in turn, may have led to the many changes.

Concurrent with this increased awareness was a mild anxiety over the "correct" answers. Since many questions were obtuse attitudinal items, they did not provide any clue as to the "correct" answers. Supervisors were constantly raising the questions "How do my answers compare to the others?" and "What is the right answer?" The frequency of these questions clearly indicates the anxiety accompanying the questionnaires.

The anxiety and saliency produced by the test may be useful independent of the training. In our study, the testing experience was associated with sharply more negative attitudes and less constructive action patterns. Yet, we discovered, in working with the data, that while most supervisors have more negative attitudes and actions after testing, some supervisors actually became more favorable in attitudes and action. Apparently, with some supervisors, testing alone produced precisely the same set of favorable attitudes and constructive action patterns which were the objectives of the training program. This suggests that, in other training programs, for some supervisors, testing alone might accomplish the same changes as training. In short, testing for some persons can serve as a substitute for training.

THE SELECTION AND MATCHING APPROACH

To determine which supervisors were most likely to change favorably after testing alone, we gathered various personality and background information from all supervisors. We then ran a multiple regression analysis to isolate those personality and background traits which were characteristic of the supervisors who had more favorable attitudes and more constructive action patterns after the testing experience. We also ran the same analysis to determine the personality profile of those individuals who were most likely to have more favorable attitudes and more constructive action patterns after the training experience. Table II details the personality profile of those supervisors who were most likely to change positively after either testing or training.

Interestingly enough, as Table II indicates, in our study the personality profile of the supervisor who changes favorably after training is almost a complete opposite of his fellow supervisor who changes favorably after testing. This suggests that there are two separate groups of individuals likely to change favorably — one group which is

likely to change favorably after testing and another group which is likely to show the same favorable change after training. By statistical manipulation, we know that if those supervisors who were most likely to change favorably after testing were selected in advance, and given only the tests, the probability of favorable change would have risen by 30 per cent.

Similarly, if those different supervisors, who were most likely to change favorably after training, were selected in advance and given only the training, the probability of favorable change would have risen by an additional 20 per cent. Thus, if those individuals who were most susceptible to favorable change would have been matched with the "correct" change experience (either testing or training) the probability of favorable change would have increased by approximately 50 per cent.

PREDISPOSITION AND ANXIETY

We have labelled this method of increasing the effectiveness of training as the "selection and matching approach." This approach has application in a broad range of training programs, rests on two assumptions. The first is

that the individual supervisor brings to the training experience the predispositions to change in a certain direction. These predispositions are the result of background, personality and on-the-job factors. It is then the task of the training to bring out these potentialities for change in the desired direction.

In addition to these individual predispositions, we assume, secondly, that training itself imposes certain demands on the individual. This particular training, for instance, dealt with a subject which had a high emotional content. The subject posed a threat to individuals with certain personalities and in certain organizational positions. The training created anxiety and uncertainty while at the same time it offered information which could be used to resolve that anxiety.

As an example, it is apparent that the "succeeder," or the one who changes favorably after training, above all, is a person who is able to withstand the questioning of what he already knows and the uncertainty this produces which is generated by exposure to new information. This ability to withstand uncertainty provides the opportunity for the individual with the personality traits of high self-esteem and high-authoritarianism to adopt more favorable attitudes and actions which flow from the new information.

The evidence also indicates that individuals who are marginal in an organization, the very young, the very old, or the female supervisor, and those who are probably prone to anxiety, are more likely to change favorably.

In essence, we propose to apply to the training area the selection and placement concepts which industrial psychologists and practicing managers have amply demonstrated can lead to sharp improvements in job performance. We strongly urge that the effectiveness of training may be improved dramatically through selection in advance of those individuals most likely to benefit from the given kind of training.

Table II
PROFILE OF THOSE WHO CHANGED FAVORABLY AFTER TRAINING OR TESTING

<u>TRAINING</u>	<u>TESTING</u>
Ability to tolerate ambiguous uncertain situations	Inability to tolerate ambiguous uncertain situations
High self-esteem	Low self-esteem
High authoritarianism	Low authoritarianism
High intelligence	Low intelligence
Female	Male
Younger age	Older age
Relatively less supervisory experience	Relatively more supervisory experience
Supervision of fewer persons	Supervision of more persons
Supervision of office work	Supervision of unskilled work

SUGGESTIONS FOR IMPROVEMENT

While all of the foregoing conclusions are very interesting, they carry out only the first part of our basic strategy. This information is valuable only to the extent that it can be translated into constructive improvements in ongoing or projected management training efforts. There are at least three suggestions for practical application which come from this study.

First and foremost, we urge a functional role for the questionnaire either independent of, or in concert with, training. As this study demonstrates in many ways, completing the questionnaire before actual training can add to the effectiveness of training by sensitizing the trainee to important information or by raising doubts and anxieties which create a readiness to seek additional information. Furthermore, questionnaires may be useful not only where training deals with new information but also where it reviews information presumably already possessed by the trainee.

The observation that testing for some people may be as effective as training in producing favorable results, highlights the second recommendation. We suggest that training specialists ascertain the characteristics of those persons who change favorably in given training programs and then "feed this back" by selecting supervisors for these programs who possess these characteristics.

This advance selection may not be possible in all situations. Information about supervisor's personality and background, for instance, may not exist on which to base any selection, although our experience has been that a wealth of information is contained in personnel records.

SELECTIVE TRAINING MEDIA

In addition, it may not be practical to withhold training from some supervisors. As an alternative to the selection and matching approach it is possible to use a wide range of training techniques. Through the "shotgun" use

of lecture groups, visual aids, cases, group discussion and role-playing it is possible to appeal to a wide range of individuals, some of whom will be responsive to lecture materials, others will be responsive to group discussion and so forth. Since no one training technique will match the predispositions of every supervisor, it is conceivable that the use of the widest possible range of techniques will touch enough different supervisors to improve the effectiveness of the training.

Thirdly, the ceremonial aspects of training should be deliberately planned for and fostered. Training, for instance, might be a good way to reduce tensions arising out of major organizational and technological change. Sponsoring an inservice training program to discuss and review a new technological process might not only teach the participants something about that process but also help to drain off some of the uncertainty and hostility which accompanies technological change. Also passage from one organizational status to another might be smoothed by the judicious use of in-service or university training. A training program for new foremen, for instance, might encourage them to identify more with the company even though what they learn may be of very little practical use. Many university management development programs also serve this purpose quite well.

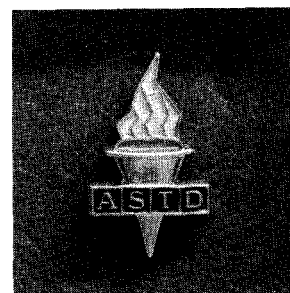
Enhancing the ceremonial aspects of training may increase the effectiveness of the training program itself. Rather than making training "easy to participate in" perhaps management should concentrate on making it "hard to pass." Tests, reading lists, outside preparation, some people who do not pass, certificates and formal recognition of success all might add to the ceremonial effects of training.

SUMMARY

In short, we suggest that thoughtful managers look to training not only for the bread and butter changes in individuals' skills, knowledge and attitude

it can produce, but also for the ceremonial side effects that produce improved supervisory morale, increased identification with the organization and a decrease in organization tensions. To improve the effectiveness of training we suggest that testing be employed and that individuals be selected in advance who are most likely to succeed in a given type of training.

Management training may not be all that its proponents wish it to be, but there are several ways to improve its effectiveness.



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