
JOB METHODS TRAINING FOLLOW-UP

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IN the past, increased production was commonly obtained by increasing the number of persons employed. This may be an easy way to step up output—*if* there are sufficient workers available, and *if* unit labor costs are to be disregarded. But, economical or not, it cannot be used today. We have reached the point where this simple arithmetical approach to the problem is stymied by the scarcity of available workers.

Our attention is turned, therefore, to a much more enlightened approach to the problem. We must find ways to get more production *by making more effective use of the men and machines now available*. Limited manpower requires that we find ways to increase our output with the men we now have—or to maintain our present output with fewer men.

CREATION OF JOB METHODS TRAINING

The necessity for increased production with limited manpower and machine power was the “mother” of the Job Methods Training invention, one of the trinity of training programs conceived and patterned by Glenn Gardiner, an executive of our company, while serving as a District Director of the Training Within Industry Division of the War Manpower Commission. The three training programs are Job Instructor Training, Job Methods Training, and Job Relations Training.

Working as he did with hundreds of war production companies, Mr. Gardner was impressed by the critical production problems growing out of increasing shortages of manpower. He decided that a quick, intensive training program should be devised to develop among industrial foremen and department heads the ability to improve methods used on the jobs under their supervision. He established the following five requisites for such a training program:

1. It must be one by which a plant could be *combed quickly* to discover *all the jobs* on which possibilities of methods improvement existed.
2. It must be a training program which could be given to supervisors, foremen, and their assistants, and which would be of practical everyday use to them.
3. It must be a *streamlined program* that could be presented to a group of 10 or 12 men or women in a period of 10 hours.

4. It must be based upon sound methods engineering principles, but these principles must be reduced to the simplest possible form.
5. It must be a training program cut to the pattern of the already highly successful and popular Job *Instructor* Training program, which Mr. Gardiner had previously developed, and which had been adopted as a national training program in both the United States and Canada.

Having set up these requisites, Mr. Gardiner assigned to Clifton Cox, of his New Jersey District Training Within Industry staff, the responsibility for working out the details of the Job Methods Training program.

The program which resulted was completed and introduced in New Jersey war industries early in 1942. Its practicability was quickly recognized, and it was established as a national training program by Training Within Industry early in 1943. Now it is getting well under way throughout the country. Canadian war industries also have been quick to recognize its merits, and Mr. Cox recently assisted the Training Bureau of the Canadian Department of Labour in setting up the Job Methods Training program for Canada.

The details of this program were presented and demonstrated by Mr. Cox at the last American Management Association Production Conference held in New York, and a detailed description of the plan itself is given in AMA Production Series Number 140.

JMT AN EFFECTIVE PRODUCTION TOOL

Job Methods Training should be thought of as a *real production tool* because it gets tangible results in the form of increased production. In five two-hour sessions a group of 10 to 12 supervisors is coached in a procedure by which a job may be improved to make possible "greater quantities of quality products in less time by making the best use of manpower, machines, and materials now available."

During the training period each foreman actually applies the procedure outlined for improving job methods on at least one of his own jobs. He thus demonstrates that he *can* apply the *four basic steps* of job methods improvement to his own work. And if he and the other foremen in the organization go further and apply the system to all the jobs under their supervision, it is obvious that all the jobs in the plant can be processed for methods improvement within a relatively short period. Thus, although the time spent in the five two-hour sessions will pay for itself over and over again through the improvements developed during the actual training period, the program will earn even larger dividends if management follows it up.

The 10-hour training period puts a valuable "production tool" in the hands of the supervisor. But a tool has real value only when it is used—the best axe will not cut down a tree unless someone gets on the end of the handle and swings. Job Methods Training is easy to follow up because its results are tangible and measurable—definitely. Whether the foreman uses the tool or not can be easily checked. In our company JMT started as a *training* program.

and blossomed into a practical *operating* program that became an inescapable part of every supervisor's job.

A CASE HISTORY IN JOB METHODS TRAINING FOLLOW-UP

Responsibility for Job Methods Training and its follow-up was made a major function of our standards department. Months before we actually started the program, I, as manager of the standards department, participated in a Job Methods Training Institute at the TWI District Headquarters, where I was certified as a Job Methods Trainer and qualified to conduct the official Job Methods Training program in war industries. Then I conducted the program in a variety of industries in our area.

When we were ready to launch JMT in our own mills, a meeting was arranged with the mill managers and chief executives of the company. At this meeting an "appreciation session" was conducted, in which the first session of JMT was presented to the executive group exactly as it would be given to the supervisors. As a result, the top executives agreed that the program was a practical one and that it should be given to the supervisors in the line organization as well as to the staff personnel and the supervisory personnel in the office. Everyone in top management, including the president of the company, was thoroughly sold on the program before it started.

In the meantime, one of our standards engineers had been sent to a Job Methods Training Institute at Training Within Industry Headquarters, where he, also, was certified to conduct the JMT program. He is now conducting two sessions per day, three days a week, and will continue on this schedule until all overseers, foremen, assistant foremen, and lead men in the organization are trained. In the time between actual training sessions, he conducts a follow-up program which operates something like this:

At one of the two-hour sessions we ask each man to submit a list of 10 jobs which he supervises. At the end of the fifth or final session, he is handed a portfolio binder with a list of these 10 jobs inserted as an index under the title, "Jobs for Future Study." Immediately following this index are 10 sets of forms for use in the methods improvement, each consisting of one job breakdown sheet for the present method, one job breakdown sheet for the proposed method, and two suggestion sheets with carbon paper between them.

On the inside cover of the portfolio is an introductory page with a short message from the president of the company and a set of instructions from the supervisor's superintendent.

The president's statement reads, "A man's ability as a supervisor can be measured by the improvements he is able to make on the way jobs are done in his department."

The superintendent's instructions follow:

You have just finished some practical instruction in how to improve methods on the jobs under your supervision.

No program is effective if we do not continue to use the tools that are put into our hands. We are providing for a continuation of this work by giving you this folder with the necessary breakdown sheets and suggestion blanks to break down and improve jobs under your supervision.

In the front of the folder is the list of jobs in your department which you recently submitted. You will be expected to handle one of these jobs per week in the following manner, and your progress will be checked periodically:

1. Select one of these jobs and make a complete list of the details of its operation *even if you do not see any way in which you can improve it at present.*
 2. Then, after listing all the details, apply Step II and Step III of the Plan.
 3. Write up your suggestion for improvement in duplicate on the Suggestion Sheet. A sheet of carbon paper is provided for this purpose.
 4. Tear out the *original* of this Suggestion Sheet and give it to your overseer. Make up drawings and charts, if these are necessary to sell your idea, and discuss your suggestions with your overseer.
 5. Your overseer will discuss your idea with the proper parties, such as his mill superintendent, the engineering department, the maintenance department, or the standards department, and will initiate steps to put your idea into effect if it is economically practical at this time.
- Don't wait until you have forgotten how this plan works. Start today to break down one of these jobs.

Once each week our Job Methods Trainer checks with each overseer to find out whether each foreman scheduled to submit a new suggestion has done so. If a foreman has failed to turn in a suggestion, the Job Methods Trainer goes directly to him to find out what has held up his project. It may be that the foreman is having some difficulty with the job he is trying to improve. If so, the Job Methods Trainer, who is himself a standards engineer, goes over the job with him, gives him suggestions, and makes certain that all the operations of the job are thoroughly studied for improvements and economies.

The Job Methods Trainer follows through to insure that the suggestions turned in to the overseer are not neglected. He is also responsible for maintaining a card record of the improved methods that each supervisor submits. Here is the record card form that we use:

Job No.	Description of Improvement	Folder		Disposition	Remarks
		Date Due	Given to Overseer		
Demonstration					

Thus we maintain an up-to-date record of the progress made by each supervisor from the time he finishes the Job Methods Training program until he

has submitted suggestions for improvement of the 10 jobs listed in his index. These records are kept in the standards department; and, as manager of that department, I check each suggested improvement and follow through until the project is completed. In many instances the suggested improvements may be enlarged upon by the standards department; often engineering details need to be perfected further. Needless to say, the JMT follow-up program serves as a feeder to our standards department and keeps us very busy.

In addition to the individual record cards, we maintain a spread sheet for each mill which gives a one-line description of each suggestion, the name of the man who made the suggestion, the estimated cost of installing the new method, the estimated savings, the O.K. of the mill superintendent in charge of the department involved, the disposition of the proposal, and a list of approvals secured from proper authorities. This record also shows the actual cost of putting the suggestion into effect and the actual savings finally realized.

As a final "buttoning up" of a supervisor's suggested job method improvement, the standards department sends top management a brief "cost reduction report" giving the name of the supervisor who made the suggestion, a brief description of the improvement, the estimated percentage increase in production, the estimated savings per year, the cost of installing the new method, and the net savings for the first year. Thus the president and the assistant to the president of the company are currently informed of the net results of the methods improvements installed throughout our mills. Incidentally, this is the most effective way to keep the training program thoroughly sold all the way up the line.

I am not going to engulf you with dollars-and-cents figures on savings, figures on workers stepped up to more important jobs, or statistics on increased production. If I did, I am afraid you would think I was exaggerating. Besides, you might wonder what my standards department personnel had been doing before JMT came along. Suffice it to say that the economies are substantial, and that there are several result factors that I should like to summarize, as follows:

1. JMT, with a systematic follow-up, will provide any company with a quick, practical means of analyzing every productive and non-productive operation, thus making possible more effective use of manpower, machines, and material.
2. The JMT program, with proper follow-up, will catch the hundreds of little economies that no standards department or industrial engineering department could ever get around to in the normal practice of its functions.
3. Such a program is a magnificent morale builder for the supervisory personnel. It gives the supervisors an opportunity to show what they can do and insures that they get credit for it. It sells methods engineering to an entire organization because the entire organization participates. Thus the situation is the direct opposite of the usual one, in which the supervisors feel that the methods engineers or industrial engineers come into their departments and try to "show them up."

4. The JMT program induces the supervisors to use their minds in making their improvements succeed—rather than in thinking up reasons why somebody else's improvement will not work.
5. The JMT program and the follow-up lay a foundation for an entirely different attitude toward constant improvement, because it teaches supervisors that further improvement is always possible.
6. JMT develops in supervisors the "questioning attitude," which is so important a prerequisite to improvement.

We can testify that Job Methods Training is the most effective "production tonic" you can feed your supervisory personnel. Our experience, in fact, bears out the statement made by Lt. Colonel J. H. White, Jr., Chief of the Administrative Group of Picatinny Arsenal, "Job Methods Training is one of the most worthwhile developments of the war."