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ABSTRACT

Due to recent industrial growth in Mississippi and the shortage of trained manpower in numerous occupations, start-up training programs have originated to provide a pretrained work force for new or expanding industry in the State. Each start-up training program is a joint effort between a new or expanding industry and a public educational institution that trains prospective company applicants for specific jobs prior to the start of plant operation. Some benefits are: higher standard of living for employees through better jobs, opportunity for prospective employees to explore new and different work before leaving present jobs, high percentage of job placement for employees, use of collective resources of total community, and the elevation of vocational-technical programs to a new level of importance. The guide outlines the steps in developing and accomplishing objectives for each individual program as: establishing rapport, identifying program objectives, specifying training methods/means, conducting the training, and evaluating the program. A complexity of the program is the large number of tasks to be completed in a relatively short period of time. Six industries using start-up training programs are described--areas of training, numbers of participants trained and placed, types of training aids, and unique features of training program. (EA)

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# START-UP TRAINING IN MISSISSIPPI

## PROGRAM DEVELOPMENT GUIDE

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## FOREWORD

Concerned citizens and government officials made a decision in 1972 which consolidated their efforts into a major organized program of start-up training in Mississippi. The decision was based on a recognized growing need to prepare skilled and knowledgeable workers for new career opportunities resulting from new and expanding industries in the State. Start-up training offers a challenge and an opportunity for local industrial development groups, junior college presidents, school superintendents, and vocational-technical educators to assist in developing specialized training programs for a wide range of new industrial jobs.

This guide presents a logical sequence of concepts which will help persons to understand start-up training. It alerts responsible officials to necessary decision points and provides a base for understanding the purpose and desired nature of a start-up training program.

# The Management of Start-Up Training Programs

Recent industrial growth in Mississippi has raised the curtain on numerous occupations or major job functions for which there is a shortage of trained manpower. Existing vocational-technical curriculums do not cover many of the new jobs now open in these new industries. In many instances, existing facilities and equipment in industry cannot be duplicated or simulated in educational institutions to provide realistic job training. A new way has been found for minimizing these problems through direct use of industry resources for specialized instruction. It is called "start-up training" and has received top priority from the Vocational-Technical Division of the Mississippi State Department of Education.

A start-up training program provides a pre-trained work force for an industry that is locating in the State or for an expanding industry within the State. The prospective employees who participate in each program learn new skills which enable the new industry to achieve maximum productivity at a rapid pace.

Start-up training programs are extremely complex because of the large number of tasks which must be completed in a relatively short period of time. The complexity of such training programs is magnified because of the multiplicity of agencies involved in the training programs. Their individual activities, roles, and functions require a high degree of coordination. The program coordinator and his staff seldom have more than four months to complete a training assignment.

Each start-up training program is directed toward one single industry, plant, or firm which manufactures or constructs a particular type of product. Therefore, a single set of objectives is identified and the program is terminated upon the accomplishment of these objectives. The development and accomplishment of the objectives require a series of procedural steps. These steps can be classified according to the following phases of work: (1) establishing rapport; (2) identifying program objectives; (3) specifying training methods/means; (4) conducting the training; and (5) evaluating the program.

The following paragraphs bring the steps in this process into prospective and describe their relevance to start-up training programs. The accomplishment of these steps presents a formidable management problem. However, program success can be achieved through efficient scheduling and viable relationships among persons and agencies involved. Coordination, communication, and decision-making capabilities are the vehicles for conducting a training program. Rapport among agencies and individuals must be established early in the program.

## **PHASE I: ESTABLISHING RAPPORT**

**Determine when to begin planning for the start-up training program.** Program planning should not begin before the industry has made a firm commitment to locate its plant somewhere in the State. A rule of thumb is to begin work after the industry has acquired a plant site and has accepted the bid for plant construction. A commitment to

locate may become known through the Mississippi Agricultural and Industrial Board, the Mississippi Economic Council, the Mississippi Research and Development Center, or any of the many area development groups which are working with the prospective industry. The State Coordinator of Industrial Training, located in the office of the State Division of Vocational-Technical Education, works confidentially with industrial development groups and the industry to initiate recruiting and training activities. The quick-response, coordinated network of training is administered by the State Division of Vocational-Technical Education through the state-wide system of junior colleges and high school training centers. The local director of vocational-technical education will be notified immediately after an industry has expressed interest in a start-up training program. A visit to headquarters of the parent company usually is necessary to analyze in detail the training needs. A visit would probably not be necessary if the parent plant has an ongoing company-sponsored training function and only needs assistance in implementing the function in the new plant.

**Assign a coordinator to the program.** The program coordinator should have the authority required, at any point in the program, to make decisions which will help achieve training goals. He should be provided sufficient time to monitor the program from beginning to end, initiate corrective action when necessary, and facilitate the work of the program staff. It is recommended that the local director of vocational-technical education assume this role.

**Identify the liaison contact with the industry.** Manpower and training information is obtained from the parent plant which is usually located in another state. A person from the parent industry must be assigned to coordinate all training and resource needs from the parent plant. However, the local director/coordinator has a responsibility to follow up on commitments made by the industry.

**Define in writing the responsibilities of each leader of various segments of the start-up program.** The definition of these responsibilities should be a joint task of the educational institution and the new industry. This should be accomplished during the initial meetings between industry representatives, the school, and other agencies, such as the Mississippi Research and Curriculum Unit (R/CU) for Vocational-Technical Education at Mississippi State University, which will be involved in the program. The delineation of responsibilities must coincide with the development of the lead-time schedule of program activities. The lead-time schedule pinpoints the recruiting, testing, selecting, and training dates. It will be necessary to review and revise these plans and responsibilities at appropriate points during the program. The industry must cooperate fully with the program coordinator in furnishing needed information during planning, conducting, and evaluating the training program.

## **PHASE II: IDENTIFYING TRAINING OBJECTIVES**

**Identify the manpower requirements of the industry.** In addition to describing the number of workers in the various skill areas, this task includes specifying personal characteristics and experience requirements for each prospective employee. The levels of performance desired at the completion of the training program and future in-

service training needs should also be identified early in the project. These requirements must be shared with the person who will direct the recruitment, testing, and selection of trainees.

**Identify the date for plant start-up.** The lead-time schedule of training activities must be keyed to the dates established for initial start of plant production. All training materials must be developed or compiled prior to the dates established for each phase of training; therefore, a realistic period of time must be allowed for the development and implementation of various phases of training. The time available to prepare workers will also dictate the depth and type of training which can be provided.

**Determine how many people will be enrolled in the training program.** If the industry has 50 jobs to fill, a decision must be made whether to enroll 50 workers or to train more than 50 workers to insure an adequate supply of prospective company applicants. Some prospective employees who enroll in a start-up training program are not satisfactorily placed in jobs for the following reasons: (1) they do not successfully complete the program; (2) they refuse the employment offer; or (3) the company does not offer employment to the prospect.

**Determine how many people are available for training.** The time necessary for training will depend upon the current skills of prospective employees. A survey of prospective employees may show that extensive training is not necessary. An important factor to remember is that training must be keyed to the hours that prospective employees are available for training.

### **PHASE III: DETERMINING TRAINING METHODS/MEANS**

**Determine if cross training will be needed for key jobs.** More lead-time will be required to train personnel in multi-skilled areas. Jobs requiring "back-up" personnel must be identified early so that the proper criteria can be established for recruiting prospective employees. Certain precautions must be taken during the training program to insure adequate training in each area. Overtraining prospective employees should also be avoided, since this is economically unsound in start-up training programs.

**Determine if both pre-employment and on-the-job training are needed.** One or two weeks of orientation to the industry will help familiarize trainees with plant characteristics and industrial needs. However, direct use of industrial resources for specialized instruction in multi-skilled jobs is often the best method to handle certain phases of skill development needed for initial plant production. It is usually possible to provide some detailed manipulative instruction in the school facility by using industry resources. In cases where the industry equipment cannot be installed in the school facility, detailed training must be accomplished at the plant site. In either case, it has been found that additional training will be required after the workers are on the job. The educational institution must decide whether or not to participate in this training.

**Determine how instructors, equipment, and supplies will be furnished for training.** Coupled with this problem is whether the program will be identified with a

specific company or a specific area of training. If the resources are furnished by the company, the program is certain to be identified with the specific industry. It has been found that training programs in areas involving unique technical ~~skills and~~ knowledge are more easily conducted using the industry blueprints and parts and using plant personnel as instructors. The use of industry resources causes the training program to be more realistic from the standpoint of the trainee since he will be using the same procedures, equipment, and materials during training that he will find when he enters the job.

The instructors for the program should be selected on the basis of: (1) experience and knowledge directly related to the company's training needs and (2) proven success in teaching. Each instructor must be capable of planning and conducting training activities.

It is usually necessary to recruit instructors from sources outside the school, since the prior commitments of instructors in ongoing programs would prevent them from giving adequate attention to start-up training programs. However, instructors who are involved in similar training functions in the schools should be encouraged to observe the training activities in the start-up program for the purpose of studying current industrial processes.

It is often necessary to set up an educational environment within a short period of time. Preparing a teaching environment includes rewiring a facility to accommodate specialized equipment and arranging for desks, chalkboards, and other training equipment for use during instruction. This requires a great deal of flexibility in program administration and management, including quick action on moving basic training equipment from other training programs. It may be necessary to request special services from community groups and individuals to insure that these needs are fulfilled in time for the start of the training program. It is best to postpone the training if essential resources are not committed to the program on the scheduled start-date.

**Acquire a training site.** The local director or project leader has the options of using the regular institution or school training facilities, the industry site, or acquiring additional space off-campus for training purposes. If an industry locates at a site outside the immediate vicinity of the school, an off-campus training facility would be beneficial to recruiting prospective employees. The location of training facilities may be selected in cooperation with the community leadership in the area. If the training is held in the regular school facility, provisions must be made to prevent the program from interfering with ongoing programs.

**Determine if training aids will be necessary.** If so, an instructional materials specialist from the Research and Curriculum Unit for Vocational-Technical Education at Mississippi State University should coordinate all activities which are necessary to obtain or develop the needed material. The instructional materials specialist develops training manuals and associated lessons plans, prepares slide and audio tape presentations, and assembles training aids of various kinds from many sources. If training materials are to be developed by R/CU personnel, the individual responsible for the development of these instructional materials should be present at initial and subsequent policy meetings. The effectiveness of a media specialist is limited if



industrial decisions and training plans continually change; therefore, any decision affecting instructional materials development must involve the individual who is responsible for the development of training materials.

**Determine if regular students in other vocational-technical programs will be allowed to participate in the start-up training program.** Most start-up programs are offered in the evening; thus, it would be possible for day students to enroll without losing credits. Some phases of the instruction could serve as valuable supplemental career development units for students enrolled in two-year programs. However, it may be necessary to limit enrollment in start-up programs to only persons who will be available for employment after training.

**Determine who will recruit, test, screen, and refer prospective employees to the training program.** This task involves identifying: (1) the geographic area in which manpower can be located, (2) the skills that exist among workers in the area, (3) the number of workers with these skills who are likely to apply for training, and (4) the attitudes of potential job-seekers toward the company. The Mississippi Employment Service will assist in the screening of applicants for local training programs. The educational institution may elect to take full responsibility for administering pre-selection tests as an objective means of detecting strengths and weaknesses of training applicants. If such tests are used, it is the responsibility of the school to relate the performance on the tests to instructional plans.

The area offices of the State Employment Service have performed key roles in past start-up training programs. These roles have included publicizing the programs in their locale, counseling individuals interested in the training program, recruiting and referring applicants to the program, and placing graduates in jobs.

#### **PHASE IV: CONDUCTING THE TRAINING**

**Determine if a teacher-training program is needed for the project staff.** This program should be geared to helping the instructional staff understand: (1) the goals of training, (2) how to use the training aids prepared for the program, (3) appropriate teaching techniques to obtain desirable levels of performance, (4) counseling roles, and (5) evaluation techniques. These tasks are cumbersome unless the best instructors available are recruited for the start-up training program.

**Establish a routine of "positive discipline" in the training program.** Although the program should be conducted in an atmosphere of congeniality, it must be operated in an efficient manner and in accordance with standard work practices of the industry. The training program should parallel plant working conditions as nearly as possible. Each prospective employee must be made aware of policies and conditions which will affect future work habits. He should also be made aware of vital roles he will play when plant production begins. Special emphasis should be placed on attitude training, because this one factor affects all levels of industrial management and worker productivity.

**Conduct each training session from an agenda developed by the project staff.** Each staff member should have definite assignments in terms of the results expected. Then the program coordinator should continuously monitor the evolving aspects of the training program. Additionally, the coordinator should provide the training staff with a periodic summary of what remains to be accomplished and should adjust the strategy of training to the ever-changing demands of the prospective employees. Flexibility is a key factor in any training program; therefore, tentative plans for unexpected changes must be included in the program agenda.

## **PHASE V: EVALUATING THE PROJECT**

**Set aside time periodically to examine the effectiveness of the training activities.** The program director/coordinator should direct an evaluation which covers the process of training and the accomplishments of the trainees. A summary of the program evaluation should be sent to the R/OU staff for review and possible implementation in future training programs. Evaluation is essential because it helps identify specific worker characteristics and procedural training problems which occur under certain conditions.

**Review the ratings and accomplishments of each trainee periodically with the prospective employer.** This review is important because the new company must base the start of production operations on the skills and aspirations of the candidate employees.

**Recognize the educational accomplishments of each graduate.** It has been found that the presentation of certificates of achievement to each graduate is a high point in the start-up training program. This session should not be taken lightly. It is most beneficial to all concerned when planned separately from the regular instructional plans. Certificates seem to be appreciated less when presented haphazardly during the last instructional session.

**Assist all graduates in finding employment.** Start-up training programs may serve to build up much enthusiasm because of the job opportunities that may become available for the graduates. However, some graduates will decline employment with the particular industry for which the training was held. Also, the company will decline to hire some applicants. The educational institution has an obligation to try to provide placement services for all who need this assistance. The procedure is usually to refer all graduates to the area office of the Mississippi Employment Service where every effort is made to find suitable employment for the graduates.

**Enlist industry cooperation for a post-project on-the-job evaluation of employees.** This aspect of the start-up program is essential to improving future training efforts. An agreement of post-project evaluation requirements should be reached prior to a commitment to assist the industry in a training program. Post-project evaluation is particularly valuable during the critical early weeks of plant production. It should involve both the workers and industry management officials and

include detailed discussion and observation of the attitudes and abilities exhibited by those who participated in the start-up training program. If possible, the evaluation should include, as a comparison group, new workers who were hired by industry, but who did not participate in a start-up training program.

In summary, the processes presented here are general in nature, but emphasis has been given to basic guidelines for program planning and control. Educational institutions, manpower agencies, and industries are challenged to analyze these processes, use them when possible, and improve them as necessary.

## Start-Up Training A Look at the Benefits

Each start-up training program is a joint effort between a new or expanding industry in the state and a public educational institution. The program is designed to train prospective company applicants for specific jobs prior to the start of plant operations. When job training is a cooperative effort by a specific industry and an educational institution, several benefits occur.

**Start-up training makes it possible for Mississippians to achieve a higher standard of living through better jobs.** In the past, the State's economy was based primarily on agriculture and textile industries. As agriculture became more automated, small farms disappeared and many people were without jobs. Others were underemployed in low paying, unskilled jobs. Many citizens left the State to find jobs in the more industrialized states. The future is now bright for Mississippi because new and expanding industries are creating new jobs. Start-up training is an important factor in moving the untrained and underemployed individuals into productive and rewarding new careers.

**There is instant satisfaction on the part of the prospective employee because the instruction is associated with an immediate job opportunity.** Any individual who seeks occupational experience has a desire "to do something in particular and to do it well." Each participant in a start-up training program receives highly-specialized training based on clearly stated industry needs. Therefore, his value in the competitive labor market is significantly increased.

**Prospective employees can explore a new and different type work before leaving their present jobs.** There is no registration charge for those who enter the program. The learning experiences offered through the start-up program help each prospective employee adapt to work change under much more desirable circumstances than after employment. Participants can make the decision as to whether to pursue a new job opportunity at an early date. Through face-to-face, first name interchange with future managers and supervisors, prospective employees are able to determine if the job is compatible with their personal characteristics. Additionally, there is homogeneity in training groups because trainees and supervisors learn to function together as members of a cooperative organization.

**Since start-up training is designed for specific job openings, a high percentage of the graduates are offered employment and most accept.** A formal placement service is a vital part of each training program. Student progress is closely monitored, and this information is readily available to any prospective employer. During 1973, more than 7,000 citizens of the State benefited from this approach to placing people in the job market.

**Start-up training is thoroughly coalescent in that the collective resources of education, business and industry, manpower agencies, and the community at large are brought to bear on a specific training problem.** Subsequently, educators become better informed about industry. Such cooperative efforts insure that individuals are not preparing for nonexistent or disappearing jobs. An added benefit is that the objectives of regular vocational-technical programs can be modified on the basis of current industry processes. The 25 training manuals and supportive instructional materials produced by the Research and Curriculum Unit for start-up training programs during 1973 are valuable resources for program revisions and/or expansions.

**Opening the doors of the school for start-up training elevates all vocational-technical programs to a new level of importance.** The eyes of the community are certain to focus on the attraction of the industry and school partnership. Participants in the start-up training program become "pipelines" for communicating the diversified training functions of the school to the community. No doubt, many of these individuals will want to serve on future advisory committees for ongoing programs and assist in curriculum development for career education at the elementary, secondary, and/or post-secondary levels.

**The length of training in a start-up training program is not limited to a set class period of weeks, months, semesters, or years.** The training time, as well as the content, is flexible. Instruction is often by small groups or even on a one-to-one ratio. Prospective employees are often cross-trained for several key jobs. The flexibility of start-up training permits the design of programs for companies whose interests range from assembling electric motors and transformers to operating printing presses and sawmill planer equipment. Additionally, this flexibility allows for taking the training to the people in rural areas distantly removed from a vocational-technical center. The training can be provided at a temporary facility located near the industry, but still coordinated through a vocational-technical school.

**Prospective company applicants are trained at no cost to the industry.** When an employer invests in a machine, he owns the machine. However, when an employer invests in employee training, he has no guarantee that he will realize the full benefit from the original training expense. Not having to pay the prospective employee during the nonproductive period is an obvious saving to the industry. The new industry is also able to start operations more quickly and efficiently with trained and competent manpower.

**Individuals who are unable to profit from the training are terminated by the school and not by the industry.** All who start the program will not necessarily finish. Each prospective employee who enrolls in the program is aware that the instructional program is controlled by the school and not by the industry. His training may be

stopped by the instructor or the program coordinator if his progress is not satisfactory. Initial turnover in a new industry is reduced because the industry receives applications from those who successfully complete the program.

Recent national reports from educational and industrial associations indicate that many industrial enterprises are disillusioned with vocational educational programs. Some have developed in-house job training capabilities rather than rely on vocational education. A common complaint is that we continue to train people for jobs within a broad occupational field which no longer are needed. Many vocational educators are hesitant about inviting industry to become involved for fear of creating major changes in the regular programs. Mississippi is meeting these problems "head-on" through imaginative start-up training programs. In the process, industry is learning more about the worth of vocational-technical education, and educators are becoming more responsive to shifting manpower needs.

## Typical Programs

During 1972-73, a variety of new and expanding industries benefited from start-up training programs in Mississippi. The skills required for the starting work force in each industry were defined in detail and training programs were designed to match the industry's start-up plans. Special operations manuals and other quality training aids were developed or compiled for use in each training program. Modern training facilities and equipment were arranged for each training program, and qualified instructors were employed to implement the latest industrial teaching methods in preparing each start-up work force.

A schematic outline which shows the structure of a typical start-up training program is presented in Chart 1. Low risk employees, such as supervisors and maintenance personnel, are hired initially by the new industry. These employees become oriented to the industry through specific assignments on equipment installation and plant preparation. Some receive intensive training on equipment which requires specialized installation, operation, and maintenance. The specialized training is either provided by the parent plant and/or the equipment manufacturer. These employees receive first consideration when instructors are selected for the pre-employment training program.

The initial period of training includes orientation instruction for all prospective employees. The purpose of orientation is to show how the job for which they are training fits into the entire production process. The mode of training becomes more specialized as occupational roles are clarified.

Graduates of the pre-employment training programs are employed on the basis of their interest in jobs, aptitude and ability to perform work assignments, and their ability to work in harmony with future supervisors and fellow employees. The pre-

CHART 1

PRE-PRODUCTION TRAINING

E M P L O Y  
E M P L O Y

|                               | PRE-EMPLOYMENT |                |                  | EMPLOYMENT |           |            |
|-------------------------------|----------------|----------------|------------------|------------|-----------|------------|
|                               | ORIENTATION    | SPECIALIZATION |                  | SHAKEDOWN  | SHAKEDOWN | PRODUCTION |
| SELECT SUPERVISORS            |                |                |                  |            |           |            |
| SELECT KEY SKILLED EMPLOYEES  | ORIENTATION    | SPECIALIZATION |                  | SHAKEDOWN  | SHAKEDOWN | PRODUCTION |
|                               | ORIENTATION    | SPECIALIZATION |                  |            |           |            |
| SELECT (CANDIDATES) PROSPECTS | ORIENTATION    | SPECIALIZATION | SELECT GRADUATES |            |           |            |

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employment training is followed immediately by a period of on-the-job training (shakedown). The initial on-the-job training is a period of readying men and equipment for plant production. This training also focuses on developing the skills and rhythm to operate equipment and/or construct and assemble parts on a productive basis.

Information about several industries which benefited from start-up training programs during 1973 are shown in Chart 2. These programs were developed through cooperation of the State Division of Vocational-Technical Education, junior college departments of vocational-technical education, area offices of the Mississippi Employment Service, and the Research and Curriculum Unit at Mississippi State University.

The training program conducted at Bruce, Mississippi for Weyerhaeuser's Southern Pine Sawmill was three weeks in length and covered 36 hours of instruction. All classes were held at night. People who desired training for the forest products industry filed an application with the area office of the Mississippi Employment Service. Personnel in this office interviewed, screened, and referred applicants to the training program. One week of orientation instruction was conducted in the Bruce High School Auditorium. The remaining two weeks of training were conducted at the Weyerhaeuser Mill. The instructional content included company information, raw materials base, terminology, manufacturing processes, units of measurement, grading, safety and first aid, and detailed hands-on experiences in equipment operation.



Lumber Grading at Weyerhaeuser

CHART 2

TYPICAL INDUSTRIES SERVED BY START-UP TRAINING

| NAME AND LOCATION OF INDUSTRY                                   | AREAS OF TRAINING  | TOTAL NUMBER TRAINED AND PLACED | TYPE TRAINING AIDS PREPARED  | UNIQUE FEATURES OF TRAINING PROGRAM  |
|---|--|---------------------------------|--|--|
| Weyerhaeuser Southern Pine Sawmill<br>Bruce, Mississippi        | Nomenclature<br>Safety and First Aid<br>Quality Control<br>Grading<br>Basic Math<br>Hands-on Job Explanation   | 90 Trained<br>70 Placed         | Orientation manuals<br>Basic skill manuals<br>Instructor's guide   | Human relations training<br>Supervisory skill training   |
| Allis Chalmers, Power Breaker<br>Division, Jackson, Mississippi | Job Orientation<br>Blueprint Reading and Assembly Drawings<br>Safety<br>Quality Control<br>Electrical Wiring<br>Machine Tool Operation<br>Welding<br>Drafting and Design<br>Light and Heavy Assembly | 60 Trained<br>47 Placed         | 35 MM slides<br>Audio tapes<br>Instructor's guide for each area of training<br>Operations manuals for light and heavy assembly and electrical wiring<br>Knowledge tests  | Use of small type circuit breakers to simulate the assembly of large-type circuit breakers<br>Individualized assembly instruction using step-by-step procedure manuals                 |
| Modular Publications, Inc.<br>Senatobia, Mississippi            | Orientation<br>Typing<br>Proofreading<br>Reading Improvement<br>Paste-up and Stripping<br>Photocomposition<br>Webb Press Operation and Bindery   | 55 Trained<br>43 Placed         | 35 MM slides<br>Orientation manual<br>Instructor's guide for each area of training<br>Participants manual for each area of training<br>Learning activity packets for typing, proofreading, and photocomposition<br>Glossary of terms<br>Pretests and posttests for each area of training | Criterion referenced tests and statistical tests for group behavior changes<br>R/CU instructional materials reprinted as a means for training<br>Press operators and bindery personnel |



CHART 2 (cond.)

| NAME AND LOCATION OF INDUSTRY  | AREAS OF TRAINING   | TOTAL NUMBER TRAINED AND PLACED TO DATE | TYPE TRAINING AIDS PREPARED  | UNIQUE FEATURES OF TRAINING PROGRAM  |
|--|---|---|--|--|
| Milwaukee Electric Tool Corporation<br>Jackson, Mississippi                          | Nomenclature<br>Quality Control<br>Blueprint Reading<br>Precision Measurement<br>Safety<br>Machining of Aluminum Castings<br>Machining of Steel Parts<br>Assembly of Parts<br>Data System and Tool Room Information | 80 Trained<br>45 Placed                 | Instructor's guide<br>Fundamentals of machine tools<br>Operations manuals for machining of aluminum and steel parts<br>Operations manual for assembly of parts<br>Filmstrips | Core of prospective employees qualified to administer first aid<br>Program conducted jointly by MDTA and start-up training<br>Specialized equipment was installed as a special project by students in the industrial electricity class |
| Packard Electric Company<br>Division of General Motors Corp.<br>Jackson, Mississippi | Supervisory Training<br>Economics of Manufacturing<br>Human Relations<br>Building Automotive Wiring Harnesses   | 1,000 Trained<br>900 Placed             | Instructor's guide for teaching work and life adjustment skills  | Development of personal responsibility in daily effort -- Project "Pride"<br>Realistic assembly line training in school facility   |
| Wilton Castings Corporation<br>Pontotoc, Mississippi                                 | Orientation<br>Melting<br>Molding<br>Coremaking<br>Cleaning and Finishing<br>On-the-job training for production   | 38 Trained<br>38 Placed                 | Training guide<br>Text materials covering the training area  | Instruction on attitude development<br>Field trip to a foundry<br>Specialized training conducted by outside resource personnel   |

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The Jackson branch of Hinds Junior College was the site for training assemblers for the Power Breaker Division of Allis-Chalmers. This program was arranged in two phases: (1) a broad orientation to the circuit breaker industry, and (2) intensive skill preparation. A 140-hour program of instruction over a period of 7 weeks was provided for a day class and an evening class. After completing the orientation, three groups were formed for specialized instruction in light assembly, heavy assembly, and electrical wiring. Supervisors from the circuit breaker industry were employed by Hinds Junior College to provide detailed skill preparation instruction. Two additional instructors provided one hour of supplementary training each day in blueprint reading and safety. Training materials, such as circuit breaker parts and assemblies, were furnished by the industry. Orientation programs were also provided for machine tool operators, welders, and drafting and design personnel.



16,000 lbs. Circuit Breakers Ready for Shipping by Rail

Modular Publications, Senatobia, Mississippi, provided resources for a training program at Northwest Junior College in lithographic printing processes. Lecture-slide demonstrations and product samples were used to explain major jobs required to complete a publication in an up-to-date lithographic printing plant. Groups were formed for specific training in typing, proofreading, photocomposition, paste-up and stripping, and web press operation and bindery. Groups were further divided into sub-groups and rotated between two or more instructors in order to provide complete coverage of instructional requirements. Prospective employees in typing and photocomposition were cross-trained in proofreading. Joint meetings were held for the groups at appropriate points during the instruction. Most of the training time was devoted to hands-on practice and experience in lithographic processes. The pre-employment training program was four weeks in duration and was held in the evenings. On-the-job instruction was also provided at the new plant after applicants were employed.

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Modern Printing Press

Milwaukee Electric Tool Corporation began manufacturing portable electric power tools in its Jackson plant early in 1974. A smooth start-up of this plant was assured after machine tool operators and assemblers were trained at the Jackson branch of Hinds Junior College. Training programs were offered at night on two different occasions. The first program focused on the knowledge and skills required for machining aluminum castings. Candidate employees learned from industry instructors how to perform machine operations on specialized equipment furnished to the school by the industry. The second program stressed machining of steel parts and assembling electric power tools. Participants in both programs were cross-trained in multiple content areas. Each class period was structured so that the participants received one hour of instruction in three different areas each night. The instruction was tailored specifically to industry needs and included the following content areas: precision measurement, safety, blueprint reading, parts and equipment identification, and cutting and assembly tools. The Jackson office of the State Employment Service counseled each person regarding training and job opportunities, notified the candidates of the date and place of training, and notified them of the availability of employment after completion of the program.



Assembling Shaft and Gear Mechanism for Electric Power Tool

Wilton Castings Corporation began the production of custom castings at Pontotoc, Mississippi in January, 1974. Candidate employees for this new industry received 12 hours of orientation to metal castings. Each person also received 6 hours of specialized training in melting, molding, coremaking, and cleaning and finishing. Most of the training was conducted at the Pontotoc Area Vocational Center. Training which could be better facilitated using production equipment was conducted in local plant facilities. Special production techniques in metal castings were taught at the new plant.

The success of the programs described above has been echoed through letters, conferences, and telephone conversations with plant managers and the presidents and vice presidents of parent plants. The records provide overwhelming evidence that the economic well-being of participants in the programs was significantly improved.

Although there is a considerable amount of pride in the service that start-up training is providing to new and expanding industry, the work has just begun. Requests for new programs come each week. Follow-up research is needed to provide more evidence concerning the changes which occur as a result of the expenditures of effort, time, and money in start-up programs. The need is great to formulate plans for responding to the **future** manpower needs of the industries which have participated in start-up training programs.