DOCUMENT RESUME

ED 369 429 JC 940 236

AUTHOR	Willis, Jean H.
TITLE	The Meridian Partnership: A Model Workplace Literacy Project and Development Unit. Internal Evaluation Report, Final Report.
INSTITUTION	Meridian Community Coll., MS.; Peavey Electronics Corp., Meridian, MS.
PUB DATE	Apr 94
CONTRACT	V198A20321-92
NOTE	67p.
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Adult Basic Education; *Adult Literacy; Basic Skills; Community Colleges; Computer Assisted Instruction; *Cooperative Programs; Courseware; *Curriculum Development; *Job Analysis; Labor Force Development; *Mathematics Skills; Outcomes of Education; Program Descriptions; School Business Relationship; Two Year Colleges
IDENTIFIERS	*Meridian Partnership MS; Peavey Company; *Workplace Literacy

ABSTRACT

The Meridian Partnership is a cooperative program established in 1992 by Meridian Community College (MCC), in Mississippi, and Peavey Electronics Corporation to provide expanded workplace literacy instruction to Peavey employees and to perform job analyses to develop customized mathematics and reading courseware. Hardware, software, classroom space, and instructors were provided by MCC, with Peavey providing meeting rooms for employee assessment and space for the project curriculum developer. Jobs identified as needing training were analyzed for specific tasks and customized, computer-assisted lessons were developed for the Metal and Transducer divisions. The lessons addressed basic literacy and mathematics skills and incorporated contextual learning, the use of actual company materials, and individualized instruction following employee assessment. The program was presented to 275 employees, with 110 signing up for assessment and 97 choosing to enroll. Specific program outcomes included the following: (1) of the 97 participating employees, 41 completed every component of their individualized educational plans; (2) 21 employees from the Metal division received a promotion or salary increase subsequent to participation; (3) all of the completers indicated that they were satisfied with the program; and (4) while 22 jobs have been analyzed to date, considerable software development is still needed to develop a task-oriented, basic skills program for use at other institutions. Tables of participant outcomes and comments are included. A sample job task analysis, lesson plan, and assessment instruments are appended. (BCY)

The Meridian Partnership:
A Model Workplace Literacy Project and Development Unit
Meridian Community College
Peavey Electronics Corporation

MERIDIAN
COMMUNITY COLLEGE

Project No. V198A20321-92

Internal Evaluation Report
Final Report

Prepared by
Jean H. Willis

April, 1994

Meridian Community College
910 Hwy 19 North
Meridian, MS 39307
(601) 483-8241

TABLE OF CONTENTS

ILLUSTRATIVE CHARACTERISTICS OF PROGRAM COMPONENTS

ILLUSTRATIVE OUTCOMES

ILLUSTRATIVE CHARACTERISTICS OF PROGRAM COMPONENTS

I. PARTNERSHIP

A. Partners/Goals

The Meridian Partnership was formed as a means to prepare the local workforce with the basic literacy skills necessary to work within a local industry, Peavey Electronics, that faces stiff international competition and that copes daily with rapid technological changes. Peavey Electronics, located in Meridian, Mississippi, is privately owned and is the largest and last American manufacturer of musical amplification equipment and musical instruments such as keyboards and guitars. Employing over 2000 employees, Peavey has facilities located in two countries, United States and England, two states, Mississippi and Alabama, and imports to 103 nations. Approximately 1500 employees work within the facilities located within a five mile radius of Meridian and are within the service area of Meridian Community College. Meridian Community College serves approximately 3000 college credit enrollment students per year and another 3500 students through literacy, continuing education and business development programs.

Both partners agreed to two common goals: 1) to provide expanded workplace literacy instruction in order to help insure that Peavey Electronics survives its foreign competition, and 2) to research jobs so as to develop customized job-related basic skills courseware that could be further developed into a software format. The partnership efforts were targeted to employees with inadequate skills particularly in critical jobs identified by industry management for analyses. In a prior study conducted as part of the Job Skills Education Program Demonstration Project, evidence had been gathered from a reliable cross section of 242 employees that only 20 % of the Peavey workforce demonstrated a reading level indicating a less that urgent need for workplace literacy training; 62% performed at an instructional level equivalent to national findings of a functional literacy level between 5th and 8th grade level; and the other 18% were performing on a frustration level of below 5th grade and too low to be successful with the JSEP software or any other workplace literacy training written at 5th grade level or above. Because supervisors and management personnel expressed concern about errors made in math skill applications required for certain jobs, it was agreed to do extensive math assessment through the use of both standardized and customized testing procedures. At the beginning of the grant period the Peavey workforce consisted of 48% Caucasian, 48 % African American and 4% American Indian and Asian, and the average age of the workforce was 34.5. The hiring trends indicated an increase in the number of minorities and women, and because these two groups t.aditionally tend to be less educated, Peavey requested the assistance of Meridian Community College in upgrading the skills of its workers in areas where changes were imminent. The two areas to be addressed were the Metal Division and the Transducer Division.

B. Governance

Peavey Electronics is a non-union industry. The Coordinator of Training and Safety at Peavey Electronics was the primary contact person for all training programs. During the grant period, this person resigned from his job, and the Director of Human Resources became the contact person for purposes of the grant. While there was no formal advisory council, Peavey Electronics

personnel and Meridian Community College personnel met frequently, especially during the first twelve months of the grant period. The meetings usually involved the Project Director, the Workforce Curriculum Developer, the Counselor/Instructor, one or more industry supervisors, the Plant Manager, the Coordinator of Training and Safety, and later on, the Director of Human Resources. Quite frequently employees were involved in the meetings if task analyses or curriculum development was taking place because their input was necessary to the process. The Curriculum Developer and the Counselor/Instructor met one-on-one with employees as needed for recruitment and motivation.

C. Involvement

Peavey Electronics provided a large meeting room used for employee group assessments and group meetings as well as a small meeting room used for supervisory meetings connected with the project. The curriculum specialist was provided space within the office of a manufacturing engineer who was available to help with understanding how basic skills were used in technical skill applications. The supervisors within both divisions also provided working space for the Curriculum Developer when she was in the industry conducting task analyses and gathering materials for customized lesson development. The most significant evidence of involvement by Peavey Electronics was and continues to be the open-door invitation extended to the Curriculum Developer. The electronics business is both nationally and internationally very competitive and industry sensitive, and proprietary information is closely guarded; however, the Curriculum Developer was given a company badge and had the freedom to move around within the various divisions as needed. All materials gathered for curriculum development were approved by a supervisor, the Coordinator of Training and Safety, and later, the Director of Human Resources before removal from the industry.

Meridian Community College provided all hardware, software, and classroom space as well as all instructional and administrative personnel to support the partnership.

D. Industry Support

Peavey upper management and the on-line supervisors were supportive throughout the project. Hartley and Melia Peavey, President and CEO of the company, have always actively searched for new training opportunities for their employees. When the project was first announced to the Metal Division employees, the Director of Human Resources, the Plant Manager, and the Division Manager as well as the Coordinator for Training and Safety took part in the presentation. During the project period, on-line supervisors provided release time for employees to assist with task analyses, to attend group assessment meetings, to talk with the Counselor/Instructor regarding attendance or problems, and to assist in lesson development. On-line supervisors also assisted the External Evaluator, Jorie Philippi, and the Curriculum Developer in the development of a supervisory survey instrument.

E. Prior Working Relationship

Peavey Electronics and Meridian Community College have had a long standing partnership since the late 70s. This partnership began with tuition-assistance for college credit courses. Since that time Peavey and MCC have worked together in customizing training for Peavey employees. Some of the customized classes offered for both credit and noncredit are as follows:

- Excel
- Word Perfect
- Word Perfect Refresher
- Team Building
- Blueprint Reading
- D C Circuits
- Basic CMS Commands
- Basic and Advanced Profs (Profession Office Systems)
- Basic and Advanced DW 370 (Document Writing)
- Using C Lists with DW 370
- Getting Started with Lotus Mainframe
- Lotus Mainframe
- Learning Application Systems
- Dimensional Measurements
- Project Management and Intermediate Project Management

F. Incentives

The project centered around voluntary participation. When the concept was presented to the employees, they were told that they would learn skills that would help them on their jobs as well as advance to other jobs within their respective divisions or even to other divisions within the company. They were also told that by going through the class, they would have a better success rate in passing math tests required for future job postings. The participants were not offered any bonus as part of this project. Employees who successfully completed the job-related basic skills class offered at Meridian Community College were eligible to enroll in additional classes included as part of an overall Metal Technology Program. To date these have included Blueprint Reading, Teambuilding, and Dimensional Measurements. Employee participants from the Metal Division and the Transducer Division who completed their individualized learning plans were awarded a certificate.

II. STAFF SELECTION AND TRAINING

A. Experience

All instructional personnel had experience in ABE/GED or workplace literacy training with the exception of the Project Director and the Media Specialist. However, the Project Director had instructional experience, experience in grant writing and grant implementation as well as administrative experience, and the Media Specialist had several years experience in graphic design. The Counselor/Instructor had prior experience as director of a volunteer literacy program and as an instructor for ABE as well as workplace literacy. The Curriculum Developer had eleven years experience in teaching adults in ABE/GED, communication skills, community high school, and workplace literacy. She was trained in conducting task analyses and developing customized curriculum by Jorie Philippi, a nationally known workplace literacy consultant. An Instructional Aide also had prior experience working with adults for both ABE/GED instruction as well as workplace literacy instruction.

B. Inservice Training

All inservice training focused on the program operations. Staff development activities were held as needed and as new components (ie. new lessons, new task analyses, new participants, etc.) were added to the program. Inservice training was informal, and in some cases, was done one-on-one with the instructors and or aide. Topics included:

- Student enrollment on the JSEP (Job Skills Education Program) software
- Student enrollment on Skillsbank software
- Student enrollment on CSR (Computer Skills Research) software
- Management of the various networks within the Adult Learning Lab and the Workforce Development Lab
- Review of all task analyses
- Company tours to observe jobs analyzed
- Review and use of diagnostic information found on TABE (Test of Adult Basic Education) and customized assessments used for placement
- Review on use of basic skills required to read precision measuring instruments
- Review on use of industry-specific lessons.
- Use of TestMate software to score TABE
- Use of DBase IV
- Tutorial on Authorware Professional

III. OPERATIONAL PLAN

A. Conceptual Framework

The central focus of the partnership between Peavey Electronics and Meridian Community College was the adaptation and organization of computerized basic skills curriculum targeted to specific jobs within the Peavey manufacturing facilities. Job tasks and the applied thinking skills required to perform the tasks were analyzed and compared to find cross matches between similar jobs. Curriculum was developed and individualized learning prescriptions were developed to address each participant's needs in relationship to the skills necessary to perform each job or each group of similar jobs. Company-specific functional context lessons were developed using company materials. When working these lessons, employee participants were able to understand how the basic skills learned in reading and math on the computer were used to complete company-specific tasks such as reading a sheet metal gauge chart, figuring percentage for a Peavey Metal Shop form, figuring drying time for paint using twenty-four hour decimal time, figuring how many pieces of metal or wire at one size could be cut from a larger sheet of metal or length of wire, understanding the basic math skills required to post for a higher grade job, etc. In other words, learning was relevant and immediately transferable to the job.

The two main points of effort for the project were 1) to produce workers flexible enough to retrain as technology and other industry related changes occurred and to empower them with the basic skills necessary to move within jobs at Peavey Electronics or to move between local industries should that become necessary, and 2) to develop additional task-oriented basic skills lessons in a software format so as to make it available for use by other industries or workplace literacy providers.

B. Population and Recruitment

The workers targeted for services included employees from both the Metal Division and the Transducer Division. Both divisions are located within one plant with approximately 675 employees. At the time the project started, the Metal Division had approximately 135 employees who attended the first meeting, and the Transducer Division was made up of 140 employees, all of whom attended their first meeting. The basic skills training concept was presented to each division during these initial meetings, and a few days following these meetings, the Curriculum Developer and the Coordinator of Training and Safety met individually with each employee in both divisions. This was done on the floor during working hours. Employees had an opportunity at that time to ask questions and sign up for classes. The demographics of the population served for each division can be found in the following table:

The Meridian Partnership

Population

# Recruited	Metal Division 135	Transducer Division 140
# Enrolled	73	24
#Black males	20	0
# White males	38	1
# Black females	9	16
# White females	6	7
Average Age	30	40
# Years With Company		
0-5	50	8
6-10	8	3
11-15	10	11
16+	5	2
Education		
HS DIP/GED	67	21
Dropout	6	3

IV. CURRICULUM AND INSTRUCTION

A. Task Analyses

All jobs identified for training were analyzed by the Curriculum Developer. Employees were observed during working hours at the beginning, middle and end of shift times as some job tasks, such as housekeeping tasks and paper work tasks, were not repetitive throughout the day but occurred only at the beginning and end of a shift. The Curriculum Developer observed the employees and took notes on what they did and the basic skills required to do the tasks. She also asked questions or asked for demonstrations for clarification. After writing a task analysis, the Curriculum Developer returned to the work site to review it with the appropriate supervisor, group leader, and employee/employees. During this visit, she examined more closely any company specific materials that were used on the job such as forms, troubleshooting manuals, S.P.C. charts, job aides, work orders, etc. Once all basic skills and job tasks had been identified and matched, the Curriculum Developer submitted her final copy of the task analysis to the appropri-

ate supervisor, group leader, and employee/employees for final approval. Further visits were made, if necessary, to gather company materials and begin the process of lesson development.

Very few specific jobs were analyzed within the Transducer Division, because the Division Manager was more concerned that the employees who worked within this division had the basic math skills necessary to post for higher grade jobs. These grade 9 and 10 jobs were some of the lowest paid jobs within the company. They required very little math or reading skills but required repetitive and tedious hand motions. One entire line (wire coil assembly) was being moved to another plant out of state. The Curriculum Developer analyzed the math skills needed to successfully pass company-developed math tests required for higher grade jobs and developed functional context lessons using Transducer Division terminology and context that provided practice in applying the math skills needed.

Late in the project the Curriculum Developer began to look at jobs within the Wood Division as that was the next area identified by management as requiring training.

Jobs analyzed include the following: (See Appendix for example of a task analysis, Press Brake Operator.)

- Press Brake Operator
- Chop Saw Operator
- Shear Operator
- Deburrer
- Punch Press Operator
- Line Loader (Phosphating)
- Line Unloader (Phosphating)
- Phosphate Technician
- Line Loader (Painting)
- Line Unloader (Painting)
- Packer (Painting)
- Painters 1 and 2
- Group Leader (Painting)
- Line Supplier (Assembly)
- Parts Coordinator (Assembly)
- Floor Supervisor (Hand Assembly)
- Triple Head Router Operator
- Drill Press Operator
- Tenon Saw Operator
- Group Leader (Wood Shop,Cabinet Assembly)
- Miter Folder Operator
- T-Nut Operator

B. Curriculum Objectives:

Employee participants understood at the beginning of each lesson the objectives and job-based competencies to be learned. For example, when working the customized lesson entitled "Reading Tables and Charts, Metal Division, Peavey Electronics," employees read the following statement:

> In this lesson you will learn:
> -how to recognize similarities and differences on tables and charts
> -how to read tables and charts
> -how information from specific charts can be helpful in decision making at work

(See Section 3 in The Meridian Partnership Curriculum.)

The lesson is divided into three major sections with the last two having applied practice. The practice includes technical vocabulary and realistic measurements encountered by employees every day at work; therefore, the employee understands what skill he is learning and why it is relevant to his work.

All other customized lessons were set up similarly. The following is a partial list of the instructional objectives included in the curriculum. These objectives address basic literacy skills that can be transferred to a cross section of entry level jobs both within Peavey Electronics as well as within other local industries. For example, most industries require a work order or route sheet that accompanies all production work. To read these work orders, employees must be able to read down columns and across rows as well as identify the location of specific details. While the context of the work order may change, the applied skills will not. Some instructional objectives from The Meridian Partnership Curriculum include:

- Recognizing common terms and abbreviations
- Recognizing similarities and differences on tables and charts
- Finding the part, the whole and the percent
- Recognizing how percent applications are used at work
- Recognizing common characteristics of forms (columns and rows)
- Using basic math to figure nesting problems
- Using printed information for decision making
- Figuring time problems
- Recognizing job terms
- Understanding the meaning of common job terms
- Recognizing key words in math problems
- Finding distractors in math problems
- Recognizing sequence
- Recognizing cause and effect
- Using context clues for vocabulary
- Reading illustrations
- Finding specific details
- Using basic related math for SPC
- Learning to remember (recognizing common handtools by shape, size, and appearance)

Software lessons while not functional in context were used to teach the basic support skills needed for understanding the customized lessons. The instructional objectives for all software used during the project are found in section 15 of The Meridian Partnership Curriculum.

C. Contextual Learning

As already mentioned, all customized lessons were developed using actual company materials or company terms and concepts, and the instructional objectives were designed to mediate job performance. The "Related Math Practice for SPC" was designed to accompany a company manual entitled Peavey Electronics Corporation: S. P. C. Operators Manual. All math word problems and math computational problems were recorded from conversations heard on the industry floor or were found on company developed job posting tests and revised for classroom instruction. Materials gathered from the Metal Division and used in customized lessons included actual work orders, actual S.P.C. forms, charts found on the wall or in reference books on a supervisor's desk, daily forms used for recording the number of completed products and the number of rejects, reject tickets, move tickets, packing tickets, detailed manufacturing aides (proprietary material that cannot be included in the curriculum), and pictures of handtools found at employee work stations. The employees and supervisors were most helpful in assisting the Curriculum Developer in determining which materials were most used and in identifying completed forms with recurrent mistakes.

D. Individualized Learning Plans

Two basic learning plans were developed, one for the Metal Division Employees and one of the Transducer Division employees. The company was interested in cross training employees within the Metal Division, so the skills identified on the plan were those skills used in a variety of jobs within that division. Within the Transducer Division, the company was more interested in enabling the employees with the necessary skills to post out of the division because one line was closing down and because the employees had a history of longevity in entry level positions. The learning plan in the Transducer Division consisted of skills needed to successfully pass a variety of math tests required for certain job postings. The learning plans were individualized after each employee was assessed to determine which skills he or she already knew and which skills were identified for remediation and instruction. The skills needing remediation or instruction were marked for study. For this reason, employees completed at different times because each was working at his or her own pace. (See Appendix for examples of individualized learning plans.)

E. Involvement of Workers in Curriculum Development

Employees were directly involved in task analyses as well as lesson development. Employees' interests were also taken into consideration. For instance, a few employees requested additional work beyond the basic requirements for each division. One employee who completed requirements for the Transducer Division Math has re-enrolled because she was interested in

doing expanded work in word problem applications. Two employees enrolled in Transducer Division Math have since enrolled in the GED program. Several employees have asked for remediation of particular math skills because they were posting for a test on which those math skills were required.

F. Amount and Intensity of Instruction

Because the instruction was individualized, the amount and intensity varied based on each participant's needs coming into the program. The instructional program was open entry/open exit; therefore, students completed at different stages throughout the project. Employees were scheduled for one and one-half hours two times per week. Enrollment was voluntary and employees attended class on personal time rather than company time, so attendance varied based on production schedules, seasonal changes, company vacation schedules, and personal commitments.

G. Methods of Instruction and Learning Tools

Employees used computer-assisted instruction and software such as JSEP, Skillsbank, and CSR to complete the basic support skills or core components of their individualized plans. Once these core components were completed, then employees began to work on the customized components. Throughout all components, individualized tutoring was available as needed. Usually one full time instructor and an instructional assistant were available to answer questions or assign supplemental materials. The use of calculators was not encouraged in the classroom. The Curriculum Developer had studied forms completed on the work site by employees who had access to calculators. As much as fifty percent of some forms had mistakes on math calculations especially when figuring percentages for quality totals or number of rejects. For this reason, instructional emphasis was placed on the process of setting up a calculation rather than on using the calculator. Employees had access to precision measuring instruments such as calipers and micrometers when learning how to read and interpret tick marks or when working on the related math component of the statistical process control package. Employees were also encouraged to work in pairs or small groups to problem solve trouble spots on the customized lessons.

V. SUPPORT SERVICES

A. Childcare and Transportation

No childcare or transportation was provided as part of this project. Employees came voluntarily on their own time before or after work and were responsible for individual arrangements as needed.

B. Educational Counseling

Educational counseling was available to students as needed. The Counselor/Instructor and the Curriculum Developer visited with employees during work hours encouraging them to attend more regularly. Employees interested in obtaining a GED were referred by the Counselor/Instructor to the Adult Learning Center for enrollment in GED classes. Employees who read below a fifth grade level were referred to the Adult Learning Center for enrollment in the ABE program. Personal letters and phone calls were made periodically to students whose attendance had dropped . The Counselor/Instructor also met with each employee at the beginning of the enrollment period to discuss assessment findings. Strengths were emphasized and weaknesses were pointed out as the focus for remedial work. She continually updated each employee on the progress being made, and she would suggest changes in instructional methodology to the instructional staff when employees began to show frustration or boredom with a particular method. The Counselor/Instructor also provided information on credit and noncredit enrollment in other programs offered by the college to those employees who requested such information.

VI. LEARNER ASSESSMENT

A. Assessment Instruments

A variety of learner assessments were used to assist the instructional staff and employees in development of individualized learning plans.

1. Standardized Test - TABE (Test of Adult Basic Education), Level D, Forms 5 and 6. Sections: Math Computation and Reading Comprehension

   Scores are translated in the form of grade level equivalents. The diagnostic information describing mastery, partial mastery, and nonmastery of specific skills was shared with each employee.

2. Customized Cloze Assessment - A teacher-made readability exercise using work-specific material timed for 7 minutes.

   The cloze was written at an intermediate level of 8th-9th grade readability as most company materials were diagnosed to be at about this level or above. Thirty blanks were omitted from a passage of 150 words. Employees who were able to successfully complete 16 or more of the blanks scored at an independent reading

level. Those who completed between 12 - 15 blanks were at an instructional level, and those who completed 11 or less blanks scored at a frustration level.

3. Multiplication Skills - 100 multiplication facts timed for five minutes.

   Because employees need to problem solve, make precise calculations when working with specifications, and make close estimations, it was felt they needed a good working knowledge of the multiplication facts. 80% mastery was required. Employees who scored 79% or lower were given times tables to study and were retested until they scored 80%.

4. Customized Pre and Post Assessments (untimed)
   Metal Division Pre and Post Tests
   Transducer Division Pre and Post Tests

   These were teacher-made tests designed to be functional in context and included competencies required for a cross section of job tasks within the Metal Division and a cross section of mid-level assembly jobs throughout the entire company. (There was no way of knowing in advance specific jobs for which an employee from the Transducer Division may post.)

5. Specific Lesson Tests - These were daily tests used to monitor progress and under standing throughout instruction. Some of these tests were part of the computer-assisted lessons, and others were developed by the curriculum specialist as part of the customized lessons.

The customized cloze assessment was used to determine if employee participants could read well enough to handle the computer software, the customized lessons and company materials.

B. Placement

Metal Division

Pre-assessments were conducted for employees in both divisions. In the Metal Division, 73 employees were tested using a customized cloze assessment (See Appendix), the TABE Reading Comprehension and Math Computation sections, the Multiplication Skills Test (See Appendix) and the Customized Metal Division Pre-test (See The Meridian Partnership Curriculum). Four employees scored at the frustration level on the cloze exercise, but when given the TABE Reading Comprehension test, all except one scored at 5th grade level or above (the cut off point for entry into the workforce development program due to the reading level of most instructional software). The one employee who scored below 5th grade level was referred to the Adult Learning Center and assigned a volunteer literacy tutor. The TABE Reading Comprehension scores ranged from a low of 3.3 to a high of 12.9 with 10.4 being the average.

Only two employees scored below the 80% mastery level on the Multiplication Skills Test. One studied the facts and was retested to score above 80%. The other employee was the same one who scored below 5th grade level in reading, and as stated before, he was assigned a volunteer tutor. The employees were also given the TABE Math Computation test to determine and help diagnose basic computational skills. Scores ranged from a low of 2.9 to a high of 12.9 with the average at 9.8.

Judging from the average TABE score of 10.4 in reading and 9.8 in math, one would assume that the majority of these employees did not require remediation in basic skills. The employees were given the customized Metal Division Pre-test. Eighty percent mastery was required, but no one was to be rejected from the program if he/she scored higher than the 80%. The pre-test scores ranged from 3% to 97% with 48.6% being the average. Even though the majority of the employees demonstrated an adequate knowledge of reading comprehension and math computation, they could not adequately apply critical thinking and problem solving skills to successfully master the required competencies of some job tasks. Only four participants scored above the 80% level, and they chose to go through the program as the first step in a total Metal Technology Program being promoted by Peavey Electronics at the time. All 73 employees were enrolled in class with one transferred to the Adult Learning Center.

Transducer Division

As already mentioned, the emphasis in the Transducer Division was placed on those employees who needed remediation in math skills so as to successfully post for higher grade jobs should they desire. For this reason emphasis was placed on math, and only a customized cloze test with a readability of 5.2 (See Appendix) was used to determine if the employees could read well enough to handle the software used for the core component of the curriculum. Thirty-seven employees were given the cloze assessment and the TABE Math Computation, and after reviewing the results with the employees, 24 enrolled in class. All 24 who enrolled in class were reading at an instructional level of 5.2 or above. The TABE Math Computation test grade equivalent scores ranged from a low of 3.9 to a high of 12.9 with the average score being 8.1. These 24 were also given a customized Transducer Division Pretest that included skills taken from a sample of job posting tests the curriculum specialists had reviewed with the personnel manager. The scores on this test ranged from a low of 11% to a high of 76%. Because the anxiety level was so high with this group of employees, the multiplications skills test was not given. The Counselor/Instructor and Curriculum Developer felt it was more important to diagnose needs from the TABE and the customized test rather than risk alienating more participants due to test anxiety. Those who needed remediation in multiplication facts received the instruction as part of their individualized learning plans. The Counselor/Instructor talked in detail with those who scored below 5.0 in math encouraging them to attend class regularly while easing their fears and anxieties regarding math. Many expressed concern that they would fail. She assured all that no one would fail as the class was not designed to be a pass/fail class but rather an opportunity to master skills never learned or remediate some skills once learned but forgotten. She also assured the concerned employees that there was no deadline to meet for completion. The college would continue to serve the employees if necessary even when the grant expired, as it is continuing to do at the present time. The

employees understood also that their jobs were not threatened in any way if they did not master these skills, but that their chances of successfully passing job posting test requirements for higher grade jobs would improve as a result of participation.

C. Ongoing Monitoring

As all employees worked through their individualized learning plans, skills mastered were marked off and lesson and unit tests were recorded through software management programs or filed in paper format in folders. Employees were updated weekly as needed on skills completed and skills in need of more remediation.

VII. PROGRAM EVALUATION

The program was evaluated by looking at the results of pre and post assessments of the skills presented for instruction as well as specially designed pre and post surveys of employee participants. The External Evaluator, Jorie Philippi, led a work session with company supervisors, representatives of company management, the Curriculum Developer and the Project Director to begin development of a supervisory rating instrument to be used as pre and post training evaluations. This rating instrument was finalized by the supervisors themselves and used to rate employee participants in areas such as attendance, motivation, dependability, promotability, and other characteristics which impact on performance. (See Appendix.) The software program, DBase IV, was used to store statistical data as participants enrolled and exited the program. The outcome evaluation components are reported under the next section entitled ILLUSTRATIVE OUTCOMES. The process evaluation was ongoing throughout the project and is reported in more detail in the external evaluation report.

Evaluation of Project Goals and Objectives

GOAL 1. To provide expanded workplace literacy instruction for a local industry in partnership with Meridian Community College in order to help this industry survive its foreign competition.

> Peavey Electronics greatest foreign competitor in the production of power amplifiers is Yamaha. According to Jere Hess, Director of Public Relations and Education for Peavey Electronics, Peavey has been able to remain number one in the world in the production of power amplifiers partially due to the changes in quality and worker attitude that were a result of training offered for the Metal Division. Employees became more aware of the need to measure accurately, handle parts more carefully, complete forms more accurately, and maintain S.P.C. charts more conscientiously and accurately.

Objective 1.a - To provide workplace literacy instruction for 200 employees of Peavey Electronics. (This objective was revised to 120 after the project began.)

The program was presented to approximately 275 employees. 110 signed up for assessment, and 97 chose to enroll in classes. Those employees who were interested but did not sign up knew that they could enroll at any time as the program was open entry/open exit. Shortly after the project started, Peavey security discovered some problems with drug use among some employees of the Metal Division. Because of this some employees who had signed up for the program were terminated, and others who perhaps would have signed up had changes to occur in shift schedules which affected attendance. The third shift was closed down; the division manager position changed; the Director of Safety and Training resigned, and several job positions changed. This was also at the time of year (Fall, 1992) when Peavey moves into overtime production because of seasonal sales and product shows. At about this same time Jere Hess, who was then the Director of Human Resources, suffered a heart attack. Mr. Hess has always been and continues to be most supportive of the partnership efforts involving Meridian Community College and Peavey Electronics, but at that time he was on medical leave for approximately six months and was unable to provide the enthusiasm and support so characteristic of him. When he returned from medical leave, he once again was behind the program, and it was at that time that enrollment efforts began for the Transducer Division. As already indicated 110 employees were assessed, but only 97 (approximately 80% of the revised objective) were actually served in classes.

Objective 1.b - To increase by 20% the number of participants promoted within six months of completing workplace literacy instruction.

Of the 41 participants who completed every component of their individualized educational plans, 21 employees from the Metal Division, or approximately 51%, have received a promotion or lateral move which resulted in a salary increase. This is a significant number since Peavey management had indicated the need to have employees within the Metal Division cross trained.

Objective 1.c - To maintain a 90% satisfaction rating as measured by surveys of participants and supervisors.

100% of the 41 employees who completed every component of their individualized educational plans and completed a post-program survey indicated that they were satisfied with the training and would recommend it to a co-worker. 100% of all supervisors voiced support for the program. Supervisory ratings are covered in more detail under Job Performance.

In talking with the employees who completed parts of their individualized plans or who stopped attending class, the Counselor/Instructor indicated that all felt the training to be worthwhile, but employees indicated they stopped attending for personal reasons that usually involved family commitments or opportunities for overtime work which also impacted on family time.

Objective 1.d - To place 80% of employees referred to the workplace counselor/instructor in JSEP or other MCC programs.

As already indicated, 110 employees were referred to the Counselor/Instructor for assessment, and 97 (80%) were placed in a basic skills class using JSEP, Skillsbank, CSR or other software. These software programs are core instructional components of the Workforce Development Lab. One participant was referred to the Adult Literacy Lab, and two have been referred to the GED program. Fifty-seven participants have been involved in other programs ranging from Fire Extinguisher Training taught within the company to Teambuilding, Blueprint Reading, and Dimensional Measurement (non-credit courses) offered at Meridian Community College. More about this training can be found under the section entitled PARTICIPANT OUTCOMES.

GOAL 2. To create a research and development unit within the partnership framework that will customize task-oriented basic skills CAI software so as to make it usable by any other industry or college.

Meridian Community College and Peavey worked together to create customized lessons for the industry. The hardware and software is now in place to begin software development. The required time for software development was grossly underestimated. A customized lesson that took a participant one hour to complete usually took the Curriculum Developer 70 to 90 hours to develop in a pencil/paper format. The project was well advanced prior to the college obtaining the necessary software and hardware to begin authoring. During this time some of the planned lessons became obsolete as the company decided to maintain records and use forms differently than had been originally studied, so new forms and new production schedules, etc. had to be studied and new lessons developed. The lessons in the curriculum that accompanies this report include skills that were most commonly thought to be needed during further production efforts. The Media Specialist completed all input for the pencil/paper versions of the customized lessons and began to learn the authoring program (Authorware Professional) so as to begin input for software development. As a result of this customized curriculum developed in partnership with Peavey Electronics, other local industries such as Avery Dennison, a manufacturer of vinyl covered notebooks; Jansko, a manufacturer of office furniture; and Colonial Baking Co., a producer of sliced bread and buns, began to request that similar lessons be developed for their employees.

Objective 2.a - To conduct task analyses and develop prescriptions for 10-15 additional job classifications.

To date 22 jobs have been analyzed at Peavey Electronics. Individual learning plans list the literacy skills needed to do a particular job or a cross section of similar jobs plus any necessary skills needing remediation as identified through individual assessments. Learning plans for the project were individualized to address an employee's needs, and therefore vary from person to person.

Objective 2.b - To develop basic skills software curriculum for 5 identified skill areas not addressed in the civilian version of JSEP.

The following customized components include skills not addressed in the JSEP software.

Metal Division: Percent Applications
- Finding the Part
- Finding the Whole
- Finding the Percent

Using Math to Problem Solve at Work (Peavey-specific)
- Whole Number Word Problems
- Decimal Number Word Problems
- Fraction Word Problems
- Percent Word Problems
- Review of Word Problems

Metal Division: Reading a Scheduled Routing Summary
- How to Read a Routing Summary
- Recognizing Common Terms and Abbreviations
- Applying Common Knowledge of the Routing Summary

Metal Division: Reading Tables and Charts
- Recognizing Similarities and Differences on Tables and Charts
- How Information from Specific Charts Can Be Helpful in Decision Making at Work

Metal Division: Using Forms
Using Basic Math Skills to fill out a Daily Work Sheet

Metal Division: Nesting Applications
How Basic Math Skills Are Used to Figure Nesting Problems

Metal Division: Painting Applications
How to Use Printed Information for Decision Making

Metal Division: Common Vocabulary Terms
Recognizing Job Terms
Recognizing Common Job Terms for Metal Division

Objective 2.b.i - To develop CAI instruction and evaluation in math for statistical process control.

The pencil/paper version of this lesson is complete. The S.P.C. Coordinator at Peavey Electronics wrote the manual and the Curriculum Developer wrote the related math practice and the final evaluation. (See The Meridian Partnership Curriculum.) Applied basic math skills include the following:

- Reading a Number Line
- Plotting Points on the X and Y Axes
- Understanding Place Value of Decimal Numbers
- Adding and Subtracting Using Decimal Numbers
- Dividing Decimal Numbers to Find the Mean
- Finding the Range of Difference between Measurements
- Find the Median
- Figuring Percent for a P-Chart
- Converting a Decimal Number to a Percent

Objective 2.b.ii. - To develop CAI instruction and evaluation for reading industry-specific illustrations.

The Detailed Manufacturing Aides used as the illustrations for this component of the curriculum are propriety and cannot be included in the curriculum package; however, the introductory lesson which addresses the applied basic reading skills is included and is entitled "Reading for Comprehension: Detailed Manufacturing Aide." Again this lesson is in pencil/paper format, but it is at a stage that with the proper computer integrated scanning equipment could be easily converted into a

software format. The basic skills covered in this part of the curriculum include the following:

- •Recognizing Sequence
- •Recognizing Cause and Effect
- •Drawing Conclusions
- •Recognizing Main Idea
- •Using Comparison and Contrast
- •Using Context Clues for Vocabulary
- •Recognizing Details
- •Locating Information
- •Skimming and Scanning
- •Reading Illustrations
- •Following Directions

Objective 2.b.iii - To develop CAI instruction and evaluation for blueprint reading.

The project did not complete a curriculum component for this objective. It was felt by all members of the project staff that the skills addressed would be too technical and not fall into the realm of basic skills. Rather the instruction that was developed included the basic support skills necessary to learning how to read a blueprint. For example, employees divide decimal numbers and read and interpret angles when figuring dimensions from a blueprint. Also employees must recognize details, technical vocabulary, and organization and placement of information when reading a blueprint. These types of skills are included in other parts of the curriculum. Through its Industrial Services Division, Meridian Community College did develop and deliver a Blueprint Reading class for Peavey Electronics. Fourteen employees who completed the Metal Division components of The Meridian Partnership Curriculum enrolled in the Blueprint Reading Class.

Objective 2.b.iv. - To develop CAI instruction and evaluation for understanding technical vocabulary.

This component of the curriculum is complete in its pencil/paper format and can readily be used by any industry involved in the manufacture of electronic components housed in metal chassis. The Curriculum Developer met with the supervisors of each department in the Metal Division and asked each one to submit a list of words that an employee should recognize and understand in order to adequately complete the tasks within that department. They were also asked to submit a list of words suitable to flexible training and movement between departments. She then met with the Division Manager and asked him to review the lists to check for any omitted terms. The lesson included in The Meridian Partnership Curriculum is the result of this effort. The lesson also includes an introductory section that raises the reader's awareness of how to identify and begin to use unfamiliar job-specific words. The lesson also includes a final evaluation in the form of an objective test.

Objective 2.b.v. - To develop CAI instruction and evaluation for recognizing and understanding safety regulations.

In developing this lesson, the Curriculum Developer talked with the supervisors regarding areas where lack of knowledge about safety was a real problem and the cause of minor accidents on the job. Most indicated that carelessness in handtool usage resulted in the most job-related accidents. Many supervisors also indicated that entry level employees did not recognize certain handtools, did not understand their functions, and did not understand how to use them safely. The lesson entitled "Handtool Recognition" is the result of this effort. The lesson is in a pencil/paper format. It includes pictures and names of handtools, how they are used in various departments at Peavey Electronics, and safety tips regarding their use. The lesson also includes an objective test for evaluation purposes.

VII. DISSEMINATION

Plans were made to disseminate information and lessons learned from the project at two major conferences. Early on the decision was made to stress the process of setting up a workplace literacy program as well as the outcomes of the project itself. Nationally, this information was presented by the Curriculum Developer at The Workforce Development Institute held in Nashville, Tennessee, in February, 1993, and again by the Project Director and the Curriculum Developer at the American Association of Community Colleges held in Portland, Oregon, in April of 1993. The customized curriculum component was also presented in roundtable discussions at the National Workplace Literacy Close-out Conference held in Washington, D.C. in September of 1993. Locally, the Project Director, the Curriculum Developer and the President of Meridian Community College were co-presenters of a program entitled "Learning Works" presented to local industry representatives, government officials, and local and state educators in June of 1993.

The Meridian Partnership process of developing customized assessments and curriculum and coordinating such with commercial software programs to deliver individualized instruction has aroused the interest of other industries and educational institutions who have visited the workplace literacy lab:

Our Lady of the Lake Hospital	Baton Rouge, LA
The Salem Company	Charlotte, NC
Shelby Die Cast	Shelby, MS
James River Corporation	Pennington, AL
Delta International	Tupelo, MS
Mecklinburg County Schools	Charlotte, NC
Air Cap Industries	Tupelo, MS
Meridian Public Schools	Meridian, MS
Lauderdale County Schools	Meridian, MS
State Board Community/Junior Colleges	Jackson, MS
MS Dept of Education: Industrial Services	Jackson, MS
University of Mississippi	Oxford, MS
Quality Logistics	Meridian, MS
Structural Steel	Meridian, MS
Gipson Steel	Meridian, MS
Engineering Plus	Meridian, MS
Jansko, Inc.	Meridian, MS
Colonial Baking Co.	Meridian, MS
Avery Dennison, K & M Division	Meridian, MS
American Broadcasting Company	New York, NY
IBM Corporation	Atlanta, GA
Teklogic/UEC Projects	South Africa
Yorkshire Coast College	England

Dissemination activities included open discussions, observations of employee participants and instructional personnel working in the lab, slide presentations on the recruitment/ enrollment, assessment and curriculum development processes and handouts of sample pages from the customized curriculum components.

Copies of this final report will be sent to the Clearinghouse on Adult Education and Literacy, the ERIC Clearninghouse on Adult, Career, and Vocational Education, and the ERIC Clearninghouse for Junior Colleges.

IX. ILLUSTRATIVE OUTCOMES

A. Participant Outcomes

PROFILE OF WORKPLACE LITERACY PARTICIPANTS				
Total # Enrolled/Pretested				97
Characteristics	Did Not complete ILP; Improved Basic Skills	Improved Basic Skills; Completed ILP	Cummulative Terminations by Project End	Total
Race: White	12	26	14	52
Black	12	15	18	45
Education: HS Grad	16	33	23	72
GED	5	5	6	16
Non HS	3	3	3	9
Sex: Male	16	25	18	59
Female	8	16	14	38

Reasons for Termination		
Total # Terminated		32
Company Termination/Self Termination	8	
Non-Attendance	23	
Death	1	

LITERACY SKILLS

Metal Division
Pre/Post Test Results

Testing Format	Pre-Test	Post-Test
TABE-Reading Comprehension	10.4 (GE)	11.3 (GE)
TABE-Math Computation	9.8 (GE)	12.6 (GE)
Metal Division Test (Company-Specific)	48.6%	87.8%

based on completions pre and post tested

Metal Division
Representative Basic Skills Improvement (% correct)*
based on completions pre and post tested

	Pre	Post	Increase
Figuring percent using part and whole	17%	50%	33%
Adding decimals and whole numberes	21%	92%	71%
Subtracting decimals and whole numbers	25%	100%	75%
Reading gauges/measuring instruments	54$	96%	42%
Fill in information on forms	50%	94%	44%

* skills showing most improvement

Transducer Division
Pre/Post Test Results

Testing Format	Pre-Test	Post-Test
TABE-Math Computation	8.1 (GE)	10.8 (GE)
Transducer Division Test (Company-Specific)	43%	67%

based on completions pre-post tested

Transducer Division
Representative Basic Skills Improvement (% correct)*

based on completions pre and post tested

	Pre	Post	Increase
Multiplying Whole Numberes	56%	100%	44%
Dividing Whole Numbers	56%	78%	22%
Adding Decimal Numbers	56%	89%	33%
Gauges: Determine Value of Tick Marks	22%	78%	56%
Convert Decimal to Percent	22%	67%	45%

* skills showing most improvement

THE MERIDIAN PARTNERSHIP
PERFORMANCE BEHAVIOR RATING SCALE RESULTS

(Average is based on rating of 1-5 for surveys turned in on 29 employees who completed ILPs)

Pre/post Supervisory Ratings

BEHAVIORS	PRE	POST	DIFFERENCE
Promotable	3.59	4.00	+.41
Team Player	3.41	3.79	+.38
Gets Job Done	3.59	4.14	+.55
Business Focused	3.28	3.55	+.27
Can Problem Solve	3.50	3.90	+.40
Quality Conscious	3.69	4.07	+.38
Continuously . . . Improvements	3.24	3.59	+.35
Self Motivated	3.59	3.70	+.11
Does Extra	3.28	3.76	+.48
Volunteers	3.28	3.79	+.51
Practices Good Attendance	3.48	3.66	+.18
Dependable	3.55	3.97	+.42
Shows Common Sense	3.59	3.83	+.24
Shows Positive Attitude	3.41	3.83	+.42
Practices Neat Housekeeping	3.59	3.90	+.31
Shows Caring Attitude	3.41	4.10	+.69

All employees had statistically significant increases in job performance with the areas of attitude, getting the job done, volunteering, doing extra, and dependability showing the most improvement. The behaviors least affected by training were attendance and self-motivation.

MOTIVATION/SELF-ESTEEM

Thirty-nine participants returned a post-program survey. The following answers are in response to the first question *"Please share a few comments about how this training program has helped you at work."*

- In my measuring on the ruler; in my counting wires correctly.
- It has done a lot for me. When I first came to this class, my self esteem was really down. Now I can do divisions, fractions, decimals, percents, learned to read lines, graphs, tables, and gauges, and I know now I can do it. I'm so proud of myself now, I can learn.
- The program helped to refreshen my memory on the math skills I learned in school. Frankly, it helps me more away from work with the figuring that I do since I use very little math in the job that I do here at Peavey.
- I don't really use a lot of math on my job, but I do have to count my covers and figure out my quota, so maybe I can do that a little better.
- I have not used my training yet.
- I really never learned about gauges but I know now.
- It has helped me to understand calipers/ micrometers, in reading them accurately and has improved my comprehension ability.
- Well it really haven't because my job requires cleaning cabinets everyday.
- I am more confident concerning my math now.
- It has brought my math and reading up.
- This program did not really help in my job, but since I completed the program, I have taken an exam that I once before did not pass too well, I have now passed and been reassigned.
- It has helped in a way that now I am better focused and more aware of my work.
- I add in my head more instead of using a calculator. And understand routings and DPI sheets better.
- I do not see any visible effects good or bad after taking JSEP class.
- Improved my math skills.
- Refreshed old math skills. Better understanding of a P.C.
- Has made me more aware of things.
- I already felt comfortable with my job. So far it has not helped, but I look forward to new ideas.
- Refreshed my math skills.
- Helped me on my percentages and brushed me up on some math I haven't used since high school.
- I don't have to use a calculator as much as I did before.
- I learned a little about blueprints and figuring my % efficiency.
- It didn't apply to my particular job.
- It was a refresher course for me. There was some math work I had to relearn. The job related tasks were helpful in learning how to do the work correctly.
- It refreshed me on my math.
- It has helped me become more aware and how to identify some problems within my area.
- It refreshed me on my math.
- None that I can think of.
- It gave me some help in using the measuring tools needed in my job.
- It refreshed my learning skills and math skills.
- None.
- I feel more confident using the tools I work with.
- It was a great refresher course in math specifically. It also offered some experience in using a computer. I feel it also helped in developing problem solving skills.
- I can figure out problems better and make better and more accurate decisions.
- Gave me a better knowledge of how the Metal Division runs as a whole.
- It just made me a little more familiar with other work centers.
- In my opinion JSEP is oriented to helping people develop their math skills. And everyone should review math periodically.
- Has helped me in future skills in bettering myself.
- (No response).

Another question relevant to self-esteem asked, *"Can you name one thing that you can do now or feel more confident doing now than before you took the training?"* Responses included the following:

- Knowing measuring and math.
- Multiply and divide fractions, decimals and percents.
- I feel that I can solve more types of math problems that I may be faced with.
- I think I can do fractions better than before I started, also decimals.
- My math skills are best.
- I feel more confident with my math now.
- Reading instruments and meters.
- Using a computer
- I understand more about fractions and percents.
- Percentages somewhat. Need more on the computer.
- The one thing I feel more confident doing is trying for better jobs. Before JSEP, I didn't have much confidence but now I have already been assigned to another job. And I am still looking for better.
- The S.P. C. charts.
- Not really.
- No.
- Better math skills. More confident with the computer.
- Performing basic math and S.P.C. information.
- (No response.)
- Math.
- Changing fractions to decimals.
- (No response.)
- I can do percentages without using the calculator.
- Math.
- No.
- Checking my parts.
- Daily paper work.
- (No response.)
- I feel more confident in identifying problems that my occur during the course of my job.
- (No response.)
- I won't be so scared to take some more classes in the future.
- Filling out time sheets.
- Math
- No.
- Checking cosmetic dimensions and mixing ink to the right measure.
- No, however to me this was a refresher course. To many people that would not apply. The course contained many skills that I use everyday where as for many people it would be their first time learning these skills.
- I feel more confident when I measure parts.
- Reading blueprints.
- Fully understanding a route sheet.
- I did not know how to read blueprints. Now, I can.

THE MERIDIAN PARTNERSHIP
FURTHER EDUCATION

Based on 97 employee participants

Non Credit Courses (Offered at MCC)

Course Title	#Project Participants Enrolled
Blueprint Reading	14
Dimensional Measurement	6
Teambuilding	8
Machine Shop Operations	1

Peavey/MCC Training (offered on-site and/or on campus)

Training class Title	#Project Participants Enrolled
Basic Profs	4
Advanced PROFS	5
Basic DW	1
Advanced DW	1
Fire Extinguisher Training	47
Basic AS	3
Advanced AS	6
Hazard Communications	9
Repetitive Mfg. Control	5
AMP Training	2
MRPS Overview	1
Calendaring	3
Lockout/Tagout	1
Lotus	1
PRE	2

JOB PROMOTION

As already mentioned, twenty-one participants have received a job promotion or lateral move resulting in a salary increase since enrollment in the Metal Division and Transducer Division basic skills classes. This is 21.6% of the number (97) who enrolled.

FUNCTIONING IN FAMILY AND COMMUNITY

A question on the post program survey asked, *"Has this training helped you outside of work in any way? If so, please explain."* The responses are as follows:

- Yes (in my math).
- Yes, I love to learn. Before I felt I couldn't learn. I can do anything or almost. On some things I may be slower than someone else or I may take longer. But I can still learn.
- It has helped me to be able to tackle problems such as figuring how to measure objects or amounts.
- It has helped me to do percents better when I am shopping.
- (Help) my child do her work.
- Yes, I am developing a love for math. I can help others a little now that I have completed this program.
- It has inspired me to think a little harder than what I used to.
- Yes, I seem to use my head figuring out math problems. I used to use pen and paper or calculator, etc.
- Better able to deal with budget at home. Helped me work with children's school work.
- Not at the present, but it did get me interested in furthering my education.
- Before taking this class, I didn't help my step son with his math homework. Now I will.
- It helped me brush up on math.
- It has help(ed) me to apply some knowledge towards other areas as carpentry and some decorative ideas and renovations.
- Once again for me it was a refresher course.
- Figuring out problems involving mathmatics.
- Yes, refreshed my mathematics.
- On working paper work concerning math.
- Yes
- Well, not exactly.
- No, I haven't been in a situation to apply it to anything.
- Not to my knowledge.
- No (10 responses).
- No response on 8 surveys.

B. **Workplace Outcomes**

BUSINESS PRODUCTIVITY

Hard data regarding productivity is not available for publication. In such a competitive business as electronics a difference of a small percent can be very revealing in terms of competitive pricing. However, Peavey Electronics has provided the following information in a narrative format.

The following information was provided by Jere Hess, Director of Human Resources who has recently been promoted to Director of Public Relations and Education:

- The Metal Division has upgraded its painting process with the purchase of a *"$750,000 new washing, drying, and powder coat system."* This upgrade alleviates the need for a number of repetitive tasks but also requires more technical skills to operate and maintain. One employee was *"able to step up to be operator of it only because he went through the training program."*

- *"The Cost Reduction Suggestion Project Leader felt that there were better thought out suggestions to reduce costs and wastes."*

- The following is an excerpt from an internal letter provided by the S.P.C. Coordinator at Peavey Electronics:

  "... although we have had S.P.C. implemented for several years in the Metal Division and have been working toward quality improvement, it was not until this past February that we had a system of measuring the Division's progress as a whole. Our first measurement on 2-16-93 was 97.3% Quality level. Since that time we have experienced a gradual upward trend toward quality improvement. We peaked at 99.4% in June which is a 2.1% increase in overall quality. This increase can be attributed to a number of variables: Management, Education, Quality Awareness programs, Methods improvements, and Statistical Process Control. I feel that with continued education of our work force and Quality being our main objective, we will continue to see an upward trend."

  The S.P.C. coordinator indicated through conversation that a 2.1% increase in overall quality was quite significant in terms of dollar amounts.

ABSENTEEISM, SAFETY AND GRIEVANCES

- The Personnel Manager indicated that *"employee grievances from those who went through the training is negligible when compared to those who did not."*

- Mr. Hess, Director of Public Relations and Education, noted in a conversation that there had been no significant changes in absenteeism and safety from those who participated in the program.

JOB RESTRUCTURING AND EMPLOYEE PARTICIPATION AND TURNOVER

- Mr. Hess wrote that the Metal Division night shift was eliminated *"because of a drug bust which had a negative impact on employee participation and also on job restructuring."*

- Other events began to occur at this time which also impacted negatively on employee participation and job restructuring:

    - The Metal Division was reorganized.
    - The Metal Division Manager was replaced.
    - The Director of Human Resources (Jere Hess) suffered a heart attack and was on medical leave for five months. Mr. Hess was most instrumental in positively promoting this program as well as other partnership efforts between Peavey and MCC.
    - The Safety and Training Coordinator resigned, and he had been instrumental in helping with recruitment activities.
    - Because of product shows and seasonal sales, the employees were required to work much overtime in the fall and winter of 92-93.

C. Partnership Outcomes

The partnership remains strong today. The workplace literacy program that began under this project grant is institutionalized and is continuing on a smaller scale. Two participants who completed their ILPs but who wanted to expand their knowledge are continuing to attend classes on a regular basis. Two other participants have been referred to the GED program, and one continues to attend the ABE classes. Peavey employees within the various divisions understand they can come to MCC to upgrade math and reading skills needed for job performance or job advancement. MCC and Peavey have already discussed the possibility of doing similar training as that of the Metal Division in the Wood Shop Division. Some task analyses have already been completed.

MCC and Peavey Electronics are also participating in a Prehire program and are currently seeking funding to assist with this program. The other educational programs and support services already mentioned in this report as well as the tuition assistance program for full time employees remain active. One instructor is shared by both MCC and Peavey. This instructor spends part of her work week at Peavey assisting with data collection and safety training and the other part of her time in a computer lab on the MCC campus where she trains Peavey employees in various classes such as Professional Office Systems (Basic and Advanced), Document Writing (Basic and Advanced), Lotus, etc.

The following is an excerpt from a letter written by Mr. Max Evans, Manufacturing Engineer, in support of the workplace literacy partnership efforts:

> *"In each of my work experiences, I have observed one common occurrence. Each work cell is no stronger than the weakest link and the company is no stronger than the weakest link. Sooner or later, it breaks: I want to commend you and all the fine staff at MCC... on successfully tailoring PHASE I of the Metal Technology Program to fit the mission. The combined computer with detailed written lessons are right on target to help the employee achieve his potential The concept insures that the employee acquires basic knowledge and training needed to improve their work and performances.*
>
> *Sheet metal fabrication is not one of the repetitive, mindless tasks commonly seen at assembly lines. The 3-dimensional nature of the work requires workers who are capable of thinking, once they have been instructed in how to perform their job. They must be alert to potential production problems and do many things beyond their assigned tasks.*
>
> *This new program will not only promote computer literacy and specific skill training, but it will encourage employee involvement in problem solving. There is nothing wrong with making the best use of our most valuable asset, the employee's mind. Thanks for your support and valuable research."*

The partnership will continue. One goal of the partnership efforts will be to continue to strive to create customized software or multimedia that is company-specific. While this goal was not accomplished in this grant, the mechanisms were set in place to begin such. In addition, it is hoped to create video or multimedia components that address work ethic for both employees and prehire participants.

Meridian Community College and Peavey Electronics as well as other local industries are looking to the future. This community needs the jobs Peavey and other industries such as Avery Dennison, Structural Steel, Jansko, Colonial Baking Co. can provide, and the people of the community who are the employees and potential employees need the training MCC can provide. Expanded efforts have already taken place to bring other industries into the partnership. Together the college and these industies can work to insure that the community college and the companies remain viable and productive contributors to the local community and state.

Appendix

PEAVEY ELECTRONICS

POSITION: Press Brake Operator

JOB TASK Bend metal to specifications

JOB SUBTASKS	LITERACY SKILL APPLICATIONS
1. Read route sheet	1.1 Read down columns and across rows 1.2 Recognize part numbers, part descriptions, operation numbers, time standards, quantity 1.3 Compare part number to blueprint 1.4 Draw conclusions; make decisions
2. Read blueprint	2.1 Recognize technical lines, symbols, numbers, etc. 2.2 Perform mathematical operations to determine dimensions (add, subtract, multiply, divide decimals numbers)
3. Change out tooling on press brake	3.1 Understand sequence of bending operations 3.2 Spatially align tooling and dies 3.3 Take measurements using calipers and rule. Read place value to thousandth of an inch

4.	Program machine	4.1 Read and understand function of buttons and switches on control panel 4.2 Subtract decimal numbers to reduce blueprint dimensions by thickness of metal 4.3 Read micrometer 4.4 Determine steps in bending process (retract, delay, stop, repeat, speed) 4.5 Determine spacing of backstop (left, right, height) 4.6 Check angle on bend against blueprint specification using precision protractor and calipers 4.7 Draw Conclusions, make decisions after bending first piece
5.	Hand operate machine to run first part	5.1 Follow procedural directions 5.2 Apply common knowledge for safety
6.	Check dimensions of first part	6.1 Read calipers, micrometer to .001 of inch/read degrees on precision protractor
7.	Operate machine for bending consecutive parts	7.1 Follow procedural directions 7.2 Apply common knowledge for safety 7.3 Troubleshoot as needed -Compare/contrast -Make decisions -Predict outcomes
8.	Place bent parts on conveyor or bin as specified by part or type of metal	8.1 Recognize position, spatial and alignment terms 8.2 Pace work. Oral communication

9. Maintain SPC chart throughout process	9.1 Read and write in columns and rows 9.2 Read calipers, micrometers to .001 of inch 9.3 Read degrees on precision protractor 9.4 Add/subtract decimal numbers for tolerance and range 9.5 Average measurements for chart (add, divide decimals) 9.6 Figure range (add and subtract decimal numbers) 9.7 Sequence measurement of specified number of pieces 9.8 Recognize median (midpoint) 9.9 Apply information from charts, graphs to select actions
10. Complete/maintain paperwork Daily shop log Move ticket Work order Reject ticket Metal shop production report	10.1 Write/spell key technical words accurately 10.2 Enter appropriate information onto appropriate sections of forms 10.3 Transfer numbers, codes, dates, figures from parts or equipment or written sources onto appropriate sections of forms

Basic concepts
Simple programming concepts
Basic math

Tool Usage
Screw drivers, wrenches

bc/JW

Name _____
Date _____

Peavey Electronics
Metal Division
Individualized Plan
Basic Shop Math and Customized Lessons

CAI INSTRUCTION (JSEP SOFTWARE)

NUMBERING AND COUNTING
_____ 1D Identify the Greatest or Least Number from a Set of Numbers
_____ 1F Write or State the Place Value of a Particular Digit in a Whole Number or Decimal Number
_____ 1I Match Positive or Negative Numbers or Points with Tick Marks on a Number Line

LINEAR, WEIGHT, VOLUME MEASURES
_____ 2A Interpret the Markings on Linear Scales
_____ 2C Measure Lengths and Distances Using Rulers, Yardsticks, and Metersticks
_____ 2E Identify Measures of Volume and Capacity

DEGREE MEASURES
_____ 3A Identify Degrees and Mils as Units in Determining Angular Measurements or Temperature
_____ 3B Estimate the Measure of an Angle Not Greater than 180 Degrees

GAUGE MEASUREMENTS
_____ 5A Read and Interpret a Gauge
_____ 5D Read and Interpret Scales with Positive and Negative Markings
_____ 5F Match a Gauge Reading to a Specification
_____ 5G Read and Interpret Unnumbered Gauges
_____ 5I Adjust Gauges to Meet Specifications

ANGLES AND TRIANGLES
_____ 9A Identify Angles
_____ 9B Identify Types of Angles
_____ 9D Draw Bisectors of Angles and Altitudes of Triangles
_____ 9E Label Angles

ADDITION AND SUBTRACTION
_____12A Add and Subtract Whole Numbers without Carrying or Borrowing
_____12B Add and Subtract Whole Numbers with Carrying and Borrowing
_____12C Add and Subtract Decimals with Carrying and Borrowing
_____12D Add and Subtract Positive and Negative Numbers
_____12F Increase and Decrease Values on Measuring Instruments
_____12G Add and Subtract Measurements

MULTIPLICATION AND DIVISION

_____13A Multiply and Divide Whole Numbers
_____13B Multiply and Divide Decimals
_____13C Divide Numbers with Decimals
_____13D Multiply and Divide Negative and Positive Numbers

FRACTIONS AND DECIMALS

_____14B Reduce Fractions to Lowest Terms
_____14C Use a Conversion Table to Convert Decimals and Fractions
_____14D Convert Decimals, Fractions, and Percents
_____14E Add and Subtract Fractions
_____14F Multiply and Divide Fractions and Mixed Numbers

GEOMETRY

_____15F Compute the Area and Perimeter of a Rectangle
_____15G Compute the Area and Circumference of a Circle
_____15H Compute the Area and Volume of Rectangular Solids
_____15I Use Formulas to Solve Problems Involving Geometric Figures

COMBINATION OF PROCESSES

_____16B Compute Averages
_____16E Get Information from Numbers, Lines, Graphs, Tables and Scales
_____16F Solve Conversion Problems
_____16G Solve Problems Involving Ratios and Proportions

CUSTOMIZED LESSONS (VERBAL AND MATH)

_____ Reading a Scheduled Routing Summary
_____ Reading Tables and Charts
_____ Percent Applications
_____ Using Forms
_____ Nesting Applications
_____ Painting Applications (Figuring Drying Time)
_____ Common Vocabulary
_____ Using Math to Problem Solve at Work
  ___ Whole Number Word Problems
  ___ Decimal Word Problems
  ___ Fraction Word Problems
  ___ Percent Word Problems
  ___ Review of Word Problems
_____ S.P.C. Operators Manual and Related Math for S.P.C.

Name _____

Date _____

JSEP/CSR/SKILLSBANK CURRICULUM MATRIX
(MATH LESSONS ONLY)

TRANSDUCER DIVISION

SKILL	JSEP	CSR	SKILLSBANK (YELLOW)
PLACE VALUE WHOLE #'S DECIMALS FRACTIONS	1F	M0809 M0810	LES1 DISK5
WHOLE NUMBERS ADD/SUBTRACT	12A 12B	M0540 M0542 M0549 M0550 M0843 M0851	LES1 DISK1 LES2 DISK1
MULTIPLY/DIVIDE	13A	M0553 M0558 M0855 M0860 M0861 M1156 M1162	LES3 DISK1 LES4 DISK1
DECIMALS ADD/SUBTRACT	12C	M0873 M0874	LES5 DISK1 LES6 DISK1
MULTIPLY/DIVIDE	13B 13C	M0875 M0876 M0877 M1178 M1179	LES7 DISK1 LES8 DISK1 QUI1 DISK1

Name _____

Date _____

SKILL	JSEP	CSR	SKILLSBANK
FRACTIONS			
ADD/SUBTRACT	14A	M0563	LES9 DISK2
	14B	M0564	LES10DISK2
	14E	M0828	LES11DISK2
		M0829	LES12DISK2
		M0865	LES13DISK2
		M0866	LES14DISK2
		M1132	
		M1133	
		M1169	
		M1170	
		M1171	
MULTIPLY/DIVIDE	14F	M0867	LES15DISK2
		M0868	LES16DISK2
		M1172	LES17DISK2
		CSR DOES NOT HAVE	LES18DISK3
		DIVIDING FRACTIONS	QUIZ2DISK3
			LES8 DISK6
			LES9 DISK6
			LES10DISK6
PERCENTS	14C	M0830	LES19DISK3
	14D	M0831	LES20DISK3
		M1134	LES21DISK3
		M1180	LES22DISK3
		M1181	LES23DISK3
			QUIZ3DISK4
SUPPLEMENT THESE COMPUTER LESSONS WITH PAPER LESSONS			
ESTIMATION	1G	M0513	LES4 DISK5
	12H	M0527	LES5 DISK5
	13E	M08103	
	14A	M08104	
	14G	M0815	
		M11105	
		M11106	
		M11107	
GRAPHS/CHARTS	16E	M05145	LES8DISK13
		M08146	LES9DISK13
		M011149	

Name _____

Date _____

SKILL	JSEP	CSR	SKILLSBANK
MEASUREMENT			
LENGTH, WEIGHT	2A	M0588	LES1DISK13
VOLUME	2B	M08137	LES2DISK13
	2C	M08138	LES3DISK13
	2D	M08139	
	2E	M08148	
	2F		
	2G		
TIME	4A	M08135	LES19DSK16
	4C		
	4E		
GAUGES	5A		
	5B		
	5C		
	5D	M1197	LES20DSK16
	5E		
	5F		
	5G		
	5H		
	5I		
PROBLEM SOLVING	12F		
	12G		
	16D		
SIMPLE GEOMETRY			
ANGLES	3A		
	3B		
POINTS,LINES,RAYS	7A		
	7B		
	7C		
	7D		
SHAPES	8A		
	8B		
	8C		
	8D		
	8E		
	10A		

Name _____

Date _____

SKILL	JSEP	CSR	SKILLSBANK
ANGLES/TRIANGLES	9A		
	9B		
	9C		
	9D		
	9E		
GEOMETRIC FUNCTIONS	15A	M08136	LES4DISK13
	15B	M11154	LES5DISK13
	15C	M11155	LES6DISK13
	15F	M11156	LES7DISK13
	15G		
	15H		
	15I		
	15J		
	16A		
WORD PROBLEMS/ APPLICATIONS	16B	M05110	LES1 DISK9
	16C	M05111	LES2 DISK9
	16D	M05112	LES3 DISK9
	16F	M08114	LES4 DISK9
	16G	M08118	LES5 DISK9
	16H	M08119	LES6 DISK9
		M08129	LES7 DISK9
		M11102	LES8 DISK9
		M11105	LES9 DISK9
		M11106	QUIZ1DISK9
		M11107	
		M11152	LES10DSK10
			LES11DSK10
			LES12DSK10
			LES13DSK10
			LES14DSK10
			LES15DSK10
			LES16DSK10
			LES17DSK10
			LES18DSK10
			LES19DSK10
			QUIZ2DSK10
			LES23DSK11
			LES24DSK11
			LES25DSK11
			LES26DSK11

See customized lesson "Peavey Electronics: Using Math to Problem-Solve at Work"

See customized tests "Peavey Electronics/ Transducer Division: Practice Tests 1-9, Required Math Skills for Job-Postings"

Name _____

Date _____

SKILL	JSEP	CSR	SKILLSBANK
SIGNED NUMBERS	11	M1311	LES11DSK15
	12D		LES12DSK15
	13D		LES13DSK15
ALGEBRA	18A	M1313	LES11DISK7
	18B	M1315	LES12DISK7
	18C	M1317	LES13DISK7
		M1321	LES14DISK7
		M1322	LES15DISK7
		M1323	LES16DISK8
		M1324	LES17DISK8
		M1325	LES18DISK8
		M1331	LES19DISK8
			QUIZ2DISK8
		M1333	LES14DSK15
		M1335	LES15DSK15
		M1337	LES16DSK15
		M1339	LES17DSK15

(from Peavey Times, "Personnel File" by Jere Hess)

Here are some things you need to remember:

1) You must _____(1)_____ in and out everyday you are at _____(2)_____ in order to get _____(3)_____ properly and to avoid disciplinary _____(4)_____. With new _____(5)_____ clocks and new badges, there is no _____(6)_____ for not punching.

2) Seek out and ask if you cannot _____(7)_____ the nearest fire _____(8)_____ to your work station. Be ready for the _____(9)_____ over the P.A. _____(10)_____ if there is a fire _____(11)_____ or a "real" fire.

3) We recently had a theft from one of our _____(12)_____ by someone who _____(13)_____ in the plant. The items that were _____(14)_____ were two Peavey jackets. We _____(15)_____ the jackets and have a _____(16)_____ on who stole them, but we need your _____(17)_____ on a daily or nightly basis. If you _____(18)_____ something fishy going on, report it to _____(19)_____ immediately. Remember that _____(20)_____ that are stolen from the _____(21)_____ are really stolen from all of _____(22)_____ and that is reflected in lowering PRIDE _____(23)_____.

4) For every _____(24)_____ you have deducted from your _____(25)_____ for FICA or Social Security, the company _____(26)_____ it so that you _____(27)_____ be assured of a _____(28)_____ when you retire. Last _____(29)_____ the contribution by the _____(30)_____ was $2,553,400.

(Frsct 8-7 J. Willis

Name _____ SS# _____

1 ×4	7 ×9	2 ×9	9 ×3	2 ×5	7 ×3	4 ×1	8 ×9	2 ×7	1 ×0
5 ×1	9 ×1	0 ×9	5 ×0	4 ×9	8 ×1	1 ×9	5 ×8	6 ×9	6 ×5
9 ×4	1 ×3	7 ×2	5 ×9	4 ×0	5 ×7	9 ×0	3 ×5	4 ×2	9 ×8
5 ×2	3 ×4	8 ×7	4 ×8	0 ×0	8 ×2	2 ×4	8 ×8	6 ×8	1 ×2
3 ×9	9 ×5	2 ×2	7 ×8	3 ×0	6 ×3	5 ×3	0 ×1	2 ×1	4 ×5
8 ×3	0 ×6	4 ×7	1 ×1	7 ×0	3 ×6	1 ×5	8 ×0	4 ×3	2 ×7
1 ×8	6 ×4	7 ×7	6 ×0	9 ×6	2 ×8	5 ×4	0 ×5	6 ×2	9 ×7
8 ×6	9 ×2	2 ×6	3 ×1	2 ×3	7 ×1	6 ×1	7 ×6	1 ×7	6 ×7
3 ×8	0 ×3	4 ×6	8 ×4	0 ×2	5 ×5	1 ×6	3 ×7	4 ×4	8 ×5
7 ×5	3 ×3	5 ×6	0 ×8	7 ×4	6 ×6	3 ×2	9 ×9	0 ×7	6 ×9

(from Peavey Electronics Employee Handbook)

COMPANY VACATION

The Plant will _____(1)_____ two weeks each _____(2)_____ for vacation. The first _____(3)_____ will usually be at the _____(4)_____ of June or the beginning of July. The _____(5)_____ week will be at the end of December. Exact closing _____(6)_____ will be published in the year-end _____(7)_____ of the Company newsletter.

Each full _____(8)_____ employee with at _____(9)_____ one year of continuous _____(10)_____ with the Company, since the _____(11)_____ he last started to _____(12)_____ for the Company, will be _____(13)_____ to one week of vacation with _____(14)_____ at the straight time _____(15)_____. Each full time _____(16)_____ with at least two _____(17)_____ of continuous service with the _____(18)_____ will be entitled to two _____(19)_____ of vacation, with pay at his/her _____(20)_____ time rate.

In the first two _____(21)_____ of employment an _____(22)_____ will receive vacation _____(23)_____ in proportion to length of _____(24)_____. This work time _____(25)_____ be determined twice _____(26)_____ year, using the date of _____(27)_____ and dates June 15 and December 15, respectively. There is no accrual of _____(28)_____ time. Each employee must _____(29)_____ through these dates to _____(30)_____ for the vacation pay due.

(Frcst5.2) JWPhilippi 5-10-89

TO: Participating Supervisors
FROM: Jorie Philippi, Performance Plus Learning Consultants, Inc.
SUBJECT: Development of Performance Behavior Rating Scales
DATE: April 21, 1993

Directions

1. These scales are to be used for pre/post program ratings of participants in Peavey's employee skills enhancement program. Use one set of these scales to rate each potential employee program participant that you currently supervise.

2. Read each rating scale carefully. Notice that the behaviors listed under each number represent observable characteristics for an excellent, an average, and a below average employee. There may not be parallel behaviors listed for each type of employee; rather, each list represents a 'snapshot' of that category of employee.

   Think about the employee you are rating as you consider each list on a scale. Which list of behaviors contains the most characteristics that describe the employee's behavior? Circle <u>one number</u> at the top (5,,3 or 1) which heads up the list of behaviors that most nearly describe the <u>current</u>, observable actions of the employee you are rating.

   If the employee performs some behaviors on several lists, for example two behaviors on list 5 and two behaviors on list 3, you may circle the number at the top between the lists (4 or 2). Please try to be as accurate as possible.

   Repeat the rating process for each employee to be rated. Remember, each completed rating scale should represent a current 'snapshot' of observable behaviors the employee performs.

3. Return your completed rating scales to Jean Willis by ..... You will be asked to use these scales again to rate each employee after he or she completes instruction in the program. Thanks for your help.

I. Promotable

5	**3**	**1**
Shows involvement--takes control	Easily motivated--shows improvement in job & self pride	Exhibits poor motivation
Exhibits good people skills	Communicates with supervisors & asks questions	Shows no desire to do better
Helps others	Has good attendance record	Does not call in when sick
Is easily understood	Keeps supervisors updated	Cannot compute simple math problems
Is totally involved in learning	Can read blueprints and measuring equipment	
Demonstrates enhanced technical skills	Covers own job only	
Has pride in job and self	Satisfied with current job knowledge	
Exhibits high self-esteem	Has knowledge of own workcenter and knows acceptable limits	
	Exhibits confidence in self	

II. Team Player

5	3	1
Shows willingness to jump in and help where needed; is quick to say, "we can do it"	Helps overcome "we can't" attitude--suggests ideas to overcome problems	Always coming up with reasons why we can't do it
Demonstrates realization that he is part of a team and that the common goal can't be achieved by himself.	Willing to work with others but occasionally plagued with negative attitude	Destroys other employees motivation with a negative attitude
One that is open-minded to help solve problems and suggest ideas to correct existing problems	Uses time wisely & asks for help when needed	Never suggests idea to solve problems; just wants to make 8 hrs. and go home
Gets along with fellow employees	Willing to suggest other options to solve problems	
Is willing to be dumped on	Willing to do things when asked	Refuses to do things
	Knows own limitations and is secure enough to allow others to know	
	Willing to listen to authority	
	Has good ideas but often has no idea how to implement ideas	

III. Gets Job Done

5	**3**	**1**
Never has to be reminded of what he is supposed to be doing.	Knows limitations-- looks for needed information to complete job	Is reluctant to take on special projects or try anything new-- acts scared to start a new job
Has advanced technically and makes many decisions.	Makes some decisions but when job is completed waits for authority to start new task	Always has to be checked on to make sure assigned task is completed
Listens to instructions without making negative comments	Occasionally makes negative comments	Stays to self-- shows little or no interaction with others
Works in a manner that achieves positive results	Able to work with minimum supervision	
Uses influence and gets along well with others	Gets job done but not without help	
Takes care of the task at hand	Hesitant to try new jobs, but willing to try certain projects	

IV. Business-Focused

5	**3**	**1**
Does only work-related activities during entire time at work; does not BS unless on break	Attentive to job but can be distracted	Daydreams and talks about what will happen after work
Always looking for ways to improve	Willing to accept less than efficient work results	Cares more about petty complaints than what is best for the majority
Looks for the best outcome for the business	Knows the success of the product pays the wages	Acts careless around moving equipment
Is not wasteful	Has a purpose--acts safely around equipment	Moves slowly
Cleans up behind self and others	Cleans up behind self and looks for ways to make own job easier	Considers only self-interest when making decisions
Moves quickly	Shows little involvement in other areas of the company	Only demonstrates interest in own work station and not for company overall.
Makes good decisions	Develops priorities and has the "guts" to stick to them	Does not show willingness to put job first for company benefit
Looks at what's best for the company and not just his involved area		
Puts the companies best interest ahead of his own		
Exhibits good professional habits--is fair, honest		

V. Can Problem Solve

5	**3**	**1**
Asks good questions	Usually knows where to start	Asks no questions
Knows where to start	Listens well & asks some questions	Shows or expresses lack of understanding
Listens well	Willing to try new things if asked to	Is always talking
Thinks of solutions	Doesn't like changes unless it benefits self	Demonstrates unwillingness to deal with problems
Demonstrates willingness to try	Suggests ideas in own area only	Always expresses or shows negative attitude toward new ideas
Demonstrates good basic math background	Moves toward jobs he already knows how to perform	Exhibits lack of ability to think for himself
Systematically approaches each problem with a plan in mind	Shows some confidence in ability to solve problems and occasionally trys to solve problems	Demonstrates lack of self-confidence in own ability to solve problems and avoids trying to solve problems
Uses good problem solving techniques to find solutions to problems, often without asking for assistance	Exhibits some ability to think for self and interest in learning new problem solving techniques	Demonstrates unwillingness to learn or use new problem-solving techniques
	Willing to learn with supervisory encouragement	

VI. Quality Conscious

5	**3**	**1**
Checks work before it goes to next station	Checks work while it is running	Pays no attention to accuracy of work
Ensures work is within tolerances and acceptable by next workstation	Produces quality products if held responsible for work	Does the job knowing it will be rejected and takes no action(s) to inform anyone
Stops the line and ask for help whenever necessary	Runs parts that are made to the best of his ability and training	Takes no initiative to learn what is acceptable or unacceptable but continues to send work out
Can tell what is expected from customer and tries to produce it	Knows what quality and production company expects	Checks no previous operations completed and exhibits desire to do things only halfway
Ensures that work meets standards and checks quality of incoming product-- never lets defective work pass	Uses parts put in front of him and will force fits	Doesn't check any previous operation done and only wants to do something half way
Never intentionally lets poor quality part go to next station	Tries hard not to send poor quality to next workstation.	Lets parts go to next workstation knowing they are bad

VII. Continuously Looking for Improvements

5	3	1
Looks for ways to do things more easily, quickly, and cost effectively	Occasionally looks for ways to do things more effectively	Finds something wrong with every new idea even before trying it
Takes charge of making workplace better	Willing to try new ideas to make workstation better	Shows or expresses desire for someone else to do the job
Knows current methods and shows concern over how things work		Offers no suggestions on improvements; shows inability to solve problems even if told what to do
Looks for chores to do that prevent bottlenecks (getting tools sharpened ahead of time)	Embraces ideas to make his job easier	Lets tooling run until it breaks or ruins parts, when obvious it need sharpening
Looks for better ways to do job, saving company time and money	Accepts others' ideas or changes for better methods after having time to think about new methods	Always has reasons why something can't be changed; shows or expresses liking for the way things are and never wants change

VIII. Self Motivated

5	**3**	**1**
Takes needed actions to keep department operating; gets job done with little or no instruction	Requires some instruction and some reminders of changes in procedures but willing to try new methods	Requires being told or shown every step of a process after each function.
Brings ideas to attention of supervisors	Needs to have work spot checked	Expresses or exhibits desire to just put in time and go home
Sometimes seems impatient-- always appears ready to do something--never idle	Moves at the same productive pace all day--is only occasionally idle	Ofen idle--wastes time talking before job is done
Looks ahead on schedule to ensure that needed parts are available or on order	Has knowledge of production schedule--only occasionally runs out of material	Runs out of row material frequently
Looks for improved ways to do job	Feels comfortable working with previously proven methods	Has to be told everything, even simple repetitious tasks

IX. Does Extra

5	**3**	**1**
Stays after bell rings to finish jobs; does not leave exactly when the bell rings	Ready to begin on time at work station--willing to work longer is asked--sometimes volunteers	Never volunteers to stay after work to get a rush order out
Performs above standard quota (standard may be 50 units an hour but does 60 an hour)	Knows how to stay on schedule--usually reaches quota or just below	Barely reaches quota each shift-- does just enought to get by
Demonstrates willingness to be inconvenienced		Expresses or shows feelings of only having to do minimum work
Goes to technically related classes to learn skills for job advancement	Doesn't like surprise changes--willing to accept instruction-and-take job related classes	Exhibits dislike for surprises (changes in routine, mandatory overtime)

X. Volunteers

5 Demonstrates advanced technical skill and offers solutions to solve problems	**3** Knows what is expected and will do it to his best ability	**1** Has to be asked to do everything--waits for direction, even on simple decisions
Exhibits caring behavior toward work duties and customers	Hesitates to volunteer without knowing job options if not a volunteer	Expresses or shows lack of willingness to get "involved"
Works into breaks or quitting time	Works only until time clock goes off	Shuts down early
Demonstrates availability to help-- sticks around to see what's going on	Gets to work station on time	Arrives as late as possible and leaves as soon as possible
Always shows or expresses willingness to help above and beyond--volunteers when there is a need	Feels time with the company should be paid for--occasionally shows extra effort	Never wants to help with extra efforts--only works for paid time

XI. Practices Good Attendance

5	**3**	**1**
Arrives early--never misses work, if at all possible	Usually at work station on time	Late to work and returning from breaks-misses work due to poor excuses
Only absent in extreme emergency cases	Calls in early when going to be late or absent	Late, absent, may not call in until late in day
Always at work station when bell rings and starts to work before co-workers arrive	Occasionally late returning to work station after breaks	Looks for excuses to miss work or be late returning to work area
Starts early enough to handle unexpected circumstances and still arrive on time		Leaves work early

XII. Dependable

5	**3**	**1**
Shows or expresses interest in future of company and job tasks	Talks too often, stopping work	Is inattentive
Gets things done--gets to work on time	Is only late in an emergency	Exhibits bad work habits--absenteeism
Is always at proper place and keeps work flowing	Leaves workplace only when excused--meets production needs	Often is away from work center; talks; is idle
Is available whenever needed		Is frequently absent
Demonstrates effectiveness and produces high quality rates	Knows how to stay on schedule	Must be told exactly how to do each job, even though previously trained
Works on own without constant supervision	Needs spot checks	Seldom finishes work on time
Takes tasks assigned and ensures they are done accurately and on time		
Helps get things done that no one else wants to handle	Will help in other areas if asked	

XIII. Shows Common Sense

5 Is knowledgeable about what he discusses	**3** Has ability to communicate	**1** Sounds and looks confused
Indicates better methods for participation	Will make simple decisions and sometimes offer better methods or procedures	Shows or expresses lack of knowledge about procedures
Makes no simple mistakes and very few, if any, on technical decisions	Has a general knowledge of what is needed	Makes frequent simple mistakes
Plans work well and thinks problems through	If confused, won't let on and usually will do job wrong the first time	Looks lost or stands around waiting for simple instructions
Asks thoughtful, appropriate questions at the right time	Lets supervisor supply answers	Asks no questions, even when unsure
Demonstrates basic ability to make decisions and solve problems	Can make basic decisions and solve simple problems	Exhibits inability to know if he is "washing or hanging out"
	Usually needs initial instructions	

XIV. Shows Positive Attitude

5	**3**	**1**
Asks to be involved	Allows self to be brought into the solution	Never volunteers to do simple chores
Keeps work area neat	Keeps things in correct places	Never completes clean-up
Asks to help	Will attempt to solve problems	Projects low self image
Smiles		Frowns
Makes no negative comments	Has ability to do job well--only occasionally makes negative comments	Does job sloppily
Looks for ways to make things work	Will ask for help to improve methods	Demonstrates no participation or involvement
Offers suggestions	Occasionally offers suggestions	
Asks questions		

XV. Practices Neat Housekeeping

5 Keeps work area well organized	3 Knows where things should go and attempts to keep area clean	1 Maintains sloppy work area
Exhibits neat personal appearance and good hygiene	Usually has neat personal appearance	Exhibits sloppy personal appearance and poor hygiene
Looks ahead to see ways to keep neat & clean	Cleans up before litter gets in the way	Never picks up or disposes of material in area--lets it pile up

XVI. Shows Caring Attitudes

5	**3**	**1**
Shows or expresses concern for department needs	Questions poor work coming to workstation	Lets bad work flow through the workstation
Looks ahead on schedule to keep orders flowing	Keeps up with schedule--knows what is needed to run job	Does not visually inspect parts as required.
Demonstrates or expresses concern for the job and for others	Shows concern for friends and buddies--pulls group together when asked	Shows or expresses lack of care for others or for doing a quality job
	Takes care of workstation--inspects parts as required	