The Workplace Literacy Project conducted in Pima County, Arizona, provided workplace literacy training for 161 trainees at 8 worksites and 3 off-site locations. Worksites included industrial and service employers. Support services, including child care, transportation, educational counseling, and tutoring, were made available to participants although they were not heavily used. Outcomes of the project included the following: (1) 77 percent of participants completed project activities; (2) many noncompleters were laid off; (3) participants showed gains in basic skills, math, and test-taking; (4) employees gained confidence; and (5) employee morale was higher. When two of the three original employers participating went out of business or drastically reduced their work force early in the project, other sites were recruited. Many of the participating sites have decided to continue their literacy efforts, despite a lack of federal funding. (Samples of specific company curricula, specific company lessons, pre- and post-assessments and score sheets, a student progress report, a supervisor needs assessment, supervisor evaluations, student class evaluations, and recruitment flyers are included in the appendix.) (CHL)
PIMA COUNTY WORKPLACE LITERACY PARTNERSHIP GRANT

FINAL REPORT

November 1, 1990 - March 31, 1990

REPORT PREPARED BY:
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WORKPLACE LITERACY COORDINATOR
PIMA COUNTY ADULT EDUCATION
531 West Plata, Suite 600
Tucson, AZ 85705
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Grant Award No. V198A80

Grantee Pima County Adult Education
Tucson, Arizona

Project Director Greg Hart

Phone (602) 884-8628

Is this program located at the work site? Yes X No __

Reporting Period From 1 11 88 to 31 3 90
Day/Month/Year

Day/Month/Year
e.g.: 1st quarter is 1/1/89-3/31/89

Number of weeks in training cycle 11

Average number of hours per week of Workplace Literacy training 5

Average number of hours per week of Workplace Literacy training per learner 3

Types of training funded (for example, basic skills, English as a Second Language, training, etc.)

English as a Second Language (ESL)
Basic Skills (ABE/GED)
Math
Test-Taking Skills

Signature of Project Director/Date
TABLE 1: Profile of Workplace Literacy Participants

<table>
<thead>
<tr>
<th>Section A. Participants who upon entry into program had:</th>
<th>American Indian or Alaskan Native</th>
<th>Asian or Pacific Islander</th>
<th>Black, not of Hispanic Origin</th>
<th>Hispanic</th>
<th>White, not of Hispanic Origin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years of School Completed or Educational Functioning Level (if known):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Level I (grades 0-8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>b. Level II (grades 9-12)</td>
<td>1</td>
<td>22</td>
<td>2</td>
<td>52</td>
<td>44</td>
<td>121</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>29</td>
<td>3</td>
<td>82</td>
<td>46</td>
<td>161</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section B. Participants who upon entry into the program were:</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ages:</td>
<td>Males</td>
</tr>
<tr>
<td>16 - 24</td>
<td>8</td>
</tr>
<tr>
<td>25 - 44</td>
<td>35</td>
</tr>
<tr>
<td>45 - 59</td>
<td>13</td>
</tr>
<tr>
<td>60 and older</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
</tr>
</tbody>
</table>

Table IA and IB require reporting on an unduplicated count. Table IA grand total must equal Table IB grand total.
TABLE 1. Profile of Workplace Literacy Participants (cont'd).

Section C.

Total number of participants* served at each site (if more than one site):

<table>
<thead>
<tr>
<th>Site Location</th>
<th>No. Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) CEI (Curtis Electronics)</td>
<td>12</td>
</tr>
<tr>
<td>b) Shape West</td>
<td>28</td>
</tr>
<tr>
<td>c) Burr-Brown</td>
<td>22</td>
</tr>
<tr>
<td>d) Handmaker Jewish Geriatric Center</td>
<td>16</td>
</tr>
<tr>
<td>e) Krueger Manufacturing</td>
<td>22</td>
</tr>
<tr>
<td>f) El Rio (Test-Taking Skills Group)</td>
<td>8</td>
</tr>
<tr>
<td>g) Hybridyne</td>
<td>16</td>
</tr>
<tr>
<td>h) University of Arizona</td>
<td>20</td>
</tr>
<tr>
<td>i) Hughes Aircraft</td>
<td>16</td>
</tr>
<tr>
<td>j) Off-site Dislocated Worker</td>
<td>1</td>
</tr>
</tbody>
</table>

* unduplicated count of individuals who began training in this cycle and remained in training for at least two consecutive weeks.
TABLE 1 Profile of Workplace Literacy Participants (cont'd)

Section D.

**Length of Employment at Work Site:**

<table>
<thead>
<tr>
<th>Time Employed</th>
<th>No. Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5 mos.</td>
<td>27 *</td>
</tr>
<tr>
<td>6 - 11 mos.</td>
<td>15</td>
</tr>
<tr>
<td>1 - 5 yrs.</td>
<td>96</td>
</tr>
<tr>
<td>6 - 10 yrs.</td>
<td>17</td>
</tr>
<tr>
<td>11 - 15 yrs.</td>
<td>2</td>
</tr>
<tr>
<td>16 - 20 yrs.</td>
<td>3</td>
</tr>
<tr>
<td>21 and over</td>
<td>1</td>
</tr>
</tbody>
</table>

* 13 students in this group were unemployed; 5 were family members of employed students, 1 was an unemployed dislocated worker, and 7 were in the JTPA class for test-taking skills.

Section E.

**Proposed Number of Individuals to be Served**

160

**Actual Number of Individuals Served**

161 (**07)**

**Cumulative number of new and continuing students.**
TABLE 2. Number of Personnel, by Organizational Placement of Job Performed

<table>
<thead>
<tr>
<th>Organizational Placement and Type of Job Performed</th>
<th>Workplace Literacy Program Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personnel Paid with Grant Funds</td>
</tr>
<tr>
<td></td>
<td>Total Number of Part-Time Personnel</td>
</tr>
<tr>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>1. Administrative/Supervisory</td>
<td>1</td>
</tr>
<tr>
<td>2. Teachers</td>
<td>9</td>
</tr>
<tr>
<td>3. Counselors</td>
<td></td>
</tr>
<tr>
<td>4. Paraprofessionals</td>
<td></td>
</tr>
<tr>
<td>5. Ancillary Service Providers</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4. Qualitative Improvement
Data to Date

Section A.

Achievement of participants:

<table>
<thead>
<tr>
<th>No. Participants</th>
<th>Section A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tested higher on basic skills</td>
<td>36*</td>
</tr>
<tr>
<td>2. Improved communication skills</td>
<td>68</td>
</tr>
<tr>
<td>3. Improved safety record</td>
<td><strong>10</strong></td>
</tr>
<tr>
<td>4. Increased productivity</td>
<td>10</td>
</tr>
<tr>
<td>5. Improved product quality</td>
<td>2</td>
</tr>
<tr>
<td>6. Increased efficiency</td>
<td></td>
</tr>
<tr>
<td>7. Reduced turnover</td>
<td></td>
</tr>
<tr>
<td>8. Higher Morale/Improved Confidence</td>
<td>67***</td>
</tr>
</tbody>
</table>

Methods of getting data for Section A:

(check those used)

1. Surveys of trainees
2. Surveys of line managers and supervisors
3. Pre and post tests of trainees
4. Observation of employee - behavior by managers and/or unions including production rates, time lost on job, etc.
5. Other (describe)

*These are the people for whom we have actual tests, (104 tested out of the 124 "completers"). We assume that all 124 "completers" would have tested higher in basic skills and communication skills if they had post-tested.

**In addition to the above statistics, employees felt that their workers were basically efficient and productive. As one supervisor commented, "Both Jesus and Maria were good workers before ESL and remain so. They've always shown initiative, been productive, and their quality of work has always been good."

***One area of qualitative improvement that many supervisors had noted was that their employees had gained in confidence and higher morale which we added as #8 in Section A.
Workplace Literacy Participants by Work Site and Type of Training

<table>
<thead>
<tr>
<th>ABE/GED</th>
<th>CEI (Curtis)</th>
<th>Shape West</th>
<th>Handraker</th>
<th>El Rio Test-Taking Skills</th>
<th>Krueger</th>
<th>Hybroidyne</th>
<th>Burn-Brown</th>
<th>Hughes Aircraft</th>
<th>U of AZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>12</td>
<td>28</td>
<td>16</td>
<td>9</td>
<td>22</td>
<td>16</td>
<td>22</td>
<td>16</td>
<td>20</td>
<td>161</td>
</tr>
<tr>
<td>ABE/GED</td>
<td>4</td>
<td>22</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>ESL</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td></td>
<td>22</td>
<td>17</td>
<td></td>
<td></td>
<td>20</td>
<td>79</td>
</tr>
<tr>
<td>Test Taking Skills</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>PALS Lab/Reading Class</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Notes:**
- The table categorizes workplace literacy participants by work site and type of training.
- The data includes counts for dislocated workers and participants from additional sites.
- The total number of participants across all sites is 161.
Pima County Adult Education's Workplace Literacy Project, funded under the National Workplace Literacy Program, provided workplace literacy training at 8 worksites and 3 off-site locations. The worksites included: Curtis Electronics (CEI), Shape West, Handmaker Jewish Geriatric Center, Krueger Manufacturing, Hybridyne, the University of Arizona (Physical Resources Department), and Hughes Aircraft. The off-site locations included: a PALS Lab, a literacy class, and a test-taking skills class for JTPA clients (dislocated workers) that needed to improve their GATB scores, (only 10 trainees out of 161 were served in off-site locations).

The following information compares actual accomplishments to the objectives contained in the approved application.

Objective 1
By October 15, 1988, the work schedules of the Project Director and Lead Teacher/Curriculum Coordinator will be adjusted so that they can assume responsibilities for meeting the needs of adult learners in this project. This will be evidenced by contracts in employee files available for review at the Pima County Adult Education (PCAE) office.

Accomplishments
Pima County Adult Education's Workplace Literacy Project got underway in November 1, 1989. This was due to a late start in hiring the Lead Teacher/Curriculum Coordinator, whom we named the Workplace Literacy Coordinator.

Objective 2
By November 30, 1988, the Director and Lead Teacher/Curriculum Coordinator will have completed a literacy audit (needs analysis) at Curtis Electronics and developed a curriculum based on the needs identified in the literacy audit. This will be evidenced by the inclusion of the results of the audit and curriculum samples in project reports.

Accomplishments
By November 30, 1988, the Workplace Literacy Coordinator completed a literacy audit at Curtis Electronics and developed a curriculum based on the needs identified in that audit. This was evidenced by inclusion of the results of the audit and curriculum samples in project reports to the outside evaluator and Project Director.

Objective 3
By March 31, 1989, 2 or more experienced and qualified teachers with backgrounds in English as a Second language and/or literacy/GED will be hired or re-assigned so that they can provide educational services to the participants in this workplace literacy program. This will be evidenced by contracts in employee files available for review at the PCAE office.
Accomplishments
By March 31, 1989, 4 experienced and qualified teachers with ESL and literacy/GED backgrounds were hired to provide educational services to the participants at three different work sites: Curtis Electronics (CEI), Shape West, and Burr-Brown. At all locations, both ESL and ABE/GED were offered.

Objective 4
By February 29, 1989, a minimum of 20 Curtis Electronics employees needing basic skills improvement will have been recruited and trained in a 10-week class session offering at least one or more of the following classes: job-related literacy skills; workplace literacy skills for adults with limited English proficiency; GED test preparation; speaking and listening skills; reasoning and problem-solving skills. This will be evidenced by the inclusion of evaluation outcomes, and information on the number of students and the classes provided in project reports.

Accomplishments
By February 29, 1989, PCAE provided 8 weeks of instruction in ESL and ABE/GED at Curtis Electronics (CEI). Eight employees were trained in the ESL class and 4 employees were trained in the ABE/GED class. Classes were offered twice a week for an hour and 45 minutes each class session. There was no release time nor compensation in terms of pay. Inclusion of evaluation outcomes and information on the number of students and the classes provided were given to the outside evaluator and Project Director in project reports.

Curtis Electronics immediately went through a major lay-off after we began classes. A second lay-off followed at which point it was appropriate for us to terminate our classes there. Shortly after that, Curtis went out of business. The Workplace Literacy Coordinator taught the ESL class at Curtis which was very helpful in training others to teach in a workplace specific environment.

Objective 5
By March 31, 1989, the Lead Teacher/Curriculum Coordinator will have completed a workplace literacy audit (needs analysis) at Shape West and developed a curriculum based the needs identified in the literacy audit. This will be evidenced by the inclusion of the results of the audit and curriculum samples in project reports.

Accomplishments
By March 31, 1989, the Workplace Literacy Coordinator completed a workplace literacy audit at Shape West and developed a curriculum based on the audit. This was evidenced by the inclusion of the results of the audit and curriculum samples in project reports to the outside evaluator and Project Director. On March 7, PCAE began ESL and ABE/GED classes at Shape West. As of March 31, 1989, 5 employees were in the ESL class and 15 employees were enrolled in the ABE/GED class. The classes were offered once a week for 3 hours each class session on employees' days off. There was no release time nor pay compensation.
Objective 6
By December 31, 1989, a minimum of 100 additional employees who work at Curtis Electronics and Shape West and who need work-related basic skills improvement will have been recruited and trained in additional 10-week class sessions offered at Curtis Electronics and Shape West. Classes offered will include job-related literacy/basic skills, workplace literacy skills for adults with limited English proficiency; GED test preparation; speaking and listening skills, reasoning and problem-solving skills. This will be evidenced by the inclusion of evaluation outcomes, and information on the number of students and the classes provided in project reports.

Accomplishments
PCAE's Workplace Literacy Project recruited and trained 118 employees by December 31, 1989. However, circumstances at both Curtis Electronics and Shape West necessitated the inclusion of Burr-Brown as an additional site. By December 31, 1989, Curtis Electronics was out of business and Shape West went from over 300 employees to 25 employees. As was stated in Objective 4, PCAE trained 12 employees at Curtis Electronics before it went out of business. PCAE also trained 28 employees or family members of employees at Shape West. At Burr-Brown, a total of 22 employees, or family members of employees, were trained. A few family members were included in classes at Shape West and Burr-Brown at the request of the companies. Classes offered included workplace literacy skills for adults with limited English proficiency, speaking and listening skills, ABE/GED, reasoning and problem-solving, and test-taking skills. Inclusion of evaluation outcomes and information on the number of students and the classes provided were given to the outside evaluator, the Project Director, and the Department of Education in project reports.

Objective 7
By April 30, 1989, the Lead Teacher/Curriculum Coordinator will have completed workplace literacy audits (needs analyses) in medical and clerical worksite locations where dislocated (JTPA) workers have been placed in jobs or on-the-job training. This will be evidenced by the inclusion of the results of the audits in project reports.

Accomplishments
By April 30, 1989, the Workplace Literacy Coordinator completed a literacy audit at Handmaker Jewish Geriatric Center, a nursing home where we trained dislocated workers. This was evidenced by inclusion of the results of the audit and curriculum samples in project reports to the outside evaluator and Project Director. PCAE began classes there on April 25, 1989. One student was enrolled in ESL and 6 in ABE/GED. The trainees in the classes were nurses' aides, food service, and housekeeping employees. There was no release time nor pay compensation.
Objective 8

By December 31, 1989, a minimum of 40 dislocated workers who have been placed in new jobs or on-the-job training and who have inadequate basic skills for their new employment fields will have been recruited and provided with work-related basic skills classes. Classes offered will include job-related literacy/basic skills, workplace literacy skills for adults with limited English proficiency; GED test preparation; speaking and listening skills, and reasoning and problem-solving skills. This will be evidenced by the inclusion of information on the number of students and the classes provided in project reports.

Accomplishments

By December 31, a total of 55 dislocated workers were trained at 5 different locations: Handmaker, El Rio (test-taking skills group), Krueger, Hybridge, and a reading class at one of PCAE's learning centers. All the trainees were employed at the time, except the group that took a test-taking skills class in connection with having to upgrade their performance on the GATB. Training was offered in ESL, ABE/GED, reading (literacy) and test-taking. See chart on page 7 for appropriate numbers. Inclusion of evaluation outcomes and information on the number of students and the classes provided were given to the outside evaluator, the Project Director, and the Department of Education in project reports.

Objective 9

By December 31, 1989, information on the outcomes of the 160 employees from Curtis Electronics, Shape West, and a variety of medical and clerical worksite locations will be gathered through comparisons of individual productivity records for pre- and post-literacy class training as well as comparisons of work-related tests given pre- and post-literacy class training and individual interviews. This will be evidenced by the inclusion of this evaluation information in project reports including the final report for the project.

Accomplishments

By December 31, 1989, information on the outcomes of 18 employees from Curtis Electronics, Shape West, Burr-Brown Handma,aker Jewish Geriatric Center, Krueger, the test-taking skills group, and Hybridge were gathered through comparisons of individualized productivity records for pre- and post-workplace literacy class training as well as comparisons of work-related pre- and post-assessment tests. The outcomes and other qualitative data established through testing are included in this report (see pages 6, 15, 16).

Objective 10

By December 31, 1989, all 160 employees participating in this program will have had opportunities to take advantage of the support services offered in conjunction with the program including childcare, education counseling and one-on-one tutoring. This will be evidenced by the inclusion of information in project reports concerning how many adults were provided with support services and which services were utilized.
Accomplishments
By December 31, 1989, 118 employees participating in this program had the opportunity to take advantage of the support services offered in conjunction with the program including childcare, transportation, educational counseling, and one-to-one tutoring. The reason that transportation was added was because at Shape West, classes were offered on employees' days off since Shape West had 12-hour shifts. At Handmaker, employees had to come back to the work site to attend class. Although we added transportation to support services, only 1 employee used the transportation reimbursement and 1 employee took advantage of the childcare reimbursement. Educational counseling was utilized by most employees, in terms of referrals to continue their education. One-to-one tutoring was utilized by 2 employees at off-site locations. Employees who attended small workplace literacy classes on-site were also provided with one-to-one tutoring by virtue of the fact that the instructor could offer the one-to-one tutoring.

By March 31, 1990 (our extension period), PCAE trained an additional 43 employees at Krueger, Hughes Aircraft, and the University of Arizona (Physical Resources Department). Both Hughes and the U of A were additional sites to our grant. The total of employees trained in PCAE's Workplace Literacy Project from January 1, 1989 to March 31, 1990 was 161.

DISSEMINATION

Pima County Adult Education's Workplace Literacy Coordinator has shared information with people who are working in or interested in workplace literacy on a formal and informal basis. She has sent materials to those that have requested them on a variety of topics pertaining to workplace literacy. Recently, the Coordinator met with David Spener, Acquisitions Coordinator of the National Clearinghouse on Literacy Education (NCLE), to discuss PCAE's Workplace Literacy Project and to put together a packet of materials for him. In addition, the Workplace Literacy Coordinator has presented at a number of conferences on workplace literacy. These are:

2) AZ-TESOL (Teachers of English to Speakers of Other Languages) Mini-Conference in Tucson, AZ, in October, 1989.

The Coordinator will send the Workplace Literacy Project's final report, evaluation, and other materials to the Curriculum Coordination Center Network and the ERIC Clearinghouse on Adult Career, and Vocational Education. She will also present at the 1990 Statewide Adult Education Conference in Tucson, AZ in September.
EVALUATION ACTIVITIES

PCAE chose Nancy Siefer, Learning Center Director for Gateway Community College, in Phoenix, Arizona, as our outside evaluator. Nancy has been involved in workplace literacy for many years. Her expertise was very helpful in implementing Pima County Adult Education's Workplace Literacy Project and providing quality services to our partners and their employees.

Because of the nature of this project, ongoing evaluation and needs assessment were a continual part of the process of curriculum and materials development and instruction. Major sections of the evaluation were completed by Summer, 1989 in order to take advantage of the results (of the evaluation) to plan, revise, and strengthen project objectives before the ending date. Most summative evaluations are outstanding; unfortunately, they are written too late for the existing project to take advantage of the many recommendations and suggestions. The Pima County Workplace Literacy Partnership Project worked with the outside evaluator from the initial stages of the project to create a flexible evaluation plan that not only ensured meeting project objectives but adapted to the many inevitable changes in the workplace.

Since this project stressed the importance of obtaining multiple perspectives about worker job performance needs, evaluation of the student, the instructor, the course, and project also involved different perspectives. For example the student was evaluated by his/her instructor, supervisor, co-workers and him/herself.

The four levels of evaluation which follow list who or what were evaluated in each level and by whom.

LEVELS OF EVALUATION

<table>
<thead>
<tr>
<th>What/Who is to be Evaluated</th>
<th>Evaluator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>Instructor, supervisor, co-worker, self</td>
</tr>
<tr>
<td>Instructor</td>
<td>Students, self, Project Director</td>
</tr>
<tr>
<td>Course</td>
<td>Students, instructor, supervisors, Project Director, outside evaluator</td>
</tr>
<tr>
<td>Program</td>
<td>Students, instructor, supervisors, Project Director, advisory board, outside evaluator</td>
</tr>
</tbody>
</table>

The Final External Evaluation Report is included with this Report.
CHANGE OF PERSONNEL

In the approved application, Peggy Erhardt-Gray was the designated Lead Teacher/Curriculum Coordinator. Peggy had accepted another position before this project began. PCAE conducted a hiring process and Linda Hellman was hired as the Lead Teacher/Curriculum Coordinator. Linda's title changed to Workplace Literacy Coordinator.

STAFF DEVELOPMENT

The Workplace Literacy Coordinator worked very closely with staff hired in terms of training. The instructors all had experience in adult education, specifically ESL and ABE/GED; however, only one of them had taught in a workplace situation prior to this project. Staff meetings and training were focused around workplace literacy issues. Topics covered included curriculum writing, lesson planning, pre- and post-testing, evaluation, and student support services. More specifically, a great deal of attention was placed on how to make the lessons as workplace specific as possible, i.e., using the forms of the workplace as lessons and using a functionally-based curriculum.

The Coordinator met regularly with staff in meetings and in on-site visits. She conducted on-going observations of every class at every workplace.

ADVISORY BOARDS

Advisory boards were set-up at Burr-Brown, Curtis Electronics (CEI), Shape West, Handmaker, Krueger, the U of A, and Hybridyne. They met at least once a cycle. The composition of the advisory boards included a representative from the company, an employee in the workplace literacy class, the instructor at the location, and the Coordinator. Questions raised were;

1) Is the class meeting everyone's needs?
2) Is attrition a problem?
3) Is the curriculum geared toward the workplace?
4) Are there any suggestions for change?

Discussions revolved around recruitment, hours, days of classes, and length of cycles. Outcomes included suggestions for recruitment, change of class times, longer cycles, and topics to be covered in class.

ADDITIONAL INFORMATION

In addition to providing workplace literacy classes, PCAE's Workplace Literacy Project conducted a Basic Education Skills Assessment at Hughes Aircraft Company. We tested 592 employee-s, randomly selected by Hughes, in reading, math, and language, using the TABE (Tests of Adult Basic Education). All results were confidential. The goal of the Basic Education Skills Assessment was to see if there was a problem in the workplace, not to see who specifically needed help in reading, math, and language. Hughes received the scores by job title rather
Additional Information, continued

than by employee's name. As part of this endeavor, PCAE also conducted
readability and math studies on generic and job-specific printed
materials provided by Hughes. We then compared where employees were in
basic skills to what they needed to perform their jobs. This project
culminated in a final report to Hughes with the results of the Basic
Education Skills Assessment. The results were to be used as a
rationale for offering workplace literacy classes. This project was so
successful that Daisy Jenkins, Manager, Personnel Development and
Training, Human Resources at Hughes Aircraft, presented this
information at the American Society of Training and Development (ASTD)
National Conference in Orlando, Florida in May 1990.

At the moment, PCAE is continuing its Workplace Literacy Project
without grant funding. The University of Arizona, Krueger, Hughes, and
Hybridyne are offering workplace literacy classes through PCAE on a
cost per class basis. We are extremely pleased to have our success
documented by the commitment of these worksites to continue offering
classes. However, the charges do not cover the cost of the Workplace
Literacy Coordinator, who now has to assume other responsibilities
along with workplace literacy. Since PCAE has a very successful
Workplace Literacy Project and because there is an overwhelming need in
our community for workplace literacy classes, PCAE is committed to
working with business and industry to upgrade the basic skills level of
our community's employees.

OUTCOMES

The following pages give statistics on the number and characteristics
of project participants who did and did not complete the program as
well as the measurable academic outcomes. In this report, we have
identified "completers" as the trainees who completed two-thirds or
more of the classroom time offered in each cycle.

Our statistics show that 124 participants (77%) out of 161 completed
project activities and 37 participants (23%) did not. Many of our
"non-completers" were laid off while they were enrolled in workplace
literacy classes.

PCAE pre-tested every participant at every location when he/she entered
the workplace literacy class. PCAE post-tested at the end of each
cycle, which ranged from 8 to 15 weeks in length. Out of 124
"completers", 104 post-tested the last day of the cycle of their class.

In ESL, PCAE used teacher-designed pre- and post-tests. The Workplace
Literacy Coordinator and the instructor at each workplace developed
pre- and post-tests geared to the specific curriculum of the workplace.
Sixty-eight, out of 68 "completers", improved their communication
skills through PCAE's Workplace Literacy classes.
Outcomes, continued

The tests were scored on a holistic scale of 0-6:

<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>pre-beginning</td>
</tr>
<tr>
<td>1 and 2</td>
<td>beginning</td>
</tr>
<tr>
<td>3 and 4</td>
<td>intermediate</td>
</tr>
<tr>
<td>5 and 5</td>
<td>advanced</td>
</tr>
</tbody>
</table>

The highest gain made any one student in ESL was 2, the lowest gain made was .3, and the average gain made was .9. Samples of pre- and post-tests are in the Appendix.

In basic skills (ABE/GED), math, and test-taking, 36, out of 36 "completers", tested higher on post-tests than on pre-tests. In ABE/GED, we used the Tests of Adult Basic Education (TABE), Forms 5 and 6. Although we do not like to use grade levels for adults, especially in the workplace, the TABE does use grade levels to document improvement. The highest gain made in reading was 3.2, the lowest gain made was .2, and the average gain made was 1.8. In math, the highest gain made was 4.5, the lowest gain made was .6, and the average gain made was 2.2. In math at Hughes Aircraft, we used a teacher-designed test customized to the curriculum of the class. The highest gain made was 44%, the lowest gain made was 28%, and the average gain made was 32%. In test-taking skills, the participants needed to score higher on the GATB. Five students, out of 5 "completers", tested higher on a teacher designed-test geared toward the basic skills that are tested on the GATB.

Although we have measurable statistics for 104 participants, PCAE assumes that all 124 "completers" would have tested higher if they had been in class for the post-test.

PCAE is very pleased with the outcomes achieved by participants who completed project activities. Other qualitative improvement data is on page 6. We received supervisor feedback from the University of Arizona class for custodial employees after March 31st. From that class of 20 people, 10 people improved in initiative, product quality, and productivity, according to their supervisors. These results are not included in the qualitative improvement data on page 6 because they result from our program that continued after the grant was over. The statistics on improved productivity, efficiency, and product quality do not sufficiently reflect how useful and worthwhile line managers and supervisors felt about the program in their individual workplaces. Most of them said that their employees were always efficient and productive, thereby making it difficult for them to state that their employees were more productive. However, they did note that their employees had gained in confidence and higher morale. The area of safety was covered in every ESL class but we do not have statistics to show qualitative improvement in that area.
### Table 1: Profile of Workplace Literacy Participants

#### Completers

<table>
<thead>
<tr>
<th>Section A</th>
<th>American Indian or Alaskan Native</th>
<th>Asian or Pacific Islander</th>
<th>Black, not of Hispanic Origin</th>
<th>Hispanic</th>
<th>White, not of Hispanic Origin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years of School Completed or Educational Functioning Level (if known):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Level I (grades 0-8)</td>
<td>6</td>
<td>1</td>
<td>24</td>
<td>1</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>b. Level II (grades 9-12)</td>
<td>20</td>
<td>1</td>
<td>44</td>
<td>27</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>2</strong></td>
<td><strong>68</strong></td>
<td><strong>28</strong></td>
<td><strong>124</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section B</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>Males</td>
</tr>
<tr>
<td>1. Ages:</td>
<td></td>
</tr>
<tr>
<td>16 - 24</td>
<td>7</td>
</tr>
<tr>
<td>25 - 44</td>
<td>28</td>
</tr>
<tr>
<td>45 - 59</td>
<td>11</td>
</tr>
<tr>
<td>60 and older</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
</tr>
</tbody>
</table>

Table 1A and 1B require reporting on an unduplicated count.
Table 1A grand total must equal Table 1B grand total.
TABLE 1: Profile of Workplace Literacy Participants

NON-COMPLETERS

<table>
<thead>
<tr>
<th>Section A.</th>
<th>Participants who upon entry into program had:</th>
<th>American Indian or Alaskan Native (a)</th>
<th>Asian or Pacific Islander (b)</th>
<th>Black, not of Hispanic Origin (c)</th>
<th>Hispanic (d)</th>
<th>White, not of Hispanic Origin (e)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Years of School Completed or Educational Functioning Level (if known):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Level I (grades 0-8)</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>b. Level II (grades 9-12)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td>18</td>
<td>37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section B.</th>
<th>Participants who upon entry into the program were:</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Ages:</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>16 - 24</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>25 - 44</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>45 - 59</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>60 and older</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 1A and 1B require reporting on an unduplicated count. Table 1A grand total must equal Table 1B grant total.
June 15, 1990

Catherine DeLuca, Chief, Section D
Service and Capacity Building Branch
Grants Division, Grants and Contracts Service
Room 3624, ROB #3
400 Maryland Avenue, SW
Washington, D.C. 20202-4838

I worked with the Pima County Workplace Literacy Partnership Grant as their outside evaluator throughout the duration of the grant (Nov. 1988 - March 1990). The decision was made at the beginning of the project to include the evaluation activities as an integral part of the workplace objectives. (See enclosed evaluation plan). As a result, the coordinator of the program, Linda Hellman, and I met on a regular basis not only to ensure meeting project objectives but also to respond in a timely manner to the inevitable changes that occur in the workplace.

Linda and I met five times during the term of the grant: December, 1988; February, June, 1989; and January, April, 1990. We also had many informal discussions, usually by telephone. I went to Tucson on four occasions to review the program's progress and Linda came to Phoenix on one occasion. During our last meeting, I reviewed the first draft of Linda's final report objective by objective, and she incorporated many of my comments and suggestions in a subsequent draft.

Summary:

Having coordinated and evaluated several workplace projects, I believe that the Pima County Adult Education Workplace Literacy Partnership Grant is clearly one of the most outstanding ones. This is largely due to the flexibility, expertise, and determination of the coordinator, Linda Hellman. Two of the three original workplace participants (Curtis Electronics and Shape West) went out of business or drastically reduced their workforce.
immediately after classes were offered. Instead of terminating the program (as I have seen other projects do), Linda energetically promoted the concept of workplace literacy to other businesses/industries. Rather than supplying onsite literacy programs to three participants, as the original grant stated, her efforts resulted in programs being implemented at nine sites. The fact that many of these sites have decided to continue their literacy efforts, despite a lack of federal funding, speaks very highly of the quality of these programs.

Recommendations:

A primary benefit of an open, ongoing evaluation process is the opportunity to continually improve services. Most of the evaluation results have been incorporated into the project as it progressed or noted in the final evaluation report written by the project coordinator. I would like to suggest several improvements for this particular project and hopefully these suggestions will be relevant to other workplace projects.

1. Stronger Staff Training and Documentation
   Fortunately, the majority of instructors of the PCAE Workplace Literacy Partnership were experienced ABE/GED/ESL teachers. Future instructors may not have this kind of education or experience and may require systematic and ongoing inservice.

2. Update and Organize the Workplace Curricula
   This program developed many outstanding samples of workplace curricula. The samples need to be edited, organized, and disseminated among project staff. (Samples will be distributed to the required agencies).

3. Advisory Board Participation
   There is a need to initiate and maintain stronger ties between project staff and the workplace advisory board. This board can serve as a promoter of workplace services to other departments in the company as well as to other companies.
4. Comparable Evaluation Outcomes

This is very difficult to do because of the subjective nature of some of the evaluations and the lack of comparable statistics from department to department and from company to company. Nevertheless, all workplace literacy projects need to be held accountable for the systematic and consistent collection of assessment results. We need to know what works and what doesn't and why.

I appreciated the opportunity to work with the Pima County Workplace Literacy Partnership Grant.

Nancy Siefer, Ph.D.
Director, Learning Center
GateWay Community College
108 N. 40th Street
Phoenix, AZ 85034
<table>
<thead>
<tr>
<th>Obj.</th>
<th>Projected Date</th>
<th>Evaluation Activity</th>
<th>Result</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oct., 1988</td>
<td>Hire project director &amp; lead teacher/curriculum coordinator</td>
<td>Contract in PCAE office</td>
<td>PCAE Director</td>
</tr>
<tr>
<td>2</td>
<td>Nov., 1988</td>
<td>Complete literacy audit</td>
<td>Literacy audit report(^2)</td>
<td>Project Director (PD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop curriculum</td>
<td>Workplace literacy curriculum(^3)</td>
<td>PD &amp; curr. coordinator</td>
</tr>
<tr>
<td>3</td>
<td>Jan., 1989</td>
<td>Hire teachers</td>
<td>Contracts in PCAE office</td>
<td>PD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initial orientation &amp; training</td>
<td>Schedule and agenda</td>
<td>PD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assessment scores for each worker(^4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Feb., 1989</td>
<td>Evaluation of first cycle of workers</td>
<td>Written evaluation of student/course</td>
<td>Student, instructor, supervisors, PD, outside evaluator</td>
</tr>
<tr>
<td>5</td>
<td>Mar., 1989</td>
<td>Complete literacy audit</td>
<td>Literacy audit report</td>
<td>PD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop curriculum</td>
<td>Workplace literacy curriculum</td>
<td>PD &amp; curr. coordinator</td>
</tr>
<tr>
<td>6</td>
<td>Apr., 1989</td>
<td>Hire teachers</td>
<td>Contracts in PCAE office</td>
<td>PD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initial orientation &amp; training</td>
<td>Schedule and agenda</td>
<td>PD</td>
</tr>
<tr>
<td></td>
<td>Apr., 1989</td>
<td>Recruitment &amp; assessment of 40 Shape West employees</td>
<td>List of recruitment activities</td>
<td>PD &amp; Shape West liaison</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assessment scores for each worker</td>
<td></td>
</tr>
<tr>
<td>Obj.</td>
<td>Projected Date</td>
<td>Evaluation Activity</td>
<td>Result</td>
<td>Responsibility</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Apr., 1989</td>
<td>Literacy audit in medical &amp; clerical fields for dislocated workers</td>
<td>Literacy audit report</td>
<td>PD &amp; JTPA/PIC liaisons</td>
</tr>
<tr>
<td>9</td>
<td>July, 1989</td>
<td>Evaluation of project to date</td>
<td>Data collected from objectives 1-8 plus record of support services used by workers</td>
<td>PD, outside evaluator, advisory board(s)</td>
</tr>
<tr>
<td>10</td>
<td>Aug., 1989</td>
<td>Offer addit' al classes for Curtis, Shape West, dislocated workers and other companies as indicated by evaluation</td>
<td>Revised recruitment, assessment, schedule of classes and curriculum</td>
<td>PD, outside evaluator, advisory board(s)</td>
</tr>
<tr>
<td>11</td>
<td>Dec., 1989</td>
<td>On-going data collection and preparation of final report</td>
<td>Maintain records on ongoing and new classes</td>
<td>PD, outside evaluator, advisory board(s)</td>
</tr>
<tr>
<td>12</td>
<td>Jan., 1990</td>
<td>Complete final report</td>
<td>Final Report</td>
<td>Outside evaluator &amp; PD</td>
</tr>
</tbody>
</table>

1. Responsible person(s) subject to change as project progresses.
2. Literacy Audit Report will include such items as interview and observation schedules, literacy needs of potential students and literacy requirements of primary job tasks.
3. Curriculum will include plan or format for materials development.
4. Names and descriptions of all assessment instruments will be included.
APPENDIX
SAMPLE SPECIFIC COMPANY CURRICULUMS
Grammar and Vocabulary

Tense (Present, Past, Present Perfect)
Numbers
Plurals
Questioning Structure
Polite Questions - Would, Could
Pronouns
Cleaning Vocabulary
Action Verbs (cleaning)
Body Parts
Left/Right
Opposites
Can, Can't
Days of the Week
Prepositions

Functions/Competencies

Following Instructions
Apologizing
Reading Time Cards
Complaining about Health
Giving & Understanding Warnings
(Safety)
Giving/Following Directions
Inviting
Ordering/Taking Orders
Informing
Checking/Indicating Understanding
Calling in Sick
Asking/Telling Where Supplies are Kept
Expressing Ability/Inability
Asking for Help

Listening Comprehension and Pronunciation

On-going each class period

Methods Used

TPR for Listening Comprehension
Silent Way
Rod Stories
Role Plays - Job Interview
Reading - Want Ads
Writing (Daily)
Pictures
Handouts
Self and Peer Connection
Grammar & Vocabulary

Pronouns
Questions Formation
Tenses (Present, Present Progressive)
Prepositions
Cleaning, Vocabulary
Can/Can’t
Could, Would
Need to, Want to, Have to
Negatives
Safety Vocabulary

Functions/Competencies

Reporting Problems
Asking for Help
Calling in S‘ck
Following Instructions
Asking to Have Instructions Repeated
Checking/Indicating Understanding
Asking/Giving Directions
Expressing Certainty/Uncertainty
Filling Out Forms

Listening Comprehension and Pronunciation

On-going, every class period.

Methods Used

Rod Stories
Pictures
Role Plays-Emergency Situation (work accidents)
Silent Way Charts for Grammar & Pronunciation
Daily Writing of Lessons
TPR for Listening
PIMA COUNTY ADULT EDUCATION
WORKPLACE LITERACY ESL CURRICULUM
KRUEGER MANUFACTURING

Grammar and Vocabulary

Demonstratives
Pronouns
Tense (Present, Present Progressive, Present Perfect, Past, Future)
Want to
Have to
Prepositions
No + Verb-ing
To know how to do something
Do/Does
Questioning structures
Commands
There is/are
To be Allowed to
Supposed to
Clothing
Job Titles and Descriptions

Functions

Checking and Indicating Understanding
Giving and Following Instructions and Directions
Repeating and Asking for Repetition
Phone: Calling in Sick
Informing Supervisors of Problems with Machines/Paycheck/etc.
Expressing Ability and Inability
Making Small Talk
Warning about Safety precautions

Pronunciation

On-going basis with Silent Way Fidels and Word Charts

Listening Comprehension

One activity at each class to reinforce grammar and functions taught

Methods Used

Silent Way for Grammar, Functions, and Discussions
Role Play in Person and with Phones
Strip Stories
Daily Writing of Lessons
TPR for Listening Comprehension
Self and Peer Error Correction
Informal Small Talk for Warm-ups
Pictures for Discussions and Grammar/Function Development
Grammar & Vocabulary

Gerunds (No parking)
Imperatives - (Don't go in that room without permission.)
Verbs: Present tense (I operate a rivet gun.)
Past of be (Work was great today!)
Must vs. Have to
Should
Questions
Negatives (I don't know how to open this jar.)
Keep
out
clear
clean

Functions

Indicating Understanding or Non Understanding
Asking for Repetition
Expressing Ability or Inability
Describing Specific Jobs
Identifying Machinery, Equipment and Tools
Reminding
Understanding and Giving Warnings
Requesting Help or Advice
Giving and Soliciting Opinions
Expressing Uncertainty

Listening Comprehension
Asking for Repetition or Clarification

On going, every class period.

Methods Used

TPR with Rods
Rods for Grammar
Pictures
Drawings on White Board
Silent Way Charts for Error and Pronunciation Correction
Handouts for Grammar Exercises
Materials:
1. Pre-Shift Set Up Form
2. Service Request Form
3. Die Attach and Wire bond Glossary
5. ESD Prevention and Control Specs
6. Microcircuits QC Specs

Function: Describing Problems (in five words or less)
Service Request Form

Grammar:
Telling time and Using Numbers
Aux do and did - Neg's
Past Tense and Past Progressive with when, until, then
"What's wrong? What's the problem?"

Function: Describing an Action (in five words or less)
Pre-Shift Set Up Form

Grammar:
Telling time and Using numbers
Aux do and did -Neg's

Function: Caution and Warning
Reading and Understanding Iconography From
ESD Specs

Grammar:
Colors
Numbers
Symbols; Caution and Attention

Function: Summarizing and Paraphrasing
Asking for Clarification and Understanding
Readings from Cleanroom, Microcircuit, and Electro Stat
Specs

Grammar:
Questions with Who, What, Where, When, and Why
Modals: Shall and Must
Could; Would; Should
Can/Could-AILITY
Will/Would/Could-Request
Have To; Want To; Need To
Clothing

Function: Identifying objects
Die Attach Glossary
Ten-Week Curriculum, continued

Grammar:
Numbers
Simple present and present progressive Tenses
Prepositions of time and place
Demonstratives; This, That, Those, and These

Misc. Functions: Reading Meters
   Reading Control logs and charts
   Understanding double negatives/
   Answering true false questions

Vocabulary:
Limit parameter, process, control area, particle, station,
temperature, schedule, foreign, log, control, environment,
criteria, weather, humid, atmosphere, humid, dry, etc.

Verb list:
attach, put, place, hold, wear, remove, cure, bond, store, save,
cut, brake, flow, move, travel, permit, allow, control, complete,
require, look for, find, change, adhere, bring, introduce,
provide, insure, produce, permit, assemble, magnify, blow, plug,
handle
PIMA COUNTY ADULT EDUCATION
HUGHES AIRCRAFT COMPANY
MATH FUNDAMENTALS

Schedule

Feb. 7
Orientation
Pretesting
Meaning of Decimals

Feb. 14
Add and Subtract Decimals
Multiply and Divide Decimals

Feb. 21
Solve Decimal Problems
Meaning of Fractions

Feb. 28
Add and Subtract Fractions
Multiply and Divide Fractions

March 7
Multiply and Divide Fractions
Solve Fraction Problems

March 14
Meaning of Percent
Change Fraction, Decimal, Percent

March 21
Solve Percent Problems

March 28
Review
Posttest
SAMPLE SPECIFIC COMPANY LESSONS
How long have you worked at Burr-Brown?
How long have you been working at Burr-Brown?
How long have you been studying with Amy?

for
since

Have you ever studied English before this class?
Yes, I have.
No, I haven't.
No, I have never.

Have you ever been late for work?
Yes, No.
Never.
Ever.

Have you gotten paid this week yet?
Yes, No.

Have you finished all your work?
Is everyone here already?
for
since
already
yet

Have you done your work from yesterday?
No, I haven't.
Have you finished this marking yet?
No, not yet.
What have you been doing all day?
I've been talking with _______.
It's time to get to work.
O.K.

yesterday
today
before he ate
before he came to work
from 7 to 8 this morning

Have you ever called in sick?
We have studied since
for

Have you had any coffee today?
Have you learned new words today?
How long have you been doing the same job?
How long have you done the same job?
Have you changed your job at Burr-Brown?

43
HANDMAKER NURSING HOME
FOOD SERVICE

FOLLOWING A RECIPE:
Grammar: plurals: count/non-count nouns; How many? How much?
(Function – Asking for Information)

Example recipe: Pancakes

Pre-Employment "Pancakes"
Pancake Recipe
Serves 6-8

Ingredients
...Dry...
2 c. flour
2 T. sugar
1/2 t. salt
2 1/2 t. baking powder
. Measure and mix the dry ingredients in a large bowl.
. Separate the egg whites from the yolks.

...Wet...
(separately)
3 eggs
1 c. milk*
2 T. oil
* 3 T. powdered milk
1 c. water
. Measure and mix the milk, oil and egg yolks in a small bowl.
. In a medium bowl, beat the egg whites until they form soft peaks.
. Stirring slowly, add the wet ingredients to the dry ones.
. Fold in the egg whites.
. Add margarine or oil to a 6-8 pan.
. Cook pancake over medium-low heat until bubbles form and the center begins to become solid.
. Turn and cook the other side.
. Serve with margarine and syrup.

Activities:
1) class reads recipe
2) class makes list (on board) of items needed
   - separate into count & non-count

<table>
<thead>
<tr>
<th>count</th>
<th>non-count</th>
</tr>
</thead>
<tbody>
<tr>
<td>egg teaspoon</td>
<td>flour oil/margarine</td>
</tr>
<tr>
<td>cup tablespoon</td>
<td>sugar baking powder</td>
</tr>
<tr>
<td>bowl</td>
<td>salt</td>
</tr>
<tr>
<td>pan</td>
<td>milk</td>
</tr>
</tbody>
</table>

3) Practice with listed words –
a) a little/a few    ie. a few eggs, a little salt
b) much/many        ie. Do you need much salt?
   Do you need many eggs?

c) How much?/How many?
   ie. How much flour do you need?
   How many eggs do you need?
Food Service, continued

4) Briefly review units of measurements & fractions:
   T=tablespoon; t=teaspoon; c=cup
   1/4, 1/2 etc.
Discuss increase of measurements for different numbers of servings (ie. mass cooking at nursing home facility)
(use a real nursing home recipe as used in this facility)

5) Demonstrate (teacher or a student volunteer) steps in preparation of the recipe - describing action while doing
(use real life ingredients & utensils)

6) Assign rotating roles to each student
   ie. a) mix dry ingredients
       b) mix wet ingredients
       c) measure the dry ingredients, etc.
       d) stir the wet ingredients into dry ingredients etc.

   Ask students to perform task:  A asks B: What are you doing?
   B replies: I'm mixing the flour & sugar, etc.

7) Cleaning up
   a) Discuss sanitation procedures of facility
   b) 2 word-verbs - wipe off the counter/stove
       wash out the bowl
       put it in the dishwasher
       rinse out the rag/sponge etc.

Follow-up Activities:

   count/non-count review:
   list foods from other recipes used on job
   count vs non/count
make questions with how many, how much?
statements with a little, a few
HANDMAKER NURSING HOME
HOUSEKEEPING - CLEANING

Grammar: prepositions; containers, cleaning vocabulary
Functions: Asking locations; following directions; asking for clarification

I. A. Introduce cleaning items - with realia and pictures
   (elicit from class)

   - rag
   - sponge
   - broom
   - mop
   - bucket/pail
   - brush
   - dustpan
   - broom
   - paper towels
   - cleanser
   - detergent
   - window cleaner
   - soap
   - gloves

   B. Introduce "containers"
      - can of (cleanser)
      - bottle of (window cleaner)
      - box of (detergent)
      - roll of (paper towels)

II. Q & A about locations of items (placed throughout room)
    Where's the broom? It's in the corner.
    Where's the sponge? It's on the table.
    Where's the rag? It's next to the sponge. (etc.)

   Prepositions: in, above, between, under, behind, on, below, next to,
                 over to the left, right

III. TPR - Following directions (commands) Wipe the table. Put the sponge on the table. Mop the floor. Sweep the floor with the broom. Put on the gloves. Clean the table with the sponge. Clean the chairs.

IV. Asking for clarification or repetition drill (substitution drill)

   Example: Student #1: Please give me the (mumble).
   Student #2: Give you what?
     What did you say?
     Huh?
     Could you please repeat that?
   Student #1: The broom.

   Substitute with other cleaning items or commands
1. **Pronouncing Names:** Foreign names are sometimes difficult. Pronunciation is very important.

   A: What's your name?
   
   B: Ouy'savan. Everybody calls me Ouy. But you can call me Ouy. People call me Ouy. Ouy, for short.

2. **Requesting a Change:** (insurance deductions, credit union membership, vacations) and necessary forms.

   A: I'd like to become a member of the credit union.

   B: OK. Let me get you a form to fill out. Here you are. Fill out this and this and sign here.

   A: Excuse me? What should I fill-out? (Could you explain this form to me?) (Where did you say I should sign?)

3. **Reporting an Accident:** Study an accident report form. Practice filling it out.

   A: I just hurt my ______. I need to see a doctor.
   
   B: How bad is it?
   
   A: It's pretty bad. I don't think I can work.
   
   B: Okay. I'll call the _____.
   
   A: Maybe I should fill-out an accident report.
   
   B: Oh, you can do that later, when you feel better.
   
   A: I think I'll get one now so I don't forget.

4. **Accompanying a Student to Actual Worksite:** Ask the student to describe what is going on, step by step. Discuss production interference: the machine is jammed, supplies run out, employees are absent, etc. The teacher should take note of the procedure and vocabulary. This information can be practiced in a writing exercise during class.

5. **Applying for an Open Position:** The student goes to the personnel director.

   A: I'd like to apply for the position posted on the bulletin board.
   
   B: OK. You need to fill out this form and return it by Friday. We'll be interviewing next week.
   
   A: Thank you.
CEI (CURTIS ELECTRONICS)
TWO-WORD VERBS

On Monday, Gina got up at 5:00. She made her breakfast, put on her clothes, and went to work. After she got to CEI, she punched in her time card, put away her jacket and lunch in her locker, got out her tool box, and began to work. She got off at 3:30, took a short break, and started her English class at 3:45.

Her husband picked her up at 5:30.

What time did Gina get up?
Who got up at 5:00?
What did she do after she got up?
What did she punch in?
What was the first thing she did after she got to CEI?
What did she put away in her locker?
What did she get/take out of her locker?
What time did she get off?
What time did her English class start?
Who picked her up?
What time did he pick her up?
Curtis Electronics.
David, please.
Just a minute.
This is David.
Hi. This is Sam. I can't come in today.
What's wrong?
I'm sick. I have a fever.
That's too bad. When do you think you'll be back?
I think I'll be back tomorrow or Friday.
Call me if you can't come in.

Ways of Calling in Sick

This is ___________. I can't come in today.
I won't be in today.
I won't be coming in today.
I'm calling in sick.

What's wrong?
What's the problem?
What's the matter?

I have a fever.
I have the flu.
I have a headache.
I have a cold.
My daughter is sick.
I sprained my ankle.
Other ______________.
CURTIS ELECTRONICS
ASKING PERMISSION

Excuse me, Beverly.
Yes?
Could I possibly take the day off tomorrow?
I don't think so.
I see. The reason I asked is my husband is going into the hospital
tomorrow for an operation.
Oh, I understand. Well, in that case, I guess you can take the day off
tomorrow.
Thank you very much.

Excuse me, ____________________.
Yes?
Could I possibly ____________________?
I don't think so.
I see. The reason I asked is ____________________.
Oh, I understand. Well in that case, I guess (suppose) you can

Thank you very much.

come in two hours late tomorrow
take next Monday off
take my vacation next week
leave early tomorrow

I have a doctor's appointment.
I have a meeting with my child's teacher.
My brother is coming to visit from Chicago.
I don't feel well.

Is it all right if I go home early?
Actually, I'd rather you didn't.
The reason I'm asking is that my son's school called to say he isn't
feeling well.
Are you sure? If you'd rather I didn't, I won't.
No, it's okay. If your son's school called to say he isn't feeling well,
then I think you should go home early.
Thanks a lot.

Instead of rather, use prefer.

Practice: could, would rather, should
THE UNIVERSITY OF ARIZONA
CUSTODIAL SERVICES
REPORTING/DESCRIBING A PROBLEM

Excuse me.
I have, a problem.
What's the matter?
My vacuum cleaner is broken.
Could you help me with it?
Sure.
Thanks a lot.
Your're welcome.

What's the matter?
What's up?
What's wrong?
What's the problem?

My vacuum cleaner is broken.
My vacuum cleaner isn't working.
My vacuum cleaner doesn't work.
SAMPLE PRE- AND POST-ASSESSMENTS AND SCORE SHEETS

SCORING

Pima County Adult Education uses a holistic scoring scale which rates grammar, fluency, listening comprehension, pronunciation, reading, and writing. The scoring translates as follows:

0 = pre-beginning
1 and 2 = beginning
3 and 4 = intermediate
5 and 6 = advanced

Scores of .5 or 1.3 are appropriate. Samples of score sheets follow the assessments. The lines on the score sheets are for sample student utterances or teacher comments.
PIMA COUNTY ADULT EDUCATION
WORKPLACE LITERACY PROJECT
PRE-AND POST-ESL ASSESSMENT (ORAL)
BURR-BROWN

1. What's your name?
2. Where are you from?
3. What's your address?
4. How long have you lived in Tucson?
5. How long have you worked here?
6. Where did you work before?
7. Have you studied English before?
8. What's your job?
9. What do you do in your job?
10. What's your supervisor's name?
11. How do you spell it?
12. What's the first thing you do when you get to work?
13. What problems, if any, do you have in this job?
14. What would you do if you were laid off?
15. What do you hope to be doing in five years?

Sample Pre-Test (Written)

1) What are your reasons for enrolling in/attending this class?

2) Please write a short paragraph about your current job at Burr-Brown.
1. What is your name?

2. What language do you speak?

3. What is your supervisor's name? How do you spell it?

4. How long have you worked at Handmaker?

5. What is the first thing you did at work this morning?

6. What do you do here at Handmaker? (INFORMING)

7. Tell me how to get to your work area from here? (ex. kitchen, cleaning area) (GIVING DIRECTIONS)

8. Take 2 orange rods and put them on the table. Take 3 green rods and put them on top of the orange rods. Take 3 red rods and put 1 under each green rod. (TAKING ORDERS)
Pre-ESL Assessment, continued

Please write about your house/apartment here in Tucson.

Can you read this story? (EXPRESSING ABILITY AND INABILITY)
Tell me what it is about?

READING: Magda's story

I work at a big hotel in Tucson. I am a housekeeper. I go to work at 8:00 on weekdays and about 8:30 on weekends. Every week your schedule is different. The manager decides your days off. Usually everyone wants Saturday and Sunday off.

When I come in, I change into my uniform first. Then I punch in. After that I get my bucket and room supplies. They give you a list of rooms to do that day. There are two kinds of rooms: occupied and check-out rooms. It usually takes 15 or 20 minutes to do an occupied room. It takes more than 30 minutes to do a check-out room. It's a lucky day when all your rooms are occupied. The worst day is when all the rooms are check-out.

In each room, you change the sheets, clean the table, clean the bathroom and put the supplies in order. Usually they give you a five day schedule. But in the summer when it is hot, the business of the hotel is slow and they give you a two day or three day schedule. We're happy when we have enough hours. We don't like the slow times.
1. What's your name?

2. What's your supervisor's name? How do you spell it?

3. Dictate numbers. Have students write the numbers and the word. (Listening)

4. What machines do you use on your job? (Giving Information)

5. Take an orange rod and put it in the desk. Take a red rod and put it next to the orange rod. Put a green rod in your pocket and put 2 blue rods under your chair. (Following Directions)

6. If you can't come to work, who do you call? What do you say? (Informing)

7. You are late for work. What do you say to your supervisor. (Apologizing)

8. How long have you studied English in this class?

9. Can you speak English better than before coming to this class? (Expressing Ability/Inability)
Post-ESL Assessment, continued

Maria had a cold. She called in sick and talked to her supervisor.
Her supervisor asked, “When will you be back to work?”
Maria said, “Probably in two days.”

Maria was sick for the whole week. When she came back to work, her supervisor told her that she was fired because she did not call in sick every day.
He said, “If you miss three days without calling in, it is a voluntary quit.”

1. What did Maria say when she called in sick?
2. What rule did she break?
3. What happened to Maria?
4. Why do you think Maria did not call in every day?
5. What do you think Maria should do now?
6. Do you have a similar rule here at Handmaker?
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**Average**

**Pronunciation**

- [ ] Non-speaker
- [ ] Unintelligible
- [ ] Intelligible but needs work
- [ ] Near native

**Comments:**

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
1) What's your name?

2) What's your supervisor's name? How do you spell it?

3) What machines do you use on your job? (Giving Information)

4) What do you (clean)?
   (do)?

5) How do you (clean) it? (Describing)
   (do)?

6) If you can't come to work, who do you tell? What do you say? (Informing)

7) If your supervisor gave you this and asked you to use it, what would you say? (Expressing Ability/Inability)

8) If someone was not doing his/her job correctly, what would you say? (Advising)

9) Here are five pieces of paper. Put them in alphabetical order (A to Z) and then set them on top of the smallest envelope. Now, put both the envelope and pieces of paper into the largest envelope. (Listening Comprehension)

10) How do you fill these out?
1. What department are you in? How do you spell it?

2. When you are sick, who do you call? What do you say?

3. There was an accident at work? Please tell your supervisor about it.

4. Take a red rod and put it on the table. Take a yellow rod and put it on top of the red one. Take two blue rods and put them behind the red and yellow rods.

5. How do you get to Bill's office from here?

6. Tell us what you do on your job.

7. How often do you wash the floors? vacuum the rugs? drive a truck?

8. You need a new uniform. What do you do (say)?

9. If your supervisor asks you to type a letter, what do you say?

10. Please fill these out.
PIMA COUNTY ADULT EDUCATION
WORKPLACE LITERACY PROJECT
ESL ASSESSMENT FORM
U OF A

Assessment Score _______ Date________

1. ____________________________
   ____________________________
   ____________________________

2. ____________________________
   ____________________________
   ____________________________

3. ____________________________
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9. ____________________________
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Checking/Indicating Understanding
Listening
Grammar
Fluency
Pronunciation
1. What is your name? What is your first language?

2. What is your supervisor's name? How do you spell it?

3. What do you do here at Krueger? (DESCRIPTION)

4. How did you get here from the area where you work? How do you get from here to the area where you work? (GIVING DIRECTIONS).

5. Here are three envelopes. Remove the contents. Make three sets of cards A through C, and put one set in each envelope. Then, order the three envelopes alphabetically. (FOLLOWING INSTRUCTIONS & CHECKING/UNDERSTANDING)

6. If you can't come to work for a few days, who do you tell? What do you say? (INFORMING)

7. If one of your co-workers told you he or she was sick, what would you say? (ADVISING)

8. (Map cards) How do you fill these out? (JOB TASK)

9. (Safety sign) What does this mean? (SAFETY)

10. If your supervisor gave you this, what would you say? (EXPRESSING ABILITY)
1. What is your job?

2. What is your supervisor's name? How do you spell it?

3. How do you get to the restroom from here?

4. Put the red rod in the middle of the circle on the pink piece of paper.

5. What are you wearing today?

6. You have to call in sick to work. Who do you call? What do you say?

7. What is this man doing wrong? What can you say to him?

8. Have you ever worked on a computer before? What would you say if your boss told you to work in the office on the computer?

9. Do you think you improved your English in this class? How do you feel about your English?

10. Why did you miss class? (Show attendance)

11. How were the lessons for you? What other things would you like to do in class?

12. How was the teacher? What could the teacher do to make the class better?

13. Do you have any comments or suggestions about the time, day, size, level, etc. of the classes at Krueger?
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<th>SCORE</th>
<th>COMMENTS:</th>
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**SAMPLE STUDENT UTTERANCES:**

- 
- 
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- 

Name ___________________________ Date ___________________________
SAMPLE STUDENT PROGRESS REPORT
SAMPLE SUPERVISOR NEEDS ASSESSMENT
PIMA COUNTY ADULT EDUCATION
WORKPLACE LITERACY PROJECT QUESTIONNAIRE
UNIVERSITY OF ARIZONA

1) For what purposes do the employees need to speak and understand English? Please rank on a scale of 1-5. One is the most important.

________ to follow oral instructions
________ to give oral instructions
________ to communicate with supervisors
________ to communicate with co-workers
________ to ask questions

2) What is the biggest problem employees have with English? In other words, which of the following language skills is holding them back the most? Please indicate the most important one.

________ vocabulary
________ pronunciation
________ grammar/structure
________ listening comprehension
________ reading & writing

3) Which of these are the most pertinent to success in the workplace. Please rank on a scale of 1-5.

________ vocabulary
________ pronunciation
________ grammar/structure
________ listening comprehension
________ reading & writing

4) For what purposes do the employees need to read and write English?

________ to follow written instructions
________ to give written instructions
________ to fill out forms
________ to understand employee benefits and pay
________ to record data or information
________ to understand data or information
________ to write reports or correspondence
5) We are setting up a curriculum for a 10-15 week cycle. Indicate the five most relevant linguistic functions to the employees in your department at the U. of A. Number them 1-5. One is the most important.

- Advising, Suggesting, Recommending, Insisting & Asking for Advice
- Asking for & Giving Directions, Instructions, Information
- Asking for & Giving Permission
- Checking & Indicating Understanding
- Complaining
- Describing Situations, Events, Problems
- Expressing Ability & Inability
- Expressing Nervousness, Anxiety, & Worry
- Informing
- Making Excuses
- Ordering & Taking Orders
- Remembering, Forgetting, & Reminding
- Showing Intention
- Warning, Cautioning

6) Can you give 1 or 2 examples of miscommunication that you have experienced in your department?
SAMPLE SUPERVISOR EVALUATIONS
1. Do you see an improvement in the basic skills level of the employees who attend the GED class?

2. Do you see a difference in worker attitude, morale, or productivity?

3. Has there been a change in attendance, tardiness, etc. for the people who are attending class?

4. Has there been a change in the quality of work?

5. Do you have any comments pertaining to the employees that are attending the GED class that have not been asked?
1. Have you seen an improvement in the communications skills of the employees who attend the ESL class? If so, how have they improved?

2. Do you see a difference in worker attitude, or morale.

3. Has the request for job transfers changed in any way for those employees who attend classes?

4. Have you seen an increase in productivity for these employees?

5. Has there been a change in attendance, tardiness, etc. for the people who are attending classes?
SAMPLE STUDENT CLASS EVALUATIONS
1. What I like about this class is_________________________

2. What I do not like about this class is_____________________

3. This class has helped me to improve my job in these ways:
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

4. Comments____________________________________________
   _______________________________________________________
   _______________________________________________________
PIMA COUNTY ADULT EDUCATION
WORKPLACE LITERACY PROJECT
STUDENT SURVEY

1. Do you think your English improved in this class?

2. How were the lessons? What other things would you like to do in class?

3. How was the teacher? What could the teacher do to make the class better?

4. Do you have any comments or suggestions about the time/day, size, level, of the classes at ______________?
SAMPLES RECRUITMENT FLYERS
ENGLISH AS A SECOND LANGUAGE

Improve your English in English as a Second Language (ESL) class offered by PIMA COUNTY ADULT EDUCATION at Krueger Manufacturing.

The ESL Class offered by PIMA COUNTY ADULT EDUCATION is for non-native speakers of English who want to improve oral and written communication skills. The classes will cover a range of topics including English grammatical structures, conversation/oral communication, workplace language and issues, vocabulary/idioms, coping/survival skills, reading/writing, and customs/cultural awareness.
Phát triển khả năng anh ngữ của mình trong lớp học Anh-Nghệ Ngôn Ngữ Thú Hai (ESL) hiện đang mở tại qua cơ quan giáo dục trung niên ở khu vực Pima (PCAE).

Các lớp học Anh-Nghệ đều mở qua chương trình giáo dục trung niên ở khu vực Pima là cho những ai muốn phát triển khả năng giao tiếp, viết anh ngữ và phải xử dụng nó khác hơn là ngôn ngữ của bản thân mình. Những lớp này sẽ bao gồm các đề mục giáo khoa như sau: Cách xử dụng văn phạm Anh-Nghệ, cảm thông/giao tiếp, ngôn ngữ và văn đề liên quan ở nơi làm việc, ngữ vực/thành ngữ, khả năng thích nghi cho cuộc sống hiện tại, cách đọc/cách viết, và sự hiểu biết về phong tục/văn hóa.
ENGLISH AS A SECOND LANGUAGE

Improve your English in English as a Second Language (ESL) class offered by PIMA COUNTY ADULT EDUCATION at Hankmaker.

The ESL class offered by PIMA COUNTY ADULT EDUCATION is for non-native speakers of English who want to improve oral and written communication skills. The classes will cover a range of topics including English grammatical structures, conversation/oral communication, workplace language and issues, vocabulary/idioms, coping/survival skills, reading/writing, and customs/cultural awareness.

Please sign below if you are interested.

INGLES COMO SEGUNDO IDIOMA

Mejore su INGLES en la clase de ESL (Ingles como Segundo Idioma) que ofrece PIMA COUNTY ADULT EDUCATION en Handmaker.

La clase de ESL ofrecida por PIMA COUNTY ADULT EDUCATION es para personas que no hablan ingles como su idioma nativo y que desean mejorar sus habilidades de comunicarse tanto orales como escritas. Las clases abarcaran una variedad de temas, los cuales incluyen gramatica de ingles, conversacion y comunicacion oral, lenguage y temas relacionados al sitio de trabajo, vocabulario y modismos, habilidades para defenderse en la vida diaria, lectura y escritura, y orientacion sobre cultura y costumbres.

Si usted esta interesado (a), haga el favor de inscribirse aqui.

1. 6.
2. 7.
3. 8.
4. 9.
5. 10.
Refresh your Basic Skills in

- Math
- Writing
- Reading

or prepare for the GED Test

GENERAL EDUCATION DEVELOPMENT

Tuesdays and Thursdays
2:30 p.m. - 4:30 p.m.
Bay Colony Classroom #2

Refresh your English Skills

- Basic English
- English as a Second Language (ESL)

ENGLISH AS A SECOND LANGUAGE

Mondays and Wednesdays
2:30 p.m. - 4:30 p.m.
Bay Colony Classroom #2

Classes are open to Burr-Brown employees, spouses, and family* at no cost.

To register, please complete the registration form and return to Education & Training or to your Human Relations Service Center.

*Upon available space

Additional information is available from Education & Training x4317

Adult L16/89