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ABSTRACT

The Sweetwater National Workplace Literacy Project was undertaken to develop the following: (1) industry/company-specific individualized literacy skills training for currently employed adults and (2) individualized, preemployment workplace literacy and job-specific skills training for unemployed or underemployed adults. The following site-specific programs were developed: a 1-week course for individuals wishing to become convenience store clerks; a 12-week (1.5 hours each week) course in general chemistry for waste handlers; a 4-session basic skills workshop for parking lot attendants; and a 120-hour course for certified nurse assistants. A total of 296 currently employed and unemployed/underemployed individuals were served by the programs. Of those individuals, 218 (73%) had positive outcomes. The basic skills for health occupations course is becoming part of the school district's regular adult school program and will continue indefinitely under regular funding. (Appended are foundation skill matrices for the literacy training provided to convenience store clerks and parking lot attendants and course outlines of the workplace literacy courses for convenience store clerks, waste handlers, and certified nurse assistants and other health workers. A copy of the independent project evaluation is attached.) (MN)

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FINAL REPORT OF THE SWEETWATER NATIONAL WORKPLACE LITERACY PROJECT

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Introduction

Despite the worst recession that Southern California has ever experienced, the Sweetwater Division of Adult and Continuing Education has successfully served more than the 200 adults targeted for services by the Sweetwater National Workplace Literacy Project. Cutbacks in defense spending created a ripple effect which has touched virtually every household in Southern California. It has been widely reported that for every defense job lost, four more are lost in the local economy. The business partners for this grant have had to make adjustments in their business plans simply to stay solvent.

Due to this local crisis, Sweetwater varied, with approval from the US Department of Education, the ratio of employed/unemployed persons served by this grant to serve a total of 200 persons. The Division has served a total of 320 participants. Of this 320, 22 were introductory ESL students who were not expected to have one of the stated positive outcomes during the grant period.

Objective #1 Train a minimum of 100 currently employed adults in industry/company specific individualized literacy skills so that 90% will achieve one of the following positive outcomes:

- Job promotion/retention
- Improved employee safety record
- Increased job productivity and quality control
- More positive job evaluation by supervisors
- Enrollment in further education

Site #2 The Southland Corporation (7-Eleven Stores)

Due to the deep, lingering recession that hit Southern California in the early 90's, our business partner, The Southland Corporation (parent company for 7-Eleven Stores), underwent major restructuring. One aspect of the restructuring included conversion of all 54 of their locally corporate owned stores to franchise ownership. The Southland Corporation had had a huge turnover problem in their corporate stores (a clerk lasted an average of 77 days in their employ) which management felt was related to both the worker's low literacy skills as well as to the lack of investment they made in these workers. It had been difficult, if not impossible, to hire clerks with even a GED certificate before the recession began.

Southland had come to realize that these entry level workers were in a position to "make or break" the profit margin of the particular store. All convenience stores carry much the same merchandise at very similar prices, so the difference is often the service provided by the clerks. Southland had committed to providing customized literacy instruction for the clerks in their corporate stores to reduce the turnover rate for clerks as well as to improve their problem solving, communication, and other literacy skills.

The restructuring meant that Sweetwater was essentially providing workplace literacy services for a sizable number of small business owners rather than for the corporation which had committed to the concept. The corporation was so enthusiastic about the project that they continued to work with Sweetwater and provide service and linkage with the franchise owners.

However, the problems faced by the franchise owners were somewhat different than those faced by the corporate stores. They did not experience the same high level of turnover because they tended to hire family, friends, and acquaintances. However, they were less able to release employees for the much needed workplace literacy instruction that Sweetwater was to provide. In a small business if a clerk is absent for instruction, the owner/manager probably has to cover his shift. An additional issue was that even the on-the-job vocational training that owners/managers provided for their new employees varied in quality from store to store and never addressed the literacy issues that are so critical to a clerk's success. For these reasons, Sweetwater received permission to train unemployed individuals who would then form a pool from which the local 7-Eleven franchise owners would hire.

A professional literacy audit was conducted by Educational Data Systems, Inc. of Michigan to determine what basic skills were needed to be successful as a convenience store clerk. The foundation skill matrices summarize the results of the literacy audit (see Appendix A).

The matrices represent the collective analysis of all the foundation skills required to perform each task as identified in the work activities/learning goals developed for each task. In some cases, certain foundation skills were not reported, especially the lower order skills, as they can be assumed.

It was determined in the analysis that a level three proficiency was the minimum requirement for a 7-Eleven clerk. Therefore, the numeral 3 is entered in the intersection of a task column and a foundation skill row wherever there is a match between a foundation skill and a task.

Analyzing these foundation skill matrices shows that the oral communication skills are the most important for clerks, followed by critical thinking, reading, writing, and math in that order. It had been hypothesized earlier that math was the most important, but the modern, programmable cash registers that 7-Eleven uses has reduced the math computations that a clerk must make. Many items are pre-programmed, and the change to be given is actually computed by the machine. However, the California "snack tax" law created a new area of critical thinking needed by clerks. Previously all food was nontaxable, but after the passage of the "snack tax", tax was to be collected on items which could be unwrapped and eaten without preparation as snacks. This created a large amount of new decisions: popped corn in small bags was taxable, but unpopped corn to be prepared at home was not! Bottled water in large jugs was not taxable but individual size bottles were!

Customer service issues have made oral language skills much more important to the store's success. In addition, observation of successful clerks brought out the fact that other critical thinking/problem solving skills are also necessary for success. Clerks are frequently called upon to handle difficult customers and those who want them to break or stretch the law. (Liquor sales to minors or in disallowed hours are prime examples.) Clerks also are expected to handle

difficult customers and situations with little or no help from supervisors as they are frequently the only employee working at certain times of day. 7-Eleven stores have taken the responsibility of being a safe refuge in dangerous situations so clerks also have to deal with reporting emergencies.

Sweetwater used the New Employee Training Program that had been developed by The Southland Corporation as a basis from which to develop the lessons for the course for convenience store clerks. These NETP materials are only available to other 7-Eleven Store owners.

A week-long class of 4.5 hours daily for 5 days was created to improve the basic skills of individuals who wished to become convenience store clerks. This schedule was developed to allow potential workers to immerse themselves in the subject matter as well as prepare them to become employed in a short amount of time. Because the instruction was not vocational, but job-related basic skill in nature, the participants still needed to have on-the-job training in the vocational aspects of the duties--changing CO₂ bottles, rotating stock, making sandwiches, etc. Early in the project, franchise owners expected a graduate of Basic Skills for Convenience Store Clerks to be fully trained employees. However, they soon realized that they would quickly benefit from brief on-the-job training to become competent employees, and were especially competent in their ability to make decisions and deal with the public. In response to store owners' concerns expressed at an advisory meeting, store field trips were added to the curriculum for subsequent classes. This provided several store owners opportunities to interact with a small group of students and provide them with a realistic view of the duties of a convenience store clerk.

Recruitment of students was done by the program counselor who distributed flyers to several sources. The best location in terms of recruiting students was EDD (Economic Development Department) because it had high traffic of unemployed individuals. The short term aspect of the course appealed to unemployed individuals who wanted to go to work quickly.

This course, Basic Skills for Convenience Store Clerks (see Appendix B for course outline), was offered nine times between September 1992 and July 1993. The results are summarized in the following table. After the first class, a two hour orientation session before the first day of class was instituted. This was done for two reasons:

1. The instructor could not afford the time necessary to complete the forms required to enroll in the grant during class.
2. A few students whose English and/or reading ability was so limited that they needed to be referred to our regular ESL/ABE program before they could benefit from Basic Skills for Convenience Store Clerks.

At orientation prospective students completed enrollment forms, listened to the counselor describe working in a convenience store, completed a brief comprehension and vocabulary screening test, and had a brief interview with a staff member to screen for oral language ability. This proved to be a valuable improvement to the program as the people who did attend orientation were much more likely to complete and be successful in employment as convenience store clerks.

Since the class was 22.5 hours in length, students were not post-tested with a standardized instrument, but rather with a curriculum based final exam which focused on the literacy skills they were learning. The content of the exam included the most pertinent information to be gleaned from the NETP and was designed in such a way as to also test the reading, writing, math, and the thinking skills taught. The oral communication skills were evaluated by the instructor through class discussions, role playing, and mock interviews. The results of the final exam are summarized as follows:

- 12 students scored 100 (10%)
- 72 students scored between 90 and 99 (60%)
- 20 students scored between 80 and 90 (16.5%)
- 9 students scored between 70 and 80 (7.5%)
- 5 students scored between 60 and 70 (4%)

Thus 118 students (98%) of the 121 course completers had a grade of 60% or above on the final exam, and were well qualified to be successful as convenience store clerks.

Table 1
Convenience Store Clerks Strand Summary

Month	Applicants	Present at Orientation	Completed	DP	Referred	Working	Continued in School/ Training	
September 1992	22	no orientation	18	4	0	12	1	
October 1992	18	15	8	3	4 to ESL	7	1	
November 1992	26	14	11	3	0	10	0	
January 1993	24	17	14	3	0	12	1	
February 1993	40	24	20	4	0	12	4	
March 1993	19	11	11	0	0	10	1	
April 1993	11	6	CANCELLED					
May 1993	22	15	12	3	0	5	4	
July #1 1993 #2	54	36	18	0	3 to ABE	13	2	
			9	4		5	2	
Total	236	138	121	24	7	86	16	

As Table 1 indicates, 121 participants completed the entire course and mastered the competencies. Of the 121 completers, 86 became employed as convenience store clerks and 16

have gone on to further education for a total of 102 (84%) positive outcomes. Most of the eighteen who have not had a positive outcome have left the area and cannot be contacted. This is not surprising in view of the severe recession, the high cost of living in the San Diego area, and the fact that many of the participants were recruited from the unemployment office.

Analyzing the demographic data collected on the participants in this strand of the grant indicates the following:

Total Positive/Negative Results

Total positive outcomes: Females=81%, Males=91%
 Total negative outcomes: Females=19%, Males=10%

Ethnicity	Participants by Ethnicity	Positive Outcome by Ethnicity
American Indian	.8%	0%
Asian	29%	31%
Black	5%	5%
White	24%	24%
Hispanic	41%	40%

Age

Average age of all participants=35
 Average age of positive outcomes: Females=36, Males=34
 Average age of negative outcomes: Females=32, Males=29

Head of Household	Single Head of Household	Not Single Head of Household
All participants	40%	60%
Females	25%	36%
Males	15%	24%
Positive outcome Females	20%	39%
Positive outcome Males	15%	26%

Education	Total Males	Positive Outcome Males	Total Females	Positive Outcome Females
Less than HSD	13%	9%	31%	33%
GED	17%	16%	15%	12%
Foreign HSD	23%	26%	22%	23%
HSD	47%	49%	32%	32%

The data seems to indicate that clerking in a convenience store is a suitable occupation for an individual who is not a Single Head of Household (due to low wages) as well as the fact that the job is more suited to men than to women because of the very real danger involved (due to the

environment and hours). In terms of education, the only significant trend seems that men with less than a high school education (in the United States or another country) were the least successful in this area of employment.

This course has not been institutionalized because the employment opportunities are minimal at this time. Turnover had been a serious problem for 7-Eleven; currently this problem has just about disappeared. The recession is the greatest reason for this, but the class has impacted the turnover rate locally. The adults who attended this course not only possess the skills needed to be successful, but had a clear idea of the expectations of the employers, and thus were competent employees from the beginning of employment.

Site #3: Appropriate Technologies II, Inc.

Although Appropriate Technologies II, Inc., a division of Greenfield Environmental, informally known as APTEC, was not a partner to the grant application, they became another site due to a previous relationship with Sweetwater. We had provided a job related basic skills class for this hazardous waste treatment facility in 1990 for truck drivers and other maintenance workers on a contract basis. The class had been very successful so they approached us subsequently to create a class for other workers who wished to advance in their company. Most of these workers were mid level literates who received and repacked waste for storage and who needed job specific knowledge in the area of basic chemical properties in order to advance. The company had experimented with sending some of these people to the local community college for science, but found that the instruction was too advanced and not closely related to the job situations.

Through collaboration among APTEC's head chemist, a highly qualified chemistry teacher from the 7-12 division of our district and the ABE resource teacher (who is also the workplace literacy project coordinator), a curriculum entitled Basic Chemical Properties for Waste Workers was created (see Appendix C for course outline). The class was taught by the chemistry teacher once a week for 1.5 hours for twelve weeks. Because all of the curriculum was directly related to the job tasks, the employee/students were able to use the information they were learning immediately. For this reason, and because they could see how this would help them in job retention and advancement, they did not object to attending class on their own time after working hours.

Eleven of the original 21 who began the class completed it. Eight participants did not complete because they travel out of state for their job and missed so many classes that they were unable to continue. The other two participants who did not complete were the personnel and payroll managers who were simply interested in knowing more about their employer's field.

Of the eleven, ten are still with APTEC and one has gone on to a better job with another division of Greenfield Environmental. Four of the ten have improved safety records, as determined by company records and another four have received more positive evaluations by their supervisors. One of the ten was promoted within the company and has been better able to evaluate those in his department because of the instruction he received. One hundred percent have had at least one positive outcome!

Currently, APTEC does not feel there are more employees who would qualify for and benefit from this course. However, they have shared this innovation with divisions of Greenfield Environmental in other geographic locations who may use the curriculum designed.

Site #4 ACE Parking, Inc.

ACE Parking was not an original grant partner but became interested in participating through discussions between the human resource managers of The Southland Corporation and ACE Parking. Previously, no training or other instruction for cashiers had been offered, despite the fact that the cashier's service is all that differentiated one parking lot from another. The job, which pays approximately minimum wage, is quite demanding. Cashiers are accountable for a significant amount of cash daily, and must complete complex business forms to show different types of payment rates and plans (i.e. per hour, daily, weekly, monthly). In addition, cashiers, many of whom are second language speakers, frequently need to use problem solving and oral communication skills to deal with difficult people and/or situations.

The Workplace Education Coordinator for Sweetwater completed a literacy audit for ACE Parking, Inc. and determined that the tasks which comprise the seven major duties of a cashier require mostly oral communication, math, and problem solving skills. Reading and writing are less important to be successful at this job, and are used mostly to complete the required business forms.

The ACE foundation skill matrices are located in Appendix D. An "X" was used to indicate the need for a particular skill without indicating a level of ability required.

ACE decided to try a small group as a pilot to a larger project. The class was to be held for 20 hours (four consecutive afternoons) at the beginning of a cashier's employment with ACE in the ACE personnel facility. The newly hired cashiers were to be paid to attend as attendance was required by their employer.

The curriculum focused on the areas above and included customer service and cultural diversity topics as well. The employee/students were given the opportunity to role play difficult work situations among themselves and discuss the best possible solution. In addition, they had to complete a performance test which demonstrated their ability to correctly complete the ACE ticket/money reconciliation form and deposit their day's receipts.

The supervisors who had these employees assigned to their locations were extremely pleased with the results of the training. Without exception, they found the new employees to be more capable and self assured than those who had not received the training. They were able to complete their forms and reconcile their cash correctly from their first day on the job. They did not get flustered when difficult customers created unpleasant situations. Nine months after the end of the classes eight of the fourteen employees from the pilot are successful employees of ACE. In fact, one of the employees has been promoted to a supervisory position where he is in charge of several lots and their employees. Four of the original students have resigned to return to school, relocate to another geographic area and/or move on to more demanding jobs. Eighty six percent of the participants have had a positive outcome.

The project did not continue for the following reasons:

1. The human resources department of ACE did not have a budget from which to pay the new employees during the instruction time, and had depended on the generosity of various parking sites to carry these people on their site budget during the training time.

2. The nature of their business required a steady stream of new employees so that grouping them together for a monthly class was not practical for them. Offering classes weekly for five or fewer participants was not practical for Sweetwater.
3. The human resource director, who had come to ACE from the defense industry, was the force behind the project. The owner did not believe in investing in entry workers, but rather in replacing those who did not have the required skills.

For these reasons, ACE did not continue the class long enough to prove that the job related basic skill instruction would significantly reduce their loss from incorrect daily reconciliation forms. However, the human resource director did agree that the class produced more qualified employees who had the potential to move up in their company and the lot supervisors were vocal in their support of the program.

Objective #1 Results

Compiling the data from the three sites which were involved with Objective #1 (training employed adults in industry/company specific workplace basic skills so that 90% would have a positive outcome) results in the following:

One hundred twenty-one adults completed the Basic Skills for Convenience Store Clerks class; 86 of them are successful employees of convenience stores and other related retail establishments. Additionally, 16 more have worked in such establishments and have returned to adult school or the local community college for more education for a total of 102 positive outcomes.

All 11 of the employees from Appropriate Technologies are still employed with them, two in more advanced positions (one with another division), four have improved safety records and four have more positive supervisor evaluations for a total of 11 positive outcomes.

Eight of the 14 employees from ACE Parking are still employed with them, four in more advanced positions, and all have excellent safety records and positive supervisor evaluations. Four others have returned to further education or taken better positions for a total of 12 positive outcomes.

Thus, of the 146 persons who participated in Objective #1 of the Sweetwater National Workplace Literacy grant project, 86% (125 adults) have had positive outcomes. These 125 represent 125% of the 100 participants proposed in the original grant application.

The slippage of 4% (21 participants) from the 90% positive outcomes proposed in the grant application has occurred because of participants who have left the area and can't be reached. Many of them may be using the skills they developed in this project in a positive way in another geographic area. The severe recession which has had a stranglehold on southern California for the past 2 1/2 years has caused an unexpected migration to other parts of the country where the cost of living is lower and jobs are more plentiful. We have attempted to correct that slippage by actively attempting to reach these participants by both telephone and letter to determine if they have had one of the acceptable positive outcomes.

Objective #2 Train a minimum of 100 unemployed or underemployed adults in individualized, pre-employment workplace literacy, and job specific skills training so that at least 90% achieve one or more of the following positive outcomes:

- Full time employment or job promotion
- Completion of a major educational goal (GED, high school diploma)
- Completion of a vocational skills training program with competency certification
- Attainment of ten points growth in reading on the 3rd edition Gates MacGinitie Reading Test

Site #1 The Employability Skills Center

The Employability Skills Center was created out of a need to prepare adult students to be successful in vocational programs. Many vocational teachers have the same concerns: their students don't have the appropriate basic skills (oral and written language and/or math) to be successful in the vocational class. In addition, the vocational instructors don't feel capable of teaching those skills. They refer students to regular adult basic education classes, but the students frequently become discouraged because they don't see the connection between what they study in ABE and what they need to know to be successful in their chosen vocational class. They are anxious to speed up the process and get into their vocational class.

It appeared that the main principle which drives workplace learning classes--that the instruction focus on skills needed to do the job, and that those skills are taught using the actual job materials or close simulations--would benefit these potential vocational students. That is: teach them the specific basic skills needed to be successful in their vocational class, and teach it using real job materials or the instructional materials used in the vocational class. For example, students who plan to study auto mechanics need to read charts and tables. It makes more sense to have them practice this skill using actual auto parts and repair manuals than to focus on population trends of various states or some other unrelated topic.

Studies done by Thomas Sticht for the Department of Defense indicate that basic skills instruction offered using this "functional context" approach produces larger grade level gains in shorter time as well as greater retention over time. This seems to be true due to the student's prior knowledge of and their high interest in the material. In effect, the student is learning not only the process (i.e. the skills) but the content relevant to their interest.

One of the most academically demanding vocational classes offered by the Sweetwater Division of Adult & Continuing Education is the Certified Nurse Assistant class. Many of the students who want to attend this class do not read at the minimum 8th grade level required by the nursing instructors, nor do they have adequate oral skills for working with patients. To be admitted to the CNA program, adults have to score a minimum of 8th grade level (raw score 55) on the 3rd edition of the Gates-MacGinitie Reading Test.

The Employability Skills Center, funded by a National Workplace Literacy grant, focused on preparing students to be successful in the CNA class. The teacher who was selected has a strong background in ESL and ABE, but also importantly, she was willing to try new techniques and instructional strategies. A comprehensive basic skills computer program, PLATO by TRO, was selected because it covered language, reading and math skills from the most basic through GED level and was available in a networked version for IBM compatible computers. This delivery

system provided general literacy instruction which would help the students increase their reading levels to the required 8th grade level. The teacher was free to concentrate on creating and delivering job related lessons which:

1. Provide students with appropriate vocabulary related to the nursing field.
2. Increase students background knowledge of the field.
3. Allow students to improve their oral skills through discussion and role play related to the duties of a CNA.
4. Increase students self confidence and critical thinking ability so that they could be successful in the CNA class and later in their work environment.

This instruction was offered to students on an open entry–open exit schedule where they were able to attend 2-4 hours per day until they had met their own goals or until they were accepted into the CNA class. This individualized scheduling accommodated the needs of adult students with family and/or job responsibilities who had a wide variety of skills to improve before they could reach their personal goals. Students worked part of their classtime individually on computer assisted lessons and part of their classtime with the teacher and other students in job related lessons that required thinking, communicating, reading, and teamwork skills.

Ideally, vocational students would receive their functional context basic skill instruction concurrently with their vocational training. They would then see that they were making progress in both areas as well as understand the interrelationship of what they were studying in both classes. However, the CNA program runs six hours a day, and the nursing instructors were reluctant to admit students whose skill level was not already appropriate to handle the written materials used in the course and/or whose oral skills were not developed enough to be successful in the clinical field work experience. Therefore participation in the ESC class Basic Skills for the Health Occupations (see Appendix E for course outline) was scheduled prior to the CNA training for those adults who needed this skill development. In vocational areas in which safety was not a significant issue or in which the vocational training was scheduled for four or less hours daily, the basic skill instruction could successfully run concurrently with the vocational training.

After the first semester, the program was expanded to prepare students for success in the Medical Lab Assistant (MLA) class which had similar oral and written language requirements as well as the additional math requirement of ability to work with percentages, ratio, proportions, decimals and fractions.

Demographic data collected on the participants in this grant strand (including demographics for the 22 basic ESL students) reveals the following:

Total Positive/Negative Results

Total positive outcomes: Females=47%, Males*=50%

Total negative outcomes: Females=53%, Males*=50%

* Males represented only 15% of the participants in this strand

Ethnicity	Participants by Ethnicity	Positive Outcome by Ethnicity
American Indian	0%	0%
Asian	50%	54%
Black	4%	3%
White	7%	9%
Hispanic	39%	27%

Age

Average age of all participants=35

Average age of positive outcomes: Females=38, Males=37

Average age of negative outcomes: Females=33, Males=29

Head of Household	Single Head of Household	Not Single Head of Household
All participants	27%	73%
Females	21%	65%
Males	7%	8%
Positive outcome Females	11%	30%
Positive outcome Males	4%	3%

Education	Total Males	Positive Outcome Males	Total Females	Positive Outcome Females
Less than HSD	23%	4%	36%	12%
GED	8%	8%	3%	3%
Foreign HSD	8%	4%	11%	7%
HSD	62%	35%	50%	25%

This data seems to indicate that being a Single Head of Household was a disadvantage in this situation. Participants who did not have the entire responsibility for providing for a family were able to study for the extended time it might take to improve literacy skills to the degree needed. In terms of ethnicity, Asian participants represented 50% of the project but had 54% of the positive outcomes. For Blacks and Whites, the percentage of positive outcomes was very close to the percentage of participants. Hispanics represented 39% of project participants but only had 27% of the positive outcomes. Age seemed to be a predictor of success as the average age for positive outcomes was higher than for negative outcomes for both men and women.

Objective #2 Results

To date, 152 adults have enrolled in the ESC to prepare to enter the CNA or MLA programs and another 22 introductory ESL students have also enrolled on a space available basis (despite the fact they would take longer than the allotted time frame to become fluent) because they had indicated an interest in eventually pursuing training in the medical field.

Of these 152, 44 have been accepted in a CNA training program and all except four have successfully completed the training. One of the reasons that the acceptance rate is low is that the vocational teachers were selecting students for their classes in rank order of their Gates test score. The assessment procedures were reevaluated, and it was decided to accept all students who reached a cut off raw score of 55 (8th grade) in order of date of application. Following this change, many more of the grant participants were accepted into the CNA program where they have proven to be just as competent students and subsequent workers as those with higher scores on the Gates placement test. In addition, ESC students' drop-out rate was much lower than for the CNA students who did not attend ESC.

Fifteen students who were preparing for the Medical Lab Assistant class were accepted to that class and ten are currently enrolled in this class as of February 28, 1994. The class is a two semester course which will end in June 1994 so none of the students has completed it to date. However, in previous years the attrition in this class had occurred early in the course when students were frustrated by their lack of math skills. This and the students' success to date lead the instructor to predict that the ten will successfully complete the class.

Additionally, 24 more students increased their score on the Gates MacGinitie Reading Test by at least ten points. The Gates test was used to measure this positive outcome rather than the CASAS test as originally proposed in the application. It is the Gates test on which prospective students must demonstrate their ability to be admitted to the CNA program. Also, early in the grant, current CNA students were tested with the CASAS Health Reading Test (C level) and virtually all scored at the top of the scale. This indicated that this particular test would not be a useful measure for the project. An additional three students received GED certificates concurrently while preparing to enter health related occupational programs.

Seventeen more students have accepted employment in the medical field and plan to pursue their CNA certification through classes offered by their employers.

Thus to date a total of 91 participants (60%) have had a positive outcome. These 91 positive outcomes represent 91% of the 100 participants proposed in the original grant application. Additionally, 35 more adult participants are currently enrolled in the Employability Skills Center and 20 of them will probably be admitted to the CNA program in the next three months, since the procedures for basic skills screening have been redesigned. Thus by June 1994, the percentage of positive outcomes will likely reach 71%. These results emphasize the fact that literacy and language skill deficits are not corrected quickly, as well as the fact that the level of literacy required in the medical field is quite high, even for entry level workers.

The major efforts to reduce the slippage in this objective were:

1. A revision of the CNA entrance testing procedures to create an improved system.
2. Counseling and encouragement for students who were discouraged to find that improving their literacy skills was so time consuming and was inhibiting their efforts to receive vocational training. The reasons the basic skills and CNA training could not be concurrent have already been addressed.

Conclusion

Combining the results of both Objectives #1 and #2, 218 of the 298 participants (73%) have had positive outcomes. This figure (218) compares favorably with the original proposal of 90% positive outcomes for 200 participants (180).

Another positive outcome of the entire project is that the class Basic Skills for the Health Occupations is becoming part of the regular adult school program at the end of the grant (2/28/94), and will continue indefinitely under regular funding. The administration supports the need for such a program as well as the philosophy of functional context curriculum. The plan for the future is to expand the class to include functional context curriculum for another vocational area.

Because the class is being institutionalized, students were continually enrolled in the grant project up until the end of the grant period, despite the fact they would not progress enough to either be admitted to the CNA or MLA class or raise their Gates score 10 points before the end of the reporting period. However, since Sweetwater Division of Adult and Continuing Education programs operate on an open entry system, we did not wish to deny anyone access to the ongoing class.

Evaluation Activities

The evaluation of this project was subcontracted to the Evaluation and Training Institute of Los Angeles, California. Their staff evaluated the project in terms of activities and positive outcomes through the use of participant, teacher, and business representative surveys and interviews. Their final report is included with this report.

Dissemination Activities

The project director, has presented the project at the following conferences to date:

CBE/Learn Training Symposium,
March 1993, Los Angeles, CA.

3rd American Adult & Adolescent Literacy Conference,
February 1994, Washington, DC

The final report and curriculum materials will be disseminated to the following sources:

Clearinghouse on Adult Education & Literacy
US Department of Education
Switzer 4428
400 Maryland Avenue SW
Washington, DC 20202-7240

ERIC Clearinghouse on Adult, Career and Vocational Education
Center on Education and Training for Employment
1900 Kenny Road
Columbus, OH 43210

Dr. Lawrence Zane, Director
Western Curriculum Coordination Center
University of Hawaii, College of Education
1776 University Avenue, Wist Hall 216
Honolulu, HI 96822
1 (808) 956-7834

Outreach and Technical Assistance Network (OTAN)
Sacramento County Office of Education
9738 Lincoln Village Drive
Sacramento, CA 95827-3399

VESL/Workplace Clearinghouse
San Diego Community College District
Mid City Center
5350 University Avenue
San Diego, CA 92106

Employment Training Network
560 J Street Suite 385
Sacramento, CA 95814
1 (800) 435-0637

Reading Foundation Skill Matrix		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7- Eleven San Diego Division		Task A001	Task A002	Task A003	Task A004	Task A005	Task B001	Task B002	Task B003	Task B004	Task B005	Task C001	Task C002	Task C003	Task C004	Task C005
R1	Recognize differences between words	3		3		3		3				3				3
R2	Recognize differences between numbers	3		3		3		3				3				3
R3	Read date/time	3		3		3		3				3				3
R4	Use dictionary															
R5	Understand technical terms/abbreviations	3		3												3
R6	Understand business forms/letters	3		3		3										3
R7	Understand written directions/instructions			3												
R8	Understand written safety rules															
R9	Use table of contents															
R10	Use encyclopedia															
R11	Use atlases/maps															
R12	Follow written sequence of events			3												
R13	Find information/facts	3		3		3										3
R14	Understand words used in context															
R15	Read mechanical/architectural drawings/prints															
R16	Understand graphs															
R17	Understand symbols	3														
R18	Understand sequenced graphics/pictures															
R19	Find information from technical manuals															
R20	Use thesaurus															
R21	Read journals															
R22	Read periodicals															
R23	Read newspapers															
R24	Read summaries															
R25	Draw conclusions from written materials	3														3
R26	Distinguish between fact and opinion															
R27	Skim text to find information	3														
R28	Verify information by cross-referencing	3					3									
R29	Understand legal documents															
R30	Understand financial reports															
R31	Understand abstracts															
R32	Understand scientific/technical journals															
R33	Predict outcomes from written materials															3
R34	Identify cause and effect relationships															3
R35	Read computer menus															

Legend: 1 = Basic Skill
2 = Limited Technical Proficiency
3 = Technical Proficiency Required of the Job
4 = Exceeds Job Requirements

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Reading Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task C006	Task D001	Task D002	Task D003	Task D004	Task E001	Task E002	Task E003	Task E004	Task E005	Task E006	Task E007	Task F001	Task F002	Task F003
R1	Recognize differences between words	3		3	3	3	3		3	3					3	3
R2	Recognize differences between numbers	3		3	3	3	3			3					3	
R3	Read date/time	3	3	3	3	3	3									3
R4	Use dictionary															
R5	Understand technical terms/abbreviations	3	3	3	3	3	3		3	3					3	3
R6	Understand business forms/letters	3	3	3	3											3
R7	Understand written directions/instructions	3			3	3	3		3	3					3	3
R8	Understand written safety rules								3						3	
R9	Use table of contents						3		3							
R10	Use encyclopedia															
R11	Use atlases/maps															
R12	Follow written sequence of events	3			3	3	3		3	3						3
R13	Find information/facts	3	3	3	3	3	3		3	3					3	
R14	Understand words used in context					3	3		3						3	
R15	Read mechanical/architectural drawings/prints															
R16	Understand graphs															
R17	Understand symbols		3	3	3											
R18	Understand sequenced graphics/pictures						3		3							
R19	Find information from technical manuals															
R20	Use thesaurus															
R21	Read journals															
R22	Read periodicals															
R23	Read newspapers															
R24	Read summaries						3		3							
R25	Draw conclusions from written materials		3	3	3	3	3		3	3					3	
R26	Distinguish between fact and opinion															
R27	Skim text to find information		3	3	3	3	3		3						3	
R28	Verify information by cross-referencing		3	3	3											
R29	Understand legal documents															
R30	Understand financial reports															
R31	Understand abstracts															
R32	Understand scientific/technical journals															
R33	Predict outcomes from written materials		3		3	3	3		3	3					3	
R34	Identify cause and effect relationships		3		3	3	3		3	3					3	
R35	Read computer menus															

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Writing Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task A001	Task A002	Task A003	Task A004	Task A005	Task B001	Task B002	Task B003	Task B004	Task B005	Task C001	Task C002	Task C003	Task C004	Task C005
W1	Print legibly				3				3			3				3
W2	Spell words correctly				3				3			3				3
W3	Write series of numbers								3			3				
W4	Write date/time				3				3			3				3
W5	Write legibly				3											3
W6	Write sentences															
W7	Punctuate correctly															
W8	Use correct grammar															
W9	Spell abbreviations correctly								3			3				
W10	Use dictionary															
W11	Understand words used in context															
W12	Complete applications															
W13	Write letters, reports, messages															
W14	Use technical terms/abbreviations				3				3			3				3
W15	Draw graphs/charts															
W16	Write directions															
W17	Use words in context															
W18	Write events in sequence				3											3
W19	Write details from recollections				3											3
W20	Write outlines															
W21	Write business letters															
W22	Write summaries															
W23	Write conclusions															
W24	Complete business forms				3				3			3				3
W25	Write using references				3				3			3				3
W26	Take notes															
W27	Proofread				3				3			3				3
W28	Write journal articles															
W29	Write speeches															
W30	Write manuals															
W31	Write critiques															
W32	Enter data															

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2 = Limited Technical Proficiency
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4 = Exceeds Job Requirements

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Writing Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task C006	Task D001	Task D002	Task D003	Task D004	Task E001	Task E002	Task E003	Task E004	Task E005	Task E006	Task E007	Task F001	Task F002	Task F003
W1	Print legibly		3	3										3		
W2	Spell words correctly		3	3										3		
W3	Write series of numbers		3	3										3		
W4	Write date/time		3	3										3		
W5	Write legibly		3													3
W6	Write sentences															
W7	Punctuate correctly															
W8	Use correct grammar															
W9	Spell abbreviations correctly		3	3										3		
W10	Use dictionary															
W11	Understand words used in context															
W12	Complete applications															
W13	Write letters, reports, messages															
W14	Use technical terms/abbreviations		3	3										3		
W15	Draw graphs/charts															
W16	Write directions															
W17	Use words in context															
W18	Write events in sequence		3													3
W19	Write details from recollections															
W20	Write outlines															
W21	Write business letters															
W22	Write summaries													3		
W23	Write conclusions															
W24	Complete business forms		3	3										3		3
W25	Write using references		3	3												
W26	Take notes															
W27	Proofread		3	3										3		3
W28	Write journal articles															
W29	Write speeches															
W30	Write manuals															
W31	Write critiques															
W32	Enter data															

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Math 1 Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task A001	Task A002	Task A003	Task A004	Task A005	Task B001	Task B002	Task B003	Task B004	Task B005	Task C001	Task C002	Task C003	Task C004	Task C005
M1	Read/write whole numbers				3	3				3			3			3
M2	Round whole numbers															
M3	Add whole numbers				3	3										3
M4	Subtract whole numbers				3	3										3
M5	Multiply whole numbers				3	3										3
M6	Divide whole numbers				3	3										3
M7	Read/write fractions															
M8	Arrange fractions in order															
M9	Reduce fractions to lowest terms															
M10	Change mixed numbers to simplest forms															
M11	Add fractions															
M12	Subtract fractions															
M13	Multiply fractions															
M14	Divide fractions															
M15	Change fractions to equivalent fractions															
M16	Change mixed numbers to improper fractions															
M17	Read/ write decimals				3	3						3				3
M18	Arrange decimals in order				3	3										3
M19	Round decimals				3	3										3
M20	Add decimals				3	3										3
M21	Subtract decimals				3	3										3
M22	Multiply decimals				3	3										3
M23	Divide decimals				3	3										3
M24	Change fractions to decimals															
M25	Change decimals to fractions															
M26	Express decimals in scientific notation															
M27	Find average															
M28	Find mode/median															
M29	Read/write percents															
M30	Change percents to decimals															
M31	Change decimals to percents															
M32	Change percents to fractions															
M33	Change fractions to percents															
M34	Compute percent of a number															
M35	Compute discounts/markup/tax/commission							3					3			

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Math 1 Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task C008	Task D001	Task D002	Task D003	Task D004	Task E001	Task E002	Task E003	Task E004	Task E005	Task E006	Task E007	Task F001	Task F002	Task F003
M1	Read/write whole numbers		3													
M2	Round whole numbers															
M3	Add whole numbers		3													
M4	Subtract whole numbers		3													
M5	Multiply whole numbers		3													
M6	Divide whole numbers		3													
M7	Read/write fractions															
M8	Arrange fractions in order															
M9	Reduce fractions to lowest terms															
M10	Change mixed numbers to simplest forms															
M11	Add fractions															
M12	Subtract fractions															
M13	Multiply fractions															
M14	Divide fractions															
M15	Change fractions to equivalent fractions															
M16	Change mixed numbers to improper fractions															
M17	Read/ write decimals		3													
M18	Arrange decimals in order		3													
M19	Round decimals		3													
M20	Add decimals		3													
M21	Subtract decimals		3													
M22	Multiply decimals		3													
M23	Divide decimals															
M24	Change fractions to decimals															
M25	Change decimals to fractions															
M26	Express decimals in scientific notation															
M27	Find average															
M28	Find mode/median															
M29	Read/write percents															
M30	Change percents to decimals															
M31	Change decimals to percents															
M32	Change percents to fractions															
M33	Change fractions to percents															
M34	Compute percent of a number															
M35	Compute discounts/markup/tax/commission		3													

Legend: 1 = Basic Skill
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3 = Technical Proficiency Required of the Job
4 = Exceeds Job Requirements

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Math 2 Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task A001	Task A002	Task A003	Task A004	Task A005	Task B001	Task B002	Task B003	Task B004	Task B005	Task C001	Task C002	Task C003	Task C004	Task C005
M36	Use ratio/proportion															
M37	Measure to nearest fraction (micrometer)															
M38	Use inches/feet/yards/miles															
M39	Measure to nearest millimeter (micrometer)															
M40	Use millimeter/centimeter/meter/kilometer															
M41	Measure weight to nearest ounce															
M42	Measure weight to nearest gram															
M43	Measure angles to nearest degree															
M44	Measure temperature in Fahrenheit/Celsius															
M45	Tell time															
M46	Convert from metric to English units															
M47	Convert from English to metric units															
M48	Measure perimeter															
M49	Measure circumference															
M50	Compute area of squares/rectangles															
M51	Use square inches/feet/yards															
M52	Use square millimeters/centimeters/meters															
M53	Compute area of triangles/trapezoids															
M54	Compute area of circles															
M55	Compute volume of rectangular solids															
M56	Use cubic inches/feet/yards															
M57	Use cubic millimeters/centimeters/meters															
M58	Compute volume of cylindrical solids															
M59	Compute mass from volume															
M60	Construct/interpret graphs (line/bar/picture)															
M61	Use expanded notation ($2 \times 2 \times 2 = 2$ cubed)															
M62	Compute square root															
M63	Use algebraic expressions (Ohm's Law, etc.)															
M64	Locate set of points on 2-axis graph															
M65	Locate set of points on 3-axis graph															
M66	Work with non-decimal based number systems															
M67	Use trigonometry tables															
M68	Compute missing angles of triangles															
M69	Compute missing sides of triangles															
M70	Use calculator				3		3									3
M71	Estimate solutions				3		3									3

Legend: 1 = Basic Skill
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4 = Exceeds Job Requirements



Math 2 Foundation Skill Matrix 7- Eleven San Diego Division		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Task C008	Task D001	Task D002	Task D003	Task D004	Task E001	Task E002	Task E003	Task E004	Task E005	Task E006	Task E007	Task F001	Task F002	Task F003
M36	Use ratio/proportion															
M37	Measure to nearest fraction (micrometer)															
M38	Use inches/feet/yards/miles															
M39	Measure to nearest millimeter (micrometer)															
M40	Use millimeter/centimeter/meter/kilometer															
M41	Measure weight to nearest ounce															
M42	Measure weight to nearest gram															
M43	Measure angles to nearest degree															
M44	Measure temperature in Fahrenheit/Celsius															
M45	Tell time															
M46	Convert from metric to English units															
M47	Convert from English to metric units															
M48	Measure perimeter															
M49	Measure circumference															
M50	Compute area of squares/rectangles															
M51	Use square inches/feet/yards															
M52	Use square millimeters/centimeters/meters															
M53	Compute area of triangles/trapezoids															
M54	Compute area of circles															
M55	Compute volume of rectangular solids															
M56	Use cubic inches/feet/yards															
M57	Use cubic millimeters/centimeters/meters															
M58	Compute volume of cylindrical solids															
M59	Compute mass from volume															
M60	Construct/interpret graphs (line/bar/picture)															
M61	Use expanded notation (2x2x2=2 cubed)															
M62	Compute square root															
M63	Use algebraic expressions (Ohm's Law, etc.)															
M64	Locate set of points on 2-axis graph															
M65	Locate set of points on 3-axis graph															
M66	Work with non-decimal based number systems															
M67	Use trigonometry tables															
M68	Compute missing angles of triangles															
M69	Compute missing sides of triangles															
M70	Use calculator															
M71	Estimate solutions															

Legend: 1 = Basic Skill
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SWEETWATER UNION HIGH SCHOOL DISTRICT
 DIVISION OF ADULT AND CONTINUING EDUCATION
 ADULT BASIC EDUCATION

<u>VI</u>	<u>Basic Skills for Convenience Store Clerks</u>	<u>6046</u>
Level	1992	Code

DURATION: Approximately 23 hours

GRADE LEVEL: Ungraded adult

PREREQUISITES: None

CREDIT: None

PROGRAM DESCRIPTION:

This basic skills course is designed to prepare students to be successful as convenience store clerks. The skills needed include listening and speaking; interpersonal relations; critical thinking and problem solving; and basic reading, writing, and mathematics.

GOALS:

Through the principles and practice presented in this course, students will:

1. Develop the employment maturity skills necessary to obtain and retain employment as convenience store clerks.
2. Understand the theory and practices of customer service.
3. Develop the skills necessary to complete sales transactions and required forms.
4. Acquire an understanding of methods for promoting store security.
5. Acquire an understanding of merchandising duties.
6. Develop a knowledge of state laws which affect the operation of convenience stores.

OBJECTIVES:

Upon successful completion of this course, students will be able to:

- 1.0 With respect to developing the employment maturity skills necessary to obtaining and retaining employment as convenience store clerks,
 - 1.1 Correctly complete an employment application.
 - 1.2 Describe appropriate dress and behavior for interviewing as well as for work.
 - 1.3 Discuss punctuality and regular attendance.
 - 1.4 Discuss positive attitudes and good interpersonal relationships.
- 2.0 With respect to understanding the theory and practice of customer service,
 - 2.1 Greet customers as they enter the store.
 - 2.2 Greet customers as they approach the sales counter.
 - 2.3 Assist customers in selection of purchases where appropriate.
 - 2.4 Suggest related purchases to customers.
 - 2.5 Break away from other tasks when customers approach the sales counter.
 - 2.6 Thank customers.
 - 2.7 Handle age related sales courteously.
 - 2.8 Process refund requests or merchandise exchanges.
- 3.0 With respect to developing the skills needed to complete transactions and required forms,
 - 3.1 Call out prices while ringing.
 - 3.2 Ring the proper amount using the correct register keys.
 - 3.3 Charge tax on taxable items only.

- 3.4 Subtotal and tell customer the amount of purchase.
- 3.5 Accept cash and place it on ledge.
- 3.6 Count change correctly.
- 3.7 Process checks correctly.
- 3.8 Offer receipt and bag to customer.
- 3.9 Process money order sales.
- 3.10 Complete shift change report and other forms.
- 4.0 With respect to understanding the concept and methods of store security,
 - 4.1 Identify potentially hazardous conditions.
 - 4.2 Discuss situations in which cash shortages could occur.
 - 4.3 Discuss cues of potential robberies.
 - 4.4 Discuss prevention of violence during robberies.
 - 4.5 Discuss procedures for handling shoplifting.
- 5.0 With respect to developing a knowledge of merchandising duties,
 - 5.1 Demonstrate procedures for receiving merchandise.
 - 5.2 Demonstrate procedures for pricing merchandise.
 - 5.3 Discuss shelving merchandise.
 - 5.4 Discuss procedures for inventorying merchandise.
- 6.0 With respect to understanding the state laws which affect the operation of a convenience store,
 - 6.1 Identify taxable vs nontaxable items.

- 6.2 Discuss age related sales (beer, wine, tobacco, lotto) and demonstrate how to compute the last eligible birthdate.
- 6.3 Identify legal sales hours for convenience stores.
- 6.4 Identify legal sales hours for alcohol sales.

INSTRUCTIONAL STRATEGIES AND TIME:

Teacher presentations and demonstrations	20%
Class and small group discussions	20%
Teacher supervised role play and other practice	40%
Evaluation	20%

EVALUATION:

Student evaluation will be based upon,

1. Satisfactory participation and progress in classroom activities as evaluated by the instructor.
2. Satisfactory completion of performance and written tests.

CONDITIONS FOR REPETITION:

There are no conditions for repetition of this course.

Approved:
Board of Trustees
October 15, 1992

SWEETWATER UNION HIGH SCHOOL DISTRICT
DIVISION OF ADULT AND CONTINUING EDUCATION
 Adult Basic Education

<u>VI</u>	<u>Basic Chemical Literacy for Waste Disposers</u>	<u>6045</u>
Level	1993	Code

DURATION: Approximately 18 hours

GRADE LEVEL: Ungraded Adult

PREREQUISITES: Employment with company offering the course

CREDIT: None

PROGRAM DESCRIPTION:

This course is designed for workers at a waste disposal facility. The purpose of the class is to provide workers with basic technical information about the chemicals they come in contact with, including how those chemicals interact. In this way, workers will perform their tasks in a safe manner.

GOALS:

Through the principles and practice presented in this course, students will:

1. Judge accurately the compatibility of chemicals and waste materials.
2. Reduce the number of on-the-job incidents and accidents.

OBJECTIVES:

Students who successfully complete this course will be able to:

- 1.0 With respect to the ability to judge the compatibility of chemicals and waste materials,
 - 1.1 Identify various organic compounds from their names and chemical formulae.

- 1.2 Identify various inorganic compounds from their names and chemical formulae.
 - 1.3 Use the two compatibility charts that are available to them.
 - 1.4 Use a Material Safety Data Sheet.
- 2.0 With respect to reducing the number of on-the-job incidents and accidents,
- 2.1 Mix, store, and dispose of oxidizers properly.
 - 2.2 Mix, store, and dispose of corrosives properly.
 - 2.3 Mix, store, and dispose of solvents properly.

INSTRUCTIONAL STRATEGIES AND TIMES:

Teacher lecture and demonstration	55%
Class discussions	20%
Teacher supervision of student practice	20%
Evaluation	5%

EVALUATION:

Evaluation of individual achievement is based upon:

1. Satisfactory completion of written assignments as evaluated by the instructor.
2. Satisfactory completion of teacher-made and/or standardized tests as evaluated by the instructor.
3. Satisfactory progress and participation in classroom activities as evaluated by the instructor.

CONDITIONS FOR REPETITION:

Employees may repeat this course with the consent of their employer.

Approved:
Board of Trustees: January 23, 1992
January 23, 1992

Revised: November 18, 1993
Formerly called "Chemistry for Waste Disposer Workers"

Foundation Skill Matrix		-Incoming	Outgoing	Mo. Pay	Daily Rept.	Unusual Cir.	Safety	Cust. Relat.	9	9	10	11	12	13	14	15
Speaking Skills																
S1	Speak simple sentences	X	X	X	X	X	X	X								
S2	Speak using normal word order	X	X	X	X	X	X	X								
S3	Use correct tense	X	X	X	X	X	X	X								
S4	Speak clearly	X	X	X	X	X	X	X								
S5	Use appropriate emphasis/pauses	X	X	X	X	X	X	X								
S6	Speak face to face	X	X	X	X	X	X	X								
S7	Speak before an audience															
S8	Speak with poise	X	X	X			X	X	X							
S9	Speak with control	X	X	X	X	X	X	X								
S10	Choose words appropriately	X	X	X	X	X	X	X								
S11	Use technical terms/vocabulary				X		X									
S12	Speak from graphs/charts						X									
	RATE CHART	X	X	X			X									
S13	Use words in context	X	X	X			X	X	X							
S14	Speak fluently	X	X	X			X	X	X							
S15	Describe a procedure for someone to follow	X	X	X	X	X	X									
S16	Use appropriate body language	X	X	X	X	X	X	X	X							
S17	Speak with understanding	X	X	X	X	X	X	X								
S18	Use telephone		X				X	X	X							
S19	Participate in panel discussions															
S20	Summarize						X	X								
S21	Draw conclusions						X	X								
S22	Paraphrase						X	X								
S23	Explain cause/effect relationships	X					X	X								
S24	Ask questions	X	X	X	X	X	X	X								
S25	Give information/directions clearly	X	X	X	X	X	X	X								
S26	Explain principles/theory															
S27	Use persuasive speech	X					X									
S28	Predict outcomes	X					X	X	X							



Foundation Matrix Skills		Incoming	Outgoing	Mo. Pay	Daily Rept.	Unusual Cir.	Safety	Cust. Relat.	8	9	10	11	12	13	14	15
Reading Skills																
R1	Recognize differences between words	X	X	X	X	X	X	X								
R2	Recognize differences between numbers	X	X	X	X	X	X	X								
R3	Read date/time	X	X	X	X	X	X	X								
R4	Use dictionary															
R5	Understand technical terms/abbreviations	X	X	X	X	X										
R6	Understand business forms/letters	X	X	X	X	X		X								
R7	Understand written directions/instructions	X	X	X	X	X										
R8	Understand written safety rules	X	X				X	X	X							
R9	Use table of contents															
R10	Use encyclopedia															
R11	Use atlases/maps															
R12	Follow written sequence of events	X	X	X	X	X										
R13	Find information/facts	X	X	X	X	X										
R14	Understand words used in context	X	X	X	X	X										
R15	Read mechanical/architectural drawings/prints															
R16	Understand graphs (rate timesheet)			X		X	X	X								
R17	Understand symbols															
R18	Understand sequenced graphics/pictures															
R19	Find information from technical manuals															
R20	Use thesaurus															
R21	Read journals															
R22	Read periodicals															
R23	Read newspapers															
R24	Read summaries															
R25	Draw conclusions from written materials						X									
R26	Distinguish between fact and opinion															
R27	Skim text to find information						X									
R28	Verify information by cross-referencing	X	X	X	X	X										
R29	Understand legal documents															
R30	Understand financial reports															
R31	Understand abstracts															
R32	Understand scientific/technical journals															
R33	Predict outcomes from written materials															
R34	Identify cause and effect relationships	X				X	X									
R35	Read computer menus															

Foundation Matrix Skills		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Writing Skills		Incoming	Outgoing	Mo. Pay	Daily Rept	Unusual Cl	Safety	Cust. Relat								
W1	Print legibly	X	X	X	X	X		X								
W2	Spell words correctly					X										
W3	Write series of numbers	X	X	X	X	X		X								
W4	Write date/time	X	X	X	X	X		X								
W5	Write legibly	X	X	X	X	X		X								
W6	Write sentences					X										
W7	Punctuate correctly					X										
W8	Use correct grammar					X										
W9	Spell abbreviations correctly					X										
W10	Use dictionary															
W11	Understand words used in context	X	X	X	X	X										
W12	Complete applications															
W13	Write letters, reports, messages					X										
W14	Use technical terms/abbreviations				X	X										
W15	Draw graphs/charts															
W16	Write directions															
W17	Use words in context	X	X	X	X	X										
W18	Write events in sequence					X										
W19	Write details from recollections				X	X										
W20	Write outlines															
W21	Write business letters															
W22	Write summaries					X										
W23	Write conclusions															
W24	Complete business forms	X	X	X	X	X		X								
W25	Write using references															
W26	Take notes															
W27	Proofread			X	X	X										
W28	Write journal articles															
W29	Write speeches															
W30	Write manuals															
W31	Write critiques															
W32	Enter data	X	X	X	X	X		X								



Foundation Matrix Skills		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Math Skills		Incoming	Outgoing	Mo. Pay	Daily Rept.	Unusual Cl.	Safety	Cust. Relat.								
Page 1																
M1	Read/write whole numbers	X	X	X	X	X	X	X								
M2	Round whole numbers															
M3	Add whole numbers	X	X	X	X	X	X	X								
M4	Subtract whole numbers	X	X	X	X	X	X	X								
M5	Multiply whole numbers	X	X	X	X	X	X	X								
M6	Divide whole numbers															
M7	Read/write fractions															
M8	Arrange fractions in order															
M9	Reduce fractions to lowest terms															
M10	Change mixed numbers to simplest forms															
M11	Add fractions															
M12	Subtract fractions															
M13	Multiply fractions															
M14	Divide fractions															
M15	Change fractions to equivalent fractions															
M16	Change mixed numbers to improper fractions															
M17	Read/ write decimals (money)	X	X	X	X	X	X	X								
M18	Arrange decimals in order															
M19	Round decimals															
M20	Add decimals	X	X	X	X	X	X	X								
M21	Subtract decimals	X	X	X	X	X	X	X								
M22	Multiply decimals	X	X	X	X	X	X	X								
M23	Divide decimals															
M24	Change fractions to decimals															
M25	Change decimals to fractions															
M26	Express decimals in scientific notation															
M27	Find average															
M28	Find mode/median															
M29	Read/write percents															
M30	Change percents to decimals															
M31	Change decimals to percents															
M32	Change percents to fractions															
M33	Change fractions to percents															
M34	Compute percent of a number															
M35	Compute discounts/markup/tax/commission	X	X	X												



Foundation Matrix Skills		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Math Skills		Incoming	Outgoing	No. Pay	Daily Rept	Unusual Cl	Safety	Cust. Relat								
Page 2																
M36	Use ratio/proportion															
M37	Measure to nearest fraction (micrometer)															
M38	Use inches/feet/yards/miles															
M39	Measure to nearest millimeter (micrometer)															
M40	Use millimeter/centimeter/meter/kilometer															
M41	Measure weight to nearest ounce															
M42	Measure weight to nearest gram															
M43	Measure angles to nearest degree															
M44	Measure temperature in Fahrenheit/Celsius															
M45	Tell time	X	X		X	X	X	X								
M46	Convert from metric to English units															
M47	Convert from English to metric units															
M48	Measure perimeter															
M49	Measure circumference															
M50	Compute area of squares/rectangles															
M51	Use square inches/feet/yards															
M52	Use square millimeters/centimeters/meters															
M53	Compute area of triangles/trapezoids															
M54	Compute area of circles															
M55	Compute volume of rectangular solids															
M56	Use cubic inches/feet/yards															
M57	Use cubic millimeters/centimeters/meters															
M58	Compute volume of cylindrical solids															
M59	Compute mass from volume															
M60	Construct/interpret graphs (line/bar/picture)															
M61	Use expanded notation (2x2x2=2 cubed)															
M62	Compute square root															
M63	Use algebraic expressions (Ohm's Law, etc.)															
M64	Locate set of points on 2-axis graph															
M65	Locate set of points on 3-axis graph															
M66	Work with non-decimal based number systems															
M67	Use trigonometry tables															
M68	Compute missing angles of triangles															
M69	Compute missing sides of triangles															
M70	Use calculator							X	X							
M71	Estimate solutions							X	X							

M72 Balance cash w/ tickets X X

M73 Count money X X X

Foundation Skill Matrix		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Thinking Skills		Incoming	Outgoing	Mo Pay	Daily Rept.	Unsuav. Clt.	Safety	Cust. Relat.								
T1	Organize time & prioritize responsibilities	X	X	X	X	X	X	X								
T2	Use memory devices for remembering information	X				X										
T3	Sort & classify information	X			X											
T4	Use problem solving strategies	X	X	X	X	X	X	X								
T5	Solve problems as a team member	X	X	X	X	X	X	X								
T6	Apply skills learned in one situation to another	X	X	X	X	X	X	X								
T7	Demonstrate ethical behavior at work	X	X	X	X	X	X	X								
T8	Solve interpersonal conflicts at work	X	X	X	X	X	X	X								
T9	Identify when prior consent from supervisor is needed	X	X	X	X	X	X	X								
T10	Identify when initiative in handling a situation is expected	X	X	X	X	X	X	X								
T11	Identify when work has priority over personal affairs							X								

**SWEETWATER UNION HIGH SCHOOL DISTRICT
DIVISION OF ADULT & CONTINUING EDUCATION
Adult Basic Education**

<u>VI</u> Level	Basic Skills for Health Occupations 1993	<u>6047</u> Code
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DURATION:

Approximately 120 hours or until
satisfactory completion of all assigned materials.

GRADE LEVEL:

Ungraded adult

PREREQUISITES:

None

CREDIT:

2 units of elective credit

PROGRAM DESCRIPTION:

This class is designed to give students the academic basis to be successful in a certified nurse assistant or other health occupational programs. It incorporates computer assisted basic skills instruction, medical vocabulary and other job specific approaches to academic improvement.

GOALS:

Through the principles and practice presented in this course, students will

1. Acquire the literacy skills needed to be accepted into a health occupational program.
2. Attain the study skills which will enable them to complete training for health occupations.
3. Acquire the specific mathematics skills needed to be successful in a health occupational program.
4. Attain an acceptable oral communication level to enable them to interact with others in the medical environment.
5. Be able to utilize medical terminology in both the vocational classroom and hospital setting.
6. Be prepared to apply for, interview for, and get a job in the health field.

OBJECTIVES:

Students who successfully complete this course will be able to:

- 1.0 In respect to being accepted into a health occupational program:
 - 1.1 Score an acceptable Grade Level Equivalent on the Gates Reading Test to enter the specific health occupational program.
 - 1.2 Complete the oral evaluation by communicating at an intermediate ESL level or above.
 - 1.3 Write short essay answers to questions which state the main idea and important details in a clear, concise fashion.
 - 1.4 Demonstrate the ability to document important information in written form.
- 2.0 In respect to attaining needed study skills for a health program:
 - 2.1 Demonstrate appropriate test taking strategies.
 - 2.2 Identify main ideas and topic sentences of paragraphs in the medical textbooks.
 - 2.3 Read at an acceptable speed without sacrificing comprehension.
 - 2.4 Comprehend and interpret what is read.
 - 2.5 Increase general as well as job related reading vocabulary.
 - 2.6 Demonstrate the ability to put items in proper sequence.
 - 2.7 Demonstrate the ability to comprehend medical charts and graphs.
- 3.0 In respect to acquiring specific math skills:
 - 3.1 Perform accurately the four basic math functions with whole numbers and decimals.
 - 3.2 Perform accurately the four basic math functions with fractions.
 - 3.3 Convert percents to decimals to fractions to ratios.
 - 3.4 Perform temperature conversions from Centigrade to Fahrenheit and the reverse.
 - 3.5 Compute percentage solutions.

- 3.6 Demonstrate an understanding of the metric system as it relates to the health fields.
- 4.0 In respect to attaining an acceptable oral communication level:
 - 4.1 Demonstrate a knowledge of common phrases and directions used in the medical environment.
 - 4.2 Pronounce words distinctly and clearly.
 - 4.3 Demonstrate the ability to give and respond to oral directions.
 - 4.4 Demonstrate an understanding of common American idioms that are frequently used in a hospital setting.
- 5.0 In respect to utilizing medical terminology:
 - 5.1 Respond to directions containing specific medical terms.
 - 5.2 Recognize and use medical abbreviations.
 - 5.3 Define and spell correctly specific medical terms.
 - 5.4 Define common prefixes, suffixes, and word roots occurring in medical terminology.
- 6.0 In respect to successfully entering and performing in the medical workplace:
 - 6.1 Complete an error-free job application.
 - 6.2 Create an effective resume of past education and job experience.
 - 6.3 Role play proper interviewing techniques and employability attitudes.
 - 6.4 Discuss appropriate on the job behaviors for specific health occupations.
 - 6.5 Discuss self-defeating vs winning behavior.

INSTRUCTIONAL STRATEGIES AND TIMES:

-Teacher and class discussions	25%
Video presentations	10%
Computer assisted learning	45%
Role playing	10%
Evaluation	10%

EVALUATION:

Evaluation of individual achievement is based upon:

1. Satisfactory completion of written assignments as evaluated by the instructor.
2. Satisfactory completion of teacher-made and/or standardized tests as evaluated by the instructor.
3. Satisfactory progress and participation in classroom activities as evaluated by the instructor.
4. Satisfactory assessment of progress in computer assisted basic skill instruction as evaluated by the individual computer progress reports.

CONDITIONS FOR REPETITION:

Students who have failed to meet the objectives because of insufficient attendance or inability to master content may repeat the course.

Approved:
BOARD OF TRUSTEES
May 27, 1993

**Evaluation of the
Sweetwater Workplace
Literacy Program**

FINAL REPORT

February 1994

**Presented to:
Sweetwater Union High School District
Division of Adult Education**

**Presented by:
Evaluation and Training Institute (ETI)
Los Angeles, CA 90025**

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INTRODUCTION

The Adult Education Act (section 371, P.L. 100-297), as amended by the National Literacy Act of 1991, provides federal funds for work-related programs of literacy and basic skills that result in new employment, continued employment, career advancement and increased productivity for workers. Through a competitive funding process known as the National Workplace Literacy Program, the U.S. Department of Education pays 70% of the costs of establishing a workplace learning program, with a 30% match required from the local partner.

The Sweetwater Workplace Literacy Project is a National Workplace Literacy Program operating from the Sweetwater Union High School District (SUHSD) in Chula Vista, California. The Sweetwater Workplace Literacy Project was designed as a broad-based partnership between the Sweetwater Union High School District's adult education program and local businesses. The purpose of the partnership was to remove barriers for job acquisition, retention and promotion for unemployed and underemployed adult workers in the area. Within the overall program goal of providing workplace learning opportunities, the project specifically aimed to achieve the following:

- Train a minimum of 100 currently employed adults in industry/company-specific workplace literacy skills, identified through assessment, so that at least 90% show one or more of the following outcomes:
 - Job promotion/retention;
 - Improved employee safety;
 - Increased job productivity and quality control; or
 - More positive job evaluation by supervisors.

- Train a minimum of 100 unemployed or underemployed adults in pre-employment literacy skills and job specific skills so that at least 90% show one or more of the following outcomes:
 - Fulltime employment or job promotion;
 - Completion of a major educational goal;
 - Enrollment in a postsecondary institution;
 - Completion of a vocational skills training program; or
 - Attainment of at least ten points on the CASAS scale.

The program also provided for external evaluation to support the development of the program and to supply outcome data. The Evaluation and Training Institute (ETI) was contracted by SUHSD to conduct the evaluation of the Sweetwater Workplace Literacy Project. The evaluation focused on the program's success in meeting its objectives. This report presents the final report findings of the evaluation, through January, 1994.

METHODOLOGY

ETI's approach was organized around the four strands of the Sweetwater Workplace Literacy Project, described in more detail in the next section. For all strands, the evaluation included a review of basic program data, such as numbers of participants served, and retention/completion rates, as well as project documents such as literacy audits, curricula, recruitment and placement strategies and linkages with other organizations. Additional evaluation activities included on-site visits, participant surveys, review of employment data, and employer interviews. Each of these is discussed below. **Table 1** summarizes which techniques were used to evaluate which strand of the project.

Strand	On-site Visit	Participant Survey	Employment Data	Employer Interviews	Pre- and Posttests
Basic Skills for Convenience Store Clerks	X	X	X	X	
Applied Chemistry for Waste Workers		X	X	X	
Employability Skills Center	X	X	X		X
Skills Training for ACE Parking Cashiers	X	X	X	X	

On-site visits

To observe the implementation of the program, we visited three of the strands classes once each. In addition, we attended the orientation session for the convenience store clerks. During the on-site visits, we observed the classes in progress and interviewed the instructors. In some cases, the instructors were interviewed via telephone following the visit.

Participant survey

ETI designed questionnaires to assess the extent to which each strand of the program met participants' needs. ETI provided copies of the surveys to the Sweetwater Literacy Project staff, who distributed and collected them and returned them to ETI for analysis.

Employment data

As a principal measure of the program's effectiveness in enhancing the employability of participants, the placement rate and job retention rate of those who completed the program were monitored for three strands.

Interviews with employers

ETI conducted interviews with a sample of convenience store owners/managers, Appropriate Technologies management, and ACE Parking management. The interviews assessed the extent to which the program met the expectations of the employers.

Data Quality

It has been noted by workplace literacy researchers¹ that while many participants and educators involved with workplace learning have reported positive outcomes, there is a need for objective evidence to confirm these accomplishments. In some cases, data which would substantiate the gains made through the Sweetwater Workplace Learning Project have been impossible to obtain; this is particularly true for the program strands which served employed individuals. While managers reported positive changes (such as fewer safety issues and/or errors), they were unwilling to release personnel records to permit the quantification of these claims. Thus, the analyses presented below are largely based on participant reports. The Sweetwater Workplace Literacy Project staff have recognized the importance of collecting employment data, and are working towards developing agreements which stipulate what data businesses that take advantage of workplace education opportunities will be expected to share.

¹ Such as Thomas G. Sticht in *Evaluating National Workplace Literacy Programs*, U.S. Department of Education/OVAE, April 20, 1991.

PROFILE OF THE SWEETWATER WORKPLACE LITERACY PROJECT

This section describes the structure and operation of the Sweetwater Workplace Literacy Project. We first describe the geographic and socio-economic context for the project, followed by a discussion of the delivery of services.

Chula Vista/San Ysidro

The Sweetwater Union High School District is located in southern San Diego county, near the border with Mexico. The two primary cities in the area are Chula Vista and San Ysidro. While the project originally proposed to focus on the needs of the southern San Diego county community, it evolved to touch on the greater San Diego area. **Figure 1** illustrates the target area for the project.

Southern San Diego county includes a large proportion of adults with insufficient skills for whom the workplace literacy project was designed. In 1989, a study by the San Ysidro Revitalization Project found that the community was 84 percent Hispanic, compared to 14.8 percent countywide. The median household income was \$13,186 compared with \$17,107 for the county as a whole. The unemployment rate was also higher than the county in general, and the average educational attainment was lower. According to the 1990 U.S. Census, nearly one-third (31 percent) of the households in San Diego county reported speaking a language other than English at home; this proportion is undoubtedly larger in the southern area where a larger number of immigrants live. The San Ysidro Revitalization study found that many residents of the southern area face a number of significant barriers to employment, including functional illiteracy, bilingual illiteracy, high drop-out rates, lack of transportation, and lack of job skills.

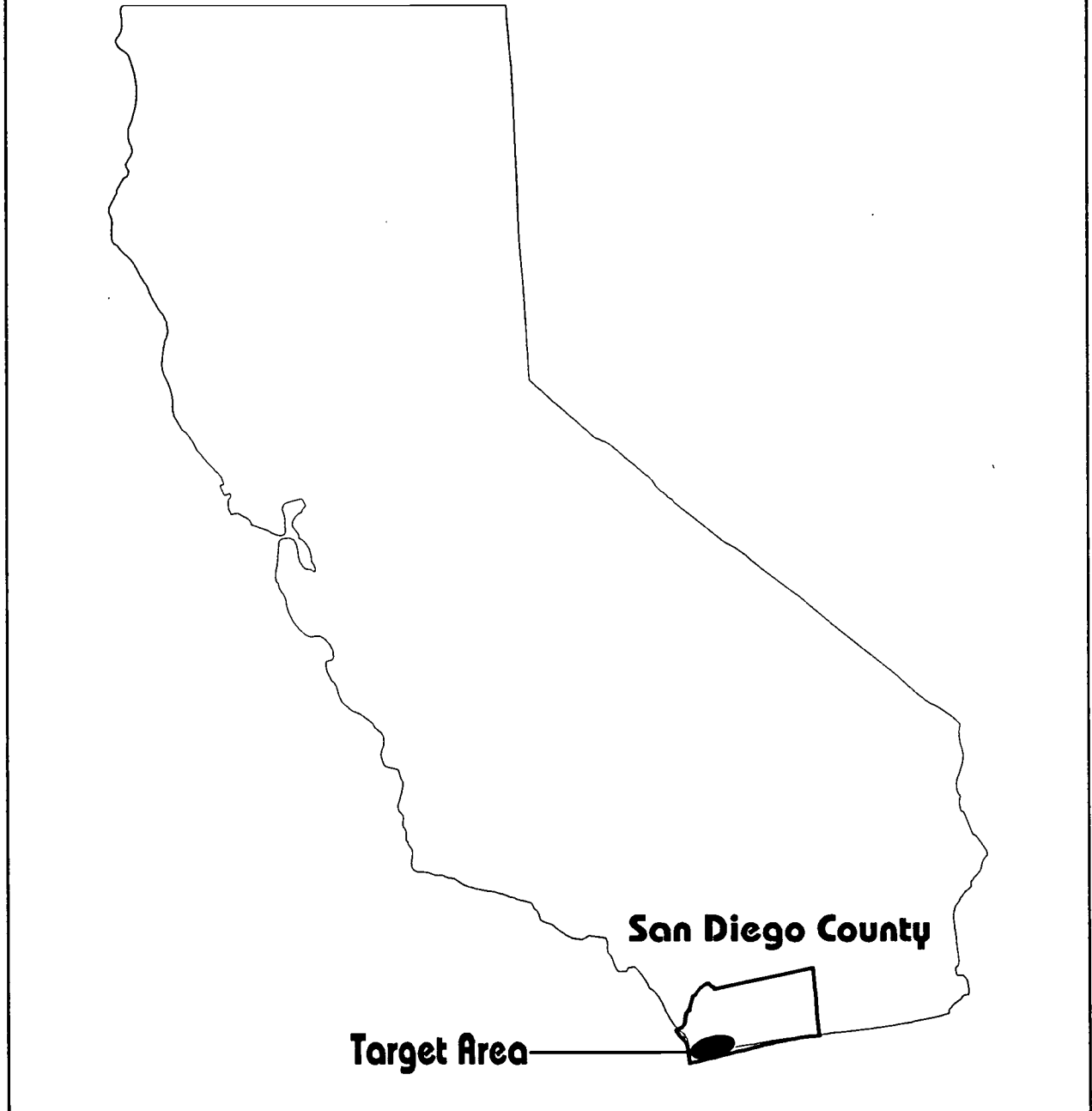
Description of the Project

The Sweetwater Workplace Literacy Project was structured around four strands:

1. Basic Skills for Convenience Store Clerks
2. Applied Chemistry for Wasteworkers
3. Employability Skills Center
4. Skills Training for ACE Parking Cashiers

Because the strands focusing on unemployed adults (Basic Skills for Convenience Store Clerks and Employability Skills Center) could serve a larger volume than the other two, the objectives for the project shifted; the overall goal remained to serve at least 200 individuals, but the total number was more flexibly allocated. In addition, tests other than CASAS were used to measure progress. A brief description of each strand follows.

Figure 1 Sweetwater Workplace Literacy Project Target Area



Basic Skills for Convenience Store Clerks

Convenience stores in the Chula Vista/San Ysidro area, as in most locales, face a significant challenge in recruiting, training and retaining clerks. The entry-level clerk position requires considerable skill in dealing with customers, store facilities and merchandise, and handling cash. While entry-level wages are relatively low, ranging from \$ 4.35 to \$ 5.00, positions are plentiful and chains such as the Southland Corporation (7-11 stores) and Circle K do offer some opportunity for good employees to move up into management positions. Convenience store clerk positions can also serve as stepping stones to other retail jobs with higher wages.

The project advisory committee included representatives from convenience stores, who encouraged the Sweetwater project to respond to the ongoing need for qualified employees to fill store clerk positions by offering a workplace learning program focused on the skills specific to the convenience store setting. A literacy needs analysis was undertaken by Educational Data Systems Inc. (EDSI) to permit the development of a customized curriculum for the course. The EDSI analysis included a very detailed inventory of all tasks performed by convenience store clerks, and the foundation skills required for each. Using the findings of the literacy needs analysis and the framework provided by the Southland Corporation's store operations manual, the course outline, text and exercises were developed.

The course consisted of a combination of lecture, role-playing and hands-on practice (as with the cash register). Basic skills training for convenience store clerks was offered once a month, in a week-long class (22.5 instructional hours) that concluded with on-campus interviews. By inviting franchise owners/managers to interview program completers at the conclusion of the course, job placement was facilitated. A vocational counselor provided additional assistance in developing job opportunities for students completing the program, and in following-up to determine outcomes. This strand was designed to help fulfill the project's goal to serve at least 100 unemployed individuals.

Applied Chemistry for Wasteworkers

Appropriate Technologies, a hazardous waste hauling and treatment firm in the Chula Vista area, worked cooperatively with the Sweetwater Workplace Literacy Project to develop a strand on Applied Chemistry for Wasteworkers. The course was intended to increase employee familiarity with chemicals and other products used on the job, so that workers could perform more safely and efficiently. The instructor worked closely with Appropriate Technologies in order to ensure that the company's goals for the course were met. The curriculum focused on such skills as understanding how chemicals combine, and reading a chemical compatibility chart.

The course was taught in twelve sessions of 90 minutes each, for a total of 18 hours. Appropriate Technologies provided the classroom space and funded the instructor's

time in the classroom, while the Workplace Literacy grant provided for testing and curriculum development. This strand was designed to help fulfill the project's goal to serve at least 100 currently employed individuals.

Employability Skills Center

Several of the Sweetwater Union High School District's vocational programs, including certified nursing assistant, require students wishing to enroll to demonstrate at least an 8th grade reading level on the Gates-McGinitie reading test. It had been noted that a number of students attempting to enroll in the certified nursing assistant program were not passing the test; this appeared to be particularly true for non-native English speakers.

The Employability Skills Center (ESC) was created as a response to this situation. Students identified as skill-deficient through the vocational intake process were referred to the Center, where they were given an opportunity to enhance their language proficiency. This strand was designed to help fulfill the project's goal to serve at least 100 unemployed individuals. With plentiful openings, starting wages from \$6.00 - \$8.00 in the San Diego area, and the potential to move up into LVN or RN positions, a job as a CNA offers considerable opportunity.

The ESC instructor worked closely with the certified nursing assistant faculty to identify appropriate instructional tools, including vocational texts, computer software, and displays. Language skills specific to the nursing environment were emphasized in the Center. Students followed individualized plans that included reading assignments, vocabulary-building, and computer-assisted exercises. Twelve PLATO computers were ordered to support this strand of the program. They were installed in the room used for the ESC, and were heavily used by participants, particularly for vocabulary drills. Job hunting skills, resume writing and business letter writing are also addressed in the ESC.

Students' progress was measured through constant written exercises, oral discussions and tests. The instructor reviewed each student's work, and discussed progress on a one-to-one basis. Each student moved at his or her own pace.

In response to demand from students in the Center, GED preparation was added to the complement of services. In addition, some students cross-enrolled in ESL classes offered at the adult school.

After the first semester, the ESC not only helped students prepare for CNA courses but for medical lab assistant (MLA) courses as well. MLA preparation emphasized reading skills similar to those taught to prospective CNAs and included additional math requirements, such as the ability to understand percentages, ratios, and decimals.

Skills Training for ACE Parking Cashiers

ACE Parking manages approximately 400 parking facilities throughout the greater San Diego area. Parking lot cashiers are the front-line employees for ACE, interacting with customers and collecting revenue. In the interest of providing better customer service and reducing errors on the job, ACE joined with the Sweetwater Workplace Literacy Project to offer a pilot training course for recently-hired ACE cashiers. This strand was designed to help fulfill the project's goal to serve at least 100 currently employed individuals.

Prior to the creation of the class, prospective ACE employees whose applications were reviewed favorably and who passed a basic math test were almost immediately assigned to a parking lot; training took place on the job. The training course provided a more formal introduction to the job content of the cashier position. The curriculum focused on:

- Cashiers' functions;
- Math review and parking rate computation;
- ACE business form preparation;
- Listening and speaking skills;
- Customer service; and
- Problem solving.

The instructional approach emphasized hands-on activities, and included practice with parking tickets, money and the ACE business forms, as well as customer interaction role-plays. The instructor visited several of ACE's lots and met with several managers prior to preparing the curriculum. ACE's personnel director was most involved in organizing the course, and reviewed and approved all course materials before the class started.

The course lasted 20 hours and was delivered in four afternoon sessions. The employees were paid by ACE for their time in class, and ACE provided the classroom space. As a pilot program, three sessions were planned with 15 employees enrolled in each. At the conclusion of the three sessions, ACE management intends to review the program and determine whether or not to continue offering it.

Advisory Committee

The project included an advisory committee which recognized the need for workplace literacy and committed to facilitate training opportunities. The advisory committee met to recommend job areas to be targeted by the project and to provide assistance in arranging for literacy audits. The advisory committee members are listed in **Table 2**.

Table 2
Advisory Committee Members

Southland Corporation
Remedy Temporary Service
Casas International Brokerage
San Ysidro Revitalization Project
Employment Development Department
SUHSD Division of Adult Education

FINDINGS

The overall finding of the evaluation is that the Sweetwater Literacy project exceeded its objective to serve at least 200 adults, by actually providing services to 296. Overall, 73% of these participants had one or more of the following positive outcomes:

For employed adults

- Job promotion/retention;
- Improved employee safety;
- Increased job productivity and quality control; or
- More positive job evaluation by supervisors.

For un- or under-employed adults

- Fulltime employment or job promotion;
- Completion of a major educational goal;
- Enrollment in a postsecondary institution;
- Completion of a vocational skills training program; or
- Attainment of at least ten points on the Gates-McGinitie test.

Specific findings for each strand of the project are presented in the following section.

Findings: Basic Skills for Convenience Store Clerks

The first program strand provided literacy training specific to the convenience store setting. **The primary objective of this strand was to enable participants to obtain fulltime employment.**

The number of participants served through the convenience store clerk training strand is summarized in **Table 3**, along with aggregate outcomes. As the table shows, nine series of classes were scheduled, and eight were held; the one remaining class was canceled due to low enrollment, and the students were referred to the subsequent session. In July, 1993, two sessions took place to accommodate the high number of

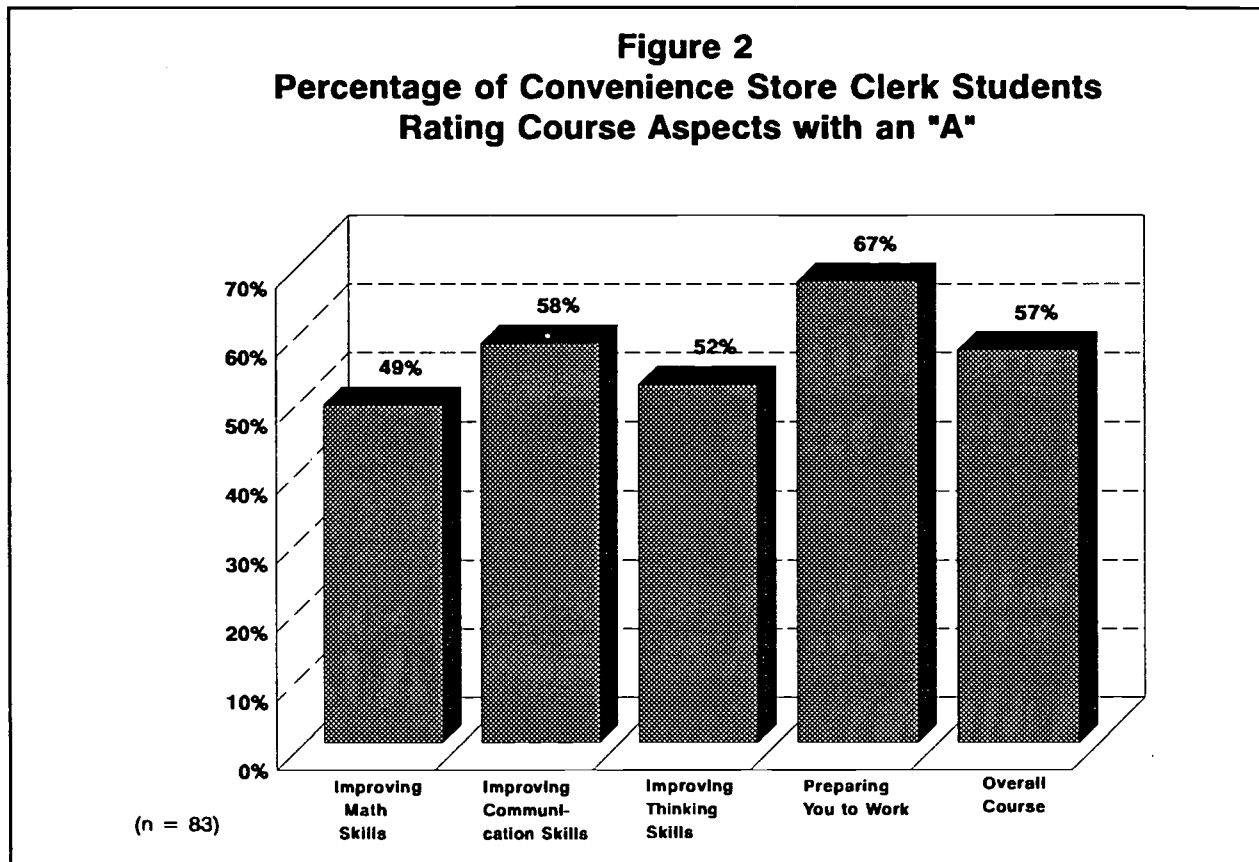
participants. Three additional sessions were scheduled for September, October and November, 1993. However, with employee turnovers reduced in the latter half of the year, employment opportunities for students also declined, resulting in a discontinuation of additional sessions. **Table 3** shows that 86 out of 121 program completers (71 percent) obtained fulltime jobs as convenience store clerks, and an additional 16 (13 percent) continued in school or training. The overall positive outcome rate for this strand is thus 84 percent.

Table 3 Convenience Store Clerks Strand Summary								
Month	Applicants	Present at Orientation	Completed	DP	Referred	Working	Continued in School/ Training	
September 1992	22	no orientation	18	4	0	12	1	
October 1992	18	15	8	3	4 to ESL	7	1	
November 1992	26	14	11	3	0	10	0	
January 1992	24	17	14	3	0	12	1	
February 1992	40	24	20	4	0	12	4	
March 1992	19	11	11	0	0	10	1	
April 1992	11	6	C A N C E L E D					
May 1992	22	15	12	3	0	5	4	
July 1992	54	36	18	0	3 to ABE	13	2	
			9	0	0	5	2	
Total	236	138	121	20	7	86	16	

The following findings, as seen in Figure 2, emerged from evaluation forms completed at the conclusion of the classroom training by 83 participants:

- More than half gave the course an "A" rating with 39 percent giving the course a "B" grade overall.
- Significantly, two-thirds indicated that the course deserved an "A" in terms of preparing them for work as convenience store clerks.

- The majority of those completing the training session (58%) gave the course an "A" in terms of improving their communication skills.
- About half of the participants also indicated that the training deserved an "A" in terms of improving their thinking skills and math skills.



When asked which aspects of the course they found most helpful, respondents were uniformly positive. Overall, classroom participants considered the hands-on training using the cash registers and lottery machines to be the most valuable aspects of the course. A number of participants also mentioned information on store policies, customer service training, procedures for selling alcoholic beverages, and emergency preparedness to be helpful classroom components.

Regarding future course modifications, participants asked that additional practice time be devoted to using the various convenience store machines, especially the cash register, and acting out potential work situations. In terms of skill development, participants requested greater emphasis on math and reading skills, procedures for selling gasoline, customer relations, and food handling and preparation. Other suggestions included on-the-job training and/or an in-store orientation as ways to improve the course.

ETI also interviewed six Southland 7-11 store managers to assess their opinion of the program, and its students. Convenience store managers commonly used the training program as a pool from which to interview prospective employees.

- Four of the six managers reported that they had interviewed at least twelve students from the program. Only one manager had not interviewed any students.
- Among the four managers, a total of eleven students were hired. Five of the eleven students were still working at those convenience stores at the time of the interview.
- Three of the six store managers expressed overall satisfaction with the training program. Two were dissatisfied, and one was unsure. The convenience store managers consistently expected the program to provide training in practical workplace skills necessary to hold a job in a convenience store.

The most common suggestion for improvement of the program, expressed by five of the six managers interviewed, emphasized the need for a more practical, "realistic," hands-on approach to convenience store work. Managers commonly felt that employees had gained skills and knowledge of a number of important components of their jobs, such as handling the sale of alcohol, dealing with potentially violent situations, and cash-handling. However, managers consistently found that they still had to train or retrain students in the more practical components of their work, such as:

- familiarity with pricing store items;
- taking initiative to clean or organize the store in spare moments on the job, doing work which is not "behind the counter" and;
- knowing which items in a convenience store are taxable and non-taxable.²

Three of the six managers interviewed recommended that a field-trip to an actual convenience store be a part of the curriculum, to give students exposure to the actual working dynamic in a convenience store.

Modifications

The course instructor and project manager have been very responsive to suggestions for improvement from participants' evaluations, and from a meeting held with the

² During the period in which the course was taught, California experienced changes in the "snack tax," which established fine (sometimes esoteric) distinctions between snacks and foods. The curriculum reflected what was accurate.

convenience store owners/managers. Starting with the May class, several changes were made to the course. Specifically, students were provided with additional opportunities to practice on the cash register outside of the regular course hours; those who took advantage of this opportunity fared better in obtaining employment. In July, a field trip to a convenience store was also added.

Summary

In summary, the convenience store training strand appears to have had considerable success, with 71 percent of those who completed the course placed in jobs, and an additional 13 percent pursuing other educational paths.

Findings: Applied Chemistry for Waste Workers

The Applied Chemistry course was intended to increase Appropriate Technologies employees' familiarity with the chemicals and other products which they use on the job. In fulfilling this mission, the course was intended to result in:

- Job promotion/retention;
- Improved employee safety;
- Increased job productivity and quality control; or
- More positive job evaluation by supervisors.

The course started with an enrollment of 21 employees; eleven of these completed the course. Each student who completed the course filled out a course evaluation in which they graded various aspects of the course (included in Appendix A). The course did not receive any grade lower than "B". A summary of the course grades appears below in **Table 4**.

When asked to report which part of the class was most helpful, a number of respondents indicated that the entire course was beneficial. Specific mention was made of the course's attention to reactions, health hazards, and acids.

Suggestions for changing the course in the future included:

- Adding more visual aids such as slides or films (three mentions);
- Making it longer (two mentions); and
- Inviting an industrial chemist to teach the class (one mention).

Table 4
Participant Evaluations of Applied Chemistry for Wasteworkers
 (n=11)

What grade would you give this course for teaching things that will help you:	A	B	C	D	F	Average
Work more safely?	8	3	--	--	--	3.73
Work more efficiently?	5	6	--	--	--	3.45
Get promoted?	4	7	--	--	--	3.36
What grade would you give this course overall?	6	5	--	--	--	3.55

The evaluations of the course from the instructor and Appropriate Technologies' management was generally positive.

- Both the instructor and management were pleased with the course, and reported being interested in doing the course again next year.
- Management of Appropriate Technologies reported marked improvement among employees who had taken the course in terms of safety performance, efficiency on the job, and increased capacity for responsibility and promotion. Two students from the Chemistry course were specifically reported to have been promoted.

The instructor suggested the following course improvements:

- Offering the course in a school classroom would provide greater access to chemicals for demonstrations, and other materials.
- The course could use more specific examples of the compatibilities of the chemicals which Appropriate Technologies employees actually work with on a daily basis.

In summary, the Applied Chemistry strand appeared to succeed in accomplishing its objectives, with general participants reported to have improved job productivity and safety, and two in particular to have earned promotions.

Findings: Employability Skills Center

The Employability Skills Center (ESC) served the largest number of participants (150). The primary objective of this strand was to provide prospective certified nursing assistants (CNAs) and medical lab assistants (MLAs) with the literacy skills needed to succeed in a certified nursing assistant or a medical lab assistant training program. The ESC instructor followed-up by telephone or through school records with all those

who had enrolled in the program. For those students who were contacted or accounted for in class, the following findings emerged:

- A total of 152 adults were enrolled in the ESC for either CNA or MLA class preparation, and an additional 22 students were enrolled specifically for ESL on a space available basis;
- Forty (26 percent) enrolled in a CNA course and successfully completed their training;
- Four (3 percent) entered a CNA class but dropped before completion;
- Ten ESC students (7 percent) are currently enrolled in a MLA class, as of February 1, 1994;
- Seventeen (11 percent) obtained employment in the medical field and plan to continue in a CNA certification class provided by their employers;
- Three (2 percent) received their GED in addition to obtaining other positive outcomes; and
- Twenty-four (16 percent) have increased their scores on the Gates-McGinitie Reading Test by a minimum of 10 points.

All in all, there were a total of 91 positive outcomes, resulting in a 60% success rate for the ESC.

Students who studied in the ESC and took the CNA entrance exam completed a program evaluation form. As shown below in **Table 5**, these participants were overwhelmingly positive about their experience. When asked to indicate which part of the class was most helpful, the number one response was that the entire course was useful; the second largest group of participants indicated that the focus on communication skills was most beneficial. When asked to report what elements of the class were least helpful, the vast majority of respondents indicated that nothing fell into that category. Finally, when asked to suggest changes to the course, some early respondents who utilized the ESC prior to the installation of the computer lab expressed a desire to use computers; most others indicated that the class should remain unchanged.

Table 5
Participant Evaluations of Employability Skills Center
(n=40)

What grade would you give this course for:	A	B	C	D	F	Average
Improving your reading skills?	31	9	--	--	--	3.77
Improving your writing skills?	30	7	3	--	--	3.67
Improving your communication skills?	23	15	1	--	--	3.56
Improving your study skills?	28	10	2	--	--	3.65
Improving your job-related vocabulary?	30	8	2	--	--	3.70
Improving your thinking skills?	30	10	--	--	--	3.75
Preparing you to work?	30	9	--	--	--	3.76
What grade would you give this course overall?	31	6	1	--	--	3.78

To support the ESC program, SUHSD helped to publicize the CNA and MLA classes. An unanticipated outcome of this activity was an increase in CNA applicants, resulting in greater competition for the available slots. It was noted by the project director that even without special publicity, vocational classes have been especially full, a possible side-effect of the lingering recession in California.

Demand for the ESC grew considerably from its inception through January, 1994. While pre-CNA students continued to receive priority, allowance was made for GED students and for students cross-enrolled in ESL classes to use the ESC resources. While recruitment for the ESC centered on the vocational intake process that occurred each time a new CNA class is offered, word-of-mouth resulted in a large number of additional students. Although the program originally was intended to transition students into SUHSD's CNA class, some students were enrolled in courses at Harbor View Convalescent Hospital. In a complementary fashion, Harbor View referred pre-CNA candidates to the ESC.

The ESC instructor reported that the program has had a positive impact, both in terms of achieving its primary objective of transitioning students into CNA or MLA training and in generally improving students' literacy skills. In order to move ESC students into the CNA class, the students were re-tested using the Gates-McGinitie. In addition, the ESC teacher made confidential recommendations indicating which students showed most promise. The actual selection process involved some negotiation with the CNA instructors, who were hesitant to fill their classes with ESC students. Of approximately 60 slots available each term in CNA classes, 10-12 were allocated for ESC students.

In the latter half of the year, a change in the selection process for the CNA classes was made. CNA instructors were now required to establish a cutoff raw score of 55,

whereby students receiving scores on the Gates-McGinitie above 55 received priority in enrolling in the CNA class. Previously, CNA instructors were allowing only those with top scores on the Gates-McGinitie into the class until the class was completely full. With the previous selection method, few ESC students were enrolled in the CNA courses. However, using the new selection process, more ESC students were accepted into the CNA classes.

The CNA instructors (at SUHSD and Harbor View) both reported that the students who come to them from the ESC are well-prepared, although they often have to work extra-diligently to keep pace with the curriculum. The instructors also noted that it is sometimes necessary to make an extra effort to teach the material to the ESC students. However, one instructor mentioned that ESC students have an advantage over the general population in terms of their familiarity with the vocabulary specific to the nursing occupation.

A number of students who enrolled in the CNA classes returned to the ESC to study together and to receive support from the ESC teacher. Both CNA instructors indicated that the ESC students are passing the certification examination (along with the rest of the class) and obtaining jobs. Even with the lingering recession in California, the CNA instructors explained that there are jobs waiting for every CNA graduate. The primary suggestion made by both the ESC and CNA instructors was to continue offering the program.

In summary, the ESC appears to have had some success, with more than one-quarter (26%) of participants enrolling in and successfully completing a CNA class and another 7% enrolling in a MLA class. As already mentioned, the ESC has experienced a total of 91 positive outcomes, resulting in a 60% success rate. Because of the success of this strand, SUHSD has decided to institutionalize the ESC program.

Findings: Skills Training for ACE Parking Cashiers

The training for ACE parking cashiers was the final strand of the project to be developed and implemented. A one-week session was offered once a month in April and May 1993. A third session scheduled for June was not held. A total of 14 participants were served.

The primary objectives of this strand, to increase job productivity/quality and improve job evaluation by supervisors appear to have been achieved. Based on the feedback received from a sample of five supervisors, the program graduates do better or significantly better in dealing with the public and filling out forms than employees who have not had similar training. While three supervisors felt that graduates were significantly better at making correct change, one indicated they were the same as other new employees. The supervisors uniformly agreed that employees who went through the training program perform significantly better overall than others.

The personnel director for ACE parking indicated that training employees is particularly important for a service employer such as ACE. Making logistical arrangements for the training, however, presented a challenge to the company in terms of finding substitutes for the workers who came to class and determining how to account for the training time. As a result, the company was interested in exploring how to shorten the course. While commenting anecdotally that the program was excellent, ACE's personnel director was unable to provide data to confirm if the program had affected worker's performance. Citing the small, unrepresentative number of participants taking part in the program, the personnel director was reluctant to indicate whether the rates of monetary loss or errors on the job were different for those that had been trained.

As seen below in **Table 6**, those who went through the program and completed an evaluation form were very positive about the experience. One hundred percent of the students indicated that the class deserved an "A" overall.

<p align="center">Table 6 Participant Evaluations ACE Parking Cashiers Training (n=12)</p>						
What grade would you give this course for:	A	B	C	D	F	Average
Preparing you to deal with customers?	9	3	--	--	--	3.75
Helping you deal with problem people or situations on the job?	9	3	--	--	--	3.75
Helping you do math in your head?	9	3	--	--	--	3.75
Helping you fill out business forms and reports?	12	--	--	--	--	4.0
What grade would you give this course overall?	12	--	--	--	--	4.0

The instructor also indicated that the class was a success. He reported that the students did well on the tests he gave covering the accounting form and customer service. According to him, ACE managers had positive feedback regarding the graduates, including those who did not excel in the classroom. The instructor suggested that the class might be improved by adding a few more hours of math review and customer service orientation. He strongly felt that the course could not be offered in a shorter period of time, such as the six hours suggested by ACE management.

The personnel director of ACE parking spearheaded the course for the company. The highest level of management apparently had less involvement and less commitment to the program. The third session was canceled due to competing interests expressed by upper management, highlighting the need to include top executives in the process of implementing a workplace literacy program.

Summary Findings

Overall, the Sweetwater Workplace Literacy Project succeeded in achieving its aims. At the end of the funding period, 298 individuals had been served, and each strand appeared to have had at least some success in producing positive outcomes, with one showing a 60% positive outcome rate, and another a 84% success rate, and two strands suggesting 100% success. Overall, 218 out of the 298 participants (73%) served had positive outcomes. A summary of the project outcomes are displayed in Table 7.

Strand	No. of participants	No. of positive outcomes	Success Rate
Basic Skills for Convenience Store Clerks	121	102	84%
Applied Chemistry for Waste Workers	11	11	100%
Employability Skills Center	152	91	60%
Skills Training for ACE Parking Cashiers	14	14	100%
TOTAL	298	218	73%

RECOMMENDATIONS

The recommendations which follow flow from the findings of the evaluation.

- 1. Future efforts to establish workplace learning programs within private companies should involve decision-makers at the executive level.** As evidenced in ACE Parking's move to cut short the workplace training program, it is crucial to obtain top-level commitment. While it would be preferable to gain direct access to executives, this may at times be difficult or impossible. Obtaining their commitment through other means, such as requesting their signature on written agreements, may be a worthwhile alternative.
- 2. Future agreements with private companies should specify the types of evaluation information that will be sought.** The Sweetwater Workplace Literacy Project staff have already recognized the importance of collecting employment data, and are working towards developing agreements which stipulate what data businesses that take advantage of workplace education opportunities will be expected to share. This information will facilitate a more objective evaluation of the efficacy of workplace learning programs.

APPENDICES

The appendices are as follows:

Appendix A:	Strand One Instruments
Appendix B:	Strand Two Instruments
Appendix C:	Strand Three Instruments
Appendix D:	Strand Four Instruments

APPENDIX A -- Strand One Instruments

Training for Convenience Store Clerks

Directions: Please fill this form out completely. Nobody will know who you are, so please be honest.

1. What grade would you give this course for:

Circle the letter that matches your grading.

Improving your math skills? A B C D F
(Working with a cash register, giving correct change)

Improving your communication skills? A B C D F
(Making eye-contact, talking with the customer, etc.)

Improving your thinking skills? A B C D F

Preparing you to work? A B C D F

2. What grade would you give this course overall? A B C D F

3. What part of the class was most helpful to you?

4. What other skills do you think the course should include?

5. How would you change the course in the future?

APPENDIX B -- Strand Two Instruments

Chemistry for Waste Workers

Directions: Please fill this form out completely. Nobody will know who you are, so please be honest.

1. What grade would you give this course for:

Circle the letter that matches your grading.

Teaching things that will help you work more safely? A B C D F

Teaching things that will help you work more efficiently? A B C D F

Teaching you things that will help you get promoted? A B C D F

2. What grade would you give this course overall? A B C D F

3. Which parts of the class will be most helpful to you in your work?

4. Which parts of the class will be least helpful?

5. How would you change the class in the future?

APPENDIX C -- Strand Three Instruments

Employability Skills Center

Directions: Please fill this form out completely. Nobody will know who you are, so please be honest.

1. What grade would you give this course for:

Circle the letter that matches your grading.

Improving your reading skills? A B C D F

Improving your writing skills? A B C D F

Improving your communication skills?
(Making eye-contact, asking for clarification, talking, etc.) A B C D F

Improving your study skills? A B C D F

Improving your job-related vocabulary? A B C D F

Improving your thinking skills? A B C D F

Preparing you to work? A B C D F

2. What grade would you give this course overall? A B C D F

3. Which parts of the class will be most helpful to you in your training and then later as you seek employment?

4. Which parts of the course do you feel will be least helpful?

5. How would you change the course in the future?

APPENDIX D -- Strand Four Instruments

Training for ACE Cashiers

Directions: Please fill this form out completely. Nobody will know who you are, so please be honest.

Circle the letter that matches your grading.

1. What grade would you give this course for:

Preparing you to deal with customers? A B C D F

Helping you deal with problem people
or situations on the job? A B C D F

Helping you do math in your head? A B C D F

Helping you fill out business forms and reports? A B C D F

2. What grade would you give this course overall? A B C D F

3. Which parts of the class will be most helpful to you in your work?

4. Which parts of the class will be least helpful?

5. How would you change the class in the future?



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