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ABSTRACT

A Chicago area private consulting firm worked in cooperation with the Comprehensive Employment and Training Act (CETA) program to train applicants in word processing operations. Careful task analyses of on-the-job word processing were used to develop a curriculum based on realistic goals and expectations. Small groups of CETA eligible applicants received information on word processing careers and on the training program, as well as some "hands on" experience with the equipment and the kind of work that would be required. Interested applicants were then screened through a series of comprehension and literacy tests. One hundred trainees were selected to enter the program in three groups--approximately 70% female, 30% male, 80% black, and all between the ages of 22 and 44. Trainees were paid to attend 40 hours of training per week in language skills, typing and word processing, work habits, and individual study time. Specialists in word processing, reading, and business planned assignments integrating language and machine skills, and provided classwork simulating actual job demands. The average time needed for the trainees to reach the preset standard was 20 weeks, with a few requiring only 14 weeks and a few as many as 28. The principles behind the success of this program include (1) application level reading and problem solving tasks, (2) materials and performance criteria reflecting real world expectations, (3) maximum student time-on-task, and (4) screening applicants to select those most likely to benefit from the program.(HTH)

Developing Job Literacy Training Programs For Business and Industry:

A Case Study of Literacy Training to Prepare CETA Eligible Workers as Competitive Word-Processor Operators

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A characteristic employment proble.. is the inability to find properly trained employees even though thousands of unemployed workers are available. In Chicago in 1981-1982, the local Private Industry Council faced such a problem with word processor operators for major industries and businesses. Positions paying over $20,000 per year were going unfilled.

Being a word processor operator involves a good deal more than being a traditional secretary who knows how to operate the new machinery. When working for local employers, most word processor operators work in centrally located pools or groups. Supervisors receive jobs from various departments, estimate the time needed to edit, format and produce letter perfect copy, and then assign the job to an operator. The operator must be able to edit for spelling, verb/subject agreement and a number of other flaws. The operator must also be able to rapidly produce copy with no mistakes. All work is proof read and returned to the word processor operator to be redone if errors are found. Correction time is added to total production time. In order to retain a job an operator must perform at or above specified standards.

A Cooperative Program

Technical Assistance Training Corporation is a private consulting firm with an office in the Chicago area. The firm has had extensive experience in working nationally with CETA training programs. TATC saw in Chicago the opportunity to bring together business and governmental efforts.

A survey of businesses involved with the Chicago area Private Industry Council had revealed the need for trained word processor

operators. Administrators of the CETA program were interested in training CETA eligible individuals for such jobs, but did not have a lengthy history of cooperative efforts with business. A survey of existing high school and vocational school training programs revealed out of date word processing equipment or no equipment. Courses tended ro be separate rather than integrated with each other. No attempt was made to coordinate training to produce effective word processor operators.

In addition, business personnel and CETA program officials were, to some extent, suspicious of each other. Business was reluctant to be trapped into accepting CETA trained workers who might be undertrained and cause difficulties once hired. Businessmen also had concerns about unnecessary red tape. Government agencies believed that the problems in getting business support made cooperative programs difficult or impossible to implement. Also, governmental officials were reluctant to invest CETA funds in programs different from existing schooling, especially programs designed by private consulting firms.

In order to overcome mutual suspicions, TATC saw part of its role to be a facilitator between government and business. The initial problem was to get both business and local governmental agencies to communicate and cooperate. TATC chose developing solid business support as its first objective. Private Industry Council members were visited, word processor operators were observed, standards of proficiency were established, and industry trainers were asked to help establish training guidelines. TATC spent several months enlisting support and planning training goals and procedures. Business personnel were assured that training would not be "like school". Business was involved in planning

at each step along the way.

A proposal was finally submitted to CETA after over a year of planning. It involved businesses contributing furniture and equipment as well as the promise of hiring trainees who met industry criteria if positions were available at the time. CETA was to pay trainees and TATC training personnel.

Once facilities were ready, potential employers were brought to TATC offices so they could see that the training area looked like a business and not a school. Equipment comparable to business equipment was clearly visible and training materials included forms and business print material from cooperating businesses. Careful task analyses of on-the-job word processing were used to develop a curriculum based on realistic goals and expectations. Every attempt was made to assure employers that high standards would be met. The fact that a private business was doing the training seemed to help convince employers that trainers were sensitive to their needs.

The time and effort expended in gaining business support was invaluable in convincing CETA officials to support the program. At several points during the six month process of gaining governmental approval, business support made the difference between continued progress of the training proposal and having the proposed program stall in bureaucratic red tape.

Recruiting and Screening Applicants for Training

Announcements describing the TATC word processing program and its goals were distributed to social agencies having contact with CETA

eligible candidates. These included schools, governmental agencies, and private agencies such as the Catholic Archdiocese of Chicago. These agencies disseminated information about the program and steered interested applicants to an assessment center to be interviewed. During interviews, applicants received information about the program and job characteristics. Applicants' educational, personal, and work backgrounds were explored. Applicants and counselors would then make joint decisions about whether applicants should attend a special Exploration Day at the word processing center.

Exploration Day

During Exploration Day, small groups of fifteen received information on word processing careers and information about the training program. Applicants also had the opportunity to try out equipment and get some "hands-on" experience with what work might be like. If an applicant was still interested in the program, he or she was asked to take a battery of tests to assess reading comprehension with business related material.

Job Literacy Screening

The literacy ability level required to do well as a word processor operater is quite high. Therefore, success in the training program was dependent, in part, on trainees being able to attain those literacy abilities in a relatively short period of time (14 to 20 weeks). In order to select trainees most likely to succeed from among the thousands of potential applicants, a serles of literacy screening exercises were developed from actual job materials. Employed secretaries and word

processor operators took the screening exercises so that performance levels could be set.

The first level of screening exercises were cloze tests constructed from representative written samples taken from business correspondence and word processing manuals used on-the-job. Trainees who scored more than two reading grade levels below the average practicing operator were likely to be screened out of the training program.

A second level of literacy screening involved spotting and correcting errors on actual job correspondence, invoice forms, and business reports. Norms were set on these problem-solving tasks by establishing how well the average secretary or word processor operator performed. Potential trainees were given two chances with each type of problem-solving situation. First they would attempt to identify and correct errors on a piece of print material. When they had done their best, the test giver would show them what they had missed and show the test taker how to make additional corrections. Following this, an extremely similar task would be given the test taker to determine if they learned quickly and easily. Acceptance into the training program was based on performance slightly below that of employed secretaries or the ability to learn quickly.

Population Selected For the Word Processing Program

All trainees selected for the program were CETA eligible (i.e. economically disadvantaged, unemployed or underemployed, and identified as having particular difficulties in entering or advancing in private sector employment). One hundred trainees were selected to enter the program in three waves of 30+ students. Approximately 30% of the

trainees were male and 70% female. The majority, 80% of trainees, are between the ages of 22 and 44. The racial distribution of trainees was 79% Black, 15% Hispanic, 5% Caucasion, and 1% Asian. Although about half of applicants had some secretarial or clerical experience, a few trainees had no work or clerical experience at all.

The screening procedures had selected individuals who were CETA eligible, but who were also likely to succeed. If the first wave of trainees did not meet industry standards, it was highly unlikely that applicants in the second and third waves would be offered jobs. Applicants scoring significantly below the job literacy performance level of actual workers were not accepted because it seemed unlikely that they could gain more than two or three grade levels in job literacy abilities during the half year program. Experience with the first wave suggested that literacy levels needed to be even more stringent for applicants without some clerical experience. Such applicants needed more time mastering typing and machinery. The extra time usually came from language training.

The Training Program

Classes of thirty to thirty-five trainees were accepted into the program. These individuals were paid to attend training 40 hours per week. Time each day was divided amongst language training, typing and word processing training, work habits training, and individual study time. Three full time teachers (a reading specialist, a word processing specialist, and a business specialist) worked with students throughout the day.

The amount of time a trainee would spend in any given area was dependent upon how much time he or she needed. Some trainees needed more emphasis in language improvement and others in machine skills. On the average, 20% of time was spent attending classroom presentations and 80% working independently or in student work groups to master information presented in classes.

Assignments were planned to integrate language and machine skills. Much of the classwork simulated actual job demands. Students would compose business communication which other students would edit and later produce in final form on word processing equipment. A good deal of the work involved using actual business communication which was hand written in rough draft form with editing notations. The job simulation training which integrated language and machine experience ranged from about 5% of assignments the first week to nearly 100% in the final weeks. Class assignments attempted to replicate the time constraints present in business performance. Though much of the work was done on an individual level, some work made use of worker teams which again replicated workplace conditions.

Trainee time on task ranged from 80% to 90% during any given workday. This compares to public school figures of 30% to 50% time on task. Instructors met on a weekly basis to determine how each student's time might be most wisely allocated. Individual conferences informed students of their progress and weak areas. Feedback was also provided by wall charts which showed the average class performace on a wide selection of language and machine competencies. Individual trainee performance listed by number also provided individual feedback of performance compared to others.

The most clear-cut differences between this program and school programs had to do with application and integration of training. TATC trainees actually used up to date word processing equipment and were aware of the industry standards they had to meet. Their training in language, work habics, and machine use was integrated so they received focused practice to meet those standards. Public schools and community colleges seemed unable to break away from offering fragmented classes with little integration and feedback. In addition, most "schooling" training programs assumed transfer of general competencies to actual job application. The cooperative program assumed no such transfer and consistently used job simulation as a major training device.

Implementation of Research

The TATC program makes use of several research findings. All training and screening is built on a clear recognition of the variety and difficulty of literacy demands in word processing job. Potential trainees are screened for their ability to comprehend job related material not the general reading material found in most standardized reading tests. In addition, the screening measures used for this training program employ actual job materials and on-the-job literacy criteria. The measures, therefore, follow court preceents for acceptable employment screening devices.

Actual training does not mistakenly assume transfer from general language learning to specific on-the-job language demands. Training is consistently on an application level and makes heavy use of job simulations. Since students learn what they are taught, they are taught to perform well on-the-job. This extends to the point of gaining

experience in working together in job groups which resemble the fucnctioning of actual employee work groups on-the-job.

Training is also integrated so that language training assignments are used to improve machine skills and vice versa. The administrative structure of the training program is not allowed to fragment training in an unnatural way. This serves to make realistic application of concepts more practical and allows practice to be regularly distributed through several trails during a given day. This distributed practice is enhanced by the mixture of 20% teacher presentation time to 80% student practice time (unlike traditional schools where the figures are reversed). Trainees receive regular intelligent and individualized feedback. This feedback plus regularly posted charts of what needs to be done keeps trainees on task. An average trainee gets two to three times as much practice or "academic learning time" from each class day as do students in traditional schools. This high percentage of time on task during each 40 hour week and also during home evening study was absolutely necessary if acceptable trainee gains were to occur.

Program Results

The time needed for trainees to reach job level competence varied. The earliest trainees were able to find employment in 14 weeks of training. The average time needed for the screened applicants to reach the pre-set standards was 20 weeks with a few trainees taking nearly 28 weeks. During the approximately 20 weeks of training time, trainees improved in ability to read business material by an average of a full grade level. Many trainees improved considerably more than this. Even more spectacular gains were made in proofreading and editing skills.

In 1981 and 1982 the economy entered a recession which limited the ability of cooperating industries to hire acceptably trained word processors. A third of the cooperating companies stopped all hiring. Several additional companies raised their hiring standards for accurate word processing speed from 55 words per minute to 65 or 70 words per minute.

In the face of these economic difficulties, slightly over one third of trainees found word processing employment within a few weeks of program completion. Other trainees used the training facilities as a base for a "job search club". The mutual support and facilities provided for the club enable another 10% of successful trainees to find appropriate employment each month. By October of 1982, 70% of trainees had found jobs as word processor operators.

In summary, the word processing program is an excellent example of how trainers can integrate language training with on-the-job training while employing insights from educational and job literacy research.

Language and literacy related job training programs such as Chicago word processor training program succeed, to a large degree, because they incorporate principles with strong research support. A summary list of the major principles employed by the TATC program is found below.

Principles for Program Success

A. Use realistic materials which reflect the workplace.

B. Create application level reading to do and problem solving tasks.

C. Set performance criteria which reflect real world expectations

D. Provide regular feedback in relation to those criteria.

E. Allow for group work, cooperation, and alternate means to gather information in ways which mimic the workplace.

F. Develop tasks which are multi-step and not single skill processes (i.e. Read-Do-Write-Ask etc.).

G. Maximize student time on task (Teacher lecture less than 20% of time).

H. Screen applicants to select those with whom you can hope to succeed.

I. Accurately estimate the number of training hours trainees will need to achieve program criteria.