Testing for Certification at Work:

an Instructional Program Guide for Equipment Operators

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Workforce education, as distinguished from job training, emphasizes instruction in learning how to learn because of the swiftly changing nature of the workplace today. Our focus through the Workforce Instructional Network (WIN) was to work with small businesses in a small town to design instruction aimed at improving the literacy skills of individuals currently in the workforce. We accomplished this by forming a partnership between Southwest Texas State University (SWT), the San Marcos Chamber of Commerce, and the San Marcos Hispanic Chamber of Commerce. The success of our project supports the use of a process-oriented education model which emphasizes transferable skills presented in a series of mini-courses lasting from five to fifteen weeks.

In order to develop our curriculum according to an education model, we identified those generic workforce education skills underlying job families rather than concentrating solely on the content knowledge needed for a particular job. Through developing competence with these skills, we hope to have equipped workers for future job changes, many of which cannot even be anticipated in the fast-moving business environment of today. Moreover, these newly developed literacy skills will provide a strong foundation from which the workers can educate themselves given new workforce education demands, resulting in future training savings to the businesses involved. This future efficiency aspect is particularly relevant to small businesses which often rely on on-the-job training by supervisors and co-workers rather than maintaining training staffs.

Four-part instructional model

A process-oriented educational philosophy formed the basis for our four-part instructional model. The first step in this model involved an initiating event which engaged the prior knowledge of the students, who were considered the content knowledge experts for their jobs. Next, the teacher modeled literacy strategies, using a large-group discussion format, for accomplishing those literacy tasks we were able to identify via a business needs assessment and through student participation. Small groups then collaborated on workplace related literacy tasks which required the use of these new strategies. This small group emphasis developed the communication and teamwork skills which are sought by employers, while at the same time developing students' strategies for accomplishing the workforce education tasks. Finally, learners worked to apply their new understandings during independent practice on workplace and home-related literacy tasks.

Workforce Instructional Network
Four-part Instructional Model

In all WIN classes, the basic instructional model contained the following 4 components:

1) an **initiating event** or focusing activity which emphasized engaging the learners' background knowledge of the topic to be discussed;
2) large-group **modeling** of a learning strategy;
3) collaborative, **small-group practice**;
4) **independent practice.**

Overview of the guide

We conceptualized the process of setting up a workforce instructional program as having several stages: the stages of partnership building and curriculum development before classes begin, the stage of actual instruction, and a feedback and evaluation stages during and after instruction. This guide is structured according to these stages in the life of our grant-funded program.

An annotated table of contents at the beginning of the guide lists a brief description of the questions to be answered in each section. At the beginning of each section, a more detailed table of contents outlines the steps involved in completing each phase of our grant.

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Background and context

The Workforce Instructional Network (WIN) started in May, 1991 at Southwest Texas State University (SWT) through grant (#V198A10219) from the Office of Adult and Vocational Education, United States Department of Education (USDOE) to establish a National Workplace Literacy Demonstration Project for small businesses. This National Workplace Literacy Program arose out of a concern that the U.S. economy was losing its competitive edge in part because the skills of U.S. workers were deficient relative to those of workers in competing nations. In the national discourse about economic competitiveness and the quality of the American workforce, images of workers in huge automobile and steel plants in urban areas predominated. However, 97% of the nations' towns and cities have populations of less than 50,000 people (*Census Tracts,* 1983). Many of them are like San Marcos, Texas, a community that is characterized by a multitude of small businesses and an educationally disadvantaged workforce. This guide is designed to assist practitioners in designing and implementing workforce education programs for small businesses. Since small businesses rarely budget funds for workforce education activities, the guide will start from the assumption that practitioners will seek grant funds, at least for the start-up phase of their workforce education programs.

Write a grant proposal

We began by approaching the two local Chambers of Commerce (San Marcos Chamber of Commerce and the San Marcos Hispanic Chamber of Commerce) for assistance in conducting a general needs assessment of businesses in the community. A preliminary questionnaire regarding business and industry training needs was distributed to the members of the Chambers at one of their monthly meetings. Answers to this questionnaire documented that employers had a general need for increased employee training in a variety of skills. Follow-up discussions with members of the two Chambers at future monthly meetings confirmed the extent of the perceived literacy needs ranging from basic reading, writing, and calculating skills through needs in computer literacy.

To further verify the need for this project, a needs assessment was completed via personal interviews and phone surveys of 20% of the businesses and industries in the San Marcos community. A broad range of the business community including manufacturing, communication, government, education, retail trade, financial, and child care sectors were contacted. Results of this assessment identified over 600 workers in these twenty businesses alone who were in immediate need of basic literacy skills ranging from reading work order forms and filling out quality control sheets accurately to basic mathematical computation skills including fractions, decimals, and percentages, to advanced mathematical computation skills up through algebra, to reading safety memos and warning labels on chemicals, to basic computer literacy, word processing, using disk operating systems, spreadsheets, data bases, and telecommunications. This information demonstrated to us that business owners perceived a need for education for the San Marcos workforce.

Learn about the problems of business

During these discussions with business owners and managers, it was continuously made clear how important it was for us to avoid preconceived notions about their needs and goals. Our early discussions introduced us to different business leaders and provided a forum where, through active listening, we were able to understand some of the challenges each was facing in an increasingly competitive marketplace. We found these businesses were often faced with accelerating rates of change and the need to try new ideas, yet the workforce available to them was poorly equipped to learn new processes and adapt to these changes. Drivers of large trucks and buses, in particular, were mandated by Federal Law to pass the Texas Commercial Driver's Licensee exam by April 1, 1992 or lose their jobs. Due to the degree of difficulty of the exam, a high level of tension existed in area workplaces. Without exception, employers did not see massive layoffs and re-hiring as an acceptable solution to this dilemma since there were few people in the workforce with greater skills. Businesses also valued the loyalty of their current workers and their job knowledge.

This lack of functional literacy skills wastes the potential of the employee frozen at an entry-level position and unable to move up into more complex jobs. It also creates a hiring bottleneck at the entry-level which harms the employment opportunities of the whole community. Together with the businesses we concluded that in many ways workforce development equals economic development.

Develop a partnership

Based on these discussions and the results of the needs assessment, the proposal development team proposed a partnership between Southwest Texas State University, the San Marcos Chamber of Commerce, and the Hispanic Chamber of Commerce. This partnership developed a model for offering effective job-related literacy and basic skills programs for the multiple small businesses that are the mainstay of the local economy. The guiding concept of the proposed model program was to develop a community-based approach to workforce education. Clearly, it would not be cost-effective or logistically feasible to provide instruction to two or three workers at different locations across the community. At the same time, it might be difficult for employers to release workers at the same time to meet at a location in the community.

Our task, then, was more complicated, or at least different from *traditional* workforce education programs, which are most often partnerships between community colleges and large manufacturers (Chisman, 1992 ; USDOE, 1992). Our strategy was to develop educational programs for job families, rather than specific workplaces. The job families we served were Custodial, Child Care, Manufacturing, and Equipment Operators.

Implement a community-based workforce education model

An initial WIN objective was to raise community awareness about the need for workforce education. The first step was to establish our position and identity within the community. We had to establish *who* we were, *where* we were, and *why* we were there. This step may appear obvious. Our experience indicated that this was not the case. Although representatives from the business community had been helpful in the proposal development phase, upon funding 12 months later we had to remind them of who we were and why we were seeking their involvement in the project. This situation was further complicated in the interim because the president of the San Marcos Chamber of Commerce who had signed the original partnership agreement had been replaced, and the San Marcos Hispanic Chamber of Commerce had elected an entirely new Board of Directors. In effect our original project partners did not know who we were, where we were, or why we were interested in workforce education. At a recent meeting of project directors sponsored by USDOE, similar stories were reported from around the country. It was therefore recommended that USDOE streamline its proposal review process. Whether this occurs or not, future projects must consider continually informing partners to anticipate changes in personnel.

Define the mission and connect with partners

Our next step then had to be re-defining ourselves and our mission to our partners and to convince them to *buy in* to the project. Since our program was of benefit to the Chambers' members, but not directly to the Chambers themselves, their support was nominal. They each agreed to place a member of their Board of Directors on the WIN Advisory Council (see below), but they did not play an active role in recruiting employers or in publicizing our services to local employers. Nonetheless, our formal partnership with the Chambers gave us valuable and needed credibility with area employers and facilitated initial negotiations with employers who became active participants in the network.

Despite the limited role that the San Marcos and Hispanic Chambers of Commerce played in the construction of WIN, we would recommend involving such organizations in the development of multi-stranded workforce education initiatives which target small businesses. Specifically, we recommend identifying individuals active in such organizations who have a strong interest in workforce education early on in the planning phase. Meet with them to learn as much as you can about the prevailing perceptions of the preparedness of the local workforce. Among other things, they can help you identify specific employers who are likely to be receptive to your proposed program. Solicit private sector involvement in the development of your workforce education proposal. Such involvement will not only strengthen the proposal, but also facilitate the project implementation process. Working with chambers of commerce and other trade organizations is particularly critical to the success of community-based approaches to literacy development. Such organizations are instrumental in the articulation of the local economic development strategy, and the quality of the local workforce is always a critical component of any such strategy. Let them know you are capable of enhancing the skills of

local workers, and with them, determine which sectors of the local workforce are currently considered most critical to the economic vitality and quality of life of your community.

> "It's allowing everyone to voice things that they think are uncertain. It's allowing people to realize that they're not stupid for questioning things. It's okay to say 'Why?' or 'How?' or 'What?' I think it's important to let everybody voice their uncertainties"
>
> *-Belenky, Clinchy, Goldberger, Tarule*
>
> *Women's Ways of Knowing*

The position which the WIN staff decided to establish was that of a community-based workforce education initiative which would raise awareness of the need for job-related literacy instruction across the private and public sectors and concentrate the knowledge and resources of multiple employers, employees, educators, and community representatives on the problem of workforce and community development. From the onset, WIN staff advocated the development of literacy programs that would be flexible enough to meet the needs of multiple workplaces. This was important to establish because it was not cost effective to customize workforce instruction for a particular small workplace that might only have had two or three workers who would participate. Furthermore, the WIN staff wanted to demonstrate that workforce instruction could be contextualized to a set of proficiencies common to a particular job family rather than a particular workplace. Such an approach was the foundation of our model of workforce education for small businesses and should be of critical interest to other literacy practitioners interested in working with small businesses.

Build on existing resources

A second and equally important reason for choosing a community-based approach to workforce education was the existence of a strong community-based literacy initiative already in San Marcos with which most of the WIN staff had been associated previous to implementation of this project. Building upon existing resources strengthens the community effort and minimizes duplication. San Marcos is a community that has a significant adult literacy problem.

Several organizations were addressing this problem prior to the establishment of the WIN project. The San Marcos Public Library has a very active literacy and General Educational Development (G.E.D.) degree preparation program in place. In addition, various community agencies had combined efforts and resources to establish a family literacy program in a public housing complex and to enhance existing programs in order to meet the requirements of the Job Opportunities and Basic Skills (JOBS) program for Aid to Families with Dependent Children (AFDC) recipients authorized by the Family Support Act of 1988. In consultation with the Program Director, the Instructional Coordinator had developed a general workforce education class for custodians working in the Physical Plant at the university. In addition, the Educational Council of the San Marcos Chamber of Commerce (itself a community-based organization) had asked the Project Director to chair a

literacy task force which culminated in the formation of San Marcos Literacy Action (SMLA), a community-based organization dedicated to overcoming functional illiteracy.

In short, given WIN's objective of establishing effective literacy programs for multiple small employers and in the context of existing literacy initiatives, it was evident that the WIN staff should extend the pre-existing community-based model to meet the needs of local employers and to establish a public/private sector initiative aimed at overcoming functional illiteracy in the workplace *as well as* in the community. The primary vehicles for accomplishing this community-wide effort toward workforce education and economic development were the WIN Advisory Council and San Marcos Literacy Action. These groups had overlapping memberships and complementary missions. Expressed in terms of raising community awareness, the primary WIN public relations theme was workforce development always equals economic development. In complement, the primary theme of SMLA was: an educated workforce (which includes the unemployed and under-employed) enhances the quality of life in the community, and the development of effective and accessible literacy programs is an investment in the future.

Literacy in San Marcos- Preliminary Statistical Summary

City of San Marcos (1990 Census)

Total population	White	Hispanic	Black
28,473	22,527 (79%)	10,571(37%)	1,535(.05%)

Note: Totals do not equal 100% because many residents identified themselves as both white and Hispanic

According to 1980 census and recent SMCISD surveys 46% of the adults over the age of 25 do not have a high school diploma. This represents approximately 11,000 people.

San Marcos Consolidated School District

Total population	Anglo	Hispanic	Black
6,000 +	34%	63%	2.5%

SMCISD statistic: The San Marcos High School class of 1990 entered the ninth grade with 562 students. It entered the twelfth grade with 337: 40 % of the freshmen did not make it to the beginning of their senior year. Of that 40%, 77% were Hispanic. Statistics for how many students dropped out in the twelfth grade are not available at this time. Nor are statistics available on the number of students who did not enter the ninth grade.

Adult and Family Literacy Programs in San Marcos

Total Population		Hispanic	Other
Adult:	1,250	86%	14%
Children:	@120	79 children attended Project PLUS last year	
		30-40 children attend ROOTS program at Jackson Chapel	

Note: These statistics do not include local adults who have attended programs at Gary Job Corps, Rural Capital Area Private Industry Council, the PRIDE Center (@70 students), or the Hays County Law Enforcement Center.

1,250 adults (.5% of the voting age population) put in a minimum of 36,000 hours of participation in area literacy programs.

Conclusion: There are at least 10,000 adults out there without a high school diploma and many more that are functionally illiterate.

Evaluate the context

While WIN believes that it made the right choice in choosing a community-based approach to workforce education in San Marcos, we do not necessarily believe that it is the only approach to workforce education initiatives that target multiple small employers. Rather, we recommend that practitioners carefully analyze the context in which they intend to operate and choose their approach based on that analysis. A significant factor in your analysis should be demographics. For example, you may choose to operate in a community larger than San Marcos that has a large number of small businesses. In such a context, a community-based approach to workforce education may well be too ambitious. You would probably have great difficulty galvanizing the interest of enough key players in the community to make it worth your effort. It is important to be cognizant of the diverse problems, challenges, and opportunities that make up community life. The larger the community, the more diverse, and the more likely that certain sectors of the community will take ownership of certain issues and thatother sectors will do the same with other issues. A promising strategy for developing programs for small employers in a medium-sized or large city might be to target a particular trade or job family and initiate a partnership with the employer trade organization and/or the labor union to which the majority of employees belong.

In economic terms where there is a greater division of labor, a greater division of literacy programs for labor is probably desirable. For example, a large high-tech company may want one basic skills program for its chip manufacturing division and another one for its hardware assembly workers. (It is important to note that major components of two such programs could be, and probably should be, the same.) In a small community characterized by small employers like San Marcos, the division of labor occurs at the level of the individual business, each needing labor for one or two product lines or customer services. The division of labor is to some degree community-based, and therefore, we chose a community-based response.

Reconcile federal priorities with local realities

Since many workforce education programs for small business are likely to be grant funded, practitioners must reconcile the funding agency's priorities to local realities. In the case of the National Workplace Literacy Demonstration Program (NWLD), USDOE strongly urged practitioners to: 1) obtain at least a 30% in-kind and/or financial contribution from their partners; 2) link instruction to the literacy requirements of actual jobs; and 3) measure the impact of literacy instruction on worker productivity.

While the WIN staff supported all of the above priorities, it had difficulty reconciling each of them with local workplace realities. In its literacy program for child care workers, for example, it was quickly established that most day care centers simply could not afford to contribute to the project. At the same time, both center directors and workers were eager to participate. The WIN staff decided it had an obligation to serve child care providers, despite their inability to pay. (Fortunately, in USDOE terminology, the child care

providers are referred to as sites, not partners. Therefore, WIN was not out of compliance with USDOE.) Unfortunately, it is clear that the great majority of day care centers in the country cannot afford to be a partner in NWLD projects. (For more information concerning USDOE definitions, please see the Federal Register, August 18, 1989, page 34419.)

Linking instruction to the literacy requirements of actual jobs can also prove difficult, particularly when those literacy requirements are quite low or when the employer has a different priority concerning the basic skills education of its workers. For example, it was difficult to develop a course of instruction tied to the literacy requirements of custodial work. In our case, this problem was heightened because the primary custodial employer that WIN served wanted a general literacy program as a prerequisite for job-specific training geared toward career advancement.

Measuring the impact of literacy on productivity was the most difficult of all. There are many variables that impact productivity. It is extremely difficult to attribute increased productivity to literacy instruction directly. Therefore, in some job families we used measures that we deemed were correlated to productivity. For example, within the Custodial Job Family, workers had little if any literacy requirements on the job. Still, supervisors and management believed their workplace would be enhanced (i.e., more productive) if their staff were to improve their literacy skills. Given improved literacy skills, more students could work toward and receive their G.E.D. and could be promoted, which would in turn open up entry-level jobs. Therefore, we argued that we had to affect the supervisors' and managements' perception of productivity. Within this job family, given increased perceptions of productivity, our project would be deemed successful.

Demonstrate what for whom

Demonstration projects are designed to identify instructional strategies that are replicable in a wide variety of situations and for a wide variety of audiences. In fact, the purpose of this guide is to help you find effective strategies to implement a workforce education program in your company or community. However, we recognize each company and community exists in a unique context, and it is usually necessary to customize your program to that context. In San Marcos, we found it useful to ask the following questions: Demonstrate what for whom? After some discussion and an in-service staff workshop, the WIN staff reached the following conclusions for our workforce context. First, we needed to demonstrate to local workers and employers that participation in the WIN project can make a positive difference in the way work is accomplished, however measured. Second, we needed to identify what worked best and recommend it as a promising approach to practitioners who are implementing workforce education projects with these job families.

This was a good first step, but the federal priorities-local realities dilemma was difficult, particularly as it relates to program evaluation issues. In our discussions with local businessmen, we sometimes encountered an aversion to government intrusion into their affairs. It is important to account for this possibility when you initiate discussions with employers. The box below describes WIN's encounter with one such employer.

Federal Priorities and Local Realities: You Can't Get There from Here

In the fall of 1991, WIN initiated its first Math for Manufacturing class. The partner company manufactures heat tracing products, usually involving insulated electric wire, for the application of heat to piping, tanks, instrumentation and other types of equipment. Headquartered in San Marcos, the company is competitive on the world market in its niche and has manufacturing and engineering offices in eight countries around the world. The San Marcos plant, the company's largest, employs 220 people, about 50 of whom work in what is called the wire plant. Hearing about the services of the Workforce Instructional Network at a presentation made by the Project Director to the San Marcos Manufacturing Association, the Vice President of Operations called WIN and said he was interested. Negotiations on how the program would be implemented began.

At about the same time, the project's outside evaluator, visited WIN to gather data for his baseline evaluation. He spent a good deal of time talking to project staff about the importance of program evaluation and the need for accountability. He reminded staff that we had proposed to USDOE that we would quantitatively and qualitatively assess learner gain in job-related literacy as well as develop productivity measures. Due to the evaluator's comments, federal priorities were in the forefront of our minds during the negotiation phase. The Vice-President listened politely as the Project Director told him the things we would need to do to satisfy our commitment to USDOE. In addition, the Project Director sent a WIN staff member to interview the Vice-President in order to collect some baseline data for the outside evaluator.

The Vice President appeared accepting, and we proceeded to develop an effective and exciting class for 15 of the company's wire plant workers; all but one of whom were women of Mexican and Mexican American origin. In order to gather some data on productivity, the project director met with the Wire Plant Supervisor in order to devise a productivity related supervisor rating scale. In that meeting the project director made some mention of USDOE or the federal government. The Wire Plant Supervisor quickly said, "You better be careful talking about the government with Mr._____ (the vice president). And if you need anything from him, you better ask me to get it for you. He's pretty steamed about the government wanting this and that around here." Well, this was all news to the Project Director. The supervisor went on to say that the vice president had said, "You know, if I had known those guys were gonna want so much damn other stuff, I would have just hired a Math teacher from the high school."

The class was a success by every measure, pre- and post- tests, supervisor ratings, and participant observations. After it was over, the Project Director asked if the company would be interested in developing an intermediate Math class. He was told that the company was just about to enter its busiest part of the year and to contact the company in the Spring. The Project Director did so. He talked to the Plant Supervisor twice and the Vice President once. There was always something that prevented us from getting another class going. The Project Director suspects that the real reason has to do with the problem of reconciling federal priorities with local realities. Yet the class was a success, and the wire plant workers and supervisors still need and want more math instruction. Only time will tell if WIN or some other literacy initiative will be welcome back to the wire plant.

Implement evaluation strategies

Both anecdotal evidence and the literature (cf., Chisman, 1992) indicate that many small businesses do not find formal evaluation as used by educators either useful or cost-effective. Our experience confirmed this and indicated that our small businesses preferred focus groups and other informal methods. On the other hand, USDOE wants and needs hard evidence to demonstrate to Congress and the tax-paying public that it is making a positive difference with our tax dollars. Practitioners need to develop creative strategies to meet the somewhat contradictory needs of these two very important "customers".

We chose a strategy that used evaluation methods that were collaborative in nature, such as focus groups with workers, supervisors, and management representatives. If your program is going well, it will be easy for management to note increased employee self-confidence and enhanced job performance. This observation on the part of management may result in the gathering of information you consider valuable for your evaluation. Just be careful how you ask for it. You might try some gentle prompts such as, "I wonder if Juan's attendance has improved since he began taking classes?" If the company is large enough to have a human resources office, you may be able to work with them on the collection of job-related data. Unfortunately, most small businesses do not have such an office, and many do not keep the kind of productivity data that practitioners might find useful.

Utilize the Advisory Council

Another promising strategy is to use the forum of the Advisory Council as the place to discuss workforce education on the global, national, and local levels. Begin by informing the Advisory Council about federal priorities. Seek their assessment of local realities in specific relation to those priorities. Share the program evaluation objectives stated in your proposal with the Council and elicit their advice.

USDOE might consider making it a priority that outside evaluators be recruited locally. Such a person could devote his time to building a partnership effort for the *purpose* of program evaluation, thus freeing up the Project Director to concentrate solely on project implementation and program development. The evaluator and the director could then work together to achieve both local and federal objectives. USDOE could hold meetings early in the funding cycle to inform both the local evaluator and project director of its priorities and to provide specific training.

The construction of a community-based Workforce Instructional Network involved two distinct processes. One was the creation of a forum which sought community input and promoted a cross-fertilization of ideas and strategies that centered around the educational needs of the local workforce as viewed from diverse perspectives. The other was the creation of a mechanism for implementing actual programs. To initiate the first process, we formed the WIN Advisory Council. The WIN staff invited representatives from across the community who had an interest in the development of an educated and/or skilled workforce to monthly meetings over the lunch hour. In addition to employers who were active WIN partners, we invited literacy professionals, elected officials, representatives from employers not participating in WIN programs, members from boards of community organizations, university professors, workforce education students, students from other literacy programs, floor supervisors, school district representatives, etc. The purpose of this approach was threefold: a) to raise community awareness about the need for workforce education instruction; b) to create a forum where purposes and methods could be openly discussed; and c) to build community buy-in for WIN objectives.

At the first meetings, the WIN staff introduced the USDOE National Workplace Literacy Demonstration Program and attempted to explain it in global, national, and local contexts. Studies and reports such as *America's Choice: High Skills or Low Wages* (1990), the *Secretary's Commission on Achieving Necessary Skills* (1991), pertinent articles from the Business Council for Effective Literacy, *MOSAIC*, and other newsletters were disseminated and referenced so that Council members could view the WIN project as part of a broader context or movement. In addition, the Advisory Council was utilized as a forum to discuss the salient differences between job-related functional context education and other more traditional literacy instruction (e.g., library based one-on-one tutoring, English as a Second Language, G.E.D., etc.). This stimulated thought and discussion among employer representatives about what they wanted their employees to learn and why. Did they want to provide G.E.D. training for their employees simply because a significant number did not have a G.E.D.? Would the academic skills that such training emphasizes have an impact on job performance? Did they want to link the learning to the skill requirements of actual jobs? Did they want workers to learn content or to learn how to learn? Similar questions should be discussed in your advisory council meetings.

We found through these discussions a cross-fertilization of ideas began to take place. It turned out that employer representatives from two high-tech companies new to San Marcos had extensive experience in basic skills programs in workplace contexts and were doing similar training for their companies. These companies had already committed to their own brand of Total Quality Management. When they moved to our town, they set high minimum skill standards for entry-level jobs. Therefore, they did not need WIN services. However, their representatives brought quality experiences and insights to the Advisory Council. In discussions of general literacy versus job-related literacy in specific contexts, they were able to make insightful comments based on their experiences. If WIN had limited the Advisory Council to only participant workplaces, this source of expertise would not have been added to our program.

The second process for developing the Advisory Council evolved after WIN had implemented programs for each of the job families. The Advisory Council began to take a

broader view of the issue of workforce development in the community. Toward the end of the grant cycle, the Advisory Council sponsored a workforce development focus group, primarily as a means to assess where to go from here without the support of the USDOE. Employer representatives reported they had difficulty finding qualified applicants, even for low-skill jobs. One truly startling revelation that arose out of this discussion was that every employer in the room admitted that most of their skilled employees lived outside the San Marcos community. If higher paid skilled employees live outside the community, they are likely to spend their paychecks elsewhere. WIN is hopeful that the implications of the above for the local economy will serve as a galvanizing issue for San Marcos Literacy Action to build local support for linking literacy education to actual jobs after the funding period.

The establishment of the WIN Advisory Council was a critical mechanism in the provision of a community base for the Workforce Instructional Network. It created a forum where people could explore the nature of the link between literacy and a good job. It provided a forum for the WIN staff to develop and refine its marketing premise: workforce development equals economic development and enhanced quality of life. Finally, it planted the seed for a private/public sector initiative to develop the local workforce through literacy.

Create a participatory support structure through focus groups

Learning communities require collaboration among all participants to create a safe, respectful environment in which each individual can be and is heard.

Marilyn Boutwell "Partnership For Change"

Participatory Literacy Education

WIN's partnership with the two San Marcos Chambers of Commerce and the establishment of the Advisory Council were critical steps in the process of establishing a viable workforce instructional network for San Marcos. In business parlance, the Chambers and the Council were the marketing arm of the network. However, another mechanism was needed to produce effective literacy programs for each of the four job families. In order to guarantee that the instruction was job-related, the WIN staff believed it was essential to understand the workforce education problem from as many perspectives as possible. We felt the best way to accomplish this was to establish planning and evaluation focus groups for each job family and work toward creating a participatory, collaborative workforce education effort. This focus group should have at least one management representative, one direct supervisor, one worker, and one educator. The purpose of the participatory group is to work together to understand each other's perspectives and concerns about all facets of the planned workforce education program.

The advantages of this participatory approach were numerous. First, it built collaboration from the very start. Management, supervisors, and workers alike were able to see that the WIN staff was interested in addressing the needs, honoring the perceptions, and listening to the ideas of the key stakeholders in the proposed program. It created a level playing field, at least for the purpose of education. Workers and employers both knew that they had an active role in the implementation process. Potential problems, such as confidentiality of test scores, relationship of student participation to job security, nature and extent of employer and employee contribution to the project, and other critical issues were addressed collectively. This participatory approach initiated a process of employer and employee *ownership* from the inception of the program and strengthened the credibility of the WIN staff. Employers and workers alike saw that the WIN staff was being consistent. We did not say one thing to managers and supervisors and another to workers. Also, the openness of the approach afforded the WIN staff high visibility at the various work sites. By the time the needs assessment was completed and classes had begun, workers, supervisors, and management knew who WIN was and why we were there. The potential for key stakeholders to feel blindsided or left out of the process was minimized. We attempted to develop these focus groups for each job family.

However, as noted above, workforce education programs occur in specific contexts, and literacy providers must have the ability to analyze workplace culture and act quickly on that analysis. We found first impressions were critical. We often were unable to immediately implement a participatory approach for the creation of these focus groups. In some cases, we even encountered resistance (see box below for an example). In these situations, we were able to adapt the participatory approach to existing realities without sacrificing fundamental principles such as the WIN staff's commitment to the holistic model of adult literacy development. The box below describes WIN's encounter with one such employer.

The WIN staff faced such a reality when it implemented its workforce education program for custodial workers at Southwest Texas State University. As noted above, SWT had a workforce education program for custodial workers in place prior to the funding of this project. That program had two major components: a general literacy program with the objective of preparing custodial workers for the G.E.D. exam and a job skills program for custodians who wanted to advance to skilled jobs within the SWT Physical Plant. (Custodians who sought to improve their limited English proficiency were referred to the existing literacy program at the San Marcos Public Library.) Although the program had been successful from the perspective of learner gain, it did not enjoy the full support of Physical Plant management and supervisors. In particular, the supervisors were reluctant to provide release time for custodians. The reasons for this were multiple. In some cases, it was just a matter of workload. In others, custodial supervisors themselves were Limited English Proficient and were threatened by the program. In general, supervisors did not understand why they were required to provide release time for workers to attend literacy or job skills classes. They did not see "what was in it for them" and were, therefore, non-supportive.

Realities of a Participatory Approach

Based on our experience, WIN recommends the participatory approach to those developing workforce education for small businesses. However, practitioners need to be sensitive to the contexts they are working in and flexible in the development of effective workforce education program.

Early on in our project, WIN staff discovered first hand how a program can be compromised by not informing all stakeholders of your purpose from the outset. An employer approached the WIN staff about the provision of Commercial Drivers License (CDL) instruction to its drivers. In the negotiation phase, the Human Resources Department assured the project director that all arrangements had been made for the classes to begin.

A meeting was scheduled with the plant supervisors, and it was as if they had never heard of WIN. These supervisors had very strong opinions about how the CDL program should be implemented. First, they believed that the employer should provide full release time to workers studying for their CDL test because the new licensing was required by law. The employer had proposed a 50 % time share. Second, the supervisors believed the worker should pay for it because they would have the right to take it with them to a new employer. The employer had proposed that it pay for the cost of the CDL license. These issues were resolved at a meeting between supervisors, human resources personnel, and the WIN staff, but a negative and combative tone had been established. Other difficult issues quickly arose concerning confidentiality of the needs assessment process: a critical issue due to the large number of Limited English Proficient drivers who needed to prepare for the exam orally in Spanish. Finally, there was a philosophical difference between WIN instructors and the supervisors on how instruction was to take place. Supervisors advocated a quick intensive training approach to achieve the discrete goal of the CDL license. WIN instructors preferred a "learning how to learn" approach with classes to be held four hours per week for five weeks. The WIN objective was for workers to complete the CDL class with the knowledge of how to prepare themselves for any job-related certification which required the studying of a manual in order to pass an examination.

All of these problems and differences were worked out, and the classes were taught according to the WIN instructional model. However, there was no mutually agreed upon mechanism for addressing the issues, and unnecessary tension was created. Extensive damage control was required. If the WIN staff had initiated the partnership utilizing the participatory model described above, these issues and differences would likely have surfaced early on and would have been efficiently and effectively addressed in a far more agreeable fashion.

As this experience above indicates, we experienced a great deal of difficulty implementing our first Commercial Driver's License mini-course. In part this was due to our inexperience. However, it is important to understand that the federally imposed deadline for truck drivers to pass the CDL had already created a great deal of anxiety on the part of workers, supervisors, and management. The context was already highly charged. After these initial difficulties, WIN taught subsequent CDL mini-courses at a local child care center and at SWT.

Developing Curriculum

Develop workforce literacy curriculum around generic literacy strategies

Gather information to develop curriculum

Complete focus group interviews with workers

Complete focus group interviews with workers

Gather job-specific material

Observe the workers on-the-job

Develop a participatory classroom based upon needs assessment

Establish the logistics of the mini-course

Ensure confidential reporting procedures

Negotiate contract with business

Screen with context-relevant task

Re-assess the need and adjust the curriculum

Provide in-service for staff development

Develop workforce literacy curriculum around generic literacy strategies

We chose to design our curriculum to appropriately meet not only our educational criteria but business needs. Always crucial in workforce education, meeting business needs became more complex when working with several small businesses each having individual yet common needs. By concentrating on developing curriculum based on educating the workers in generic workforce literacy strategies rather than training for specific job content, the instruction was made flexible enough to meet the needs of workers from several small businesses. For example in our CDL mini-courses, we had workers attend who worked for SWT, the city of San Marcos, self-employed truckers, and child care providers who needed to drive day care buses. Literacy instruction, therefore, centered around generic reading strategies for reading a technical manual, planning and organizing material for study, studying techniques, and test-taking skills. These generic tasks were found to be appropriate whether the individual was currently driving a bus or a dump truck.

The focus on educating for generic, workforce education strategies rather than training for individual job skills also enhanced the transferability of the learning in several ways. The tasks should prove helpful in a variety of job advancement options such as studying for the Wastewater or Pest Control Certification. Topics like problem-solving and planning should be useful both in current and future job requirements. In addition, this generic task focus also enabled some participants to develop applications of these skills in their personal lives. For example, some workers stated that they now felt able to help their children learn to study school materials. Others noted the applicability of the studying and test-taking processes to the General Education Development (GED) certificate. These changing personal goals can be considered strong evidence of participants' increased academic self-confidence.

Gather information to develop curriculum

Complete a Small Business Literacy Task Analysis

An effective means for determining the educational needs of the businesses you hope to serve is a Literacy Task Analysis. Descriptions of the formal process can be found elsewhere (Drew & Mikulecky, 1988). We found we needed to modify this process to work with small businesses while retaining the three main points of triangulation: interviews, materials inspection, and job observation. Therefore, we created a Small Business Literacy Task Analysis (small business needs assessment). The purpose of the small business needs assessment is to look at each worker's job from several viewpoints in order to get a clear picture of the literacy tasks or demands involved in its completion. This analysis was particularly useful for the other three job families with which we worked (i.e., Custodial, Manufacturing, and Child Care). However, the uniqueness of preparing for a certification examination mitigated against a complete use of the small business needs

assessment in this job family. Therefore, we will explain how we completed it for the other job families and how we adapted it to fit this job family.

Complete focus group interviews with workers

For the other three job families, we formed focus groups rather than individual interviews within each organization in order to interview the various workers involved in a job (see above). Often in small businesses, several workers performed several jobs. Moreover, we found it important to get input from each level of the business organization. Management gave us a *big picture* of how each job fit into overall business needs, such as in terms of quality goals; the first-line supervisors contributed information about the problems with woerkers actually completing their goals; and the front-line employees were the *job experts*. Most times these focus groups were composed of people at each level discussing together. However, an uncomfortable management climate in some small businesses mitigated against focus groups. So, in these climates we interviewed the same players separately. In addition to the information-gathering function of the interviews, direct contact with each set of concerned workers early in the development cycle increased the commitment of the organization. This buy-in was crucial to our success.

Focus group interviews were not completed for this Equipment Operators Job Family since succeeding at the certification task had little to do with immediate job tasks. However, class discussions emphasized connections between the processes being learned in class and opportunities to apply these processes during actual job performance and at home. This was particularly true when discussions arose about correct answers on the sample tests we were using for instruction. Often, workers would connect the information presented in the questions to their jobs.

Gather job-specific material

The next step in our small business needs assessment was to gather all the materials which potential workers were expected to use when completing a particular job, as well as those general materials such as safety warnings, newsletters, and policy manuals which are part of their work environment. These materials were used to provide a functional context for instruction. In the CDL mini-course, a *Commercial Drivers License Manual* prepared by the Texas State Highway Department was used as the text. Similar manuals were used for other types of test preparation in the job skills mini-course. However, materials themselves should be carefully evaluated in the curriculum development process. Occasionally, what looks like a lack of necessary skills in the workforce can actually be traced to poorly designed materials. In our first iteration of this mini-course, we found the material to be at the frustration level for our workers. In other words, their ability to learn from the manual would be a frustrating task because of its difficulty. In this case, new materials rather than mini-courses might be suggested to more appropriately meet the business' needs. Since we did not have the luxury of selecting new material, nor the time to re-write the material to a more appropriate level, we chose to provide the workers with

test preparation and test taking strategies that would facilitate their ability to study the manual while preparing for the certification exam.

Observe the workers on-the-job

The third point of the triangulation for the other three job families was actual job observation. This gave us a context for the information gained in the interviews and provoked further clarifying questions about the literacy strategies of the workers. In addition, observation helped avoid misunderstandings of the nature of the job which would not be uncovered in an interview-only approach. Employees often did not realize the extent of the various literacy tasks required by their jobs nor did they identify them as such. For example, since the *reading-to-do* found on a job is different from the *reading-to-learn* remembered from school days (Mikulecky & Diehl, 1980) workers may say they don't read on the job, whereas observation gathers more accurate data on the frequency of their actual job-related interactions with print.

Job observation was not done before the Equipment Operators mini-courses. The certification task was not part of normal job duties and observation on the job was determined to be unnecessary. Instead, WIN staff members became familiar with the literacy demands involved in studying and test-taking for the certification exam.

Develop a participatory classroom based upon small business needs assessment

The curriculum was considered the road to our instructional goal. Therefore, based upon the small business needs assessment, we identified the basic topics, a sequence for the topics, some materials and handouts to be used, and pre-tests and post-tests before beginning the mini-course. Still, the curriculum was considered tentative until actual mini-course members were involved in the development. There are three important reasons for running workforce education mini-courses in this participatory manner. First, the workers are the *job experts* and their continuing input is essential to determining the validity of instruction. There is little time to waste in unnecessary instruction, and they are prime experts in what instruction is relevant to their needs. For example, suggestions made by class participants resulted in the elimination of a prepared vocabulary lesson and the incorporation of a trial attempts at taking sample CDL exams during class time.

Second, sharing the power of the mini-course tended to increase the commitment of mini-course members. This commitment was crucial to success and can be easily lost if the mini-courses come to be viewed as just something "done to" the workers by management or by educators unconcerned with them. This commitment is also enhanced because a

participatory approach demonstrates respect for the learners as successful adults who bring many skills with them to class.

Third, several of the underlying skills considered important by businesses today, such as those associated with problem-solving and teamwork, are developed best in the atmosphere of mutual respect fostered by participatory education.

Characteristics of an Effective Participatory Instructor:

Flexible

- willing to adapt new teaching strategies
- able to take and give constructive criticism
- able to approach problems and explain ideas from many angles, not just "This is my way, the right way."
- employs a team-player approach
- facilitates group interactions

Experienced in the Real World Application of the Content Area

- knows subject thoroughly to allow teaching from numerous perspectives and validating/building from learner's prior knowledge
- quickly builds bridges from academic jargon to real world contexts

Student-Centered

- sensitive to workers' perspectives
- able to listen, as well as lecture
- patient with disparate background knowledge and rate of progress of varied adult learners
- acknowledges learner gains in as many areas as possible, not just pre/post-test numbers
- shows workers s/he cares
- sensitive to multicultural issues

Establish the logistics of the mini-course

Educators who are used to working in an established educational institution often do not have to think of some of the logistics associated with developing a mini-course. However, we found workforce education requires a more entrepreneurial approach. Such things as finding a place to teach, discovering a source for overhead projectors and blackboards, and arranging for copying services must be done. One important item to consider was the confidentiality of a classroom site. One of our mini-courses moved to the community room of the local public library rather than use a training room in one of the involved organizations. Since the supervisors' offices were near the training room, employees sometimes felt that management could "look over their shoulders." The library room was better able to meet the workers' needs for confidentiality during class.

Ensure confidential reporting procedures

Confidentiality was also an issue for reporting student progress. We found it very important that the workers feel comfortable during the learning process. This was especially true of our workers whose past educational experiences had been negative. They needed to know that the inevitable mistakes they made while learning would not have a negative effect on their job ratings. To ensure this confidentiality as learners, we negotiated agreements with all employers to provide learner gain reports either in the aggregate or individually with randomly-assigned numbers, rather than in names of individual workers.

Negotiate contract with business

The project director needed to negotiate an informal agreement with the businesses for both programmatic and individual learner concerns. One aspect of this agreement was the incentives which were used to encourage workers to attend and the various ways workers were going to demonstrate their commitment. In the case of the Equipment Operators Job Family, some employers demonstrated their commitment by paying for either half or full release time for the workers to attend mini-courses. The employees demonstrated their commitment by regular attendance, which was reported to the companies by doing the necessary studying outside of class on their own time and by paying for their certification exams or licenses. Since the employees came to class during the regular working day there was no need for additional support structures such as child care or transportation.

Screen with context-relevant task

The process of screening for possible participants had two aspects: to identify those who needed assistance with the certification exams and to identify those who were not ready for the mini-course as designed and refer them to a further source of instruction. The screening process included several perspectives in order to get the most complete information to answer these questions. Perspectives included the worker's self-perception of need, the perceptions of management and supervisors, an interview with an educator during the first class to prepare the Individual Educational Plan and to assess possible English as a Second Language (ESL) needs and student goals, and written pre-tests/post-tests developed from the material in the certification manual and emphasizing test-taking and studying strategies. These several perspectives provided both qualitative and quantitative information for the educator to determine what is best for each student.

Re-assess the need and adjust the curriculum

The results of the pre-testing and interviews were then evaluated. At this point, some workers were referred to alternative educational providers for help with ESL or beginning literacy instruction. It was at this point also that the lack of work with the supervisors negatively affected the program during the first iteration of the CDL mini-course. Many of the workers had not been briefed by their supervisors about the pre-testing. This lead to morale problems since they were faced with a long pre-test unexpectedly. In addition, a cloze test was administered as a test of workforce education. This unfamiliar test format proved intimidating and, again, affected morale negatively. It was also found that several individuals needed to have their mini-courses taught in Spanish. Since the actual CDL test could be administered in Spanish as well as in English, a new Spanish-language section was added to the mini-course schedule. Such reassessment and adjustment following participant screening increased the effectiveness of the later iterations of the mini-course.

Provide in-service for staff development

A particular addition to our course development was the provision of staff development workshops. Most of our staff had not worked in workforce literacy environments, had little experience with qualitative and quantitative assessment, and had virtually no experience with the WIN instructional model. We solicited consultants from the field at large as well as from SWT to deliver three workshops. Outside consultants were hired to provide a two-day workshop to help us corroborate our priorities to demonstrate what for whom. This workshop was extremely fruitful to evaluate these priorities and document what information needed to go to whom. Two half-day workshops were given by the Program Director on the WIN Instructional Model as well as administration and scoring of the cloze instrument. For the novice instructors, these proved useful. In addition, the Instructional Coordinators held weekly staff meetings where instructional issues were

discussed, pedagogical strategies confirmed, and problems resolved. To foster transfer for instructors new to the program, several of the novice instructors sat in the class for an entire mini-course to observe and act as teacher's aide. For the next iteration of the mini-course, the instructor taught the course with the Instructional Coordinator observing and acting as a teacher's aide. This transfer of responsibility for instruction proved successful as performance varied little from those mini-courses taught by the Instructional Coordinator and those taught by instructors new to the program. We would, therefore, recommend you solicit consultants for staff development in curriculum development, the WIN instructional model, and qualitative and quantitative assessment. We would also recommend regular staff meetings with an experienced Instructional Coordinator to serve as a resource person for instructors.

Teaching the class

Teach process not content

Use WIN four-part instructional model

Initiating event

Modeling and large group discussion

Guided practice

Independent practice

Graduation ceremony

The original intent was to develop a general course for workers from the Equipment Operator Job Family. However, discussions with employers showed that the new CDL law was a problem for many workers in this category. Other workers needed to take certification tests for pest control or wastewater licenses or for other types of job advancement. Since there is a current trend toward mandatory certification tests in many job areas, WIN staff decided to develop a mini-course for this job family focused around the literacy tasks necessary to successfully take standardized certification tests.

One of the main instructional goals in designing the certification courses was the instructional *process* of teaching workers how to learn independently. Workers were expected and guided to contribute greatly to the pacing and presentation of ideas (see WIN instructional model below). This method of teaching surprised many of the workers who, following the traditional model, initially expected the mini-course to consist largely of lectures on specific test areas. Workers were also surprised to be forming, then answering their own questions about subjects. However, since the WIN instructors did not necessarily know how to drive trucks but did know how to study and take standardized tests, participants adjusted to the idea that they were the driving experts and had important contributions to make to the mini-course.

Other aspects of the instructional model, detailed below, contributed to a consistent effort to model and practice the *process* of independent, holistic learning by using the *content* derived from certification manuals. For example, we identified generic literacy tasks, such as time management and problem solving, to perform successfully on these exams. Time management was selected since a schedule for studying the manual needed to be developed by each individual. A problem-solving unit was also included since the participants needed to evaluate their studying progress, adjust their techniques if necessary, and anticipate/solve possible problems during the exam. More detailed information about other generic literacy tasks for certification can be found in the syllabus and sample lesson plans in Appendix A of this guide.

The studying for certification course consisted of 20 hours of instruction: two-hour classes held twice each week for five weeks. This mini-course structure was based on a combination of business constraints, pre-test performance scores, and the number of identified literacy tasks. We felt that a twice-a-week mini-course spread out over five weeks gave the participants the time needed to practice and refine their use of the techniques from class in actual studying at home and in practice tests in class. Moreover, this structure was not so long as to be interfering with their personal preparation for the CDL certification exam. The usual two-day seminar of traditional training would not have permitted this guided growth process.

Use WIN four-part instructional model

A process-oriented educational philosophy formed the basis for our four-part instructional model (Caverly, Burrell, Austin, & Wedig, 1992). The first step in this model involved an initiating event which engaged the prior knowledge of the workers, who were considered the content knowledge experts for their jobs. Next, the teacher modeled literacy strategies, using a large group discussion format, for accomplishing those literacy tasks we were able to identify via the small business needs assessment and through participatory learning with the workers (see above). Small groups then collaborated on workplace related literacy tasks which required the use of these new strategies. This small group emphasis developed the communication and teamwork skills which are sought by employers, while at the same time developing workers' strategies for accomplishing the workplace literacy tasks. Finally, learners worked to apply their new understandings during independent practice on workplace and home related literacy tasks.

WIN Instructional Model

Initiating event/focusing activity

- engages prior knowledge
- builds on learner strengths
- demonstrates relevance/connection of new knowledge to old knowledge

Teacher modeling/large group discussion

- uses master/apprentice conception of literacy
- demonstrates metacognitive strategies
- validates a variety of strategies from students

Small group collaborative practice/application

- encourages a community of teachers/learners
- gives learners opportunity to develop teamwork skills being emphasized by business
- safe risk-taking environment, especially for LEP students

Individual practice/application at home and work

- transfers strategies to variety of contexts
- encourages metacognition
- incorporates writing across content areas

Initiating event

At the beginning of the mini-course, activities were oriented toward engaging the background knowledge of the workers. Starting with information the learners already knew reinforced their self-confidence about the importance of their prior knowledge and lessened the feeling of the class as remediation. Starting instruction by building on strengths already held also decreased the alienation and helplessness many workers felt toward learning. The participatory nature of the mini-course was enhanced by acknowledging the co-learner status of instructor and student, with workers as experts in job content and instructors as experts in applying learning strategies. The brief "survey" of background knowledge also served as a mini-diagnosis for the teacher. He/she could have a rough idea of the level of expertise of each of the workers and so know at what level to begin instruction, what analogies would be relevant in teaching, and who could be called upon early as an "expert" to help model concepts. Examples of initiating events for the CDL mini-course include discussing what the workers knew about the differences between normal and air brakes, or what experiences and possible problems workers had experienced with brakes in the past. Other examples of initiating activities can be found in the Lesson Plans in Appendix A.

Modeling and large group discussion

The next step in the mini-course was the instructor modeling techniques for preparing for and taking certification exams such as the CDL. For example, during this process the instructor would model and work with the students on creating a semantic map of their knowledge of air brakes from their own job knowledge and the information in the manual. Think-alouds, described below, were often used for demonstrating a variety of reading comprehension and studying strategies necessary for understanding and remembering the information from their prior knowledge and that new information from in the *Commercial Drivers License Manual* . The instructor would talk about his/her search for meaning while encouraging class members to contribute their ideas. Instructors and workers talked about not only the *what* (i.e., the content) of the text meaning, but also the *how* of arriving at meaning. Comprehension and studying strategies demonstrated and discussed included vocabulary context clues, predicting information and reading to confirm, marking text with question marks, and underlining and questioning to monitor comprehension and recall. A useful checklist of reading strategies can be found in Soifer's *Complete Theory -to-Practice Handbook of Adult Literacy* (1990).

The combination of teacher modeling and large group discussion was very flexible and could be altered as needed according to the progress of the workers. Some methods were modeled almost exclusively by the instructor the first time. Other methods were presented mostly by the workers, with the instructor facilitating a summary, if necessary.

Guided practice

The next step added a guided practice for the literacy techniques introduced during the modeling and group discussion step. For example, reading and studying strategies were applied collaboratively on a different part of the manual. Workers usually formed their own groups of 2-5 members. They were encouraged to talk aloud about their problem-solving process in order to arrive at a consensual understanding about the literacy strategy they were learning. In addition, after a test reasoning strategies had been modeled, participants would work in pairs on a multiple choice practice test. Each would choose answers and then explain these choices to their partner. Later, each pair might report to the group on how they arrived at the answers.

This small group practice was intended to mirror and evaluate the strategies learned during the large group modeling, but with much less direction from the instructor. The instructor's role in this step changed from director to facilitator. Workers were encouraged to actively involve all group members in a discussion of each student's understanding of how to use the strategy. If questions arose as to the correct answer on a practice test, for example, the instructor's first response was usually, "What does your group suggest? Who have you asked within your group?" This small group, collaborative activity validated workers' roles as co-teachers and encouraged workers to think of knowledge as being actively constructed, not passively received. Problem-solving was guided toward being an on-going collaborative effort, not a random guess for the right answers to complete the worksheet.

Independent practice

The fourth step of the WIN instructional model provided the workers with a chance to independently practice the new literacy techniques. For example, after the problem solving unit, the participants were asked to figure out what was interfering most with their ability to study at home, develop some possible solutions, implement one, and report back to the class whether or not it had worked adequately.

Graduation ceremony

A final component of each class was recognition for the workers who participated. A brunch was given in honor of those attending each class at which Certificates of Attendance were presented (see Appendix B for an example). This brunch was attended by program staff and workers' managers and supervisors, and pictures were taken for the local newspaper and company newsletters. This recognition provided feedback to the workers on the importance we place on literacy improvement. For adults who had had little if any academic success in their lives, this recognition was well- received.

Assessment and Evaluation

Worker's perspective

Instructor's perspective

Evaluator's perspective

Conclusions

Summary

With our participatory approach, the responsibility for each class's success was shared by workers, teacher, and evaluators. Workers were constantly encouraged to provide feedback to the instructor and to monitor their satisfaction with class progress. Instructors were encouraged to assess and adapt their instruction to the workers' needs. Evaluators were encouraged to assess the workers' progress with tools that informed both the student and the instructor. This triangulation led us to select some specific assessment tools while we developed others in a formative effort to identify the most valid instruments and procedures for evaluating worker progress.

Worker's perspective

Develop an Individual Education Plan

At the outset of each class, instructors completed an interview with each worker to design an Individual Education Plan. Using the *WIN IEP Interview Form* (see Appendix B), instructors orally interviewed each worker. This information helped the instructor to screen for workers who were in need of ESL instruction and identified the worker's goals and aspirations for the class. This information was then used to adjust the curricular goals for the class (see below).

Collect on-going feedback from workers

A second, effective procedure was to request from workers their perceptions on the success of a given class as it was in progress. To gather this information, we constructed a *WIN Formative Evaluation Form* (see Appendix B) and administered it during the mini-courses. This form provided the instructor of the mini-course instant feedback from the workers about the most and least useful parts of a given lesson. It further gave instructors information about problems early enough during instruction so that immediate corrections could be made. The anonymous, written format not only helped some workers express themselves more freely than an oral format, but it provided a forum to practice writing strategies.

Collect transfer feedback from workers at the end of class

A third procedure for gathering evaluation information which we found useful was to have workers complete a *WIN Participant Observation Form* (see Appendix B) on the final day of class. This information helped confirm the extent of transfer that workers were making from the class to the literacy requirements of the their job and their personal lives. It also uncovered any global dissatisfactions, such as too little time to prepare homework between classes.

Collect exit interview feedback

A fourth procedure was an exit interview conducted with each participant. During this conversation, oral feedback was gathered from workers to confirm the transfer of the class information to work or to home (e.g., sample information received, "I have a job since I

passed the test" or "I can teach my kids how to study"). Information from these exit interviews was then compared with the student's Individual Educational Plan (IEP) designed at the outset of the course and examined for goals achieved and new goals set. These new goals helped program staff determine new mini-courses that needed to be offered or referrals to other community service or educational programs for additional support.

Instructor's perspective

These same four tools used for the worker's perspective helped inform the instructor's perspective for each course. These tools gave the instructor information about the workers' progress in learning the strategies, their concerns about strategy usage, and any transfer of strategies to work and home literacy task demands.

Additionally, short sample exams were utilized in a modified portfolio assessment procedure for some classes. These exams provided workers and instructors with useful quantitative and qualitative information. Workers gained awareness concerning their ability to transfer strategies learned in class to performance in the workplace. Instructors gained insight into what aspects of the curriculum seemed to connect with worker goals and suggested areas where further course development was required.

Evaluator's perspective

A variety of instruments were also used to document worker gain from the evaluator's perspective. We were attempting to document gain in both workplace literacy and general literacy from both quantitative and qualitative viewpoints as well as to document improved productivity. Several instruments were piloted to find the best mix which would be both informative and non-intrusive to formatively evaluate the curriculum. This also would provide a triangulation on the worker's perceptions and the instructors perceptions as measured by the informal procedures discussed above.

Initially, we attempted to use a cloze test to measure workforce education. For the first iteration of the CDL mini-course, two cloze passages were constructed from the introduction to the *Commercial Drivers License Manual*. Two passages were constructed since this mini-course was only 5 weeks in length and we wanted to guard against a practice effect. These passages were constructed to be as similar as possible taken from the same material, same length, and similar topics. Nevertheless, workers reported being uncomfortable with this cloze task, and their performance reflected it. All but one worker performed at frustration level on the pretest instrument. This suggested the workers had either extremely low reading levels given the task demands of the CDL manual, or it suggested workers' performance on the unfamiliar cloze task did not provide an accurate measure of their performance. The instructors believed it was more the latter. Because

they believed it did not inform instruction, they chose not to continue using the cloze in subsequent iterations of the mini-course.

Instead, a standardized reading test, the *Adult Placement Indicator (Hadley Press, 1992)*, was selected as a quantitative indicator of general literacy performance level. The *Adult Placement Indicator* satisfied our non-intrusive criterion, since it was typical of most traditional general literacy measures and our workers reported being more comfortable with its format. Performance on this instrument suggested almost all of the workers were approximately at the eighth grade level in ability, informing the instructors that most of the workers could handle the CDL study manual. It also served us as a screening instrument finding several workers who were Limited English Proficient. These workers prepared for the CDL exam through individualized and small group instruction. In conjunction with the LEP specialist, each worker chose whether to take the test orally in English or in Spanish. All of them passed the CDL test. In terms of real world outcomes, the adult placement indicator proved an effective screening and placement instrument Nevertheless, from the evaluator's perspective, this instrument left much to be desired in terms of aiding us in assessing workforce education.

Next, two sample CDL exams were constructed to be used as a pretest and posttest in the equipment operators mini-courses. In many ways, these can be thought of as a measure of work related literacy as they reflect typical certification examinations found in the workplace. Since the goal of this mini-course was to educate workers to perform well on any certification exam in general, and the CDL exam in specific, "reading" this multiple-choice test and its directions are as work related as might be possible for any workforce education assessment instrument.

These two CDL sample tests were developed by the Program Director to reflect the CDL exam and were constructed from material presented in the *Commercial Drivers License Manual* prepared by the Texas State Highway Department. These two exams consisted of eight subtests reflecting one subtest for each of the seven sub-areas measured by the CDL (i.e., General Knowledge, Air Brakes, Combination Vehicles, Passenger Vehicles, Double-Triple Vehicles, Tanker Vehicles, and Hazardous Materials) and one subtest for the workers' knowledge of those study strategies (i.e., test preparation, test taking, time management, and problem solving) taught specifically in the class (see Appendix A). All workers took the study strategies subtest and the General Knowledge subtest. In addition, each worker self-selected specific CDL subtests for which s/he were preparing to be certified.

To satisfy our concerns with attrition rates in traditional adult education programs, we measured attendance rates for our seven classes. For this mini-course averaging 22 hours of instruction, the attendance rate averaged 89%. This was significantly above the national average of 50-75% (Chisman, 1990). We argue our participatory, collaborative approach to workforce literacy has much to do with this reduced attrition.

Finally, we wanted a measure of productivity. We chose passing the CDL examination as an indicator of success. All but one worker who completed the mini-course went on to pass the CDL examination and receive their certification. This success also can be attributed to our participatory, collaborative approach to workforce literacy.

We would, therefore, recommend a variety of job-specific literacy measures. Specifically, if a measure of general literacy is desired, we would recommend using the *Adult Placement Indicator* to screen students into the most appropriate level of instruction, to inform both workers and instructors about general literacy performance, and to document transfer of workplace literacy performance to general literacy performance for the evaluator. However, we would recommend selecting workplace material that is more appropriate to the worker's performance level when utilizing a cloze test. Continued experimentation with the cloze should include selecting or designing workplace related material that is more appropriate to the worker's performance level when creating a cloze test. While several workforce education experts believe the cloze test is the most viable measure of the reading process, our experience indicates that instructors, students, and program administrators found the cloze results to be of limited diagnostic and comparative utility. Continued experimentation with cloze test administration and interpretation is recommended. We would recommend experimenting with correlating performance on certification type examinations with general literacy performance as an attempt to measure workplace related literacy skills needed for performing well on such exams. Particularly promising is the work of Mosenthal and Mosenthal in the area of document literacy (cf., Mosenthal & Mosenthal, 1991). We would also recommend experimentation with the portfolio based qualitative assessment instruments. These qualitative instruments could replace the traditional literacy measure and the cloze test as multiple literacy performances are documented into a portfolio. Finally, we would recommend monitoring attendance to confirm whether the WIN Instructional Model will reduce attrition in other job settings.

Conclusions

The final responsibility of any workforce literacy effort is determining whether the needs of all concerned parties have been met and then communicating this to each stakeholder. One of the complicated aspects of workforce education is the number of stakeholders who may be involved. In our case, we had eight separate stakeholders for each mini-course: SWT, the WIN program staff, the USDOE, an outside evaluator, each of the workers, each of the businesses, the two Chambers of Commerce, and the workforce literacy field at large. In order to clarify these priorities, we solicited outside consultants. This proved to be extremely fruitful as we were introduced to an elegant evaluation method developed by Paul Jurmo that demonstrated answering the questions: "WHO wants WHAT MEASURE for WHAT PURPOSE". This was not only simple, but useful for our formative evaluation and our summative evaluation.

Following this suggestion, we chose to satisfy these stakeholders on two levels. On a long-term level, SWT, the USDOE, an outside evaluator, the two Chambers of Commerce, and the workforce literacy field at large will receive this document to inform them in future decisions about workforce literacy implementation for small businesses. On a more immediate level, the WIN staff and the workers received the information to meet their needs for refining the curriculum and the instruction. Moreover, on an immediate basis the *businesses* received attendance data to maintain their payroll records. Learner gain data was also reported on an immediate basis to the businesses. However, we reported it anonymously or in the aggregate. We found it vital to make sure that needed feedback was given to and received from each stakeholder at this immediate level and that this communication was fostered so that future mini-courses could be developed.

In the end, we determined five questions should be answered by this WIN demonstration project. These questions and the answers also document the success of this project.

Did we reach our service goals?

Our project as a whole served 232 workers in four job families from 33 separate small businesses. In this Equipment Operators Job Family specifically, we offered five iterations of one mini-course to 40 workers. Of those 40 workers, 37 successfully completed the mini-course for an average retention rate of 92.5%, significantly above traditional adult literacy retention rates of 50-75% (Chisman, 1990). Most significantly, 36 of the 37 workers obtained their Texas CDL license with their desired endorsements. In the case of the one who did not, his employer did not encourage him to pursue the license.

Was instruction successful?

The holistic, participatory nature of our instruction proved successful from both qualitative and quantitative perspectives. We were able to pilot quantitative and qualitative general and workplace specific literacy measures and assess the effectiveness of each. We were able to develop informal measures of workforce education from the workers', the instructors', and the evaluators' perspectives. We were able to arrive at a definition of productivity as being the workers' passing the certification examination.

We piloted the use of a cloze measure of workforce education. Taken from the introduction of the *Commercial Drivers License Manual* prepared by the Texas State Highway Department, two cloze tests were constructed. Performance for the pretest, for the first iteration of this mini-course, averaged 27% and averaged 32% for the posttest. This data suggested that the CDL manual was, for the most part, at the frustration level for the workers in this class. In other words, attempting to study the manual on their own generally would prove to be a frustrating task for this group of workers. While these workers improved in their workplace literacy on the posttest, it was not sufficient to allow them to study the manual on their own. This was, we believe, more an artifact of their familiarity with the cloze task than a true measure of their reading performance. We draw this conclusion from their performance results when actually taking the certification examination. All but one worker passed the exam on his/her first attempt. Therefore, the study strategies taught in the mini-course proved to be successful for these workers when faced with the task demands of performing on an exam. The fact that the workers did not perform to an appropriate level on the cloze test is, we believe, more an artifact of the sensitivity of the cloze test in measuring workplace related literacy strategies for this task.

Since all workers only completed two subtests, only those results will be reported. Gain on the study strategy subtest was generally positive for the five iterations of the mini-course ranging from no gain to 17% gain with an average gain of almost 10%. Gain on the General Knowledge subtest was even more positive ranging from no gain for the first iteration of the mini-course to 32% gain for the last iteration with an average gain of 18.13%. This performance gain was robust and consistent over the five iterations of the mini-course with three different instructors.

Perhaps more importantly, anecdotal reports indicated that workers found greater academic self-confidence and increased literacy skills by participating in the mini-course. Workers reported feeling more free to participate in workplace conversations with peers and supervisors and better able to understand written directions as presented on certification exams. Several workers mentioned that they felt more able to participate in family literacy activities, such as helping children with homework or preparing for their exams.

Did the mini-courses continue beyond the granting period?

The 18-month life of this grant was not long enough to deal with the whole of the community need for workforce literacy in preparing for certification exams. WIN Advisory Council meetings and discussions with former and current workers indicate a continuing need for the types of literacy instruction covered in the mini-courses offered for this Equipment Operators Job Family.

Under what conditions is this project replicable?

WIN's instructional model has demonstrated its flexibility and replicability by being used in eight different mini-courses across four job families: Custodial, Child Care, Manufacturing, and Equipment Operators. Within the Equipment Operators Job Family, the model was used for a *Commercial Driver's License* mini-course. These mini-courses were taught by three different instructors to test out the transferability to instructors and to workers from a number of workplaces. The holistic, participatory nature of our

instructional model should be replicable to a number of sites outside the San Marcos area. The applicability of our specific lesson plans (as found in Appendix A), however, will depend on the degree your workers, business climate, and other resources match our program.

How was the project disseminated?

The WIN demonstration project has produced several tangible end products. This guide contains a narrative of our process for developing mini-courses for Equipment Operators Job Family workers, course outlines and lesson plans, sample administrative forms, original qualitative and quantitative assessment instruments and accompanying user's information, and a selected bibliography. Similar guides exist for mini-courses for the Manufacturing, Child Care, and Custodial Job Families. The mini-courses for the Manufacturing Job Family teach mathematical constructs from basic operations, to working with decimals, fractions, and blueprints to reading machinist measurement instruments. The mini-courses for the Child Care Job Family teach strategies for accessing print resources to solve job-related problems as well as writing to apply for certification. The mini-courses for the Custodial Job Family teach strategies for accessing print resources to solve job-related problems as well as writing for clerical job tasks. Within each guide, program implementation strategies from both an administrative and an instructional viewpoint are also provided.

There are several important reasons for a thorough dissemination of this project's results, and several different strategies are required to accomplish such a dissemination. One need was to create good public relations for the project and its partners. To do this we have been in contact with various state and local news agencies. This is a successful literacy program that needs to be part of the community consciousness. We would recommend you promote your workforce literacy program to solicit future endeavors.

Next, we wished to benefit and strengthen the newly emerging field of workforce education. For this, we needed to produce publications for a professional audience and make presentations at relevant conferences. This audience of experts helped us through peer review to refine our own program. The qualitative assessment instruments were introduced at a workforce education conference in Dallas, and the WIN instructional model was presented at the national COABE conference in Bismarck, ND at the annual national meeting of the National Association of Developmental Education in San Antonio, TX at the annual meeting of the College Reading and Learning Association in San Francisco, CA, and at several state and regional conferences.

Next, and perhaps most importantly, this material should be used in a continuing effort to educate the business community about the need for workforce education and the resources which are available to meet that need. In order to do this, we have disseminated this instructional program guide to national workforce education organizations. WIN staff plan to adapt the material presented in the guides to formats appropriate for business trade journals and other commercial media. We must cultivate an understanding of business needs and develop a presence within business-oriented organizations. This will help us create the true business-education partnership needed to guarantee this country's economic future.

Summary

Our project demonstrates that a holistic, participatory, process-oriented workforce education program created in partnership with a small-business community within a small city can meet the needs of both employees and employers in overcoming the skills gap currently existing in business and industry in this country. Furthermore, we assert that the participatory approach is essential in developing those Information Age skills like problem-solving, teamwork ability, and communication skills. In addition, the process-oriented rather than content-oriented nature of our instructional approach will support the growth of workers who must be flexible enough to cope with a constantly changing work environment by transferring their learning skills to each new situation which calls on them to master a new machine, work comfortably with a new process, or make a positive contribution as part of a restructured organization.

Appendices

Appendix A: Sample Course Outlines and Lesson Plans

Appendix B: Evaluation Forms

Selected Bibliography

- *Workforce Skills*
- *Background Theory*
- *Practitioner Resources*

APPENDIX A

SAMPLE COURSE OUTLINES AND LESSON PLANS

Lesson 1-Expectations (What is this all about?)

I. **Materials**
   A. WIN registration form for each student
   B. 10 County registration form for each student
   C. pre-test analysis sheet for each student
   D. completed pre-test for each student
   E. blank Class Feedback form for each student
   F. several blank pre-tests
   G. SWT notebook and folder for each student
   H. pencils
   I. Commercial Drivers License manual for each student

II. **5 minutes-Introductions**
   A. have teacher introduce self
   B. have each one introduce self

III. **5 minutes-PAIRED DISCUSSION: CDL questions**
   A. form pairs to pool any questions each has about CDL test
      1. make sure to emphasize taking turns, writing down for later sharing with the whole group
      2. **do teacher modeling before start discussion**

IV. **1 minute-TEACHER MODELING: taking group notes**
   A. mention writing ideas rather than whole sentences, forget spelling
   B. do a think aloud for the process with imaginary group
      1. choose a recorder/reporter
      2. clarify as take notes "You said ... what types of trucks?"
      3. same basic guidelines with small groups, pairs, large groups, alone

V. **Please ask someone to record what goes on board in all discussions-perhaps the man from SWT Physical Plant? John says he has a college degree.**

VI. **10 minutes-LARGE GROUP DISCUSSION: CDL questions**
   A. ask each pair to state their questions and write on board
   B. solicit answers from the group and write after each one
   C. if there are unanswered questions have group decide how to get answers

VII. **5 minutes-SMALL GROUP DISCUSSION: class expectations**
   A. form groups of 3-5 to discuss questions "What do I want to get from this class?" "What do I expect to do for this class?" "What do I expect the teacher to do?" "What does the teacher expect me to do?"
   B. emphasize taking turns, writing down for later sharing
   C. have them develop as many ideas as possible

VIII. **15 minutes-LARGE GROUP DISCUSSION-expectations**

A. ask each group for their expectations and write on board
B. try to categorize answers i.e. teacher's job, my job
C. make sure to mention:
    1. we won't be using "transfer CDL info to your brain" model but showing them tools they can use to get the info themselves
    2. using these techniques outside of class to study is the only way to test them, see if they work for you
    3. may or may not be ready to take test right after class
    4. there is a deadline and a lot of material to study-need to develop a plan to work on it
        a) do whatever you would do normally to prepare for CDL test
            (1) use it until then to see how well it will work
            (2) pay attention to any problems you are having in implementing plan and note any successes
        b) next Thursday will talk about the plans

IX. **5 minutes-GROUP DISCUSSION: group benefits**

A. ask the group questions about the process:
    1. did anyone have same questions as others?
    2. was anyone glad to get the answer to someone else's question?
    3. was there anything uncomfortable about the process?
    4. do you work in small groups in other areas of life?
        a) possible areas-PTA, church/political committees,
B. we will do a lot of small and large group discussion
    1. we can learn from each other
    2. we know about manuals and studying but you know about trucks
    3. can use these ideas in other areas-form study groups

X. **10 minutes-PAPERWORK: WIN and 10 County forms**

A. complete registration forms as a group
B. teacher presents appropriate codes and assists

XI. **2 minutes-TEACHER MODELING: pretest question analysis**

A. teacher passes out one pretest analysis form for each student
B. teacher demonstrates the steps to analyzing/recording the incorrect questions from the pretest
    1. mention how that helps study needed sections
    2. mention pre-test just says where you start NOT how far you can go
C. teacher passes out completed pretest to each student

XII. **10 minutes-PAPERWORK-pretest question analysis**

A. students record their missed questions on form

XIII. **45 minutes-students do pretest who have not done it**

A. may need to finish later or schedule it for study hall time

B. people who have completed pretest can study

1. might look up sections from analysis sheets
2. **Please do not give out answers to pre-test since I want to use those questions for continued testing and class examples**

XIV. **2 minutes-GROUP MODELING: filling out feedback sheet**

A. this will be given out after each class and needs to be turned in at next class

B. teacher will make comments and return

C. note last questions require you to do something between classes-it's up to you and your schedule what you plan-please be as realistic as you can

D. do a think aloud about how this class has been as you complete your sheet

XV. **5 minutes-INDEPENDENT PRACTICE-feedback sheet**

A. have students complete their sheets as far as possible up to creating their own homework

B. remind students to fill out last question just before next class

XVI. **Remember: no class on MONDAY-meet THURSDAY 14th**

Lesson 2-Reading/Planning (How do I do all this?)

I. **Objectives**
   A. analyze current study plans
   B. learn format of manual and CDL test
   C. incorporate manual format into study plans
   D. prepare a new plan to study a particular section for a test next class period

II. **Materials**
   A. blank Class Feedback form for each student
   B. several blank pre-tests for new students
   C. pencils and notebooks
   D. Commercial Drivers License manual for each student

III. **Ask someone to record what goes on board**

IV. **5 minutes-JOURNAL QUESTION: finish analysis of last study plan**
   A. did you **do** the studying?
   B. did you feel you **learned** anything?
   C. ask about any questions with journal process

V. **10 minutes-LARGE GROUP DISCUSSION: usual study plan**
   A. was anyone satisfied with their plan
      1. why do you think it worked?
      2. was it realistic?
      3. was the studying effective?
   B. was anyone dissatisfied with their plan?
      1. what went wrong?
         a) unrealistic?
         b) ineffective?
      2. what could you do to fix it ?

VI. **30 minutes-GROUP MODELING: using the manual**
   A. write on the board students ideas about how to approach manual
      1. how do you plan to use this manual?
         a) review what I know
         b) learn new things
         c) get an overview
         d) concentrate on small sections
         e) look for answers to particular questions

2. how would you change your reading in each case?
   a) NOT start from beginning and read to the end
   b) skim, scan, look only at subheads
      (1) **10 minutes -TEACHER MODELING: skim, scan, using subheads, table of contents**
3. what is the first thing you do when faced with this manual?
   a) ideas-figure out what I want from it, use table of contents, look at how it is organized
   b) manual organization points
      (1) sections
      (2) subheadings
      (3) test questions

B. first rule of reading-it's a tool to get what you choose

VII. **15 minutes-GUIDED PRACTICE: using the manual**

A. teacher asks several questions that the students must use manual to answer and which uses different reading forms
   1. everyone raise hand when have the answer
   2. tell how answer was found
      a) where does it say under what conditions you can lose your license?
      b) how many steps are in the pre-trip inspection?
      c) what do you do whan your truck skids?
      d) how do you hook up a combination?

VIII. **5 minutes-PAIRED DISCUSSION: what do I know about CDL test?**

A. form pairs to pool information about the CDL test and report to group
B. re-model paired reporting procedure
C. especially interested in answers to questions from last Thursday

IX. **10 minutes-LARGE GROUP DISCUSSION: what is CDL test like?**

A. ask each pair to state their information and write on board
B. notice the difference in the organization of manual and test
   1. relate format of manual to format of test
      a) some subdivisions differ
      b) which do you need to study?
   2. which will you use to fine tune your study plan?
      a) studying what need to study
      b) pacing the studying

X. **<u>15 minutes</u>-LARGE GROUP DISCUSSION-learning**

A. before talking about studying let's talk about learning

1. difference between recognition and recall
   a) ask students to tell group one thing learned studying last time
      (1) without book-recall
      (2) with book-recognition
   b) different study techniques for each and use in different situations
      (1) multiple choice question-often recognition BUT if 2 close answers will need recall
      (2) essay question-need recall
      (3) pre-trip inspection?
      (4) driving test?
2. how does one learn something new
   a) relate it to what you already know
   b) use it -you need to study all along and take tests
   c) teacher draws "bull's eye" on board-outer circle as new knowledge, middle circle for recognition, and midpoint as recall where "own it"

B. different kinds of knowledge may need to study differently

1. what things are-skid
2. how to do things-avoiding a skid
3. under what conditions (when)-when it's icy or wet

XI. **<u>20 minutes</u>-GUIDED PRACTICE-creating a new study plan**

A. prepare a new plan to study a particular section for a test next class period

1. test-taking skills can help but don't substitute for knowledge
2. steps to planning (group discussion/modeling)
   a) figure out goal- test on general knowledge section Monday
   b) figure out a basis for organizing plan material
   c) figure out a basis for organizing plan time
   d) put it in writing-committment to self
3. anticipate biggest problem in fulfilling plan and try to solve in advance
   a) think about what went wrong last week in studying
   b) what can you change in today's plan
4. share plan with someone for reality check

XII. **10 minutes**–**JOURNAL QUESTION: filling out feedback sheet**

A. collect last journal-will return Monday with comments
B. give out next journal-needs to be turned in at next class
C. note last questions require you to do something between classes-it's up to you and your schedule what you plan-please be as realistic as you can: this is creating your own homework.
    1. can staple new study plan to journal sheet rather than rewrite
D. remind students to fill out last question just before next class

XIII. **Remember: next class on MONDAY 18th and Study Hall every Thursday 11am-1pm.**

Lesson 3-Test Reasoning/Organizing Ideas (What do I do next?)

I. **Objectives**
- A. identify idea relationships: superordinate, subordinate, supporting details
- B. learn to express these relationships in outlining, mapping formats
- C. relate relationship ideas to manual format and organization
- D. evaluate current study plan
- E. modify study plan with notetaking techniques
- F. test experience-reasoning through a problem

II. **Materials**
- A. blank Class Feedback form for each student
- B. blank copies of practice test for each student
- C. pencils and notebooks
- D. Commercial Drivers License for each student
- E. outline worksheet on brakes
- F PRACTICE TESTS

III. **5 minutes-JOURNAL QUESTION: finish evaluation of study plan**
- A. make sure the study plan is attached to the feed back sheet
- B. make sure you have answered these questions on the plan
  1. what you did, when, where, and how you did it
- C. did you do the studying?
  1. why or why not?
- D. did you learn anything?
  1. did your procedures work or not?
  2. why do you think so?
- E. how do you think you will do on this test?

IV. **20 minutes-TEST EXPERIENCE: practice test on Prologue, Sec.1**
- A. study while the test is being scored
- B. return tests

V. **20 minutes-GROUP MODELING: reasoning through a problem**
- A. teacher chooses one question that everyone or most missed and goes through the process of reasoning through a question
  1. the teacher models and asks group for ideas on some steps
     a) step one: be sure you know what question is asking-rephrase
        (1) be careful of negatives and word definitions

b) step two: answer the question in your own words before looking at the answer choices given
   (1) helps guard against distractors
c) step three: see if any choice matches your own answer
d) step four: look at all answer choices even if you found one you liked in step 3
   (1) when two answers are both good choose the best
      (a) it covers more circumstances i.e.
         i) When you plan you should
            (1) a. know your goal and procedures
            (2) b. set your goal, your procedures, & specific time
      (b) it is more often true i.e.
         i) Many people study too hard because
            (1) a. they don't know effective ways to study
            (2) b. they think it will make them better people
   (2) be cautious about any answer which uses absolutes like must, never or always since <u>any</u> exception makes it untrue
   (3) if there are opposite answers look at these closely
e) step five: narrow down the answer choices one by one
   (1) state what each one means in your own words
   (2) use your common sense as well as manual material
   (3) see if any are wrong, not even close
      (a) this may eliminate another like "all of above"or "A and B"

   (4) see if are any exceptions to positive or negative statements
      (a) this may eliminate "all of above", "none of above", etc.
f) step six: choose the best one of those not eliminated before
g) step seven: narrow down choices as much as possible (increase your odds)
   (1) guess among remainder if necessary
   (2) choose "B" or "C" rather than "A" or "D" if necessary
   (3) do not leave blank
      (a) if no deduction for wrong answers
      (b) blanks-more likely to mess up numbering on score sheet

VI. **15 minutes-GUIDED PRACTICE: reasoning through test questions**
   A. have students form pairs and each one in turn explains how got one of their test questions right (but that the partner got wrong if possible)

B. in same pairs each student in turn tries to reason through one they got wrong (but their partner got right if possible)
C. teacher listens to explanations and asks questions as necessary of pairs

VII. **5 minutes-BREAK-talk together, stretch, ask questions, whatever**

VIII. **20 minutes-INDEPENDENT PRACTICE: reasoning through questions**
A. each person reasons through a question s/he got wrong with the teacher
B. other students make a study plan correcting problems had last time

IX. **5 minutes-LARGE GROUP DISCUSSION: taking notes**
A. teacher begins discussion with question "Who took notes last class?"
1. if no one did-write on board reasons why not-followed by reasons it could be useful
2. if someone did-write on board why and brainstorm more reasons it might be useful
3. emphasize: external memory device, own style, concentrate on ideas instead of word for word i.e. planning steps from last time
B. can take notes on manual as well as in class-same goals (know/recall)

X. **15 minutes-GROUP MODELING: idea organization**
A. last class talked about organizing material for recall
1. according to what a thing is, how its used, and under what conditions
2. showed how much easier it is to remember a pattern and how you can remember the whole pattern by remembering one piece
3. main rule-do it so you can use it-whatever way works best for you
a) try these new ways to see if work
b) expect them to feel awkward at first-tennis example
B. now talk about two specific ways to show that organization
1. outlining-shows idea hierarchies
a) main idea-superordinate-most important (whole pie, Army)
b) subordinate-less important usually a part of superordinate (pieces of pie, Army Divisions)
c) supporting details-each apple slice, each person in the Army
2. mapping-shows relationships among ideas
a) can be hierarchical but also directional, cause and effect, etc.
b) main idea goes in the middle
3. how do you choose which to use?
a) outlining-people who like words, linear

b) mapping-people who like pictures, images, non-linear
c) depends on how material is organized

XI. **10 minutes-GUIDED PRACTICE: organizing manual material**

A. teacher outlines p. 2-16 on board soliciting answers from students

1. Seeing

a) look ahead

(1) far enough-room to manuever

(a) quickly shift eyes from close to far to close...

(b) 12-15 seconds

i) low speed-1 block

ii) high speed-1/4 mile

(2) look for traffic

(a) merging, lane changing

(b) brake lights, slowing

(3) look for road conditions

(a) hills, curves

(b) traffic signals and signs

(c) obstructions, potholes-OWN

(4) people-OWN

(a) kids/adults nearby-OWN

(b) people in front seats-OWN

b) look to sides and rear

(1) regular mirror checking

(a) traffic

i) spaces for fast maneuvering

ii) overtaking

iii) watch for "blind spots"

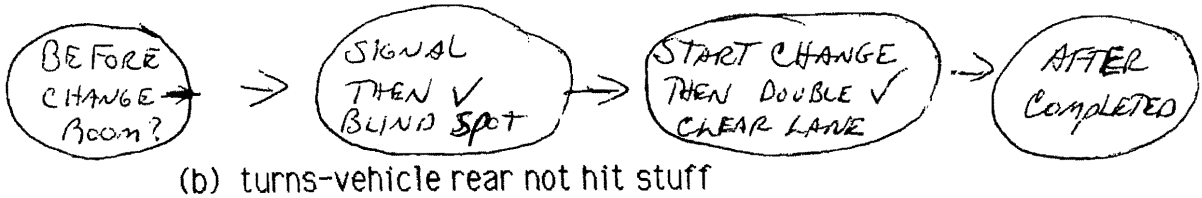
(b) own vehicle

i) watch tires-avoid fires

ii) check cargo security: tarp, lines

(2) special mirror checking

(a) lane changes-no one next or about to pass



(b) turns-vehicle rear not hit stuff

(c) merge-gap large enough

(d) close quarters-check clearance often

(3) using mirrors correctly
(a) check quickly and return to looking ahead
(b) convex mirror-things look smaller and further away

XII. **5 minutes-JOURNAL QUESTION: filling out feedback sheet**

A. return previous journals and collect last journal
B. pass out blank feedback journals for today's class-turn in Thursday
C. for question 5 -try to work on material from section 2
1. test on whole section next Monday-learn 1/2 by Thursday
2. try a note-taking technique as part of a revised study plan
a) can staple new study plan to journal rather than rewrite
b) remember to complete last question just before next class

XIII. **REMEMBER: Class Thursday 21st 8-10am and Study Hall 11-1pm**

+ **Lesson 4-Idea Relationships (How does it all fit together?)**

  + **Objectives**
    - identify idea relationships: superordinate, subordinate, supporting details and coordinate ideas
    - learn to express these relationships in outlining, mapping formats
    - relate relationship ideas to manual format and organization
    - evaluate current study plan
    - modify study plan with notetaking techniques
    - test experience-reasoning through a problem

  + **Materials**
    - blank Class Feedback form for each student
    - blank study plan form for each student
    - pencils and notebooks
    - Commercial Drivers License manual for each student
    - outline worksheet on brakes

  + **15 minutes-REVIEW-planning and reasoning**
    + planning
      - collect feedback forms, pass out planning sheets & previous forms
      + WHY do we spend so much time on planning? solicit answers
        - need the book knowledge as well as experience, common sense
        + need to start now with studying to make deadline
          - too crowded and more expensive closer to deadline
          - get most use from class if can relate info to actual studying
          - a lot of info-this is just written part-need to allow time to learn the pre-inspection info, too, before deadline
          - spaced review most effective-takes time
          - if can't find time now-why do you think you will be able to later-a plan that works is really the key-more than anything
        - evaluating the plan is important to improvement-no one starts out with a perfect plan-keep your eye on your goal to check plan
    + pass out test reasoning sheets and ask questions
      - next test on Monday-Section 2
      - return the practice tests and try to reason through them

  + **20 minutes-GUIDED PRACTICE-creating a study plan**
    - teacher models creating a new study plan while each completes the steps on his/her own sheet

- each then trades plans and asks "After reading this would I know enough to follow the plan?" and tells plan maker what part is still unclear

- **5 minute break**

+ **15 minutes-GROUP MODELING: idea organization**
  + in class we've talked about organizing material for recall
    - according to what a thing is, how its used, and under what conditions
    - showed how much easier it is to remember a pattern and how you can remember the whole pattern by remembering one piece
    + main rule-do it so you can use it-whatever way works best for you
      - try these new ways to see if work
      - expect them to feel awkward at first-tennis example
  + now talk about two specific ways to show that organization
    + outlining-shows idea hierarchies
      - main idea-superordinate-most important (whole pie, Army)
      - subordinate-less important usually a part of superordinate (pieces of pie, Army Divisions)
      - supporting details-each apple slice, each person in the Army
    + mapping-shows relationships among ideas
      - can be hierarchical but also directional, cause and effect, etc.
      - main idea goes in the middle
    + how do you choose which to use?
      - outlining-people who like words, linear
      - mapping-people who like pictures, images, non-linear
      - depends on how material is organized.

+ **20 minutes-GUIDED PRACTICE: organizing manual material**
  + teacher outlines p. 2-16 on board soliciting answers from students while noting how the format describes the idea relationships
    + Seeing
      + look ahead
        + far enough-room to manuever
          - quickly shift eyes from close to far to close...
          + 12-15 seconds
            - low speed-1 block
            - high speed-1/4 mile
        + look for traffic
          - merging, lane changing
          - brake lights, slowing

- look for road conditions
  - hills, curves
  - traffic signals and signs
  - obstructions, potholes-OWN
- people-OWN
  - kids/adults nearby-OWN
  - people in front seats-OWN
- look to sides and rear
  - regular mirror checking
    - traffic
      - spaces for fast maneuvering
      - overtaking
      - watch for "blind spots"
    - own vehicle
      - watch tires-avoid fires
      - check cargo security: tarp, lines
  - special mirror checking
    - lane changes-no one next or about to pass

    - turns-vehicle rear not hit stuff
    - merge-gap large enough
    - close quarters-check clearance often
  - using mirrors correctly
    - check quickly and return to looking ahead
    - convex mirror-things look smaller and further away

- **5 minutes break**

- **10 minutes-GUIDED PRACTICE: mapping**
  - teacher uses mapping on board to show the interrelationships found in the section on pre-trip inspections

- **20 minutes-INDEPENDENT PRACTICE: organizing manual material**
  - students form small groups of 3-5 in order to organize one part of first half of section 2 of manual with either mapping or outlining

+ students need to label the pages covered-I will make a copy of each group project to share with everyone
  - one way to study in a group-each take a section and pool info
  - choose one person to write down the product to share

+ **10 minutes-INDEPENDENT PRACTICE: creating new study plan**
  + try a note-taking technique as part of a revised study plan
    - can staple new study plan to journal rather than rewrite
    - remember to complete last question of feedback form just before next class
  - test on whole section next Monday

- **REMEMBER: Class Thursday 21st 8-10am and Study Hall 11-1pm**

Lesson 5-Plan/Evaluate: Test/Analyze

I. **Objectives**
   A. practice organizing ideas
   B. practice taking notes from the manual
   C. practice test taking
   D. evaluate efficiency of study methods and study plan used
   E. review difference between understanding and remembering material

II. **Materials**
   A. CDL manual for each student
   B. blank feedback form for each student
   C. blank study plan for each student
   D. previous feedback forms with teacher comments to return
   E. blank worksheet on organizing outline ideas
   F. blank tally sheet for analyzing test results for teacher

III. **10 minutes-JOURNAL QUESTION: evaluate last study plan**
   A. did you do it?
   B. do you think you learned the material?
   C. hand back feedback form with responses
   D. gather in feedback form from last class and study plan

IV. **10 minutes-GROUP DISCUSSION-preparing for the test**
   A. solicit ideas about ways to study used for this test-write on board
   B. rate them for (a) time spent (b) usefulness (efficient v. effective)
   C. breaking down the material into manageable amounts-salami technique
   D. could study only main ideas first or only main plus subordinate headings

V. **10 minutes-INDEPENDENT PRACTICE: organizing ideas**
   A. each student receives a worksheet with ideas from a manual section on it in a random arrangement and must rearrange in some sensible order
      1. the order needs only to make sense in terms of idea importance with superordinate, subordinate, and details identifiable
   B. form small groups to share organizations-discuss reasons for differences

VI. **5 minutes-BREAK**

VII. **20 minutes-INDEPENDENT PRACTICE: organizing manual material**
- A. each student outlines or maps a small subsection of section 2 haven't studied enough yet
  1. one way to study is by discovering the organization of the material
  2. deciding which ideas are most important and which support them
- B. students form small groups of 3-5 in order to discuss what they learned from one part of section 2 of manual with either mapping or outlining
  1. one way to study in a group-each take a section and pool info
  2. another way to study-explain to someone else good way to learn or to check learning

VIII. **10 minutes-TEST EXPERIENCE: general knowledge practice test**
- A. teacher corrects test as soon as completed
- B. students study until everyone is done

IX. **15 minutes-GROUP DISCUSSION: analyzing test results**
- A. look at question #1 - 6 asking these questions of group for each question
- B. if you got this question correct (teacher keeps count of answers)
  1. how many knew right answer with no doubt?
  2. how many reasoned through questions to find right answer
     a) ask someone to share their steps
     b) if nobody is willing to share the teacher models the reasoning
  3. how many narrowed down the choices and then guessed?
  4. how many guessed without narrowing down the choices?
- C. if you got this question wrong?
  1. how many thought they were really right with no doubt?
  2. how many reasoned through question to choose an answer thought was correct?
  3. how many narrowed down the choices and then guessed?
  4. how many guessed without narrowing the choices by reasoning?
- D. look at totals of # right v. # wrong using each step

X. **5 minute BREAK**

XI. **15 minutes-GROUP MODELING: understanding vs. remembering**
- A. which was the biggest problem with studying for the test?
  1. solicit answers from group and put on board as a map
     a) problems doing the studying
        (1) that is what plan is for

(2) may have to give up some things-set priorities, make choices
(3) can turn interruptions into study breaks-laundry set a timer

b) problems understanding the material
(1) ask for ideas why hard to understand
(a) possibilities: confusing, hard words, new stuff, too much
(2) ask for ideas to aid understanding
(a) possibilities: look for organization, discuss with someone, put in own words, outline, map, think about what you know about an area before you start reading
(3) realize that understanding is a process and a product
(a) process: layers like a cake, like the bullseye
i) depends on experience-child/adult ideas of work
ii) degrees of understanding-ask yourself what you do know and then add to that -your/my ideas on trucks
iii) why its good to try to take the test several times
iv) how long do you think it should take to understand?
(1) how many readings, how much studying?
(a) beware giving up because it takes longer than you think it should ie marriage before 30
(b) it takes as long as it takes-the product

c) problems not remembering the material
(1) same things that help you understand help in remembering
(a) do in small amounts-build on firm foundation next step
(b) takes time-havelina trail
i) like learning your last address
(1) first carry it around
(2) used it a lot-told people, wrote on forms
(3) it changed from new to known information as you used it - still might know even old addresses
(c) make sure you are working on recall and recognition
i) close the book and summarize what you read aloud
ii) use the book questions to check yourself
iii) make up your own questions from subheadings or paragraphs material and test yourself and each other

XII. **20 minutes-INDEPENDENT PRACTICE-create plan and study material for next test on Monday December 2-Post test on 9th**

A. next test will be all of section 2 with 20 questions/pre-test on
1. do not study the pretest

2. make your plan realistic for holiday
   a) start thinking about a plan for studying after the class is over
   b) make it as specific as you can

XIII. **HAPPY THANKSGIVING!!! NO STUDY HALL THURSDAY!**

Lesson 6-Using New Skills

I. **Objectives**
- A. practice organizing ideas
- B. practice taking notes from the manual
- C. practice test taking
- D. evaluate efficiency of study methods and study plan used
- E. outline remainder of class sessions

II. **Materials**
- A. CDL manual for each student
- B. blank feedback form for each student
- C. blank study plan for each student
- D. previous feedback forms with teacher comments to return-make copies
- E. blank copy of pretest for each student
- F. copy of pretest analysis sheet for teacher

III. **30 minutes-TEST EXPERIENCE: general knowledge pretest**
- A. teacher corrects test as soon as completed
- B. students study or answer journal question until everyone is done and tests corrected
- C. teacher gets previous pretests for each student for comparison

IV. **concurrent-JOURNAL QUESTION: evaluate last study plan**
- A. did you do your planned studying?
- B. did it help with the test?
- C. what would you do differently?
- D. hand back feedback form with responses
- E. gather in feedback form from last class and study plan

V. **5 minutes-BREAK**

VI. **30 minutes-GROUP DISCUSSION: analyzing test results**
- A. look at each question asking these questions of group for each question
- B. if you got this question correct
  1. how many knew right answer with no doubt?
  2. how many reasoned through questions to find right answer
     a) ask someone to share their steps
     b) if nobody is willing to share the teacher models the reasoning

3. how many narrowed down the choices and then guessed?
4. DID YOUR WAY OF DOING IT WORK?

C. if you got this question wrong?
1. how many thought they were really right with no doubt?
2. how many reasoned through question to choose an answer thought was correct?
3. how many narrowed down the choices and then guessed?
4. how many guessed without narrowing the choices by reasoning?
5. DO YOU KNOW WHAT WENT WRONG?

VII. **10 minutes-GUIDED PRACTICE: organizing manual material**

A. students choose a section for teacher to outline or map on the board while asking students to provide input-students choose outlining or mapping procedure-might be a section they thought was difficult
1. teacher models activating P.K and skimming the section first
2. students decide which ideas are primary and which supporting
3. teacher asks reasons for students' placement suggestions
4. one way to study is by discovering the organization of the material

VIII. **5 minute BREAK**

IX. **30 minutes-INDEPENDENT PRACTICE: organizing manual material**

A. each student a manual section reads it and uses study technique of choice
1. outlines or maps need only to make sense in terms of idea importance with superordinate, subordinate, and details identifiable
2. students can work in pairs or groups if prefer to-on same section

B. teacher moves around to students and looks at work and listens to groups

X. **5 minutes-GROUP DISCUSSION-preparing for test/rest of class**

A. solicit ideas about ways to study used for this test-write on board
1. rate them for (a) time spent (b) usefulness (efficient v. effective)

B. breaking down the material into manageable amounts-salami technique
1. has anyone made a long term plan i.e. 2 pages a day of needed sections?

C. could study only main ideas first or only main plus subordinate headings

XI. **10 minutes-INDEPENDENT PRACTICE-create plan and study material for Posttest on 9th**

A. next test will be all of section 2 with 20 questions/pre-test on
1. do not study the pretest

2. make your plan realistic
    a) start thinking about a plan for studying after the class is over
    b) make it as specific as you can

B. finish last class' evaluation and turn in

XII. **STUDY HALL THURSDAY 11-1pm !**

10/21/91 Lesson 7 Increasing Comprehension and Recall

I. **20 minutes-TEST EXPERIENCE: general knowledge practice test**
   A. while it is being corrected write answer to journal question

II. **5 minutes-JOURNAL QUESTION: Write about what worked well for you during studying since our last class. If nothing worked well, try to figure out why and what you could do next time.**

III. **15 minutes-return scored tests and have students try to find the correct answer to at least one question missed.**

IV. **30 minutes-GROUP MODELING/DISCUSSION: recall v. comprehension**
   A. ask everyone whether s/he thinks the reason for incorrect answers was not understanding the material or not remembering it (write on board)
      1. on the test?
      2. during independent studying was this a problem?
      3. anything else going on?
   B. problems not understanding the material
      1. ask why something might be hard to understand (write ideas on board)
         a) possibilities: confusing-too much to cover, hard words. new stuff
      2. ask everyone for ideas to help understanding and write them on board
         a) ideas: salami technique, outline, mapping, talk with friend, try to explain to someone, put in own words
         b) understanding is a process and a product-look at both
            (1) how much time do you think it should take to understand it?
               (a) how many readings, how much studying?
               (b) it takes as long as it takes
            (2) degrees of understanding-ask yourself what you do know
            (3) fill in main ideas, then supporting ideas, then details
            (4) can map or outline small and large sections
               (a) map all types of inspections then one of "during trip" inspection
   C. problems not remembering the material
      1. same things that help understand help remember, too
      2. ask for suggestions to help remember material (write on board)
         a) possibilities: flashcards, use book questions, test each other
      3. difference between recognition and recall
         a) use ways methods that help with recall
         b) spaced repetition with review
         c) concept of ownership (illustrate with vocab bullseye on board)
            (1) example-how did you learn your last address
               (a) used it a lot

(b) wrote it down on forms
(c) note how it changed from new to known information

V. **20 minutes-GUIDED PRACTICE: have each choose a section to study using these techniques to understand, remember material**
   A. 10 minutes-reading and studying
   B. 5 minutes-explain the material to partner without the book
   C. 5 minutes-partner asks questions about the material from the book

VI. **30 minutes-INDEPENDENT PRACTICE: look at bus and pretend to do a walk-around pre-trip inspection**
   A. do the same on your own truck before or after work this week

Practice Test-Analyzing Results
Tally Sheet

Question #	Correct	Incorrect	TOTAL
1	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
2	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
3	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
4	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
5	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
6	no doubt	no doubt	
	reasoned	reasoned	
	narrowed down	narrowed down	
	just guessed	just guessed	
	_____		_____
TOTALS			

APPENDIX B

REGISTRATION AND EVALUATION FORMS

WORKFORCE INSTRUCTIONAL NETWORK

STUDENT REGISTRATION FORM

1. Name: _____ Date: _____

2. Place of employment:_____ Class name: _____

3. Job Title:_____ Supervisor: _____

4. Equipment Operated:_____

5. Number of years/months employed at current workplace:_____

****

6. Highest level of schooling: grade____ High school diploma_____

GED diploma____ Years of college _____ College degree_____

Other education or training: _____

****

7. Number of children: _____ 8. Are you a single parent? yes no

9. Did you grow up in a Spanish speaking or bilingual household?_____

10. Do you speak Spanish in your home today? (circle one)

always sometimes almost never never

11. Do you speak Spanish in the workplace? (circle one)

everyday at least once or twice a week almost never never

****

(WIN staff use only)

Pre-Test:_____ Post-Test_____ Hadley_____

Referral: Where_____ Why _____

Concurrent Enrollment (WIN & Place of Referral) yes no

Other Indicators:_____

_____

_____

County/District No. _____

Site _____

Ten County ACE Co-op

Adult Education Record

Registration Date _____

Instructor _____

PERSONAL DATA

Last Name | First Name | M.I. | Social Security No.

Address | City | State | Zip Code

Home Phone | Work Phone | Sex ( ) ( ) | Age | Date of Birth

Ethnicity ( ) American Indian ( ) Asian ( ) Black ( ) Hispanic ( ) White

PROFILE (codes on reverse side)

Employment Status ( ) Residence ( ) Special ( )

PROGRAM PLACEMENT (definitions on reverse side)

ESL - Placement Test

1. ( ) 5. ( ) 9. ( ) 13. ( )
2. ( ) 6. ( ) 10. ( ) 14. ( )
3. ( ) 7. ( ) 11. ( ) 15. ( )
4. ( ) 8. ( ) 12. ( ) Total ( )

( ) I. Beginning
( ) II. Intermediate
( ) III. Advanced

ABE - Pre-Test

SCORE	LOCATION	DATE

( ) Beginning ( ) Intermediate

ADULT SECONDARY ED. (GED)

Subject Area	Score
Writing	
Social Studies	
Science	
Literature	
Math	

( ) GED

ACHIEVEMENTS

( ) Improved basic skills

Improved or obtained competencies in:

( ) Government and Law
( ) Community Service
( ) Parenting
( ) Occupational Knowledge
( ) Health Care
( ) Consumer Economics

( ) Completed Level 1 or its equivalent
( ) Moved to a higher level
( ) Obtained high school diploma
( ) Passed all GED tests
( ) Entered another education or training program
( ) Received U.S. citizenship preparation instruction

( ) Improved English language skills
( ) Voted for the first time
( ) Got a job
( ) Got a better job or salary increase
( ) Removed from public assistance

REASON FOR SEPARATION

( ) Completed objectives
( ) Class ended
( ) Health problems
( ) Day care problems
( ) Transportation
( ) Family problems
( ) Location of class
( ) Lack of interest
( ) Conflict with schedule
( ) Took a job
( ) Changed address or left area
( ) Other known reasons
( ) Unknown reason

POST-TEST RESULTS

TEST _____

SUBJECT AREA	SCORE	LOCATION	DATE

GED

SUBJECT AREA	SCORE	LOCATION	DATE
Writing			
Social Studies			
Science			
Literature			
Math			

Reading and Writing Improvement Class

Let's Get Started!

What is today's date?

_____

What is your name?

_____

What is your job title?

_____

Where do you work?

_____

Please take your time to answer the following questions. Be as honest and complete as you can. Use the back of this sheet or another piece of paper if you need more room. Your answers will help me know what and how to teach to meet your needs. Let's create a class together!

Why are you in this class?

_____

_____

_____

What are the two most important things you want to learn from this class?

_____

_____

_____

Do you think it is easy or hard to learn new things? What makes you think that?

_____

_____

_____

What are your plans when you finish this class? Do you think you'll do your job any differently? Will you take other classes? Do you hope to get a promotion or different job?

_____

_____

_____

Workforce Instructional Network

Individualized Education Plan

for

_____

Date_____

Education/Learning Goals (both at work and home--now and in the future)

_____

_____

Pre-test Results

Areas I can teach others_____

Areas I can review_____

Areas I can study_____

Student Comments

Additional areas I'd like to teach others

_____

Additional areas I'd like to review or study (for home or work)

_____

Instructor Comments

Additional areas you could teach

_____

Additional areas you might like to review

_____

Student Placement (Present and Projected)

Enrolled in WIN course (titles and dates)

_____

Referred to other programs (specify)

_____

CLOZE EXERCISE

In a cloze exercise, you try to guess which words are missing. For example, in the sentence below, a word is missing.

She looked before she _____ the street. A good guess for the missing word is "crossed."

In the story below, try to guess and replace the missing words. Don't expect to get them all. Many are nearly impossible.

Commercial Driver's License

A driver currently licensed in Texas will be required to present his driver's license and proof of his Social Security number (example: card, pay check, tax return, etc.). Also he will be _____ to complete an application _____ a Qualification Certification form (_____ or CDL-5) to certify _____ he meets certain physical _____, along with any other _____ certification forms previously mentioned. _____ the information necessary to _____ and pass the required _____ tests is contained in _____ Texas Commercial Motor Vehicle _____ Handbook.

If a person _____ applying for a Texas _____ license for the first _____, he will have to _____ requirements in addition to _____ for a Texas driver. _____ will be required to _____ an original application for _____ Texas driver's license and _____ any knowledge and/or _____ tests required. The tests _____ derived from both the _____ Drivers Handbook and the _____ Commercial Motor Vehicle Drivers _____. All necessary forms/handbooks are available at any Driver's License Office.

Cloze Exercise Answer Key

Commercial Driver's License

A driver currently licensed in Texas will be required to present his driver's license and proof of his Social Security number (example: card, pay check, tax return, etc.). Also he will be *required* to complete an application *and* a Qualification Certification form (*CDL-4* or CDL-5) to certify *that* he meets certain physical *qualifications* along with any other *necessary* certification forms previously mentioned. *All* the information necessary to *take* and pass the required *CDL* tests is contained in *the* Texas Commercial Motor Vehicle *Drivers* Handbook.

If a person *is* applying for a Texas *drivers* license for the first *time*, he will have to *fulfill* requirements in addition to *those* for a Texas driver. *He* will be required to *complete* an original application for *a* Texas driver's license and *take* any knowledge and/or *skills* tests required. The tests *are* derived from both the *Texas* Drivers Handbook and the *Texas* Commercial Motor Vehicle Driver *Handbook*. All necessary forms/handbooks are available at any Driver's License Office.

WIN Formative Evaluation Form

1) The best thing about class this week was

2) Pick one sentence to complete:
This week, I learned

That was important because

This week, I didn't really learn anything important. Next week, what needs to happen so I can learn something useful is

3) The one thing I would like to change about class this week is

4) Other comments, gripes, suggestions, questions, etc.?

Workforce Instructional Network
Reasoning Through a Test Question

step one: **be sure you know what the question is asking**
- look for key words
- put question in own words
- be careful of negatives and definitions

step two: **answer the question in your own words before looking at the answer choices given**

step three: **see if any choice matches your own answer**

step four: **look at all answer choices even if you found one you liked in step 3**
- when two answers are both good choose the best
  - it covers more situations i.e.
    - When you plan you should
      a. know your goal and procedures
      b. set your goal, your procedures, & specific time
  - it is more often true i.e.
    - Many people study too hard because
      a. they don't know effective ways to study
      b. they think it will make them better people
- be careful about any answer which uses absolutes like must, never or always since <u>any</u> exception makes it untrue
- if there are opposite answers look at these closely

step five: **narrow down the answer choices one by one**
- state what each one means in your own words
- use your common sense as well as manual material
- see if any are wrong, not even close
  - this may eliminate another like "all of above"or "A and B"
- see if are any exceptions to positive or negative statements
  - this may eliminate "all of above", "none of above", etc.

step six: **choose the best one of those not eliminated before**

step seven: **narrow down choices as much as possible (increase your odds) before guessing**
- guess among remainder if necessary
- choose "B" or "C" rather than "A" or "D" if necessary
- do not leave blanks if wrong answers aren't deducted
  - blanks-more likely to mess up numbering on score sheet

Workforce Instructional Network
Commercial Drivers License Class

USEFEL IDEAS TO REMEMBER

Problem-solving Steps:

1. What is the problem?
   state the problem as clearly as possible

2. What different ways can I think of to handle it?
   create several solutions and think about the advantages and disadvantages of each one

3. Which one should I try first?
   choose one solution and try it

4. Did it work?
   figure out what worked and what did not work about the solution - if there is still a problem, go back to step one

A helpful acronym for test-taking: S C O R E R

S - schedule your time

C - clue words

O - omit, do the easy questions first

R - read carefully, pay attention to directions

E - estimate, narrow down the possible choices and guess

R- review, look test over, change answers only for a good reason

GOOD LUCK ! LET US KNOW HOW IT GOES. GOOD LUCK!

ne_____ Date _____

mmercial Driver's License Test - Study Skills SubTest

)ose the one alternative that best completes the statement or answers the question.

_____ The first thing you should do when taking a test is
A) look over all of the questions, answer the easy ones first, and guess at the rest.
B) ask the teacher for an explanation of the questions.
C) read the directions, look over all the questions, and decide how much time you will spend on each part.
D) sharpen your pencil.

_____ When you prepare for any test, the most important thing to do first is to
A) find out the date and time of the test.
B) begin to worry.
C) find out what kind of test it will be.
D) memorize as many facts as possible.

_____ If you get nervous on a test because you don't know the answer, you should
A) skip the item.
B) take deep breaths and skip the item.
C) give up and come back another time.
D) go up and tell the test administrator.

_____ When answering multiple choice questions, the one usually correct is
A) B
B) C
C) A or D
D) B or C

_____ If you don't understand a question while taking a test, you should
A) skip the item.
B) ask the test administrator for an explanation.
C) look up the answer in your materials.
D) ask your neighbor.

_____ If you are taking a test where you must write out an answer, the most important thing is
A) write in short sentences so it is easy to read.
B) write as much as possible.
C) try to present as organized an answer as possible.
D) go back and spend time correcting grammar and spelling.

Name_____ Date _____

Commercial Driver's License Test - General Knowledge SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ Why is it important to be able to see to the side and rear of your vehicle if an emerger occurs while you are driving?
   A) You have to know whether you have your hazadous placards.
   B) You may have other emergencies occuring there.
   C) You may have to watch for jackknifing.
   D) You may need to make a quick lane change.

2. _____ When should you check your mirrors when making a lane change in your vehicle?
   A) after you have signaled to see no one moved into your blind spot
   B) before you change to make sure there is enough room
   C) after you complete the lane change
   D) all of the above

3. _____ When should you shift into a lower gear when driving down a long hill?
   A) before starting down the hill
   B) if you start to go too fast
   C) just as you start to go down the hill
   D) all of the above

4. _____ What causes brakes to "fade?"
   A) too much weight in the vehicle
   B) pumping the brakes
   C) they get too hot from overuse
   D) excessive wear

5. _____ Letting up on the brakes from time to time when going down a long grade is
   A) not going to help brakes cool down.
   B) is going to help brakes cool down.
   C) the best procedure to reduce the chance of brakes "fading."
   D) useful to keep people from tailgating.

6. _____ If you are ever in an accident, the order of the steps to take are to
   A) care for the injured, protect the area, and notify the authorities.
   B) notify the authorities, care for the injured, and protect the area.
   C) protect the area, notify the authorities, and care for the injured.
   D) none of the above

7. _____ To protect the area if you are in an accident, you should
   A) call out on your CB for emergency vehicles.
   B) move injured people away from the accident.
   C) park away from the accident.
   D) notify your employer and the National Response Center.

8. _____ One cause of a fire on a vehicle is
   A) flammable cargos that are well ventilated.
   B) drivers that smoke when driving.
   C) improperly combined hazardous materials.
   D) dual tires that touch.

9. _____ A effective way to prevent a fire on a vehicle is to
   A) check the tires, wheels, and truck body for signs of heat whenever you stop.
   B) have the tires a little underinflated.
   C) stop every two hours to cool down the engine, the transmission, and the differential.
   D) do B and C.

10. _____ If you have an engine fire while you are driving, you should
   A) stop and use a B:C type fire extinguisher.
   B) pull into a service station so they can call the fire department.
   C) use water if you cannot get to your fire extinguisher.
   D) stop and open the hood to get the fire extinguisher to the fire.

11. _____ All vehicles with hazardous materials must have the correct placards.
   A) This is false; vehicles with weights under 26,000 lbs. do not need placards.
   B) This is false if you have your shipping papers in clear view and within reach.
   C) This is true only if the materials require placards.
   D) This is always true.

12. _____ If you have hazardous materials in your vehicle and you don't have a hazardous materials endorsement, you can
   A) be cited and not allowed to drive your vehicle any further.
   B) drive the vehicle to the Driver's License Office to get your endorsement.
   C) drive for 1 month if your vehicle is properly placarded.
   D) get your employer to allow you to drive the vehicle.

13. _____ Before you drive, it is State and Federal law that you must
   A) fill out a vehicle condition report.
   B) have a fire extinguisher on your vehicle.
   C) have a Hazardous Materials Endorsement.
   D) inspect your vehicle.

14. _____ You must use your flashers if your speed on an interstate highway gets below
   A) a certain speed that depends upon the state you are in.
   B) 40 mph and you are carrying hazardous materials that are classified as Poison A.
   C) 25 mph.
   D) 40 mph.

15. _____ The major reason why vehicles crash into other vehicle in front of them in an accident is due to
   A) following too closely.
   B) brakes "fading" after excess pressure by the driver.
   C) "tailgater" distracting your attention.
   D) answers B and C.

16. _____ If you have to back up your vehicle, you should
A) use your mirrors as you begin to back up to find your correct path.
B) consider driving around the block so that you can turn toward the driver's side.
C) move at a slightly fast speed so that the air pressure will be sufficient.
D) back and turn toward the passenger's side as much as possible.

17. _____ If you believe your vehicle is beginning to hydroplane, the best technique to use is to
A) release the accelerator and push in the clutch.
B) speed up slightly to increase the chance of contact with the road.
C) use the white sidelines to guide you.
D) do A and C.

18. _____ If someone is "tailgating" your vehicle, you should
A) increase your following distance from the vehicle in front of you.
B) move to another lane if possible.
C) flash your brakes to help them realize they are tailgating.
D) speed up to get away from them.

19. _____ If you get sleepy while you are driving, you should
A) stop driving and get some coffee.
B) turn on your radio for some companionship.
C) stop driving; the only cure is sleep.
D) open your window for some fresh air.

20. _____ If you go off the road onto the shoulder, you should
A) make sure all of your tires are off the pavement.
B) ease gradually onto the road and countersteer.
C) turn sharply onto the roadway and countersteer.
D) stay there and slow down using the "stab braking" method.

Name_____ Date _____

Commercial Driver's License Test -General Knowledge SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ If you only will drive a dump truck on your job, what class of license do you need?
   A) It depends upon the gross vehicle weight rating of the truck and if I am hauling hazardous material.
   B) It depends upon the gross vehicle weight rating of the truck and if the truck has air brakes.
   C) Class B
   D) A and B above

2. _____ What is the purpose of the pretrip inspection part of the skills test?
   A) to see if you can explain the parts of your vehicle
   B) to see if you know whether the vehicle is safe to drive
   C) to see if you understand the working parts of your vehicle
   D) to remind you to check your brakes before you drive

3. _____ When can you have a commercial driver's license in another state?
   A) if you pass the CDL test in that other state
   B) never
   C) if you are hauling hazardous material
   D) if you notify your employer

4. _____ You need to inspect your tires
   A) only during the after trip inspection.
   B) to see if they have at least 6/32" of tread depth on front wheels.
   C) only during the pretrip inspection.
   D) to see if they have at least 4/32" of tread depth on front wheels.

5. _____ Which of the following do you need to check from the back of the vehicle during the walkaround inspection?
   A) wheels, rims, tires, wheel bearings, suspension, brakes, and lights
   B) glass, wipers, steering mechanism, turn signals, and oil level
   C) battery, tie rods, Pitman arm, and power steering fluid level
   D) lights, reflectors, license plate, spash guards, and secured cargo

6. _____ What should the engine compartment be checked for?
   A) condition of hoses, belts, and wiring
   B) condition of brakes, lights, signals, and cargo
   C) level of oil, coolent, power steering, battery, transmission, windshield washer fluid
   D) condition of u-bolts, clamp bolts, eye bolts, and axel seats

7. _____ Why must you do a vehicle inspection before every trip?
   A) to satisfy your employer
   B) to reduce the chance of breakdown
   C) to make sure the vehicle is safe
   D) to satisfy any state trooper who is whatching

8. _____ How should you test hydraulic brakes for a leak before every trip?
   A) press and hold for three seconds and see if pedal moves
   B) pump three times, press and hold for five seconds, see if pedal moves
   C) check under axels for fluid leaks and check fluid level
   D) move vehicle slowly and press pedal

9. _____ How often must you inspect your truck?
   A) before every trip when you are hauling hazadous materials
   B) within the first 3 hours of driving the vehicle and every 200 miles thereafter
   C) at the start of your shift
   D) within first 25 miles and either 150 miles or every 3 hours afterwards

10. _____ When shifting make sure you safely
   A) slow down the RPM when shifting up
   B) speed up the RPM when shifting down
   C) use progressive shifting
   D) both A and B

11. _____ How far should warning reflectors be placed from the truck if you have to stop on an undivided highway?
   A) 20 feet and 80 feet
   B) 10 feet and 100 feet
   C) 100 feet and 500 feet
   D) 20 feet and 500 feet

12. _____ What is an easy way to tell if the roadway is beginning to ice up?
   A) if the road looks wet
   B) if there is ice on the front of your outside mirror
   C) if your tires begin to hydroplane
   D) if it is less than 35 degrees in outside temperature

13. _____ At 55 MPH, how long will it take you to stop?
   A) 6 seconds
   B) 10 seconds
   C) 3 seconds
   D) 15 seconds

14. _____ If you are driving 55 MPH, how many seconds should there be in terms of space in fror of you?
   A) 1 second for every 10 feet of vehicle length plus 1 second
   B) 1 second for every 15 feet of vehicle length plus 1 second
   C) 7 seconds
   D) 10 seconds

15. _____ You should use your high beams on your headlights
   A) whenever you can.
   B) when it is safe and legal to do so.
   C) never
   D) when you are within 500 feet of an oncoming vehicle.

16. _____ In hot weather, if your engine temperature goes above the safe range,
A) it could lead to your engine locking up.
B) it could lead to engine failure or even a fire.
C) it could be a broken gauge.
D) stop and immediately take off the radiator cap.

17. _____ The speed posted on an off-ramp or an on-ramp to a freeway
A) is only for when driving in bad weather.
B) is the minimum speed you should travel.
C) is intended for trucks but is too slow for cars.
D) is safe for cars but not for trucks.

18. _____ If a oncoming vehicle has drifted into your lane, you should
A) move to your left.
B) beep your horn.
C) slow your truck as quickly as possible.
D) move to your right.

19. _____ If your tires begin to skid, you should
A) speed up and turn toward the road.
B) slow down, downshift, and press your brakes.
C) press your brakes, turn toward the road, and then countersteer.
D) stop braking, turn toward the road, and then countersteer.

20. _____ If you drink before you drive,
A) have a lot to eat and you won't get drunk.
B) drink a lot of coffee and breath a lot of fresh air.
C) drink only beer; it's not as strong as wine or whiskey.
D) do none of the above

Name_____ Date _____

Commercial Driver's License Test - Air Brakes SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ Baffles in a tank truck are for
   A) controlling the expansion of the liquid in hot weather.
   B) controlling the forward and backward flow of the liquid.
   C) transporting only liquids like milk.
   D) only transporting hazardous liquids.

2. _____ If you are loading and unloading flammable liquids into a tanker truck, you should
   A) have someone else watch.
   B) turn off your engine and ground the tank properly.
   C) make sure your vehicle is displaying the product ID number.
   D) do all of the above.

3. _____ If you have an accident with hazardous material and your tanker is leaking, you should
   A) keep only the people who are smoking away and remove smoldering packages fron the other packages.
   B) try to stop the leak, send for your employer, and park in a safe haven.
   C) always try to limit the spread of the leak, keep people away, then send for help.
   D) keep people away and upwind, take the shipping papers with you, then send for help.

4. _____ What emergency equipment must be on a tanker truck?
   A) air brakes, fire extinguisher, and hazardous warning signs
   B) fire extinguisher, spare fuses, and warning devices for parked vehicles
   C) fire extinguisher, registration information, and insurance information
   D) parking lights, amber reflectors, white turn signals, red stop signals

5. _____ Hazardous materials signs on a tanker truck
   A) are for all tanker trucks carring all materials.
   B) must only be understood by those who are driving the truck containing the hazardous materials.
   C) are for packaging to let others know the risk, to guarantee safe drivers, and in case o an emergency.
   D) are for letting emergency crews know how to put out a fire.

6. _____ Tanker trucks require special handling because of
   A) the movement of the liquid in a partially filled tanker truck.
   B) the loading procedures when the tank has bulkheads.
   C) all of the above.
   D) a high center of gravity which means they can easily roll over.

7. _____ When you load a tanker truck, you should never load it completely because
   A) you may spill some over the side when loading.
   B) the weight of some dense liquids may exceed weight limits.
   C) of the outage caused by the liquid expanding.
   D) of A and C.

8. _____ A hazardous material labeled "Poison A" on a tanker truck

A) must have hazardous materials placards when transporting any amount.
B) must have hazardous materials placards when transporting over 1000 pounds.
C) must have hazardous materials placards when loaded next to blasting agents.
D) must be A and C above

Name_____ Date _____

Commercial Driver's License Test - Combination SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ Which two procedures will help prevent rollovers when driving a combination semi-truck and trailer vehicle?
   A) Never drink and drive and drive only when not drowsy.
   B) Keep the cargo close to the ground and go slow around turns.
   C) Change lanes quickly and double pump the air brakes.
   D) Put the heaviest trailer in the front and reduce the air pressure in the back truck tires

2. _____ To prevent other drivers from passing you on the right when turning with a combination semi-truck and trailer vehicle, you should
   A) turn wide after you complete the turn not before.
   B) keep close to the curb and go over it if you have to.
   C) turn wide before you complete the turn not after.
   D) use "offtracking" whenever possible.

3. _____ The trailer hand valve (or trolley valve or Johnson bar) on a combination semi-truck and trailer vehicle should be
   A) used for a parking brake when parking on a hill.
   B) used only to test the trailer brakes.
   C) used in driving to prevent the trailer from skidding.
   D) used only in icy conditions.

4. _____ Loss of pressure in the emergency air line in a combination semi-truck and trailer vehicle causes
   A) the glad hands to unlock.
   B) the possiblity of the brakes on the trailer to fail.
   C) the emergency brakes to come on.
   D) more pressure to be applied to the service air line.

5. _____ A "trailer jackknife" is more likely to happen if driving a combination semi-truck and trailer vehicle when
   A) the trailer is fully loaded.
   B) the air pressure is too high.
   C) the trailer is empty or lightly loaded.
   D) the pavement is wet and the speed is too high.

6. _____ To test the Tractor Protection Valve,
   A) make sure the trailer air supply valve control pops out after you pump the brakes several times.
   B) place the air supply valve in the emergency position and move the vehicle slowly forward.
   C) move the vehicle slowly forward, apply the trolly valve, and see if the brakes come on.
   D) pull the air supply valve out and build up enough air pressure to get above 100 psi.

7. _____ If you cross the glad hands for the air lines,
   A) nothing would happen if you had an older trailer.
   B) air would not be available to release the spring brakes.
   C) the relay valve will not work.
   D) air pressure for your trailer brakes would be too little.

8. _____ When you back under a trailer,
   A) make sure the spring brakes are off.
   B) make sure the air lines are already connected so the trailer doesn't move.
   C) make sure the trailer is raised only slightly.
   D) make sure the trailer is raised high enough to clear easily.

Name_____ Date _____

Commercial Driver's License Test -Hazardous Materials SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ The purpose of a hazardous materials transportation rules are
   A) to help you learn how to contain hazardous cargo and to communicate its danger.
   B) to make sure you as driver understand the shipping papers.
   C) to safely transport a hazardous shipment without delay.
   D) all of the above.

2. _____ Corrosive material is a hazardous material which
   A) is a viable micro-organism which might cause human disease.
   B) can be liquids or solids that can harm human skin and even steel.
   C) poses an unreasonable risk to health.
   D) is best left alone if leaking from a vehicle.

3. _____ Hazardous materials labeled "Explosive A"
   A) are like ammunition or fireworks and are of minimum hazard.
   B) function by rapid combustion and are flammable.
   C) a flamable gas that has little probability of ignition during transportation.
   D) detonate quickly and are of maximum hazard.

4. _____ You determine which hazardous material placards to use by
   A) hazard class, identification number, and reportable quantity.
   B) hazard class, hazard name, and whether there are two or more hazardous materials.
   C) hazard class, the amount shipped, and the total weight of all hazardous materials.
   D) hazard class and types of hazardous material loaded next to each other.

5. _____ On the Hazardous Materials Table, the "+" in the first column means
   A) the entry only applies to air shipments which are not hazardous substances or are hazardous waste.
   B) to use the stated shipping name and hazard class even though the product doesn't match the hazard class definition.
   C) to use at least 4 placards on your vehicle: one on the front, one on the back, and one on each side.
   D) the hazardous material package must be double sealed in plastic in case of leakage.

6. _____ If you have a spill of more than 1 pound of phosphoric acid, you should first
   A) tell your employer.
   B) send someone for help and secure the area.
   C) let your supervisor look up the hazardous substance in the Table of Reportable Quantities to see if the spill must be reported.
   D) complete all of the above.

7. _____ The Uniform Hazardous Waste Manifest is a set of shipping papers that contain
A) the name, EPA registration number, and signatures of the carrier and the shipper.
B) the shipping name, the hazard class, and the identification number.
C) the name and address of the shipper, the hazardous material name and ID, and the labels required.
D) none of the above.

8. _____ Before loading any explosive hazardous materials, make sure
A) you are not loading it next to nitric acid.
B) you use a floor liner that does not contain iron or steel.
C) you load the packages one by one.
D) complete answers B and C.

9. _____ If you are given a shipping paper with 100 pounds of Siver Cyanide and 500 pounds of Hydrocloric Acid, what should you do?
A) refuse to accept the load
B) load the cyanide in the rear of the vehicle
C) look at the List of Hazardous Subtances and Reportable Quantities in case of accident
D) make sure an oxidizer such as hydrogen peroxide is also on the load

10. _____ If you are transporting explosives, always park
A) with the placards clearly visible from the roadway.
B) on private property with no one within 100 feet of the vehicle.
C) in a government approved safe haven if you are going to leave the vehicle.
D) using stopped vehicle signals such as reflective triangles or red electric lights.

11. _____ When driving a placarded vehicle with hazardous material, you must
A) never let the fuel level go below half or the air brake pressure go below 110 psi.
B) stop every two hours or 100 miles to check tire pressure.
C) shift gears when crossing railroad tracks to make sure you have control of the vehicle.
D) always travel with another driver who has the same class of licence.

12. _____ When driving a vehicle placarded for hazardous material, you must
A) stop at each railroad crossing at least 15 feet from the track if a train is present.
B) stop at each railroad crossing if you are loaded; don't stop if you are empty.
C) stop at each railroad crossing whether there is a train or not.
D) stop at each railroad crossing if you are carrying "Class C" explosives.

Name_____ Date _____

Commercial Driver's License Test - Tanker SubTest

Choose the one alternative that best completes the statement or answers the question.

1. _____ Baffles in a tank truck are for
   A) transporting only liquids like milk.
   B) controlling the forward and backward flow of the liquid.
   C) controlling the expansion of the liquid in hot weather.
   D) only transporting hazardous liquids.

2. _____ If you are loading and unloading flammable liquids into a tanker truck, you should
   A) turn off your engine and ground the tank properly.
   B) make sure your vehicle is displaying the product ID number.
   C) have someone else watch.
   D) do all of the above.

3. _____ If you have an accident with hazardous material and your tanker is leaking, you should
   A) try to stop the leak, send for your employer, and park in a safe haven.
   B) keep only the people who are smoking away and remove smoldering packages from the other packages.
   C) keep people away and upwind, take the shipping papers with you, then send for help.
   D) always try to limit the spread of the leak, keep people away, then send for help.

4. _____ What emergency equipment must be on a tanker truck?
   A) air brakes, fire extinguisher, and hazardous warning signs
   B) fire extinguisher, registration information, and insurance information
   C) parking lights, amber reflectors, white turn signals, red stop signals
   D) fire extinguisher, spare fuses, and warning devices for parked vehicles

5. _____ Hazardous materials signs on a tanker truck
   A) are for all tanker trucks carring all materials.
   B) must only be understood by those who are driving the truck containing the hazardous materials.
   C) are for letting emergency crews know how to put out a fire.
   D) are for packaging to let others know the risk, to guarantee safe drivers, and in case of an emergency.

6. _____ Tanker trucks require special handling because of
   A) a high center of gravity which means they can easily roll over.
   B) the loading procedures when the tank has bulkheads.
   C) all of the above.
   D) the movement of the liquid in a partially filled tanker truck.

7. _____ When you load a tanker truck, you should never load it completely because
   A) you may spill some over the side when loading.
   B) of the outage caused by the liquid expanding.
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8. _____ A hazardous material labeled "Poison A" on a tanker truck

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D) must be A and C above

Analysis of Pre-Test Results
Commercial Driver's License Test

Name _____

Date _____

Employer _____

Class Site _____

Class Time _____

Area Tested	# Correct/Total	> 80% Teach	50-80% Review	< 50% Study
GENERAL KNOWLEDGE SUBTEST	/ 20	16/20	10/20	9/20
1			1.1	
2,3			1.2	
4,5,6,7,8,9			2.1	
10			2.3	
11			2.5	
12,13			2.6	
14			2.7	
15			2.8	
16			2.10	
17			2.12	
18			2.13	
19			2.14	
20			2.17	
AIR BRAKES SUBTEST	/ 8	7/8	4/8	3/8
1			5.0	
2,3,9			5.1	
4			5.2	
5,6,10			5.3	
7,8			5.4	
COMBINATION SUBTEST	/ 8	7/8	4/8	3/8
1,2,5			6.1	
3,4,7			6.2	
6			6.4	
8			6.3	

Area Tested	# Correct/Total	Recommendation:		
		> 80% Teach	50-80% Review	< 50% Study
PASSENGERS SUBTEST	/ 8	7/8	4/8	3/8
1			4.1	
2,3			4.2	
4,8			4.3	
5			4.4	
6			4.5	
7			4.6	
DOUBLE-TRIPLE	/ 8	7/8	4/8	3/8
1			2.2	
2			2.3	
3			2.9	
4,5,6			6.3	
7			6.2	
8			3.3	
TANKER SUBTEST	/ 8	7/8	4/8	3/8
1,6,7			3.4	
2			7.5	
3			7.7	
4			2.1	
5			7.1	
8			7.5	
HAZARDOUS SUBTEST	/ 12	10/12	6/12	5/12
1			7.1	
2,3			appendix B	
4,5,7,9			7.3	
6			7.7	
8			7.4	
10,11,12			7.6	

PRACTICE TIME OUT OF CLASS

Name _____ Date _____

Thank you for participating in WIN classes. We hope you're finding this class both enjoyable and useful.

As you know, we at WIN are very interested in how useful this class is to you right now. We'd like to know how often you can use the material and strategies we've discussed here *outside* of class. We'd appreciate it if you could use the form below to jot down any instances outside of class where you've used what we've discussed together.

Some examples might be time you've spent reading your textbook or doing individual practice assignments. Other examples are using new math or reading skills to solve a problem at work, or using new strategies to help your kids with their homework. Maybe something we talked about in class encouraged you to go to the library or drag open a book you hadn't read before. For however you've used ideas from this class at home or work, please jot down the **amount of time** you spent and a **short description** of what you did. One entry might look like this:

Monday 30 minutes doing practice sheet
15 minutes reading library book

Day	Amount of Time	Description
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		

Name _____

Date _____

Where Do I Go From Here?

I plan to take my commercial driver's license exam on _____.

On that date, I will take the sections of _____

_____.

Please list any other sections of the test you must take, and the dates you plan to take them:

_____.

_____.

_____.

_____.

For ***each section*** of the test which you still need to study, answer the following questions. Use the back of this sheet or another piece of paper, if you need to. (The more specific your answers are, the better chance you have of actually ***doing*** your studying and passing the exam!)

When will you study that section? (Tomorrow? Next week? January 10?)

For how long will you study? (2 weeks? 4 nights? 1 hour?)

How long will each study session last? (15 minutes? 2 hours?)

What time of day will you study? (8-10 pm? Over lunch?)

What special study techniques will you use? (Explaining to a partner? Re-creating a map? Outlining? Answering the book's questions?)

WORKFORCE INSTRUCTIONAL NETWORK (WIN)
COMMERCIAL DRIVER'S LICENSE PREPARATION COURSE

PARTICIPANT OBSERVATIONS

WIN is in the process of developing instruction for workers in various workplaces in San Marcos. Your comments about the class you have just completed will help us to better meet the educational goals of other workers and their employers. It will also help us to develop a better education program for you when WIN offers additional classes.

Please be specific and honest in your answers. Thank you.

1. When you enrolled in this class, what did you expect to learn?_____

_____

_____

2. What did you like best about the class?_____

_____

_____

3. What did you like least about the class?_____

_____

_____

4. What did you find most helpful? _____

_____

_____

5. What did you find least helpful?_____

_____

_____

6. What did you learn? _____

_____

_____

_____

7. Do you think that taking the class will help you in your job?_____

How? _____

_____

_____

8. Do you think that taking the class will help you in your life outside of work?_____

How? _____

_____

_____

9. How did you feel about the length of the course: too long, too short, about right?

Why?_____

_____

_____

10. Do you have any suggestions on how to improve the CDL preparation

class?_____

_____

_____

_____

11. Are there other courses that you would like to see offered at the City or your

workplace?_____

_____

12. Have you enrolled in another Adult Ed. program such as a GED class? _____

Where? _____

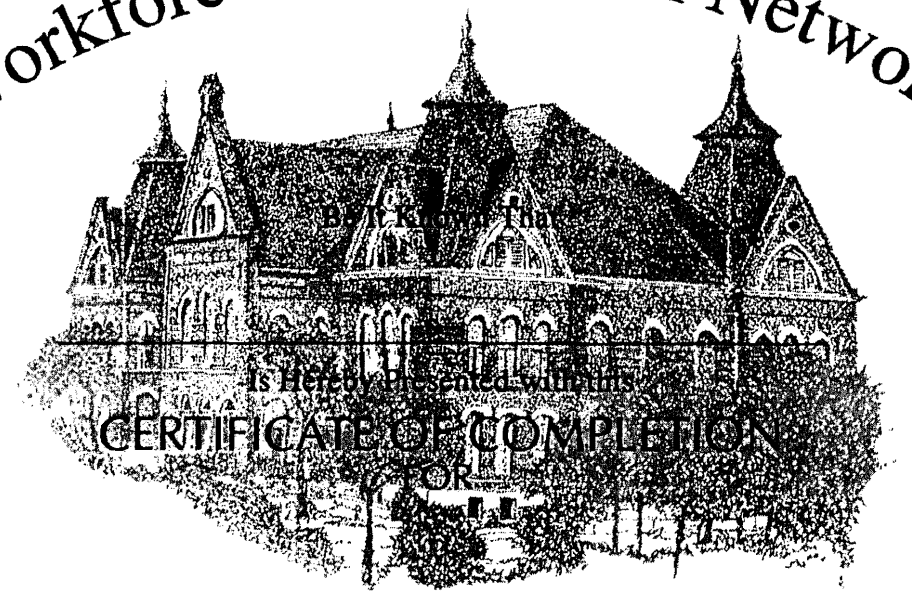
Do you plan to? Why or why not? _____

_____

Thank you for your help! **Good luck getting your CDL!**

SOUTHWEST TEXAS STATE UNIVERSITY

Workforce Instructional Network



Dated this day_____

School of Education

Center for Initiatives in Education

SOUTHWEST TEXAS STATE UNIVERSITY 1899

_____
Project Director

_____
Instructor

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