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ABSTRACT

This document describes two activities of the Literacy Leader Fellowship research project, which addressed the needs of adult educators for knowledge of job skills and of business and unions for information about adult literacy efforts. The first section describes the following efforts related to skill standards and other policy initiatives: (1) 22 skill standards projects funded by the U. S. Department of Education that are attempting to define the occupational content and performance levels needed within and across industries; (2) the National Job Analysis Study, identifying cross-occupation workplace skills necessary for worker and business success, particularly in high performance work organizations; (3) the effort of the U.S. Department of Labor to replace the Dictionary of Occupational Titles, using the framework established by SCANS (Secretary's Commission on Achieving Necessary Skills) to create the Occupational Information Network (O*NET); and (4) a number of initiatives, including community efforts to set high expectations for all learners, spurred by the National Education Goals. This part of the report contains 65 references and an annotated bibliography of 10 selected resources. The second activity of the Literacy Leader Fellowship research project involved writing skill descriptions as the framework for workplace literacy skill standards, especially for those basic skills needed for work in high performance work organizations. The document contains a sample framework consisting of outlines for the following courses: problem solving, communication skills I-II, workplace math I-II, and English as a second language at work I-VII. For each course goal, the following are listed: learning objectives, workplace contexts, basic skills, possible activities, and outcomes. (KC)

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National Institute for Literacy

Literacy Leader Fellowship Program Reports

Part I in a Series

Framework for Developing Skill Standards for Workplace Literacy

Eunice N. Askov, Ph.D.
Literacy Leader Fellow 1994-95

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Literacy Leader Fellowship Program Reports

Part I in a Series

Framework for Developing Skill Standards for Workplace Literacy

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*The project was developed in cooperation with the National Workforce Assistance Collaborative of the National Alliance of Business (funded by the U.S. Department of Labor) which provides technical assistance to small and mid-sized businesses in the areas of workplace literacy, technical training, labor-management relations, and work restructuring. The audience for this report is adult educators who are working, or plan to work, in workplace literacy or workforce preparation programs.

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Framework for Developing Skill Standards for Workplace Literacy

National Institute for Literacy

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Executive Summary

Adult educators working in workplace literacy and workforce preparation programs need to be aware of the many efforts to define standards for the knowledge, skills, and abilities needed for successful performance in the workplace. Similarly, business and union decision makers also need to be aware of the efforts within the education community to establish standards. The Literacy Leader Fellowship research project at the National Institute for Literacy addressed these needs by two activities: (1) Describing the various efforts related to skill standards and other policy initiatives for those who may not be directly involved in these ongoing efforts; (2) Writing skill descriptions as the framework for workplace literacy skill standards, especially for those basic skills needed for work in high performance work organizations (HPWOs).

During the fellowship period, extending from October 1994 through September 1995, for a total of 12 contracted weeks, the efforts resulting from the changing business environment were reviewed as part of the first activity of the fellowship. As many companies strive to adopt the practices of HPWOs, the skills needed for successful employment are also changing. The 22 skill standards projects, funded by the U.S. Departments of Labor and Education, are attempting to define the occupational content and performance levels needed within and across industries.

Also funded by the U.S. Departments of Labor and Education, the National Job Analysis Study is identifying cross-occupation workplace skills necessary for worker and business success particularly in HPWOs. The result will be a scientifically determined set of general or core skills that every worker needs, regardless of occupation and job tenure level, in order to work in the HPWO environment.

Concurrent with these efforts, the U.S. Department of Labor is funding an ambitious effort to replace the *Dictionary of Occupational Titles* using the framework established by SCANS (Secretary's Commission on Achieving Necessary Skills). The Occupational Information Network (O*NET) is a huge electronic database of occupational information that provides a common language and framework and that can be accessed directly by the end user. O*NET will be useful not only for employers in hiring but also for workers and educators who need to know the skills and education required for various occupations.

The creation of the National Education Goals has led to a number of initiatives, including community efforts to set high expectations for all learners, build an accountability system, and set performance checkpoints, as well as formal assessments using the National Adult Literacy Survey and its derivative. The National Institute for Literacy engaged in a joint effort with the National Education Goals Panel to further define the adult literacy goal in terms of learners' perceptions of the knowledge and skills that they need.

For the second fellowship activity, selected curricula created as part of the U.S. Department of Education's National Workplace Literacy Program (NWLP) were reviewed to determine the basic skills that are most frequently taught in various workplaces, especially those adopting HPWO patterns. These skill descriptions, based on the O*NET descriptions, have been anchored with examples from the NWLP curricula.

Review of the NWLP curricula revealed that most of the instructional efforts are focused on the more traditional basic skills probably due to initial emphasis of the federal program. More recently, the NWLP curricula have been including higher order skills, such as critical thinking and problem solving. O*NET proved to be a useful framework for categorizing the workplace literacy skills. It is compared to other frameworks that are commonly used for assessment and instruction in workplace literacy.

How may these literacy skill descriptions for the workplace be useful to adult educators? Since the selected NWLP curricula were developed from literacy task analyses of many diverse workplaces, it is informative to know what basic skills appear frequently in the workplace literacy curricula. If the same basic skills are taught, even if in contextually different work settings, these skills should have priority for instruction. These skill descriptions provide a starting point for adult educators as they analyze the specific needs of the workplace as part of program planning. The framework for basic skills standards provided in this paper should be tested and reviewed by those involved in delivering workplace literacy and workforce preparation programs.

Framework for Developing Skill Standards for Workplace Literacy

National Institute for Literacy

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Professor of Education and Director
Institute for the Study of Adult Literacy
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Introduction

Just as there is a movement in K - 12 education to develop content standards about what students need to know and be able to do, there is a parallel movement to develop voluntary skill standards for the workplace. Occupational skill standards[1] are an attempt to define what workers need to know and be able to do to perform effectively in the workplace. Educators can use occupational skill standards to develop curricula and plan instruction that will assist learners of all ages in meeting the criteria specified in the standards. In other words, the skill standards can define the outcomes of good instruction; educators can plan instruction so that it leads to the achievement of those outcomes.

Skill standards are designed to help learners see what they need to know and be able to do as they participate in various levels of adult education programs. If certification is tied to the attainment of occupational skill standards, then students will have portable credentials that they can take anywhere in the country. Workers can plan their own training opportunities to ensure that they are acquiring necessary new skills. Employers can set job expectations for new or advancing employees based on the skills standards certificates.

The skill standards movement calls for establishing voluntary industry skill standards which will inform workers as well as companies about the skill requirements for various occupational clusters. The U.S. Departments of Education and Labor have been funding industry associations and others to determine the skills needed to work in such industries as electronics and retail. Simultaneously, the Department of Labor is also supporting the development of the replacement for the *Dictionary of Occupational Titles* through research with job incumbents and others to determine the skills needed for various occupations. All these efforts include the identification of basic skills needed for the workplace and grow out of the original SCANS effort which created a framework for workplace skills.

What do these activities mean to adult educators? What impact will they have in the future? The Literacy Leader Fellowship research project at the National Institute for Literacy addressed these questions by two activities: (1) Describing the various efforts related to skill standards for practitioners who may not be aware of these ongoing efforts (see Chapter 2); (2) Writing skill descriptions as the framework for workplace literacy skill standards, especially for those basic skills needed for work in high performance work organizations.

During the fellowship period, extending from October 1994 through September 1995, for a total of 12 contracted weeks, selected curricula created as part of the U.S. Department of Education's National Workplace Literacy Program (NWLP) were reviewed to determine the basic skills that are most frequently taught in various workplaces, especially those adopting high performance work patterns. These skill descriptions have been anchored with examples from the NWLP curricula.

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[1] Skill standards refer to the knowledge, skills, and abilities necessary for successful performance within the workplace. While the National Skill Standards Act (1994) defines skill standards within occupational clusters, it is still yet to be decided whether standards will be clustered within or across industries. The term *occupational* simply indicates that standards for literacy performance should be included as part of larger requirements for the workplace.

How may these literacy skill descriptions for the workplace be useful to adult educators? Since the selected NWLP curricula were developed from literacy task analyses of many diverse workplaces, it would be informative to know what basic skills appear frequently in the workplace literacy curricula. If the same basic skills or competencies are taught, even if in contextually different work settings, these skills should have priority for instruction. These skill descriptions provide a starting point for adult educators as they analyze the specific needs of the workplace as part of program planning. The framework for basic skills standards provided in this paper should be tested and reviewed by those involved in delivering workplace literacy programs.

Chapter 1: Background to the Occupational Skill Standards Efforts

In this chapter we explore how the business and educational environments are changing, as background to understanding the efforts to develop occupational skill standards. Occupational skill standards define what a person should know and be able to do to be an effective worker. Concerns about the quality of the workforce, both current and future, have led to the pressure to develop occupational skill standards. The movement to develop standards comes from a sense that the world is changing rapidly and that neither our schools nor our industries are keeping pace to stay competitive internationally. Industry-based skill assessment and certification offer an attractive strategy for workforce development and an opportunity to create a system of workforce preparation. Skill standards create a "common language" and framework that communicate occupational requirements (knowledge, skills — including basic skills — and abilities) needed for successful employment to current and future workers, companies and their training departments, and educational institutions (National Alliance of Business, 1995a).

While the business community is moving toward embracing voluntary occupational skill standards, it wants to move carefully in establishing a national system, and is skeptical about government intervention (National Alliance of Business, 1995b). Businesses support the concept of voluntary standards that can help them learn from each other. They want to involve the educational community in the effort to implement occupational skill standards, the development of which is led by business/industry.

Changing Business Environment

The environment that business must operate in has changed dramatically. Competition is no longer only the store down the street but companies on the other side of the world which may be able to produce goods and services more economically and customized to the needs of the buyer. Numerous studies (for example, Cappelli, 1993; Mikulecky & Drew, 1991) have indicated that entry-level workers must know and do more than in the past. For example, in the banking industry lower level jobs have been eliminated; entry-level workers are expected to perform more tasks, some of which previously belonged to other job holders in the past (Bailey & Noyelle, 1989; Baloun, 1995). Many of these tasks now involve higher order thinking skills and more sophisticated communication skills. Similar changes are found in almost every business and industry, regardless of the type.

These changes are largely due to international competition and increased customer expectations that, in turn, have led to subsequent changes in the skill demands on workers. *Technology* has played a key role in helping both create and meet global competition. Likewise, *work restructuring* has led to new work practices.

Technology has allowed workers to do more by relieving them of routine tasks; it has eliminated some jobs while creating other jobs. As technology is changing the workplace, it is also necessitating further ongoing training for workers. Often workers' basic skills prove to be inadequate for developing new work-specific skills, such as use of a computer system or new machinery.

A recent study (National Center on the Educational Quality of the Workforce, 1995a) indicates that employers think that one out of every five of their workers is not fully proficient in the skills needed for the current workplace. Sometimes workers' skills are perceived to be inadequate because they are being asked to do new tasks for which they were not hired or trained. Yet very few companies include basic skills in their training programs or even offer workplace education (Bassi, 1992). While more than half of all respondents to a member survey of the Society for Human Resource Management (1994) said that their unskilled or semi-skilled workers would probably need remedial training in reading and/or math during the next five years, most do not offer basic skills instruction at the work site.

The importance of a worker's education was further highlighted in another recent report from the National Center on the Educational Quality of the Workforce (1995b). It indicates that a 10 percent increase in the average educational attainment of a company's workforce is associated with an 8.6 percent increase in productivity. (In contrast, a 10 percent increase in the value of capital, such as equipment and tools, is associated with only a 3.4 percent increase in productivity.) Education of the workforce has become linked to productivity in the minds of the business community. Therefore, business is driving the movement toward educational change and the establishment of occupational skill standards to assure that workers have the skills and knowledge they need to perform effectively on the job.

Another effort to increase productivity to meet global competition has resulted in *work restructuring*. Many companies are moving toward becoming High Performance Work Organizations (HPWOs) by adopting at least some new work practices. The characteristics of HPWOs, in contrast to traditionally organized companies, are as follows (Office of Technology Assessment, 1990):

CHARACTERISTICS OF TODAY'S AND TOMORROW'S WORKPLACES

Traditional Model	High-Performance Model
STRATEGY	
• Mass production	• Flexible production
• Long production runs	• Customized production
• Centralized control	• Decentralized control
PRODUCTION	
• Fixed automation	• Flexible automation
• End-of-line quality control	• On-line quality control
• Fragmentation of tasks	• Work teams, multiskilled workers
• Authority vested in supervisor	• Authority delegated to worker
HIRING AND HUMAN RESOURCES	
• Labor-management confrontation	• Labor-management cooperation
• Minimal qualifications accepted	• Screening for basic skills abilities
• Workers as a cost	• Workforce as an investment
JOB LADDERS	
• Internal labor market	• Limited internal labor market
• Advancement by seniority	• Advancement by certified skills
TRAINING	
• Minimal for production workers	• Training sessions for everyone
• Specialized for craft workers	• Broader training skills

Haigler & Stein (1994) have also laid out the contrasts between the traditionally organized companies and HPWOs, contrasting them on their view of the production process, view of the work organization, role of workplace education, and development and implementation of workplace education programs. Furthermore, to assist in identifying HPWO companies, American College Testing or ACT (1994a), under a contract with the U.S. Department of Labor, developed an interview protocol using numerous criteria similar to the above characteristics of HPWOs. While some variations exist in the definitions of HPWO, many industries are restructuring along similar lines consistent with the general thrust of this concept and thereby are requiring new skills of their workforce.

In fact, most companies are not yet HPWOs (National Center on the Educational Quality of the Workforce, 1995a). However, many are adopting some HPWO practices, such as use of decision-making teams in contrast to the hierarchical decision-making that occurs in a traditional organization. These changes are leading to restructuring or organizational "flattening" in the workplace.

Research (National Center on the Educational Quality of the Workforce, 1995c) indicates that employees in HPWOs are not expected to master a greater number of skills, but to acquire different skills that are sometimes called "soft skills," such as team building, trouble-shooting, and problem solving. Front-line workers are assuming more responsibility for problem solving and decision making; communication with team members and others in the company becomes much more important than in a traditional hierarchical organization.

Ongoing training, furthermore, is essential and is being recognized as one of the characteristics of the HPWO, ensuring a greater demand for learning new skills in the future (National Center on Education and the Economy, 1990). In fact, training is being reconceptualized from a single course or workshop to a broader training program with multiple types and levels of learning opportunities which might be labeled as lifelong learning.

Changing Educational Environment

Globalization of American business and industry has led to the realization that the U.S. workforce may not be as competitive as that of other industrialized countries. The "products" of our educational system do not seem to be competitive with those of other industrialized countries; furthermore, the most recent national achievement tests indicate a slow but steady decline in some basic skills from previous years (National Assessment of Educational Progress or NAEP, 1995). For example, the average reading proficiency of 12th grade students, including White, African American, and Hispanic students, declined significantly from 1992 to 1994.

In addition, the skills that high school graduates do have are not well matched to the needs of the workplace. A report entitled *America's Choice: High Skills or Low Wages!* (National Center on Education and the Economy, 1990) called attention to the lack of a "system" for coordinating school and work, pointing out that many of the graduates from our public school systems were ill-prepared for the modern workplace. It proposed that a new performance standard should be set for all students to be met by age 16. Called the Certificate of Initial Mastery, it would be awarded only when students have demonstrated mastery on performance-based examinations for which they can explicitly prepare. As the report states, "Once created, this system would establish objective standards for students and educators, motivate students and give employers an objective means to evaluate the accomplishments of students (p. 6)." The Certificate of Initial Mastery is being piloted in a consortium of states and local school districts in the New Standards Project following the recommendations of the Commission on Skills of the American Workforce (see Marshall & Tucker, 1992).

The National Council on Education Standards and Testing (1992), in a report to the Congress, the Secretary of Education, the National Education Goals Panel, and the American people, also recommended the adoption of high national education standards for all students and voluntary assessments that are linked to the standards. The report then recommends specific components for these standards that should be developed at the national and state levels including performance-based testing of competency or mastery.

Furthermore, the amendments to the Carl Perkins Vocational and Applied Technology Education Act (1990) mandated that states develop and implement a statewide system of core performance standards and assessments. The first four states to attempt this implementation were not as successful as had been hoped, indicating that some changes may be needed in the legislation (Stecher, Hanser, Rahn, Levesque, Klein, & Emanuel, 1995). One reason was that the "...priorities — measures and standards, integration, Tech Prep, and service to special populations — were not seen as a coordinated system at either the local or state levels (p. 4)."

The School-to-Work Opportunities Act (1994) also suggests that receipt of a skill certificate might be one of the performance outcomes for students as they graduate from the public schools. Encouraging performance outcomes that articulate school and work experiences, this act could also foster mastery of basic skills and attainment of occupational skill standards as well as stimulate the offering of certificates for mastery of specific skills.

Another ongoing effort in vocational education is the Vocational-Technical Education consortium of the States (V-TECS). While this consortium is not in every state, it has led to a substantial pool of occupational skill identification and job analysis task lists as well as curricula which have been developed over the years. V-TECS uses a taxonomy or classification system to communicate how various curricula can cross-walk to each other. An example of the job analysis coding system can be found in *The Basic/Essential Skills Taxonomy* (Snyder, 1990) created with funding from the Arizona Department of Education.

Educational associations as well as some state departments of education have responded to the skill standards movement by developing education standards. Probably the best known and leader of these efforts is the National Council of Teachers of Mathematics (NCTM) (Malcom, 1993). Similarly, the International Reading Association and the National Council for Teachers of English are creating standards for English language arts. (An overview of the educational community's standards may be found in a recent issue of the *Phi Delta Kappan*, 1995, and in an *Education Week Special Report*, 1995.)

Since the business community has not been closely involved with the development of most of the educational standards, especially those developed by professional education associations and state K - 12 efforts, these standards, for the most part, do not tend to reflect an orientation toward the workplace but rather focus on the academic curriculum. Similarly, educators have not been closely involved with most of the attempts of the business community to establish occupational skill standards, creating a gulf between the content of the skill standards and the curricula of the public schools.

National Education Goals

Numerous reports issued during the 1980s testified to the rising skill needs in the workplace and the possibly inadequate and even declining literacy skills among the workforce. The creation of education goals is viewed as fundamental to establishing a coordinated educational system that is responsive to the needs of the workplace.

In 1989, the nation's governors and the President convened the Education Summit which led to the adoption of six National Education Goals. In 1994, Congress adopted these six goals and added two more goals. Goal #6 is particularly relevant to adult literacy stating that by the year 2000: "Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." (National Education Goals Panel, 1994).

The National Education Goals Panel was established to monitor and report annual progress toward accomplishing the goals at the federal and state levels. The *Goals 2000: Educate America Act* (1994) established the Goals Panel as an independent federal agency and expanded its charge to include educational reform. The purpose is to help local communities set high expectations for all learners, build an accountability system to measure and report progress, and set performance checkpoints.

The National Institute for Literacy (NIFL) engaged in a joint effort with the National Education Goals Panel to arrive at a functional definition of Goal 6 (adult literacy) that can guide the improvement of literacy services as well as the measurement of success. The NIFL asked adult learners across the country to respond to the question: "What skills and knowledge do adults need to be literate, to compete in a global economy and to exercise the rights and responsibilities of citizenship?" The responses from 1500 adult learners were analyzed ethnographically; four purposes for literacy (see Chapter 3) were identified using the framework described in the report from the NIFL *Equipped for the Future: A Customer-Driven Vision for Adult Literacy and Life-Long Learning* (Stein, 1995).

In a related effort the NIFL is also building state performance measurement, reporting, and improvement systems (National Institute for Literacy, 1995). The criteria for a state accountability system include measuring results rather than processes, moving toward establishing a flexible framework for systemic reform that may involve the setting of standards.

To check on progress in attaining the adult literacy goal, the National Adult Literacy Survey or NALS (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993) was developed and administered by the Educational Testing Service (ETS). The results indicated that nearly half of America's adult population scored in levels 1 and 2 of a 5-level scoring system, making their participation in the changing workplace problematic. Low NALS scores also correlated, as expected, with unemployment and dependence on welfare as well as with other personal and societal problems.

The U.S. Department of Labor commissioned ETS to develop a workplace literacy version of the NALS which was administered to eligible applicants for JTPA training and to job seekers in the Employment Service/Unemployment Insurance programs. The purpose was to study the relationship between the workplace literacy and labor market performance of the unemployed workers in these programs. The results similarly showed that about 40 to 50 percent of the JTPA applicants and about 40 percent of the ES/UI program participants demonstrate literacy skills that are in the two lowest levels of the same 5-level scoring system (Kirsch & Jungeblut, 1992). The report issued from the U.S. Department of Labor (1993) supported workplace literacy instruction as an integral part of job training, specifically recommending "...contextual literacy training in conjunction with specific job training...(p. iii)." The report also suggests that periodic monitoring of workplace literacy skills could occur using the same test instrument created by ETS.

Chapter 2. Occupational Skill Standards Movement

Understanding the occupational skill standards movement is difficult because various groups are piloting independent efforts toward developing standards without articulation with other efforts. Even the term *standard* is unclear. The definitions that seem to be used most universally in K - 12 education are from the National Education Goals 3 and 4 Technical Planning Group report to the National Education Goals Panel (Malcom, 1993). The report recommends that the following definitions be used:

> Content standards specify what students should know and be able to do. In shorthand, they involve the knowledge and skills essential to a discipline that students are expected to learn. Those "skills" include the ways of thinking, working, communicating, reasoning, and investigating that characterize each discipline. That "knowledge" includes the most important and enduring ideas, concepts, issues, dilemmas, and information of the discipline (p. 9).
>
> Performance standards specify "how good is good enough." In shorthand, they indicate how adept or competent a student demonstration must be to indicate attainment of the content standards. They involve judgments of what distinguishes an adequate from an outstanding level of performance (p. 22).

While the report uses the term *discipline*, one can substitute the word *occupation* and have a useful definition of standards for the workplace (Wills, 1993).

The term *skill standards*, however, is used more frequently in industry, being a combination of content standards and performance standards that include both the knowledge and skills needed for work as well as the level of performance required. The term is defined in the National Skill Standards legislation (1994) as:

> The term "skill standard" means a standard that specifies the level of knowledge and competence required to successfully perform work-related functions within an occupational cluster (pp. 198-199).

Both content standards and performance standards — as well as skill standards — need to be set by industry groups. It is impossible to specify, in the abstract, "...the level of knowledge and competence..." needed for work. Skill standards must be set within the occupational cluster by the industry group since they define content and performance levels needed for entry level or expert workers.

The intent of this guide, while using the term *skill standards*, is to define the *skills* that are necessary for the modern workplace without specifying content or performance levels. (In fact, many of the voluntary industry skill standards projects, described in this chapter, have not yet reached the phase in their work where specified performance levels are identified.) Since the selected occupations as well as the workplaces are so diverse in the NWLP curricula, it is impossible to define the *knowledge* base since it is dependent upon the vocational content of the occupation and the context of the workplace.

Role of Knowledge and Skill

Literacy is not an attribute that one has or does not have. Literacy — and its synonym basic skills — represents a continuum of skills and knowledge which becomes more complex as one's aspirations and needs become more complex. The context for literacy skills is crucial in the assessment and instruction of literacy skills (Sticht, 1987). In other words, one does not "read reading," for example; one must read *something*. That *something*, such as a technical manual or a blueprint at a workplace, is the context in which literacy skills function — the context in which literacy skills are assessed, developed, and applied.

Skills and knowledge interact. One does not use literacy skills for learning or doing in the absence of knowledge of the subject matter. Several models of literacy learning exist; knowledge is an important component in all of them. For example, in *schema theory* (Anderson, 1985), when new information is presented to learners, they can assimilate it only if a base of knowledge already exists. If they know nothing about a topic, they will either distort the information to fit the existing knowledge base ("schema") or forget it (Olson, 1977). An example is trying to read material about a subject that is totally unfamiliar, such as nuclear physics. One may use the few familiar vocabulary words — which may not have the same meanings anyway, given the multiple meanings of words — to construct meaning which becomes distorted to fit what the learner already knows. Or one simply forgets the new information because it does not relate to what is already known.

In the *information processing model* of literacy learning (Sticht & Armstrong, 1994), the knowledge base and information processing skills interact in learning new information. The knowledge base existing in the long-term memory is crucial to improvements in literacy skills and acquisition of new knowledge. Information stored in the short-term memory does not transfer to the long-term memory (in the form of new learning) unless a related knowledge base exists in the long-term memory.

Knowledge may be derived from first-hand experience or from learned experiences (study). New knowledge (information) must be congruent with the knowledge base in order to be learned; in fact, new knowledge may be rejected if it conflicts with the existing knowledge base. For example, workers from the Pennsylvania Department of Transportation who were part of the *R.O.A.D. to Success* NWLP project learned reading skills while studying for their Commercial Driver's License. When the information in the CDL study manual disagreed with their common practice, the workers rejected the manual; it did not have the credibility of their experience. (However, they had to "unlearn" what they knew in order to pass the CDL exam!)

The significance of this discussion is that one does not use literacy skills for learning in the absence of knowledge of the subject matter. Prior knowledge and experience are important factors in acquiring new skills. The movement toward setting voluntary industry skill standards, which encompass both knowledge and skills, has gathered momentum with several projects that have been issuing reports from the early 1990s to the present day.

Secretary's Commission on Achieving Necessary Skills (SCANS)

The Secretary of Labor 's Commission on Achieving Necessary Skills (U.S. Department of Labor, 1991) was charged to identify the skills needed for employment, propose acceptable levels for those skills, suggest effective assessments for those skills, and develop a strategy for broad dissemination (Peterson, n.d.). The Commission included business, labor, government, and education representatives in an attempt to create a broad base for deciding the skills needed for jobs in the modern workplace.

The product of the job analysis research that ensued, which was limited in scope by the available resources, provided definitions of 37 skills and competencies thought to be necessary for entry-level jobs in the future. These skills were organized into five broad skill domains (ability to use resources, interpersonal skills, information, systems, and technology) with three foundation areas (basic skills, thinking skills, and personal qualities). Furthermore, examples of job tasks to illustrate applications of these skills helped describe levels of proficiency needed for different jobs as well as guide the development of assessment tools and instructional curricula. An example of how the SCANS skills have been used in curriculum development for the Tech Prep program (which emphasizes coordinated academic and vocational experiences in high school and college in preparation for work) can be seen in *Toward Active Learning; Integrating the SCANS Skills into the Curriculum* (Crabbe, 1994).

The SCANS skills provided part of the foundation for the larger effort of developing the replacement of the *Dictionary of Occupational Titles*, also funded by the U.S. Department of Labor. The SCANS research effort gave investigators an opportunity to identify the concepts and pilot the methods that were taken advantage of in the later research to replace the *Dictionary of Occupational Titles*.

Replacement of the *Dictionary of Occupational Titles*: O*NET

The Occupational Information Network or O*NET (U.S. Department of Labor, 1995) is the result (still in draft form) of a long process of developing the replacement for the current *Dictionary of Occupational Titles* (DOT) to create an occupational database system responsive to the needs of the modern workplace. The plan is for O*NET to provide the national framework or infrastructure needed to match workers' abilities, knowledge, and skills to occupations as well as training opportunities in restructuring workplaces. The future O*NET, designed to accommodate rapidly changing work environments, will enable workers to identify the appropriate education and training opportunities to prepare them for the workplace. Educators and trainers will be better able to serve the education and training needs of both employees and employers because the job requirements for various occupations will be clearly specified. O*NET will provide electronic access to worker skill and job requirement information that has been scientifically gathered, verified, and kept current.

The Advisory Panel for the *Dictionary of Occupational Titles* (APDOT, 1993), commissioned by the Secretary of Labor, developed an initial conceptual framework for an integrated system that will be useful to employers, workers, educators, and trainees in providing a single standardized occupational information system. The APDOT Content Model envisions the new DOT as a huge database which provides a common language and can be accessed directly by the end user.
Data are currently being collected from randomly sampled incumbents in 80 occupations using the variables in this model. These 80 occupations were selected from the Occupational Employment Survey, such that they represent about 50% of the working population. The draft O*NET model (U.S. Department of Labor, 1995, p. 3) is displayed in Figure 1.

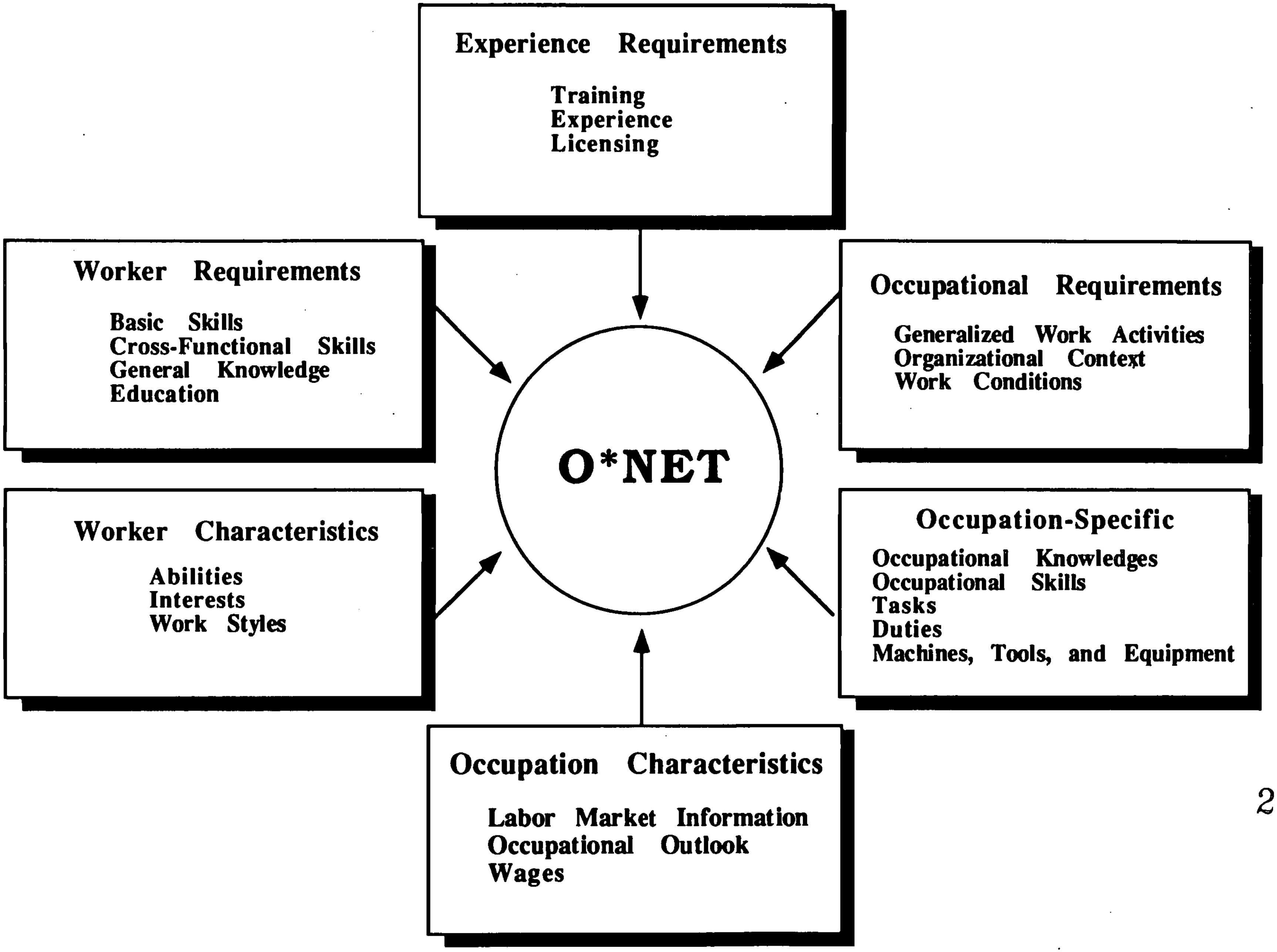
Experience Requirements
Training
Experience
Licensing
Worker Requirements
Basic Skills
Cross-Functional Skills
General Knowledge
Education
Occupational Requirements
Generalized Work Activities
Organizational Context
Work Conditions
O*NET
Worker Characteristics
Abilities
Interests
Work Styles
Occupation-Specific
Occupational Knowledges
Occupational Skills
Tasks
Duties
Machines, Tools, and Equipment
Occupation Characteristics
Labor Market Information
Occupational Outlook
Wages

Figure 1. O*NET Draft Content Model

The model contains workplace basic skills, such as reading and writing, as well as more general abilities, interests, and work styles that are considered fundamental to all jobs to some degree. Cross-functional skills are more generic skills, such as information gathering and organizing, that occur across a wide variety of jobs. (The five broad skill domains of SCANS are similar to the cross-functional skills identified in the O*NET.) Linking these worker requirements to occupational requirements are "experience" requirements, such as training and licensing. Each of these domains provides a distinct "window" to occupations; each window may be more helpful to certain users of occupational information. Collectively, they provide a comprehensive description of occupations.

The current DOT has such an occupation-specific focus that it is difficult to make cross-occupation comparisons or to consider broad occupational clusters. O*NET, in contrast, will enable users to organize job-specific information into the broader, cross-job categories and to form occupational clusters based on empirical data. Users can sort occupations based on skill requirements, or other occupational descriptors in the database, as appropriate. Because the system will not be rigidly referenced to existing job titles (as in the DOT), it will help identify emerging jobs and occupational clusters.

In summary, O*NET (U.S. Department of Labor, 1995) will enable users to: "(1) answer real world questions about matches between skills, job and educational requirements; (2) identify skills and education required for entering the workforce or transferring occupations; or (3) identify jobs available given particular combinations of skills and educational background (p. 7)." The skill standards movement can benefit from the O*NET database in specifying occupational requirements that can be linked to assessment, training opportunities, and perhaps certification. The O*NET database will provide electronic matchmaking of these occupational requirements with current and future workers' skills and knowledge, among other characteristics.

Industry Organizations

Just as O*NET was an outgrowth of the recognized need for an overarching framework and common skills language, the occupational skill standards projects reflect a similar need. Funded by the U.S. Departments of Labor and Education, 22 industry associations and organizations are analyzing clusters of occupations within and across their industries to determine the essential job tasks and the underlying knowledge, skills, and abilities that relate to performing those tasks. The *Occupational Skill Standards Projects* (1994) provides a description of the 22 projects with a directory of contact people.

In a study of the Education-funded projects, Wills (1993) describes the methodology being implemented as well as provides a good overview of the advantages of a competency-based system of occupational skill standards that builds into the education and training curricula the workforce skill and knowledge requirements identified by industry. She envisions a framework for generating valid and reliable skill standards, assessments, and certifications that should also be benchmarked to international standards. She cautions that the appropriate role for education and training institutions is the delivery of services, not leadership in the development of the occupational skill standards, an effort whick should be led by industry in order for skill standards to be realistic and accepted by industry.

Analysis of Two Voluntary Industry Projects

Two of the 22 voluntary, industry-led projects funded by the U.S. Departments of Education and Labor are described below. Since they represent vastly different industries and workforces, they provide an interesting comparison.

The American Electronics Association (AEA), representing high-tech electronic companies, has developed skill standards for four occupational areas — manufacturing specialist, manufacturing specialist team leader, administrative/information services support, and pre/post sales (American Electronics Association Workforce Skills Project, 1994). The AEA's development of occupational skill standards was based on extensive background research, expert panels, observations at company locations, and interviews with workers and supervisors who know the targeted positions best. The skill standards focus on outcomes rather than on processes and tasks. A national validation survey was conducted to confirm the results of the initial research which laid the foundation for the development of the skill standards. The AEA also identified the knowledge and skills that enable performance of the occupational standards.

The AEA followed these procedures in developing standards: (1) Identify the *key purpose* of each occupational area; (2) Identify the *critical functions* of each occupational area; (3) Identify the *key activities* for each area; (4) Describe *competent performance — performance indicators*; and (5) Identify *underlying knowledge, skills,* and *understanding* needed to achieve these standards.

At present, the AEA has identified the knowledge and skills needed to achieve the standards by convening research groups of frontline workers, supervisors, educators, trainers and other experts, and asking them to decide what someone needs to know and be able to do to achieve the performance described by the standards. The AEA then organized this specific information into a knowledge and skills framework that represents coherent sets of knowledge and skills that can be addressed as units in a training or assessment system. This framework is drawn substantially from the SCANS report (U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills, 1991). The information is presented in two other ways: Knowledge and skills grouped under activities, and activities grouped under knowledge and skills categories. These alternative presentation methods assist users to identify what is needed specifically to attain the occupational skill standards so that training curricula can be developed within the context of real work challenges.

The National Retail Federation, or NRF (1994), is another of the 22 voluntary industry-led projects that are developing occupational skill standards. The NRF's initial efforts have focused on standards for the Professional Sales Associate. Sales associates and managers from across the country participated in the task analysis phase of the project to determine what a sales associate needs to know and do to be successful. The resulting standards are "meant to be a tool... (that) will help describe *what trainers need to teach, what workers need to learn, and what employers can expect* when they look for employees to hire and promote (p. 4)." Because the standards also will inform high school educators, the project has begun to integrate standards with state school-to-work initiatives.

American College Testing (ACT) validated the task list that resulted from task analyses with sales associates and managers by sending it to the entire membership of NRF. Both sales associates and managers were asked to respond to the survey. The results determined the criticality and frequency levels for each task as well as established the relative importance of each task and duty area. ACT, as part of developing its assessment system *Work Keys*, profiled the basic skills required for the Professional Sales Associate and the level of skill needed in each area. (These skills areas related closely to the SCANS foundation skills.) Specifically, *Work Keys* assessed levels of selected generic skills in Reading for Information, Applied Mathematics, Listening, Writing, Locating Information, Applied Technology, and Teamwork skills. Sales associates and managers determined the levels needed for these skills. *Work Keys* helped set generic standards which, combined with job specific skill standards, will result in measurable standards for the Professional Sales Associate, and which can also lead to certification of competence.

Debatable issues have become evident as the 22 pilot projects attempt to set skill standards for their occupations. Some occupations, such as customer service worker, cut across industry groups; how much specialized knowledge of the industry is needed in order to be a skilled customer service worker in electronics or retail, for example? Furthermore, great variability exists among the 22 projects in the level of specificity of the occupational skill standards as well as in the methodologies for determining the skill standards. Setting the performance levels required for entry-level or expert workers is also variable across industries; many of the skill standards projects have not yet reached the point of establishing levels of competence within the occupational cluster.

National Job Analysis Study

Also funded by the U.S. Departments of Labor and Education, the National Job Analysis Study or NJAS (ACT, 1994b) is identifying cross-occupation workplace skills necessary for worker and business success particularly in HPWOs. The result will be a scientifically determined set of general or core skills that every worker needs, regardless of occupation and job tenure level, in order to work in the HPWO environment. The NJAS will provide a common language that will link generic and job-specific skills, resulting in "a definitive foundation on which to base assessments, work training programs, educational curricula, and comprehensive descriptions of job requirements (p. 1)."

Growing out of the SCANS effort, the NJAS includes construction of criterion-referenced assessments of the identified competencies and skills, measuring whether or not a worker has mastered a particular skill rather than how well s/he does in relation to other people. As part of this effort, ACT is also working with several of the 22 projects that have been funded to develop voluntary industry standards.

The various skill standards efforts are summarized in Table 1. Additional information on skill standards is available from other sources.[2]

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[2] Some additional resources on the occupational skill standards initiatives follow. The Training Technology Resource Center (TTRC) of the U.S. Department of Labor, Employment and Training Administration, has an electronic *Skill Standards and Certification Reference Guide* found by selecting the Skill Standards option on the TTRC Main Menu. Menu options include General Information (about occupational skill standards), National Skill Standards Board (including legislative background), Consultants Directory, Practices (industry, international, and state practices), Project Profiles (about the 22 voluntary industry projects), Research Topics (including annotated bibliographies), Organizations, and Products (developed by vendors). Technical assistance and further information may be obtained by telephone from (800) 488-0901 or (202) 219-5600. TTRC also has a web site (telnet://ttrc.doleta.gov) as does the Department of Labor, Employment and Training Administration about O*NET (http://www.doleta.gov/programs/onet).

Another source of information about occupational skill standards is from the American Training Standards Institute (ATSI), a not-for-profit skills research corporation, with its STEPS (Skills Training Evaluation Procedures and Standards) initiative. Members of the corporation are from private industry, universities, research organizations, government agencies, associations, and concerned individuals. ATSI's mission is to enhance national economic competitiveness by establishing a skills language, an array of measurable skill assessment tools, skills-based training courses and certification, and a lifelong learning process that will encourage workers to acquire new skills. The vision is to build a high performance workforce using new occupational skills standards and advanced telecommunications and computing technologies. Information on these skill standards efforts may be downloaded electronically from ATSI's home page (http://steps.atsi.edu).

Table 1. Summary of Standards Setting Activities

Standards Activities	Academic Skills	Workplace Skills	Occupational Skills
National Education Goals	X		
State Education Standards	X		
SCANS		X	
O*NET		X	
Industry Organizations			X
NJAS		X	

Chapter 3. Methodology

The purpose of this study was to define a common set of basic skills for the workplace. These skill descriptions are a starting point for workplace educators and those involved in workforce preparation. They also provide guidance to the developers of industry skill standards who might integrate these skill domains with specific occupational knowledge.

The curricula created by the U.S. Department of Education's National Workplace Literacy Program (NWLP) are resources that can offer guidance by providing examples of how the skill descriptions have been implemented in workplace literacy programs.

The intent of these skill descriptions is not to ignore the great variability that exists in U.S. workplaces. The purpose is to provide guidance to those service providers who are inexperienced or untrained in designing instruction for workplace literacy or workforce preparation programs and to those involved in the development of occupational skill standards. Since literacy task analysis is required to determine the basic skills that should be taught in a given workplace, identification of the skills that are taught in workplace literacy programs could be useful in developing occupational skill standards. Before the specific methodology can be described, a brief discussion of literacy task analysis is necessary.

Literacy Task Analysis

The NWLP grant guidelines (for example, U.S. Department of Education, 1994) do not specify how a literacy task analysis is to be accomplished. The guidelines do state, however, that curricula created as part of NWLP projects are to be job-specific and customized to the workplace being served.

The procedures for job analysis followed by the American Electronics Association, described in Chapter 2, represent the ideal. However, most literacy providers lack the resources and expertise to fully adopt those procedures. Nevertheless, providers should ensure that all stakeholders, including front-line workers, supervisors, union representatives, trainers, and management, participate in the process, not merely validate what is found. Literacy task analysis of selected occupations usually involves observation of work, interviews or focus groups with job incumbents, their supervisors, and trainers, and collection of materials to determine: (1) the most frequently performed and important job tasks; and (2) the literacy skills that are necessary to performing these job tasks. Differences in approaches to literacy task analyses were evident as part of the NWLP curriculum development process.

Some providers used previously developed skills lists, such as the Comprehensive Adult Student Assessment System (CASAS, 1989), to note the basic skills needed in the workplace. In the NWLP curricula, these providers usually indicated that they used the skills list as a guide to the literacy task analysis. Most of these curricula did not indicate the specific CASAS skills that were identified and taught in the workplace.

Other NWLP providers derived their own skills lists based on the basic skills that were encountered most frequently in specific workplaces. These lists appeared in the NWLP curricula, usually under the categories of reading, writing, math, and so forth, similar to the CASAS list.

The skills list approach—whether from an external source (like CASAS) or developed internally—assumes that the basic skills, such as reading, writing, and math, can be identified and taught separately. In other words, a class is offered in reading skills, another class in writing, and so forth; materials from the workplace, identified during literacy task analysis, provide the context for skills instruction. Service providers are often accustomed to offering separate classes in these skills in their regular adult education programs; this approach carries over to the workplace literacy programs even though basic skills are, in fact, integrated in use in the workplace. (For example, one usually uses reading and writing together in the workplace to perform some job task; math is often accompanied by reading and writing.) When the skills are taught separately, transfer back to the job must be explicitly taught and practiced to ensure that classroom learning carries over to the workplace.

In contrast, other NWLP curricula describe the detailed job tasks in one column with the related basic skills shown in another column as recommended by Philippi (1991). These job tasks and basic skills are usually very specific and contextual, making them difficult to generalize from the given workplace. The curriculum which usually results from this type of literacy task analysis is organized around the job tasks rather than the basic skills being taught since instruction is designed to mirror the exact job tasks of targeted jobs. Because the curriculum tends to be very specific to the job tasks being performed, it is difficult to use it with other workers (even from the same company or industry) in different jobs. The other difficulty is that this approach focuses on the job as it is in the present and teaches only those skills needed for that job; it does not teach those skills needed in reorganizing workplaces or for future advancement (Sarmiento & Kay, 1990). Theoretically, however, because the curriculum does replicate job tasks in the classroom, transfer of classroom learning back to the job should not be difficult.

Procedures and Results

The survey of NWLP curricula resulted in 208 entries in a *Filemaker Pro* database. These represented 45 sources, mostly educational providers, that created curricula with NWLP funding between 1990-94. The sample size is small, given that the NWLP has funded about 50 projects during each "wave" or funding cycle when they were 18 months in duration. This sample, drawn from the second to the fifth waves, was selected on the criteria of: (1) the curriculum was on file at the U.S. Department of Education (some projects provided only final reports or samples from the curricula); (2) the literacy task analysis process being used was evident in the final report; (3) a customized curriculum for teaching job-specific or job-related basic skills resulted from the project. Curricula for teaching the GED were not included in the analysis. Curricula that consisted primarily of generic instructional materials and curricula that appeared to teach technical skills rather than literacy skills were not included.

Of the occupations analyzed, 103 jobs were from the manufacturing sector; 34 from healthcare; and 71 were categorized as "other", which may be other occupations or unspecified occupations. While this sampling of the NWLP curricula was greatly constrained by the length of the Literacy Leader Fellowship period (12 weeks), it was based on the criteria stated above. The project should nevertheless provide useful information, particularly to those practitioners who are new to workplace literacy or workforce preparation programs.

It was originally hoped that unique skills could be identified for various occupational clusters from the NWLP curricula. This effort proved to be impossible since many providers worked with several industries, not necessarily of the same occupational cluster, within a given community.

The investigator had hoped to identify and use only high performance work organizations (HPWOs) as the sample from the NWLP curricula. However, it was difficult to tell from the information provided in the final NWLP reports about their work restructuring efforts. Unless a company was clearly HPWO, as in 13 of the entries, or clearly not a HPWO, as in 51 of the entries, it was coded as "mixed" which meant that the company was moving toward becoming a HPWO or its status was unknown or unspecified in the NWLP curricula or final report.

Using the four purposes of literacy from the National Institute for Literacy's *Equipped for the Future: A Customer-Driven Vision for Adult Literacy and Life-Long Learning* (Stein, 1995), virtually all the NWLP curricula focused on the purpose of "Literacy for Access and Orientation."

Other purposes—"Literacy as Voice", "Literacy as a Vehicle for Independent Action", and "Literacy as a Bridge to the Future"— were not made explicit in the NWLP curricula, probably due to the emphasis on job-specific literacy skills in the NWLP (U.S. Department of Education, 1992).

NWLP curricula focused on literacy skills at various levels of specificity, ranging from curricula built around job-specific literacy skills to general workplace literacy skills. The sample of NWLP curricula for this study included 108 entries that were job-specific, 56 that were specific to the company, 45 specific to the industry, and 39 related to general workplace skills. (Numbers do not total to 208 entries since some curricula were focused at more than one level.)

The categories of the Occupational Information Network (O*NET) were used as the framework for coding the basic skills. The literacy skills of the sample NWLP curricula included the following basic skills categories with the number of occurrences:

Reading Comprehension	41
Writing	38
Oral Communication	35
Quantitative	38
Problem Solving	23
Critical Thinking	15
Knowing How to Learn	5
Cross-Functional Skills[3]	9

These numbers are distorted by the fact that general skills lists such as CASAS were entered into the database only once. More than ten percent of the programs in the sample actually used the CASAS framework as the basis for organizing the basic skills in the workplace. Since most of the curricula did not state which CASAS skills were identified, multiple entries were not made in the database. Therefore, CASAS skills actually occurred more often in the NWLP curricula than are noted above.

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[3] Includes the 36 cross-functional skills defined in the O*NET.

Chapter 4. Framework for Skill Standards

The standards developed by the National Council of Teachers of Mathematics or NCTM (Malcom, 1989) can serve as the model for developing skill standards for the basic skills descriptions presented in this chapter. They were used as a model for the development of *The Massachusetts Adult Basic Education Math Standards* (The ABE Math Standards Project, 1994). While the NCTM standards provide content standards at different levels corresponding to grade levels, the Massachusetts standards do not specify levels of performance.

The context for these skill descriptions is the workplace. Examples from the NWLP curricula provide examples of contextualization of these skills. However, skills and standards, while emanating from specific contexts, are stripped of their context and knowledge base (Hull & Sechler, 1987). Specifically, the knowledge that is required to apply the skills in the workplace context is lacking. Workers may be able to apply a skill in the familiar context of the workplace but be unable to demonstrate mastery of it in an unfamiliar context like a standardized test. In fact, Diehl & Mikulecky (1990) found that workers could read familiar materials related to their work at higher reading levels than general materials for which they lacked appropriate background knowledge. It seems reasonable to expect that workers might likewise be able to apply a literacy skill in more difficult materials that are familiar in the workplace than in generic or academic materials even if they are written at a lower readability level.

Examples from the NWLP curricula are provided in this chapter to help define the context in which the skills are being applied. Processes rather than isolated skills are provided to demonstrate the dynamic nature of the workplace application of skills. Skill descriptions are artificial, but convenient, categories; skills, however, are not applied in isolation but in combination in the workplace. For example, reading is usually accompanied by writing in accomplishing a workplace task.

A recently completed study (Jones, 1995) of skills needed by college students supports the framework selected for these skill descriptions. (The study was conducted as part of the National Center for Education Statistics' attempt to monitor the National Education Goal: "Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.") As part of the study, faculty, employers, and policymakers were surveyed to determine the most important specific skills that college students should possess upon graduation. These are similar to the ones identified in the draft O*NET and in this chapter.

This framework for developing basic skill standards adapted the draft O*NET definitions, as written in the spring of 1995, which are listed at the end of Chapter 3. Since O*NET's skill definitions were derived from careful review of prior pertinent research, including observations and interviews in actual workplaces, and since these skill definitions will be used to describe jobs in the future, it made sense to use them as the basis for developing skill definitions for workplace literacy. Some adaptations in the draft O*NET language were made to fit the present purpose, recognizing that the O*NET terminology may change as it is developed. The draft O*NET categorizes the first seven variables as "Basic Skills"; "Cross-Functional Skills" are considered a separate domain within the draft O*NET. (This guide does not deal with the third category of O*NET skills called "Job or Occupation Specific Skills.") The label of "Problem Solving" (which appears as a skill within O*NET's "Cross-Functional Skills") was used instead of O*NET's terminology "Math and Science", and "Quantitative" was established as a separate category for math operations. Some of the definitions were slightly modified.

The skill definitions developed for this guide, adaptations of the draft O*NET definitions (U.S. Department of Labor, 1995) which are partially based on the SCANS categories (U.S. Department of Labor, 1991), are compared in Table 2 to the NALS literacy scales (1993), CASAS skills (1989) as found in the Workplace Literacy Analysis Job Profile, and Stein's purposes for literacy (1995):

Table 2. Comparisons of Systems for Categorizing Literacy

*Adapted O*NET*	*NALS*	*CASAS*	*Purposes for Literacy*
Reading Comprehension	Prose Document	Reading	Access and Orientation
Writing		Writing	Voice
Oral Communication		Communication	Voice
Quantitative	Quantitative	Measurement/ Numerical	Access and Orientation
Problem Solving		Critical Thinking/ Problem Solving	Independent Action
Critical Thinking		Critical Thinking/ Problem Solving	Independent Action
Knowing How To Learn		Organizational/ Learning	Bridge to the Future
Cross-Functional Skills		Knowledge of Classrooms/ Workplace Expectations	Bridge to the Future

One can see from Table 2 that the NALS is the least comprehensive in terms of including the draft O*NET skills adapted for this guide. On the other hand, CASAS is more specific, corresponding closely to the draft O*NET skills. For example, NALS defines reading comprehension by the materials being read, forming two of its three scales: Prose and Document. One has to infer the specific skills that are assessed from the NALS sample items. CASAS, on the other hand, lists under each skill category (*e.g.*, "Reading") the specific skills (*e.g.*, "Read and interpret vocational vocabulary") as well as subskills (*e.g.*, "Identify abbreviations and symbols specific to the job"). Stein does not categorize literacy by skills but rather by the purposes that adult learners identified for literacy.

The draft O*NET skills, as adapted for this guide, follow with examples from the NWLP curricula; the O*NET categories and descriptions are still being modified at the time of this writing:

Reading Comprehension

*Draft O*NET Definition*: Decodes, interprets, and comprehends information drawn from written documents, etc.

Some examples of skills which are found frequently in the NWLP curricula are:

- Recognize technical vocabulary used at the workplace, including abbreviations

- Follow written directions
- Locate information
- Scan materials for specific facts
- Read for details

Writing

*Draft O*NET Definition*: Communicates thoughts, ideas, information, and messages in writing; planning, generating, and revising text.

Some examples from the NWLP curricula are:
- Write short notes and simple memos
- Enter or transfer information onto a form
- Flowchart prose information
- Take telephone messages accurately

Oral Communication

*Adapted Draft O*NET Definition*: Communicates thoughts, ideas, and information orally, attending to the comprehension of listeners and the demands of the setting.

The NWLP curricula contain examples of skills such as:
- Listen, especially to follow verbal instructions to perform a job task
- Ask and answer simple questions
- Make requests for supplies, days off, etc.
- Use correct grammar and word choice
- Participate actively in team meetings, listening to the input of others and expressing his/her own contributions

Quantitative

Definition: Understands basic mathematical computations and problem solving procedures and how these procedures might be used to address various problems.

The NWLP curricula tend to focus heavily on computational skills as prerequisite to higher level operations:
- Perform addition, subtraction, multiplication, and division including whole numbers and multiple operations, common or mixed fractions, decimals, and percentages
- Convert decimals, fractions, and percentages
- Interpret ratio and proportion
- Convert numbers to and from the metric system
- Interpret data from graphs and tables
- Measure with a ruler and use measurements in solving problems such as finding area

Problem Solving

*Adapted Draft O*NET Definition*: Understands basic problem solving procedures and how these procedures might be used to address various problems.

The NWLP curricula have relatively few examples of formal problem solving skills although some curricula embed problem solving and critical thinking activities into their basic skills instruction. Some examples are:
- Differentiate, sort, and classify information
- Formulate, evaluate, and choose options in solving problems

- Trouble shoot, quickly identifying and solving problems as they arise
- Predict outcomes based on available information
- Prioritize job tasks for effectiveness and efficiency

Critical Thinking

*Draft O*NET Definition*: Recognizes and can analyze the strengths and weaknesses of arguments and propositions using logic to establish the validity of these propositions.

In the NWLP curricula critical and creative thinking are combined. Some examples are:

- Participate in brainstorming sessions
- Judge the credibility of sources of information
- Distinguish major problems from minor ones
- Differentiate between relevant and irrelevant information
- Compare and contrast information

Knowing How To Learn

*Adapted Draft O*NET Definition*: Identifies and uses various alternative strategies for working on learning tasks, looking for examples, taking notes, and identifying alternative strategies for working with material.

One NWLP project, entitled S.C.O.R.E., which developed computer-based and classroom materials for AT&T, targets basic skills for customer service and telephone sales workers. The classroom portion of the program involves instruction in metacognitive and self-system strategies in the work context. These strategies are further reinforced in the computer courseware.

While most of the NWLP curricula give relatively little emphasis to skills in this category, Heiman & Slomianki (1994) have developed a "learning how to learn" curriculum for industries in Massachusetts. This skill cluster becomes particularly important in industries adopting HPWO patterns since workplace requirements are changing rapidly especially in response to new technology. These skills are very important in formal and informal training so that workers do not lose more time than necessary away from their jobs. Some examples from the NWLP curricula are:

- Apply appropriate learning style, techniques, strategies, tools, and resources
- Manage time effectively, estimating the time to perform each task
- Maintain a high level of concentration

Cross-Functional Skills

*Adapted Draft O*NET Definition*: Works with technology, people, resources, and systems to perform activities that occur across jobs.

Again, the NWLP curricula do not contain many examples of skills in this category. Some examples are:

- Transfer skills learned in one job situation or in training to another job
- Work in a team with people with diverse personalities and cultures
- Mediate a conflict within a team or with coworkers before it becomes destructive

Examples from the NWLP Curricula

Skills are not used in isolation in the workplace. An example of an integrated skills activity is a worker reading gauges, recording the numbers on a form, interpreting the findings (perhaps having to calculate averages or perform other math operations with the numbers obtained), and writing the information in a brief memo to the next shift. This relatively simple activity uses skills that are found in most of the categories. The worker must first use problem solving and critical thinking when machinery is not functioning properly and the gauges do not yield expected results. Then the worker must be able to evaluate the information and weigh the alternatives of various actions to correct the situation. Oral communication may become important as s/he might have to explain the problem to a supervisor or a work team.

Another example of how the skills are applied in an integrated way is with non-native speakers of English. Role play might be used to teach hotel workers, for example, how to greet coworkers, supervisors, and guests, how to deal with routine requests and problems, and how to solve problems that might not be routine. In addition to the oral communication skills, workers need to be able to perform the other literacy skills that a native speaker does, including reading instructions, making notes about the condition of rooms, checking a pay stub for accuracy of pay (calculating the correct pay based on the number of hours worked), and participating in team meetings.

In summary, skills are not performed in isolation in the workplace. If the educational provider is offering separate courses by skill category, such as reading, writing, math, and oral communication, these skills must also be presented and practiced in integrated skills activities to encourage transfer to the workplace.

Chapter 5. Discussion and Conclusions

This final chapter discusses the key issues raised by the study of a sample of NWLP curricula in an attempt to draft basic skills standards for workplace literacy.

Constraints of the Study

The task of writing standards for workplace literacy is complicated by a number of factors relating to the definition of terms. For example, what are skill standards? The legislation (National Skill Standards Act of 1994) states that they are to be measurable, including performance standards. Yet most of the government-funded pilot occupational skill standards projects have not yet arrived at the point of being able to set expected levels of performance which would provide guidance for others. Some of the projects are global in their statements of skills; others are highly specific. Some describe the skills needed for entry-level workers; others describe various levels of tenure and competence. These projects are intended to be pilots to help identify models and best practices for the emerging system of skill standards.

The many initiatives that affect the setting of skill standards, such as O*NET and the NJAS, are confusing while they are in process. Most of the materials related to these initiatives are not published nor easily accessible, but that is at least partially changing. For example, the O*NET Content Model report became available in the Fall 1995; information about its availability and recent informational updates can be found electronically on the O*NET home page (http://www.doleta.gov/programs/onet).

Other limitations pertained to the NWLP curricula that were reviewed: (1) Due to the space constraints of its offices, the U.S. Department of Education did not collect complete curricula from the NWLP projects; in some cases, only samples from the curricula were included with the project final report; (2) Procedures for conducting literacy task analyses were varied, resulting in different levels of specificity in the skills identified for workplace literacy programs; (3) Terminology was a barrier in that the same skill may have been labeled differently by various grant recipients — for example, communication may have meant ESL for non-native speakers, and oral speaking, writing, team building, or oral problem solving for native speakers; (4) The NWLP projects evolved over time, with greater emphasis in the more recent years on the so-called "soft skills" of team building, communication, problem solving, and critical thinking in addition to the more traditional basic skills; and (5) It was often impossible to determine at what point an industry partner was in the effort to become a HPWO.

Given these limitations, it was concluded that: (1) No clear framework for basic skills within occupational skill standards exists although O*NET may become the organizing structure when it is no longer in draft form; (2) NWLP curricula were not as useful in this study as anticipated because they tended to focus on the traditional "access and orientation" skills rather than on the higher order skills needed for HPWO practices — those identified in O*NET and in Stein (1995). (Stein's "Independent action" is similar to O*NET's "critical thinking" while "bridge to the future" is O*NET's "knowing how to learn.")

Nevertheless, it is hoped that the skill descriptions that have been formulated here will be of use to adult educators who are new to workplace literacy or workforce preparation and that they will inform the occupational skill standards initiatives. The discussion that follows summarizes some of the key considerations in using skill standards in workplace literacy programs.

How Can Skill Standards Help the Adult Educator?

Skill standards define what current and future workers need to know and be able to do to perform successfully in the workplace. The value of standards is as a communication tool among educators (both in the K-12 system and adult education), workplace technical trainers, management, unions (if represented), the workers themselves, and those preparing for the workforce. If assessments and certification are linked to the standards, then workers can even design their own training plans using various courses offered both at the worksite and at educational institutions, such as community colleges. Certifications acknowledge and make portable workers' skills that can be taken anywhere in the country and may apply across industries; they also inform employers about what workers know and can do. The "system" becomes more straight-forward and transparent for all stakeholders.

Although Wills (1993) states that the role of the adult educator is to deliver services, this author believes that adult educators should also work with business and industry to help define the basic skills that are needed for particular companies and for occupational clusters within various companies. In fact, the National Skill Standards Act (1994) mandates a partnership body, including educators, to develop standards; however, some difficulties have arisen in finding appropriate representatives from education who could be released to participate in project activities.

Businesses and industries have taken the lead in the skill standards efforts, and this is appropriate. Adult educators, however, should participate in the efforts, especially in helping determine the basic skills that underlie the required job tasks. Most importantly, they need to design assessment and instruction in basic skills that relate to these job tasks. The skill descriptions in Chapter 4 can provide guidance to adult educators in selecting the basic skills for assessment and instruction.

According to the legislation (National Skill Standards Act of 1994), skill standards should state not only what a worker should be able to *do* but also what a worker needs to *know*. The knowledge base is essential for the application of the skills; as the required knowledge base expands over time, skill standards must be revised accordingly. Adult educators may be at an initial disadvantage because they probably lack the content knowledge related to the business or industry. They may know how to teach basic skills in a generic, academic, or life skills context; however, that is not appropriate in a workplace or workforce preparation setting. Therefore, it is imperative to work closely with technical trainers who may serve as "mentors" to the literacy providers in developing assessments and instruction in basic skills that are relevant to the targeted jobs and workplace.

Some of the learning in the basic skills classroom needs to be experiential and work-based, especially if performance-based assessments are used. Workers who are students in a workplace literacy program can help fill in the knowledge base of the adult educators by explaining their jobs, bringing in materials from their work, and describing critical and frequent activities related to their jobs. Adult educators should also tour the workplace, observe the targeted jobs being performed, and keep close contact with trainers, supervisors, and workers so that the content used for basic skills instruction is relevant to the needs of the students/workers. Again, occupational and basic skill standards can be a communication device with all these stakeholders in a workplace literacy program.

How Can Literacy Task Analysis Be Conducted?

Literacy task analysis examines the jobs within the workplace to determine the basic skills that are related to successful performance of the job tasks. (See the Appendix for resources on literacy task analysis.) As discussed in Chapter 3, however, multiple approaches exist to conducting a literacy task analysis. The highly specific approach results in a curriculum, including assessment and instruction, that exactly mirrors the tasks and materials required for the job, theoretically ensuring transfer back to the job. This approach, however, is time consuming and consequently expensive (although the adult educator does become very familiar with the workplace through this process). It has also been criticized for limiting possibilities for advancement by teaching only what workers need for their current specific jobs (Sarmiento & Kay, 1990).

The other problem with the highly specific approach is that literacy task analysis should focus on the skills needed for extraordinary situations rather than routine job tasks. For example, what does a non-native English speaker do when his/her machine begins to break down — say nothing (perhaps for fear of using incorrect English) or notify the supervisor so that the machine can be repaired? Furthermore, it may also be important to consider what workers are *not* doing that they could be doing to be fully productive. Usually incumbent workers as well as supervisors are the best source of this type of information.

A caution relating to the methods used to identify generic skill requirements of workplaces may also be relevant to literacy task analysis. Berryman (1993) points out that the method should allow "...a conception of work as an interaction between the individual and the social, technological, and functional context within which she or he is performing work...Traditionally seen as a fixed bundle of tasks and skill requirements, a 'job' is being revealed as an interaction between characteristics of the larger work environment, including coworkers, and the characteristics of the worker (p.346)." Similarly, Waugh (1992) urges a more holistic perspective of the workplace, highlighting that: "Literacy task analysis is only one component of an overall process for assessing basic skills needs at the workplace (p. 32)." When the focus turns to the dynamics of the workplace, then the highly specific listing of job tasks performed by workers in targeted jobs may be less useful.

Furthermore, if the stakeholders are instituting a workplace literacy program as part of restructuring — where workers are being asked to make more decisions, work in teams, and think critically — then the detailed literacy task analysis does not make sense since it focuses on the job as it exists today. The skills approach, in which the CASAS framework or the draft O*NET skill descriptions are used as a guide to identifying the basic skills needed for the workplace, is more appropriate. This approach assures that a balance that includes higher order skills is obtained in the basic skills selected for the workplace literacy instructional program since it is not tied to detailed literacy task analyses. The danger in this approach is that instruction and assessment, which should still be tied to the context of the workplace, might become too generic or academic.

A mid-level of specificity — one which focuses on the basic skills needed for occupational clusters or job families, such as customer service workers, or for a department in a company — still ensures instruction that is relevant to the workplace yet broad enough to be used by workers in more than one job. This form of literacy task analysis looks for commonalties in the basic skills needed across the jobs in the occupational cluster or department, including those needed for the changing workplace. It requires seeing common patterns across jobs that are similar in that they belong to the same occupational cluster or department in a company.

The College of Lake County, a current recipient of a NWLP grant, is using this approach. The adult educators identified the basic skills needed in the six workplaces that they are serving in Lake County (north of Chicago, Illinois). The curriculum developers created their own skills lists by following mid-level literacy task analysis procedures. Teachers are now encouraged to identify which skills from the lists will be taught to the individuals in their classes based on initial and ongoing assessments. The list of skills developed by this community college is shown in the Appendix.

How Do Skill Standards Help with the Transfer of Skills to the Job?

Evaluations of workplace literacy programs have indicated that transfer of basic skills learned in the classroom to performance on the job is a major problem (Mikulecky & Lloyd, 1993).

Similarly, those in workforce education programs have difficulty demonstrating the skills that they learned in the classroom when they attain employment in the workplace.

Use of job materials in assessment and instruction in basic skills greatly assists in transfer; if workers are learning basic skills in context, while using familiar job materials, transfer is more likely (Sticht & Armstrong, 1994). Some of the more recently identified basic skills, such as team building, communication, problem solving, and critical thinking, may be best taught through simulated job situations in the classroom. Critical events — important activities that occur frequently on the job or that have significant impact on the performance of the job — can be simulated in the classroom to assess and instruct workers in essential basic skills. These can then be reinforced by work-based learning back on the job.

Additionally, transfer can be explicitly taught through development of metacognitive (learning how to learn) skills (Thomas, Anderson, Getahun, & Cooke, 1992). (The draft O*NET labels these skills as "Knowing How To Learn.") Workers who have mastered the "Knowing How To Learn" skills have an advantage when they must apply their literacy skills, learned in one context, to another. They also have the metacognitive strategies that enable them to learn as well as transfer that learning back to their jobs. They realize when they are not comprehending reading material (and other media) or reaching a solution in math. In other words, they monitor their own comprehension and can take corrective actions (Baker & Brown, 1984; Paris, Wasik, & Turner, 1991). They are active learners rather than passive recipients of information. They recognize the need for continuous learning to update their knowledge and skills.

These learners can react critically to new information, deciding whether or not it agrees with what they already know. They can also construct new meanings and interpretations, using creative thinking skills (Tennyson & Breuer, 1991). A knowledge base is essential, however, for critical and creative thinking since, by definition, learners react to and build on what they already know.

Skill standards, by defining what an individual needs to know and be able to do for successful employment, make classroom instruction relevant to the workplace and, hence, encourage transfer to the workplace. The workplace can reinforce the need to master these skills and show how literacy skills apply on the job. Skill standards also can be used to demonstrate that transfer of learning has occurred if assessments of transfer are included in the workplace literacy evaluation plan.

How Can Adult Educators Help Companies Adopt High Performance Work Organization (HPWO) Practices? How Can Skill Standards Help?

As companies restructure, downsize, and "flatten" their organizations, more responsibility is being placed on the front-line workers. While the traditional basic skills are still required, companies are now expecting more than the "3 Rs." Adult educators must find out where companies are on the continuum of traditional to HPWO practices. Companies that view workplace literacy as one piece of restructuring may have greater expectations from a workplace literacy program than companies that are traditionally organized. (If the expectations are not greater, they may be different in a restructuring company!)

Skill standards for basic skills in companies that are adopting HPWO practices usually include communication and team building as well as problem solving and critical thinking. Again, skill standards communicate to all stakeholders in a workplace literacy program what is important to function on the job and in the company.

How Can O*NET and NIFL's Purposes for Literacy (Stein, 1995) Help Adult Educators?

The basic skills component of the draft O*NET includes the gamut of skills from more traditional literacy skills to those necessary in HPWO companies. The sample of NWLP curricula in this study included a preponderance of traditional literacy skills which is to be expected given the NWLP guidelines. It is also evident that the more recent projects funded by the NWLP have changed to include more "soft skills" of team building, communication, problem solving, and critical thinking.

It is not surprising that the sample of NWLP curricula for this study focused exclusively on the "Access and Orientation" level of the purposes for literacy identified by 1500 adult learners in the NIFL study (Stein, 1995). The NWLP grant proposal guidelines encourage the highly specific literacy task analysis that is linked closely to the job. However, adult educators should realize that workplace literacy programs must also meet workers' needs. Indeed, most workplace literacy programs are voluntary, even if offered on company time. Workers need to feel that the program is meeting their needs not only as workers but also as family and community members. Incorporating opportunities for the other purposes for literacy identified by Stein (1995) — that is, "Voice," "Independent Action," and "Bridge to the Future" — should enhance the effectiveness of a program. Most of the NWLP evaluation reports record the phenomenon of workers becoming empowered through workplace literacy programs. Empowerment occurs when workers learn to express themselves through speaking and writing, to function independently in the workplace, family, and community, and to seek other learning opportunities. As one worker in a textile factory explained to the author: "It's like I caught on fire. I can't stop now. I've got to keep on learning and learning."

A Final Note

The draft O*NET was the most usable framework for categorizing basic skills in the workplace. While basic skills in the sample NWLP curricula were not equally distributed over the O*NET categories, we recommend that workplace educators include instruction in all categories to prepare workers for the changing workplace environment. The traditional skills of reading comprehension, writing, and math are still important. However, higher order skills of problem solving, critical thinking, and knowing how to learn are also essential, especially in restructuring organizations. These higher order skills encourage effective learning and transfer of classroom instruction into the workplace. They help individuals think about what they are learning and how they can use the skills in the workplace.

Basic skills must be assessed and taught in the workplace context. While the skill descriptions may seem generic, we do not mean to imply that assessment and instruction should be generic. In fact, these skills must be closely tied to the occupational knowledge base of the job — one of the cornerstones of the O*NET construction. Skills and knowledge are two sides of the same coin of improving the basic skills of current and future workers.

The usefulness of this framework should be tested in the workplace. Do these skill descriptions provide helpful guidance to those involved in workplace literacy and workforce education as well as to those who are developing occupational skill standards? Does this guide provide a useful framework or "big picture" to practitioners? Does it help industry and education communicate their expectations in setting up a workplace literacy program? Please use the attached fax-back survey to communicate your reactions.

Fax-Back Survey

1. Are you

_____ a. a workplace educator
_____ b. a workforce preparation instructor
_____ c. a developer of occupational skill standards
_____ d. a business/industry employer/employee (if so, state position _______________)
_____ e. other ____

2. How experienced are you in teaching basic skills in the workplace:

_____ a. experienced
_____ b. novice
_____ c. inexperienced

3. How useful was the description of the occupational skill standards initiatives?

_____ a. very useful
_____ b. useful
_____ c. so-so
_____ 4. not useful

4. How useful was this skills framework?

_____ a. very useful
_____ b. useful
_____ c. so-so
_____ d. not useful

5. Have you tried using this framework in a workplace?

_____ a. yes
_____ b. no

If yes, please comment on its usefulness:

6. What are your other comments and reactions?

Please fax or mail to:
Sondra Stein
National Institute for Literacy
800 Connecticut Avenue, NW, Suite 200
Washington, DC 20006
Fax: (202) 632-1512

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Appendix A

Literacy Task Analysis: Annotated Bibliography of Selected Resources

Literacy Task Analysis:
Annotated Bibliography of Selected Resources

Prepared by: Shawn Jenkins
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Governor's Commission on Adult Literacy. *A proposal and rationale for the workforce alliance for growth in economy program.* Little Rock, AR: Author.

The WAGE program designed to improve basic skills of the un- and under-employed is described. Included in the plan is the goal of determining which basic literacy skills should be taught using 100 different entry level jobs as the source of those skills. It also includes an essential skills list of 18 reading, 4 writing, and 5 mathematical/problem-solving skills , all of which are generic.

Idaho State Department of Vocational Education. (1990). *Format for workplace literacy job analysis and employee assessment* (pp. 63-70).

This is an generic outline for conducting a workplace literacy job analysis. It provides a fairly inclusive, but not specific to a particular job, checklist for interviewing an employee, materials to gather, and how to perform a readability test on collected job materials.

Manly, D. (1994). *Workplace educational skills analysis* (Training Guide and Supplement). Madison, WI: University of Wisconsin, Center on Education and Work.

WESA is a systematic process used to identify and analyze basic education skills required in the workplace. In the training guide, the methodology explains a six-stage process which includes design meetings, preparation, interviews and observations, data analysis and draft reports, clarification, and final reports. Basic skills are identified in seven areas: computing, listening, problem-solving, reading, speaking, team building, and writing. Sample agendas, interview worksheets, observation worksheets, reports are included. The supplement provides greater explanation of each of the six stages.

Minnesota Teamsters Service Bureau. (1994). *Minnesota hospital industry workplace literacy project: Final evaluation report.* Minneapolis, MN: Author.

Table 1 is an outline of a curriculum development process listing the first activity as: Conduct a needs/task analysis. It suggests a list of six tasks to include in order to complete the task analysis. Table 2 is the proposed course description for six hospital skills courses.

National Alliance of Business. (1993). *Precision strike training in lean manufacturing: A workplace literacy guidebook* (pp. 18-33). Washington, DC: Author.

This section of the guidebook states that a literacy task analysis should include: discussions with job experts, observing workers, interviewing workers, and analyzing written materials. A general list of 16 standards for comparing job tasks and literacy skills is included. It is suggested to create training levels with similar literacy requirements, and develop skill profiles for each level. Skills are broken into five areas: basic skills, functional skills, technical skills, work maturity skills, and physical requirements. A sample of how to combine all three into a detailed training level skill profile is provided.

Nurss, J. R. (1990). *Hospital job skills enhancement program: A workplace literacy project.* Atlanta, GA: Georgia State University, Center for the Study of Adult Literacy.

This is an evaluation report of a hospital training program. It includes a literacy task analysis done as part of the development segment of the program. Part of the literacy task analysis is shown in Table 2 and includes one column listing the job tasks and a second column which describes the corresponding literacy objectives.

Philippi, J. W. (1991). *Literacy at work: The workbook for program developers* (pp. 97-104). New York, NY: Simon & Schuster Workplace Resources.

This section of the workbook contains a short description of a literacy task analysis and a checklist for completing one. It also provides listing of literacy skills commonly found in the performance of job tasks. There are separate lists for reading, writing, and computation and math problem-solving skills. The information is not specific to any particular workplace.

Project ACHIEVE: Implementation of a clerical workplace literacy program (pp. 5-10). Louisville, KY: Jefferson County Public Schools.

The suggestion is made for doing a worksite assessment by observing a worksite and visiting with an employee and interviewing an employer or supervisor. It also suggests using the Dictionary of Occupational Titles job description as part of the task analysis. A form and sample of a worksite evaluation are provided, including: Job description, task competency, validation, artifacts, and task components.

Sticht, T. G. (1995). *The military experience and workplace literacy: A review and synthesis for policy and practice* (NCAL Technical Report TR94-01) (pp. 39-43). Philadelphia, PA: University of Pennsylvania, National Center on Adult Literacy.

This is a discussion *about* task analysis. It defines and discusses trait analysis, task-by-trait analysis, literacy task analysis or literacy audits, structured interviews, reading task inventories, and observation of information processing. The author refers to other works for more detail on how to conduct a task analysis.

Taylor, M., & Lewe, G. (1990). *Literacy task analysis: A how to manual for workplace trainers.* Nepean, ON, Canada: Algonquin College.

This manual provides a general overview of what goes into a literacy task analysis and details the process of conducting the analysis. It discusses various techniques which can be used to conduct a literacy task analysis relative to workplace literacy programs. Information on literacy task analysis is not specific to any single workplace setting. Examples are given for when different analysis techniques would be used and which worksheets could be used.

Appendix B

Sample Framework for Workplace Literacy*
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PROBLEM SOLVING IN THE WORKPLACE

This course emphasizes problem solving as a process and uses a project-based team strategy. In addition to teaching problem-solving skills, this strategy also promotes the interpersonal skills necessary for successful execution of group projects in the workplace. As the students learn in a cooperative team atmosphere, they also learn to transfer those skills to an individual situation at work or outside of work. The goals and learning objectives in this course are arranged sequentially and should be taught accordingly to achieve the maximum benefit. The ideal conclusion of the course is the presentation of the problem-solving process in the context of a real-life workplace problem. The chart below outlines the goals for this course. For a more detailed description of the course goals with specific learning objectives, workplace contexts, a list of some of the basic skills needed to attain the goals, some possible activities, and examples of measurable outcomes to show mastery of the goals, see the course outlines which follow.

COURSE GOALS

PROBLEM SOLVING IN THE WORKPLACE

- Understand problem solving as a process
- Recognize and identify problems in the work environment
- List and discuss the interpersonal skills necessary for successful team approach projects in the workplace
- Define a workplace problem using a team project-based approach
- Generate and verify possible causes of problem
- Identify and evaluate alternative solutions to the problem
- Create an action plan to implement the solution to the problem

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐WORKPLACE CONTEXTS

The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.

☐ POSSIBLE ACTIVITIES

The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ BASIC SKILLS

The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.

☐ OUTCOME

The outcome is a description of a measurable assessment of student performance.

PROBLEM SOLVING IN THE WORKPLACE

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Goal #1: Understand problem solving as a process.				
Define "process". Outline the steps in a problem solving process for a general overview of the process. Discuss different approaches to problems including team approach and individual. Recognize that problems often offer opportunities.	Situations, issues, questions, dilemmas, controversies, or decisions in the workplace.	Generate ideas Sequence steps Compare and contrast information Organize and process information-(Seeing Things in the Mind's Eye)	As a group discuss the concept of "process" . Ask the students to give examples of a process from their work experiences. Discuss how the students solve problems at work and at home. Do they use the same process or a different one? Ask students to create a flow chart of a process from a narrative description.	Complete a flow chart of a problem solving process.
Goal #2: Recognize and identify problems in the work environment.				
Determine a common definition of the word "problem". List possible reactions to problems in the workplace such as denial, blame and avoidance. Identify possible situations, issues, questions, dilemmas, controversies, or decisions in the workplace that could be potential problems.	Communication problems. Production problems Time management problems Personal problems Value or cultural conflicts	Generate ideas Describe situations Evaluate and choose relevant situations or central issues for problem solving	Create a variety of statements using a mixture of problem statements and non-problem statements. Ask students to identify the problem statements and explain why it is a problem statement.	List possible problems found in the work environment.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Goal #3: List and discuss the interpersonal skills necessary for successful team approach projects in the workplace.				
Discuss how to work cooperatively with team members and contribute to the team with ideas, suggestions, and effort. Demonstrate different ways to help others learn in a team situation by: • summarizing ideas • setting goals • asking open-ended questions • asking for clarification • prioritizing • reflecting on process of learning Define and discuss the roles and responsibilities of team members (e.g., motivator, facilitator, recorder, etc.). Identify how people in the workplace respond to conflict, authority, group dynamics, and body language (hand gestures, nonverbal cues, distance and space requirements). Compare and contrast techniques used by different people in the workplace to resolve problems. Define conflict resolution and brainstorm different strategies that can be used in a team setting such as compromising, collaborating, and accommodating.	Interactions with co-workers, supervisors, and/or management.	Receive, interpret, and respond to verbal messages and other cues Communicate oral messages appropriate to listeners and situations. Think creatively Evaluate information Make decisions Know how to learn	Prepare a role playing exercise demonstrating all of the negative aspects of team interactions and team building. Ask the students in the class to evaluate the interactions. Next, ask them to brainstorm for alternative (and more positive) ways of interacting in a team situation. Discuss different student perceptions of teamwork and the interpersonal skills that the members of a team need in order for a team approach to problem solving to be successful. Brainstorm a list and ask students to select the most important interpersonal skills needed on a team. The selected interpersonal skills will then be used in the formation of a checklist to evaluate each team member and self at the end of the problem solving project.	Create an interpersonal skills checklist for each member of the team to evaluate the other members and self at the end of the problem solving project.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Goal #4: Define a workplace problem using a team project-based approach.				
Identify the central issue that needs resolution. Identify all of the possible people and/or departments (stakeholders) involved in the situation. Collect data from the stakeholders that includes their idea of the central issue, what change has to be made, what cannot or should not be changed, and how they would measure the success of a solution. Analyze the different options/conditions required by all stakeholders for a solution to be considered successful. Create a problem statement using the following two prompts: 1. How can we .....(central issue) 2. In a way that ....(conditions required for success)	Situations, issues, questions, dilemmas, controversies, or decisions in the workplace People and departments involved in the situation	Understand the organizational structure of the company Set goals Collect data Organize data Consider constraints, risks, and standards for success Analyze conditions Develop strategies for attaining success Summarize	Using a familiar general situation, concept, or topic, create a "concept map" in order to prepare students for creation of a problem map. Begin with the major idea, write it down and circle it. Identify supporting secondary ideas. Write these around the main topic with lines connecting the secondary ideas to the main topic. Identify supporting details for each secondary idea. Then arrange supporting details around the secondary idea. Some general topics may be transportation, time management, and family conflicts. Using a hypothetical *workplace problem* (major idea), create a "problem map" whose pathways *define the stakeholders* (secondary idea) and their *perceptions of necessary changes to solve the problem* (supporting details). See example of problem map in appendix.	Create a problem map and write a problem statement. (See example of problem map in appendix)
Goal #5: Generate and verify possible causes of problem.				
State the difference between symptom and cause of a problem. List possible causes of the problem. Discuss and evaluate possible causes and determine primary cause of problem in the problem statement.	Production Communication Time management Training and/or sufficient	Compare and contrast information Make inferences Evaluate information Draw conclusions	Given a problem situation, ask the students to decide how to find the root cause of the problem. Write out on a chart the questions the students would ask in order to determine the root cause. Using class consensus, determine the best questions to use when trying to find the root cause. Examples of questions	List possible causes for problem in problem statement and

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Collect data from stakeholders, if necessary, to verify primary cause of problem.	personnel Safety Waste		would be: 1. What's wrong? 2. Where did the problem occur? 3. Who is involved?	determine the primary cause.
Goal #6: Identify and evaluate alternative solutions to the problem.				
Differentiate between options and solutions. Brainstorm a list of options to the problem statement. Generate a list of viable solutions from the option list . Compare the list of viable solutions to the standard developed in the problem statement. Build a list of solutions from a different point of view. Determine possible impact of the solutions on the stakeholders. Choose the optimal solution to the problem by consensus. Write a brief statement of commitment.	Production Communication Time management Training and/or sufficient personnel Safety Waste	Generate ideas Compare and contrast information Make inferences Evaluate information Draw a conclusion Negotiate Work through group conflict, if necessary	Ask students to create a chart to evaluate the possible solutions. Use a large sheet of paper for each possible solution evaluation. Post the sheets in the classroom, if possible, and do not review or edit until the next class period. Review and edit the charts during the following class period. After editing, discuss what happens during a "break" in a brainstorming session. Also, discuss how turning over a problem to one's intuition sometimes results in the answer "popping" into one's head when least expected.	Write a description of the optimal solution and the rationale behind it.
Goal # 7: Create an action plan to implement the solution to the problem.				

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Write objective of action plan (the optimal solution). List concrete measurable actions to be taken to implement the solution to the problem. Identify and list potential institutional and interpersonal obstacles to the plan. Identify and list resources that are needed to make the solution work. Name support people and stakeholders in the action plan. Prepare a schedule for implementation. Identify and list criteria for success. Identify and list expected benefits. Prepare an evaluation checklist for the stakeholders to measure the effectiveness of the solution. Evaluate the usefulness of the team based approach to problem solving in the workplace with attention to the flow chart, the problem map, and the other outcomes of this course.	Stakeholders in the original situation	Generate ideas List details Evaluate information Make decisions Implement decisions	Plan a presentation of the action plan to appropriate company personnel. Incorporate overheads, graphs, schedules, and charts when possible. **Transfer of Learning** List the goals in this team approach to problem solving that could be applied individually in a non-work environment. Next, give students several non-work scenarios such as: 1. Your spouse has a new job some distance from home, and you only have one car. 2. You want to buy a new television and your spouse wants to buy new carpet. 3. Your son/daughter wants to quit school and get a job. Discuss how to individually apply the problem solving process to these different scenarios.	Write and present an action plan to implement the solution to the problem.

COMMUNICATION SKILLS I and II

These two courses are designed in a modular fashion. *Communication Skills I* stresses reading skills along with basic listening and speaking skills. *Communication Skills II* emphasizes writing skills along with basic discussion techniques. Each goal includes specific learning objectives, workplace contexts, a list of some of the basic skills needed to attain the goal, some possible activities, and an example of a measurable outcome to show mastery of the goal. The course should be customized for the learners by mixing and matching goals. For example, the instructor and student may design an individualized course of study by selecting specific goals needed by the student, the instructor may design a course based on a company's immediate needs by selecting the appropriate goals from each course, or the courses may be taught as is. The flexibility of this design offers may options to the company, instructor, and student. The order of goals in each course is designed to progress from beginning-level skills to increasingly more difficult skills, although completion of one goal does not necessarily depend on completion of the previous goal. If students wishes to begin at a higher level goal and can demonstrate satisfactory completion of previous goal outcomes, they may do so. The final goal in each area of reading, writing, listening, and speaking is the highest skill level in that particular section and a culmination of the previous goals. The following chart displays the goals in each course. For a more detailed description of the courses with the learning objectives, workplace contexts, basic skills, and outcomes, see the course outlines following this page.

COURSE GOALS

COMMUNICATION SKILLS I - Focus on Reading

- Locate and comprehend product information on a work order
- Read and comprehend written work instructions from a supervisor or team leader
- Read and comprehend company safety standards and procedures
- Read and interpret employee handbook and/or company policies
- Read and interpret company schedules, charts, and graphs
- Evaluate the accuracy of written sequential standard operating procedures and/or job descriptions
- Listen to and comprehend instructions from supervisor or co-worker
- Give directions to team members or co-workers
- Get information from supervisor or team leader

COMMUNICATION SKILLS II - Focus on Writing

- Fill in date, time, and other requested information on work forms
- Apply note-taking skills in a training session and/or meeting
- Write a short note or simple memo about a request or workplace occurrence
- Write a descriptive paragraph of a workplace event or situation
- Write a sequential job procedure
- Organize information into a written report
- Apply appropriate discussion techniques in a team or group meeting

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ **GOALS**	The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.
☐ **LEARNING OBJECTIVES**	The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐WORKPLACE CONTEXTS	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.	**☐ BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ POSSIBLE ACTIVITIES	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.	**☐ OUTCOME**	The outcome is a description of a measurable assessment of student performance.

COMMUNICATION SKILLS I - Focus on Reading
(Emphasis on Reading Skills, Listening and Speaking Skills)

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Reading Goal #1: **Locate and comprehend product information on a work order.**				
Identify categories on a work order. Locate information in the appropriate category on a work order. Recognize and interpret task-related words, abbreviations, and acronyms. Distinguish between important information and unimportant information as it relates to a particular work order. Locate new non-technical vocabulary in a dictionary when appropriate.	Work orders Shipping labels Production orders Product labels	Skim for overview Scan for details Read technical terms Access dictionary Use back-ground knowledge	List the types of information found on a work order. Highlight or underline task-related words, abbreviations and/or acronyms. Locate and define new vocabulary words Create a list of yes/no and short answer questions which elicit information found on a work order. Prepare a list of true/false statements based on customer information found on a work order.	Identify specific details on a work order.
Reading Goal #2: **Read and comprehend written work instructions from supervisor or team leader.**				
Skim for overview of written work instructions. State main idea of work instructions. Scan for detail of written work instructions. Recognize and interpret task-related words, abbreviations, and acronyms on written work orders. Order instructions sequentially, if needed.	Written work instructions including lists of single words, phrases, sentences. Job procedures	Skim for general information Scan for detail Read technical terms Sequence information	Choose examples of written work instructions from a text or "create" some. Discuss the purpose of the instructions and whether or not the writer wrote clear instructions. Were abbreviations confusing? Discuss how the learners could seek clarification, if needed. Decide which format-lists of phrases, single words, or complete sentences make the most effective method of written communication.	Explain either in an oral or written manner an under-standing of a set of written work instructions.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Reading Goal #3: **Read and comprehend company safety standards and procedures.**				
List sources and location of safety materials. Skim company safety materials for overview. Scan company safety materials for detail. Match company safety codes and symbols with company safety procedures. Interpret company-specific safety vocabulary and common abbreviations. Summarize safety information from charts and printed visual materials. Locate and explain specific information from company safety texts and forms. Read about and discuss common safety accidents. Read and name procedures for reporting job-related hazards, accidents, injuries, and damages.	Safety signs Safety manuals and related publications Safe work procedures Safe work attire Accident reports Company safety reports	Skim for overview Scan for detail Define words Comprehend and explain codes and symbols Use charts and forms to locate information Analyze information from texts and work environment. Determine relationships Make critical judgements	Before reading anything, brainstorm a list of safety vocabulary used in the company. Copy and keep in students' folders for review and editing during lessons. Create true and false statements based on information found on company charts and/or forms; students can refer to charts and forms to provide answers. Using information from a sample accident report form, create a class story about the incident. Read about a potentially dangerous situation in a workplace. As a class decide what safety rules are important, what could happen if a worker did not follow safety rules, and what each student would do in that particular situation. Read about the evolution of safety requirements in manufacturing.	Identify and demon-strate company safety standards.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Reading Goal #4: Read and interpret employee handbook and/or company policies.				
Read and state company policy regarding absences/sick leave. Read and state company policy regarding vacation/holidays. Read and state company policy regarding pension plan/retirement. Skim and scan information regarding health care coverage. Read and fill out medical insurance forms. Name the criteria for performance evaluation.	Company employee handbook Company policies Human Resources	Skim for overview Scan for detail Recall information Comprehend and explain information Organize information Apply information in specific situations	Create several possible employee scenarios using a specific learning objective. Prepare a list of questions that require the students to find the answers in a specific part of the employee handbook. This is a good activity for pairs or small groups. Ask the human resource person to give a presentation on a specific topic such as the company's health care policy or any other area pertinent to the student's needs. **Transfer of Learning** Bring in local newspapers or articles of interest to the students and ask them to read and locate specific information.	Interpret various sections of the employee handbook or specific company policies by oral or written answers to specific questions.
Reading Goal #5: Read and interpret company schedules, charts, and graphs.				
Identify and locate company schedules, charts, and graphs. Identify information across rows and down columns in a variety of graphic formats. Scan various company schedules, charts, and graphs and identify title or heading, names of axes or sections, information in the key, and sources of information.	Schedules, charts, and graphs created and displayed by the company. Charts and graphs found in industry publications	Skim for overview Scan for detail Locate information Summarize information	Ask students to create a schedule of their	Interpret information from various company schedules, charts or graphs by oral or written answers

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
Locate specific information from a company schedule, chart, or graph. Summarize information in a company schedule, chart, or graph.	Production schedules Vacation schedules			to specific questions.
Reading Goal #6: **Evaluate the accuracy of written sequential standard operating procedures (SOP's) and/or job description.**				
Skim and scan SOP/job descriptions for overview and detail. Recognize and define technical terms in SOP/job description. Distinguish between important information and unimportant information in SOP/job descriptions as they pertain to employees jobs. Identify different ways to order procedure (priority, sequence, frequency, or chronological). Determine type of ordering relevant to a job or situation. Sequence procedures or tasks in SOP/job descriptions. Record information in key phrases or simple sentences. Compare and contrast content and sequence of written document and actual job.	Standard Operating Procedures Job descriptions	Skim for overview Scan for detail Identify technical terms Explain technical terms Make comparisons Organize information in a specific order Create a pattern Make critical judgments	Introduce the concept of a flowchart. Practice creating flowcharts with some familiar tasks, then ask each student to create a flowchart of his/her job from beginning to end. Students should edit and review flowchart for correctness. If possible, ask students to confirm their flowcharts with a supervisor. When the final version is finished, compare with the SOP. Post the results.	Accept or revise the content and sequence of a standard operating procedure and/or job description. (*Important: This is only a method used in the classroom to evaluate the reading goal.)*

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Listening and Speaking Goal #7: Listen to and comprehend instructions from supervisor or co-worker.				
Identify non-verbal active listening behavior. Listen for main points of instructions. Listen for order of steps in instructions. Repeat and/or paraphrase the main points of the instructions to the speaker. Ask questions for clarification of instructions, if necessary. Take brief notes.	Workplace training sessions Instructions between shifts Instructions from supervisor or team leader Company meetings	Recall active listening behaviors Summarize main points Request clarification Take notes	Role play job scenarios in which one student gives instructions and another receives them. The remaining students should list main points of the instruction and compare notes at the end of the role play. Practice non-verbal active listening behaviors with partners. Describe non-verbal behaviors observed in the workplace that lead to misunderstandings and incorrect information. Discuss cultural differences in non-verbal behaviors and make a chart showing the differences.	Demonstrate comprehension of instructions through a task completion.
Listening and Speaking Goal #8: Give directions to team members or co-workers.				
List steps to complete a task. Classify steps of task for easier comprehension Demonstrate task. Review and clarify steps to task Ask questions to check for understanding	Instructions to co-workers in 1.) meetings 2.) training sessions 3.) shift change	Classify information Order or re-order information Explain information Restate information	Select a task that is related to the workplace such as punching the time clock, explaining a section of the benefit package, explaining a new procedure, filling in a form, measuring a product, etc. Each student will prepare and give instructions to a small group. To check for understanding, the group will correctly complete the task.	Explain a job specific task in a clear and concise manner and check listeners for understand through task completion.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Listening and Speaking Goal #9: Get information from supervisor or team leader.				
Identify different types of questions, e.g., yes/no, short answer, open-ended. State who in the company is most likely to have the information or knowledge needed to answer a specific question. Identify the appropriate time and way to ask a question.	On-the-job interactions with supervisor and/or team leader. Production New job or machine procedures	Identify types of questions Classify key personnel in company Distinguish between appropriate behaviors	Create a list of questions that an employee might ask about a new job, promotion, or a new machine. Categorize the types of questions (who, what, where, when, why, how), identify who in the company might have the answers, and the appropriate time to ask questions of these people.	Devise an open-ended question to ask supervisor, record response, and present answer to instructor.

COMMUNICATION SKILLS I and II

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COMMUNICATION SKILLS II - Focus on Writing

- Fill in date, time, and other requested information on work forms
- Apply note-taking skills in a training session and/or meeting
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☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

COMMUNICATION SKILLS II - Focus on Writing
(Emphasis on Writing Skills, Listening and Speaking Skills)

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Writing Goal #1: Fill in date, time, and other requested information on work forms.				
Scan work form for required information. Interpret task-related words, technical terms, or abbreviations on a work form. Fill in work form legibly. Check work form for accuracy, especially the numbers.	Time sheets and logs Purchase orders Work orders Work schedules	Write numbers, dates, times Write technical words Record essential information Proofread for errors	Develop different customer orders. Ask learners to fill in specific information. Check for accuracy. Have on hand several samples of various work forms that are completed incorrectly. In pairs, have learners find the mistakes. As a group discuss how these errors can occur and correct them.	Fill in requested information on a work form.
Writing Goal #2: Apply note-taking skills in a training session and/or meeting.				
Identify the main points during an informational meeting. Record main points and/or new information using abbreviated words, phrases or short sentences. Review notes for clarity. Ask for clarification, if necessary. Determine symbols to use in notes for emphasis or future action. Summarize and state the content of the training session or meeting by reviewing written notes.	Training sessions Team meetings Company or union meetings	Write abbreviated words, phrases, short sentences Summarize and record essential information Use concise language Use symbols	Conduct brief informative sessions using information from employee handbook, company newsletter, or industry publication. Model the correct way to take notes. In pairs, have one learner present information while the other takes notes then reverse the roles. Compare notes. **Transfer of Learning** Ask a person from human resources to give a brief presentation on company benefits or a new company policy. Students will take notes, ask for clarification and compare information at the end of the session.	Take clear and concise notes during a brief informative session on a company issue. (*The instructor may present the information using the employee handbook or company newsletter.)*

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Writing Goal #3: Write a short note or simple memo about a request or workplace occurrence.				
Describe the correct format for a memo. Identify the appropriate person or department to receive the memo. Determine pertinent information to include in the memo. State main idea of memo in first sentence of message. Organize the pertinent facts in appropriate order. Write message in clear and concise sentences. Check for correct spelling and overall clarity.	Requests from employees for vacation time, time off, a meeting, change of shift, change of hours, or supplies. Suggestions Instructions Complaints Shift changes	Organize information Analyze information Write simple, complete sentences Correct spelling	In pairs, role play a situation where a worker writes a memo to his/her supervisor requesting time off for vacation, purchase of specific supplies, description of a machine malfunction, or any other pertinent workplace occurrence. The "supervisor" replies in a return memo.	Write a memo, using proper format, about a workplace occurence or a request.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Writing Goal #4: Write a descriptive paragraph of a workplace event or situation.				
Identify intent and target audience of the written paragraph. For example: ▸ intent - recomendation for an employee award ▸ target audience - personnel or department head Outline a workplace event or situation by identifying key points. Add supporting details to each key point. Write a descriptive paragraph using clear, concise sentences and technical terms, if necessary. Check sentence structure, correct grammar, punctuation, capitalization, and spelling. Evaluate writing by requesting feedback from instructor or peer. Revise writing. Write a neat final copy.	Workplace accident Recommendation for an employee award Documentation of a machine breakdown or mechanical problem	Gather details Analyze information Classify information Order information Write clear, concise sentences Write key technical terms Use correct grammar and sentence mechanics Evaluate writing	Create drawings, obtain pictures, or photographs of events or situations in the the workplace. Instruct students to write brief, descriptive accounts of the activities or transactions performed. The goal of this activity is to compose sentences which express a complete thought and fit in clearly with the rest of the writing. Avoiding sentence fragments, run-on sentences, and rambling sentences is stressed.	Write a descriptive paragraph of a workplace event or situation.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Writing Goal #5: Write a sequential job procedure.				
List job task steps. Organize job task steps in sequential order. Write a complete sentence for each step. Evaluate sentences for clarity, grammar, conciseness, and correct spelling.	Documentation of job procedure ISO 9000	Organize information Use correct grammar Correct spelling	Examine examples of simplified flow charts. Explain the usefulness of visual presentation of a process. As a whole class, create several flow charts using familiar examples to reinforce the concept (e.g. cause of stress on the job, cause of car engine failure). Next, ask the students to create a flow chart of their job tasks. After the students have reviewed and edited the tasks in the flow chart, ask them to write in complete sentences the procedure they have produced visually. Use peer editing to evaluate clarity and conciseness of sentences. Final product may be presented to management.	Write a sequential job procedure from a flowchart.
Writing Goal #6: Organize information into a written report.				
Identify different types of written reports, documents, summaries, informational releases used in the workplace, e.g., accident reports, production reports, policy updates, company news releases. List ways of organizing information appropriate to specific written forms, e.g., chronological order for accident reports. Compare and contrast formats of commonly used written documents within the company.	Documentation of a workplace situation Description of qualifications for a new job posting or promotion within the company Suggestions for product or process improvement Evaluations	Classify information Order information Paraphrase information Organize information	Brainstorm for different workplace scenarios or situations that could be used as the subject of a written document, e.g., evaluation of educational opportunities, suggestions for improving communication on the job, ideas for improving production or description of qualifications for a new job within the company. Students should maintain the list in their classroom folder for future use in the evaluation of this goal.	Select a workplace situation and write at least two paragraphs using the proper format and paragraph-writing process.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Identify the three parts of a paragraph: topic sentence, body, and ending sentence. List the main steps for writing paragraphs: • Write down main thoughts and ideas (brainstorm). • Organize the ideas in chronological order or order of importance, depending on topic. • Write the topic sentence that expresses what the paragraph is about. • Write several sentences that support the topic sentence using the organized ideas. This creates the body of the paragraph. • Write an ending sentence about the main idea that summarizes the content of the paragraph. • Revise writing. • Check sentence structure, correct grammar, punctuation, capitalization, and spelling. • Proofread writing again. Write a short paragraph, using the paragraph-writing process, that focuses on a single main idea in a workplace context.	Written informational releases to employees from supervisors, personnel, or upper management	Make comparisons See link between ideas Write simple and compound sentences Write a paragraph Make critical judgments	Create several "puzzle paragraphs" by cutting out each sentence in a selected paragraph and placing the pieces in an envelope. Give one envelope to a pair of students and ask them to recreate the paragraph. **Transfer of Learning** Discuss a current issue of importance in the community or from the local newspaper. (Read different articles from newspapers or magazines, if necessary, to promote discussion) Write a letter to the editor in reply to the issue. If possible, mail it in to a local paper.	

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Listening and Speaking Goal #7 : Apply appropriate discussion techniques in a team or group meeting.				
Identify agenda or topics to be covered in meeting. State possible statement and/or questions for meeting. Distinguish facts from opinions presented in the meeting. Demonstrate active listening and appropriate behavior for meetings. State clear and concise verbal comments in the meeting. Summarize expectations at end of meeting to confirm expected outcomes. Write a brief summary of the meeting.	Team meetings Group or shift meetings Company meetings Department meetings Committee meetings Performance reviews	Comprehend information Summarize information Prepare questions Distinguish between fact and opinion Express ideas verbally Write a summary	Prepare several job-related agendas. Form small discussion groups and practice discussion techniques. The purpose of small discussion circles is to ensure that everyone contributes and becomes more confident expressing ideas. Ask a supervisor or team leader to join discussion circles. Have students review techniques with supervisor. Request more ideas for discussion circles from the supervisor or team leader.	Demon-strate appropriate discussion techniques in a team meeting scenario using the learning objectives as a checklist.

WORKPLACE MATH I and II

These courses are designed sequentially to emphasize the basic math skills needed in the workplace. *Workplace Math I* stresses basic arithmetic calculations and mathematical terminology involving whole numbers, fractions, and decimals which are used on the job. Basic measurement principles, as well as measurement readings and conversions, are also emphasized. The course culminates with the interpretation of charts, graphs, tables, and/or diagrams used in the company. *Workplace Math II* begins with a compact review of *Workplace Math I* (the first goal), to insure a solid foundation of prerequisite knowledge. The course then goes on to the structure, use, and application of different measurement systems used in the company, focusing on precision and accuracy. Simple formulas using ratio, proportion, and percentage as they are used in the production process are also featured. Finally, the merging of geometric principles, basic algebra, and measurements to calculate weights, perimeter, and area of company products completes this course. In addition to the skill-based goals of both courses, the instructor should emphasize the concepts of knowing which operation to use in solving a problem, estimating an answer, and determining if an answer makes sense. Use of a calculator, if it is employed on the job, may be woven into both courses. Although goals may be selected from the two courses to individualize a course of study, the instructor should be careful to insure that the student or students possess the prerequisite math skills needed to do the work. The chart below displays the goals in each course. For a more detailed description of the courses with the learning objectives for each goal, workplace contexts, basic skills, and measurable outcomes, see the course outlines which follow.

COURSE GOALS

WORKPLACE MATH I	*WORKPLACE MATH II*
• Read, match, count, and compare whole numbers on product and work order	• Perform arithmetic with fractional and/or decimal measurement numbers used in the company
• Add, subtract, and multiply whole numbers to determine quantity of company product	• Convert from U.S. standard to metric measure and vice versa using company product specifications
• Add, subtract, multiply, and divide whole numbers to fill out a time card	• Read, convert, and record direct measurement where the numerical reading is displayed on some sort of scale
• Add and subtract fractions or decimals on specifications or drawings to calculate upper and lower control limits and determine if a product is within those limits	• Solve problems involving ratio and proportion to determine machine downtime and scale drawings
• Read and record fractional or decimal measurement of a product using an appropriate measuring tool	• Determine percentage of any of the following workplace situations: waste, downtime, shrinkage, efficiency of a process or a machine, percent increase or decrease of a company process
• Convert fractional measurement of product to decimal equivalent and vice versa	• Using the relationship of geometric principles, basic algebra, and measurements, determine perimeter, area, and weight of a company product
• Read and interpret company charts, graphs, tables, and/or diagrams	

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS	The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.
☐ LEARNING OBJECTIVES	The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

WORKPLACE MATH I

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Goal #1: Read, match, count, and compare whole numbers on product and work order.				
Identify and read whole numbers on a work order. Compare whole numbers on work orders. Identify and correct transposed numbers.	Work orders Inventory sheets	Read whole numbers Compare whole numbers	Give students an inventory sheet and several work orders. Ask them to match work orders with available product. As a group discuss how the transposition of numbers occurs and how to prevent it.	Read and compare whole numbers on a work order to product.
Goal #2: Add, subtract, and multiply whole numbers to determine quantity of company product.				
Predict the approximate number to any calculation before actually performing it. Add and subtract whole numbers to determine the net weight of product to be shipped. Multiply whole numbers to determine the amount of product to be shipped.	Work orders Shipping and receiving	Estimation Add and subtract whole numbers Multiply whole numbers.	In pairs, have students estimate and record the answers to several whole number problems. Next, have students calculate the correct answer. Compare answers and discuss the importance of estimating answers in a technical trade. Use several different job scenarios in which an employee would have to report the quantity of product ready for shipping.	Using number of skids, and number of product per skid, use arithmetic to determine the amount of product.
Goal #3: Add, subtract, multiply, and divide whole numbers in order to fill out a time card.				
Add and subtract whole numbers to determine number of hours worked in a day.	Time cards Time clock, if used	Add and subtract whole numbers	Create several time cards in which some are incorrectly filled out. Have students select the correct ones and correct the errors on the incorrect time cards.	Complete a time card by recording

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Multiply whole numbers to determine the amount paid for a week's work, vacation time, and/or sick leave accrued. Divide whole numbers in order to determine the hourly wage.	Paychecks	Multiply and divide whole numbers	Use military time to fill out several time cards. Company military time to regular time. Note to the instructor: Be sure to find out how the company tracks the employee's time and use it in examples.	hours worked per day and per week.
Goal #4: Add and subtract fractions or decimals on specifications or drawings in order to calculate upper and lower control limits (tolerance) and determine if product is within those limits.				
Define tolerance. Add and subtract fractional or decimal tolerance attached to a measurement in order to determine upper and lower limits of size. Sequence fractional or decimal measurement between upper and lower limits. Determine if a product measurement lies within tolerance.	Specifications Quality control Blueprints	Understand technical terms Add and subtract fractions and/or decimals Sequence measurement Evaluate measurement results	Create several simplified blueprints or drawings of product with measurement dimensions (e.g., 1.746 +/- .005). Ask students to calculate upper and lower control limits. Give several examples of product measurement and have the students determine if these measurements fall within tolerance. From a quality control point of view, discuss the importance of tolerance and precision in the manufacturing industry.	Calculate tolerance on a drawing and determine if a given measurement is within those limits.
Goal #5: Read and record fractional or decimal measurement of product using an appropriate measuring tool.				
Identify the graduations on scale of each measurement tool. Determine the size of the smallest division in one interval on a measurement tool.	Tape measure Machinist's rule Micrometer Caliper	Evaluate scale divisions Read and record fractional measurement	**Transfer of Learning** Bring several different objects from home and the workplace to class. Identify what part of each object is to be measured, e.g., length of wire, width of book. Have several different measuring tools available. Ask students to select the appropriate tool, measure, and record.	State and record fractional or decimal measurement of product using an

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Label all scale markings on the measurement tool. Count the intervals, then count the numbers of smallest divisions from the last interval mark on the measurement tool. Read and record a specific dimension on a measuring tool.		Read and record decimal measurement	If digital calipers are used in the company, practice reading and recording the measurement of several objects or products. Next, use vernier calipers and compare the results. Discuss the difference in using each one.	appropriate measuring tool.
Goal #6: **Convert fractional measurement of product to decimal equivalent and vice versa.**				
State that decimal numbers are fractions and represent a part of some quantity. Convert a fraction form to decimal form by dividing the top of the fraction by the bottom. Differentiate between terminating decimals (no remainder) and repeating decimals (repeat a sequence of digits). Convert a decimal form to a fractional form by using the place value as the bottom part of the fraction.	Specification sheets Simplified blueprints Company conversion charts Product measurements	Know the function of numerator and denominator of fractions Convert fractions to decimals Know place value of decimals Covert decimals to fractions	Using a copy of the company or generic conversion chart, delete some of the given conversions. Ask students to fill in the missing fraction or decimal. Working in pairs, have students measure several products or objects with a tape measure. Record the measurement and convert to decimal equivalent. Find out the most commonly used decimal-fraction equivalents in the workplace. List all of the fractions on individual index cards. Write the decimal equivalent on other index cards. Mix the cards together and give five cards to each student. The students are now required to trade and match with other students to get their five "pairs".	Convert fractional measure-ment of a product to decimal equivalent and vice versa.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Goal #7: Read and interpret company charts, graphs, tables, and/or diagrams.				
List different types of graphs, e.g., circle, bar, and line. Identify different graphs, charts and schedules used in the company. Identify information across rows and down columns in a variety of graphic formats. Scan various company graphs and identify title or heading, names of axes or sections, information in the key, and source of graph information. Identify specific information from a company graph or chart. Compute numeric information on a company graph or chart in order to obtain information to be used in drawing conclusions. Draw conclusions, make inferences, or make predictions based on the information in a company graph or chart.	Charts, graphs, tables, and/or diagrams created and displayed by the company Charts and graphs found in industry publications Graphs in local newspapers or magazines Production data	Scan for information Read points on horizontal and vertical axes Plot points Compare graphic information Calculate numeric information Draw conclusions Make inferences Make predictions	Give students company data or create hypothetical data, e.g., weekly production numbers, pieces rejected vs. monthly production, and graph paper. In pairs, ask students to construct an appropriate graph and present to the class. Obtain company graphs that show quarterly data or yearly data. Ask students to compare values represented and draw conclusions about the information. Analyze the conclusions, find patterns or trends if possible. Ask the students to make a prediction about future occurrences. **Transfer of Learning** Request students to find a graph in the local newspaper, a magazine, or on the company bulletin board that relates in some way to their jobs, the company, their community or their family/household. They are to write a brief summary of the graph and describe why it is important in their lives.	Compare graphic information, calculate numeric information, draw conclusions and make predictions based on graphic company information.

WORKPLACE MATH I and II

These courses are designed sequentially to emphasize the basic math skills needed in the workplace. *Workplace Math I* stresses basic arithmetic calculations and mathematical terminology involving whole numbers, fractions, and decimals which are used on the job. Basic measurement principles, as well as measurement readings and conversions, are also emphasized. The course culminates with the interpretation of charts, graphs, tables, and/or diagrams used in the company. *Workplace Math II* begins with a compact review of *Workplace Math I* (the first goal), to insure a solid foundation of prerequisite knowledge. The course then goes on to the structure, use, and application of different measurement systems used in the company, focusing on precision and accuracy. Simple formulas using ratio, proportion, and percentage as they are used in the production process are also featured. Finally, the merging of geometric principles, basic algebra, and measurements to calculate weights, perimeter, and area of company products completes this course. In addition to the skill-based goals of both courses, the instructor should emphasize the concepts of knowing which operation to use in solving a problem, estimating an answer, and determining if an answer makes sense. Use of a calculator, if it is employed on the job, may be woven into both courses. Although goals may be selected from the two courses to individualize a course of study, the instructor should be careful to insure that the student or students possess the prerequisite math skills needed to do the work. The chart below displays the goals in each course. For a more detailed description of the courses with the learning objectives for each goal, workplace contexts, basic skills, and measurable outcomes, see the course outlines which follow.

COURSE GOALS

WORKPLACE MATH I

- Read, match, count, and compare whole numbers on product and work order
- Add, subtract, and multiply whole numbers to determine quantity of company product
- Add, subtract, multiply, and divide whole numbers to fill out a time card
- Add and subtract fractions or decimals on specifications or drawings to calculate upper and lower control limits and determine if a product is within those limits
- Read and record fractional or decimal measurement of a product using an appropriate measuring tool
- Convert fractional measurement of product to decimal equivalent and vice versa
- Read and interpret company charts, graphs, tables, and/or diagrams

WORKPLACE MATH II

- Perform arithmetic with fractional and/or decimal measurement numbers used in the company
- Convert from U.S. standard to metric measure and vice versa using company product specifications
- Read, convert, and record direct measurement where the numerical reading is displayed on some sort of scale
- Solve problems involving ratio and proportion to determine machine downtime and scale drawings
- Determine percentage of any of the following workplace situations: waste, downtime, shrinkage, efficiency of a process or a machine, percent increase or decrease of a company process
- Using the relationship of geometric principles, basic algebra, and measurements, determine perimeter, area, and weight of a company product

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS

The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES

The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

WORKPLACE MATH II

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Goal #1: **Perform arithmetic with fractional and/or decimal measurement numbers used in the company.**				
Add, subtract, multiply and divide measurement numbers using fractions and/or decimals. Determine place value of decimals. Round measurement numbers to a designated significant digit commonly used in the production process. Convert fractional measurement of product to decimal equivalent and compare to specification dimension given in decimal form. Convert a given measurement from one unit to another. Define tolerance as used in technical measurements in specifications.	Measurements performed in the company Specification sheets Conversion charts used by employees Measuring tools used on the job	Add, subtract, multiply, divide fractions and decimals Determine place value Round off decimals Convert fractions to decimals Convert units of measurement	Give students several specification sheets and ask them to locate measurements with tolerances and to calculate upper and lower limits. Next, give them several product measurements and determine if the measurements fall with the tolerances. In a large group discussion, pose several "what if" questions, such as: 1. What do you do if your measurement is above or below tolerance? 2. What do you do if a measurement specification is missing? 3. What do you do if the specification is in metric measure? 4. If you normally use a calculator for calculations, what would you do if it was not available?	Given a technical measurement with a tolerance, calculate the upper and lower limits of size and determine if a product lies within the limits.
Goal #2: **Convert from U.S. standard to metric measure and vice versa using company product specifications.**				
State the importance of metric measure in the manufacturing industry. Define and explain the metric units used in the workplace.	Work orders Company blueprints	Understand meter and other metric length units	**Transfer of Learning** Locate and distribute articles from magazines or newspapers on metric measure in the industry and the United States. Discuss the relevance of metric measure and the global impact of a universal measuring standard.	

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Demonstrate how metric units are related to corresponding English units. Explain how to convert from one unit to another. Identify U.S. Standard and metric measurements on a specification.	Specification sheets Measuring devices	Recognize U.S. Standard and metric measure Convert U.S. Standard to metric measure and vice versa	Create a simplified drawing of a blueprint with metric measurements, ask students to convert to U.S. Standard.	Given a product measurement in U.S. Standard, convert to metric or vice versa.
Goal #3: Read, convert, and record direct measurement where the numerical reading is displayed on some sort of scale.				
Define accuracy and precision of a measuring instrument. Identify significant digits that represent a measurement result. Demonstrate how to use various measuring instruments of the workplace. State a fractional or decimal number readout on a measurement instrument. Record a fractional or decimal number readout on a measurement instrument.	Company measuring devices such as machinist's rule, tape measure, micrometer, caliper, gauges. Company product	Determine decimal place value Add, subtract, multiply decimals Add, subtract fractions Calculate decimal equivalent Round measurement numbers Understand and read scale divisions on a measurement instrument	Draw several measuring instruments with their scale displayed or ask students to bring in the tools they use on the job. Ask students to determine the how the scale is graduated and to find designated dimensions. Record in fractions or decimals.	Measure several products or objects using an appropriate measuring device; record and recite the measurement.

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
Goal #4: Solve problems involving ratio and proportion in order to determine machine downtime and scale drawings.				
Define ratio in terms of company-specific units. Define proportion using two ratios. Determine downtime of a machine using a proportion equation. Create a scale drawing of a company product using a proportion equation. Calculate the missing dimension on a simplified blueprint by measuring the dimensions on the actual product and using a proportion equation. State the difference between direct and inverse proportion.	Production data Simplified blueprints	Multiply and divide whole numbers, decimals and fractions. Set up ratios Set up and solve proportions Understand direct and inverse proportion	Using various company products or objects, ask students to make a drawing to scale. Create several different job scenarios in which the student is to determine the downtime of a process or machine. **Transfer of Learning** 1.) Using a floor plan of a home and a scale, ask students to determine the total square footage of the home. 2.) Bring in or create several ratio mixtures from home, e.g., gas/oil for engines, concentrate/water for insecticides or fertilizer. Ask students to determine the quantity needed of each to arrive at a designated amount.	Use ratio and proportion to determine machine downtime and create a scale drawing.
Goal #5: Determine percentage of any of the following workplace situations: waste, downtime, shrinkage of a product, efficiency of a process or a machine, percent increase or decrease of a company process.				
Write fractions and decimals as percents. Convert percents to decimals. Identify the three quantities-total amount, part being compared with the total amount, and rate-as they are related in the percent problem formula. Apply the percent problem formula (P=R X B) to different company percent problems.	Written work instructions Work orders Product instructions Procedures Waste	Understand percent as a comparison of two numbers Write fractions and decimals as percents Convert percents to decimals Apply percent	Create several specifications sheets which call for a part to be machined at a certain measurement. Next, give the students the actual measurement and ask them to calculate the machinist's percent error. Obtain or create data from production showing the quantity of waste from a machine process or from operator error. Ask students to calculate the percent of waste.	Determine percentage of any of the following: waste, downtime, efficiency of a process or a machine, percent

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Determine the efficiency of a company process by comparing the power output to the power input times 100%. Determine the percent tolerance of a product dimension by comparing the measurement tolerance to the measurement times 100%. Calculate the percent change-decrease or increase in a machine output of product per day. Calculate downtime of a machine by setting up and solving a proportion.	Production	problem formula- (P=R x b) Apply estimation skills to predict answer	In a small group have students design a production line, project cost of labor and materials, determine price of product and percent of profit. This activity can be simple or complex depending on class abilities and extent of teacher preparation. Advanced classes may wish to problem solve and "create" a small company.	increase or decrease of a company process.
Goal #6: **Using the relationship of geometric principles, basic algebra, and measurements, determine weights, perimeter, area, and length of company products.**				
Determine perimeter and area of company products. Calculate weight per square foot of a company product. Calculate coil weight, gage, and length of a company product.	Company product Simplified blueprints Measuring tools Scales Coil weight and length calculator	Add, subtract, multiply, and divide whole numbers, decimals, and fractions Compute the perimeter and area of certain polygons Calculate the diameter and circumference of a circle Use proportion	Create several simplified blueprints or drawings of company products with missing dimensions. Have the students determine the missing dimensions. Using stock and finished product dimensions, ask the students to calculate the square amount of waste. This exercise may be applied to any product produced.	Determine weight, perimeter, area, and length a company product.

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Introduction to ESL AT WORK I

The topics in this course include making introductions, asking for clarification, describing one's workplace, and filling out personal information on basic forms.

COURSE GOALS

Speaking Goal: Make introductions and describe the workplace.
Listening Goal: Identify and produce different sounds, intonation, and vocabulary.
Reading Goal: Recognize and predict familiar words on workplace forms.
Writing Goal: Enter personal information on workplace forms.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS

The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES

The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

INTRODUCTION TO ESL AT WORK I

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Make introductions and describe the workplace. **Listening Goal: Identify and produce different sounds, intonation, and vocabulary.**				
Introduce yourself. Ask and answer basic questions about job and native country. Spell name and address. State vocabulary used to address a variety of workplace personnel. Introduce a co-worker. Give and respond to formal greetings. Give and respond to informal greetings. Identify key words and sounds in conversation. Ask for clarification. Demonstrate ability to express lack of understanding. State the vocabulary to describe physical location. State company's name and address. Name areas of the workplace and describe physical location.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instructions Training new co-worker Training programs New equipment or procedures Job evaluations Company events Company maps	Make introductions Ask and answer questions Give and respond to greetings Listen for key words Express lack of understanding Ask for clarification Make lists Describe physical location	Given a sample workplace dialogue of greetings, questions and responses, omit the key words for an oral cloze. As you read the dialogue, students can write the missing words in a list or given a copy of the dialogue cloze, students can fill in the missing words. Label the machines and areas on a company floor plan. Role play greetings and conversation from the perspective of different workplace personnel.	Demonstrate formal and informal greeting techniques utilized in the workplace. Name jobs, areas, and machines in the workplace.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Name the machines in the workplace and describe physical location. Name the jobs in the workplace and describe physical location. Ask and answer questions about the physical location of things and people in the workplace. Identify vocabulary that describes the job, such as *job title, job description, job duties.*	Break time Job descriptions Standard operating procedures	Hearing sounds Identifying key words, aurally and in written form	Have students orally read job descriptions and job duties and then have other students guess the title and job.	Use workplace greetings, physical location and job vocabulary to correctly identify and produce sounds, intonation, words, and phrases.
Reading Goal: Recognize and predict familiar words on workplace forms. Writing Goal: Enter personal information on workplace forms.				
Identify the names of workplace forms that require personal information. Identify and list what personal information is required on different workplace forms. Describe where to enter the personal information on a workplace form. Identify and list common abbreviations for dates, titles, and addresses. Print or write personal information on different workplace forms.	Health insurance foms Company newsletters Company benefit forms Company applications	Describe physical location Use abbreviations, acronyms, codes, etc. Identify familiar words Read simplified work forms Fill in simplified forms	Have students dictate to the teacher a description of what is on a specific workplace form. The teacher reads the description to the class and after, students try to read it back. Underline familiar words. Then, using that workplace form each student underlines familiar words and reads them aloud to the class.	Given a completed workplace form, underline familiar vocabulary.

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
Make a list of tools you use at work. Make a list of machines you use at work. Make a list of the people you work with and their jobs. Identify alphanumeric, alphabetic and color codes used on workplace forms. Identify and interpret workplace abbreviations and acronyms used on workplace forms. Identify and list familiar vocabulary on different completed workplace forms.	Human resources Training new co-worker Training programs New equipment or precedures Job interviews Job evaluations Workplace forms	Generate lists	Have students work in groups, list machines and tools, and then describe to other groups. Have students list machines, tools, abbreviations, and codes as you dictate them.	List personal and workplace information applicable to completing various company forms and materials

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Introduction to ESL AT WORK II

The topics in this course include answering and asking questions, making polite requests, and completing basic workplace forms and schedules.

COURSE GOALS

Speaking Goal: Ask basic questions and make requests in the workplace.
Listening Goal: Identify structures, key words, and main ideas.
Reading Goal: Understand main ideas in simple workplace forms and schedules.
Writing Goal: Fill in required information on simple workplace forms and schedules.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS

The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to.a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES

The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.
☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

INTRODUCTION TO ESL AT WORK 2

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Ask basic questions and make requests in the workplace. **Listening Goal: Identify structures, key words, and main ideas.**				
Review from ESL at Work Ask and answer questions about the physical location of things and people in the workplace. Identify vocabulary that describes the job, such as *job title*, *job description*, and *job duties*. --- Ask and respond to yes/no questions used in the workplace. Ask and respond to short answer questions used in the workplace. Ask and respond to "wh" questions in the workplace. Ask and respond to basic open-ended questions used in the workplace.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instructions Reporting information and problems Updates from supervisor or human resources Training new co-worker Training programs New equipment or procedures	Ask and respond to questions Describe job Understand politeness Make and respond to requests Effective listening	Create a Jazz Chant (a la Caroline Graham) which consists of common questions and response patterns known to the students. Tape record a series of short answers and responses on the work floor with all of the "real" noise in the background. Practice playing this and having the students ask for clarification of what they hear. Write short dialogues that illustrate the various types of workplace questions and responses.	Demonstrate ability to use basic questions and requests in a variety of workplace situations with a variety of workplace personnel

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Demonstrate how to make polite requests in the workplace. Make and respond to requests: • to borrow tools or supplies • for a sick day • for a schedule change • for a specific vacation time Make a request for specific work instructions	Job evaluations Workplace forms Company events Break time Workplace schedules Vacation and health policies	Hearing sounds Understanding intonation and stress Producing sounds	Role play making and responding to workplace requests.	Identify key words and main ideas in basic questions and requests.
Reading Goal: Understand main ideas in simple workplace forms and schedules. **Writing Goal: Fill in required information on simple workplace forms and schedules.**				
Review from ESL At Work 1 Print or write personal information on different workplace forms. Identify and list familiar vocabulary on different complete workplace forms. List words that describe the people, tools, machines you work with. Identify and interpret any new vocabulary on simple workplace forms and schedules.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instructions Updates from supervisor or human resources Training new co-worker	Print or write simple information Identify familiar words Make lists Order lists alphabetically	Show or tell about activities in a person's workday with pictures of clocks and have students write the name of the activity onto a schedule. Have the students list questions they think they will be able to answer after reading a workplace form or schedule. They can answer the questions as they read or afterwards.	Fill in required information on a simple workplace form.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Identify key words on simple workplace forms and schedules. Read and identify parts of simplified workplace forms and schedules. State main ideas for simple workplace forms. Identify what information is given on: • simple workplace forms • simple workplace schedules Identify what information is missing on: • simple workplace forms • simple workplace schedules Fill in required information on simple workplace forms and schedules.	Training programs New equipment or procedures Job interviews Job evaluations Workplace forms	Identify key words in writing Read simple forms and schedules Identify required information	Have students work in small groups to match key words or vocabulary from a list to workplace forms and schedules. Practice pronouncing these words, also.	State main ideas and distinguish what information is on various workplace forms.

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluations.

Introduction to ESL AT WORK III

The topics in this course include reading and discussing safety signs and issues, reading and completing company benefit forms and accident reports.

COURSE GOALS

Speaking Goal: Describe safety signs and their workplace location.
Listening Goal: Identify safety warnings and procedures.
Reading Goal: Skim for overview and understand the organization of forms, schedules, and pay stubs.
Writing Goal: Transfer and record information onto workplace forms.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ **GOALS**	The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.
☐ **LEARNING OBJECTIVES**	The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐ **WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.	☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.	☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

INTRODUCTION TO ESL AT WORK 3

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Describe safety signs and their workplace location. **Listening Goal: Identify safety warnings and procedures.**				
Review from ESL At Work 2 Ask and respond to a yes/no, short answer and open-ended questions about work completed.	Team or group meetings machine	Ask and respond to questions		
Make and respond to a request for a schedule change.	Machine set-up or break-down	Evaluating appropriateness	Provide students with a list of situations where there are safety concerns and a list of possible warnings that occur in the workplace. Have them choose which warning apply to which situations.	State what your response would be to various, common safety warnings.
Identify the appropriateness of questions in terms of whom to ask, when to ask, and how much to ask at that time.	Shift changes	Make and respond to requests		
	Ongoing problem solving			
State the safety signs found in the company.	Work instructions	Understand cause and effect	Find or draw a map of the workplace production area and have students identify safety sign locations.	
Describe the location of different safety signs in the workplace.	Updates from supervisor or Human Resources	Describe personal experience		
List the safety signs and procedures relevant to one's department.	Training new co-worker			
Identify one or two word safety warnings that are heard in the workplace.	Training programs			
Describe a personal experience with a safety problem in the workplace.				

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
List the possible safety problems that could occur in the workplace.				
Ask and respond to questions about why safety problems occur.	New equipment or procedures	Describe physical location, make lists	Have students take pictures of safety signs and safe job practices, the teacher or company develop, and the students then work in small groups to orally identify the signs and location.	Demonstrate safety warning and procedures.
Request a copy of the safety rules or requirements in your workplace.				
Identify the safety goals, e.g., so many days accident free, in the workplace.	Job interviews	Describe procedures		
Describe the emergency procedures in your workplace	Job evaluations			
Identify the consequences for not following safety rules.	Workplace forms	Understand concepts of goals, rewards, incentives and penalties	Match safety signs (from photographs or drawings) with procedures and appropriate warning. This 3 step process could be completed in teams and the instructor records on a chart the oral responses.	Identify and respond to workplace safety issues.
Identify the rewards or incentives for reaching safety goals.		Give and respond to warnings		
Give and respond to a variety of safety warnings in the workplace.				
Reading Goal: Skim for overview and understand the organization of forms, schedules, and pay stubs. Writing Goal: Transfer and record information onto workplace forms.				
Review from ESL At Work 2 Identify key words on standard workplace forms and schedules.	Team or group meetings Machine set-up or break down	Identify key words Understand main ideas	Brainstorm a list of parts of a pay stub and arrange them by memory into the format for a pay stub.	Read a short case study of a new worker's

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
State main ideas for standard workplace forms and schedule. Read and understand the main idea of safety signs in the workplace. Read and underline the familiar vocabulary in a list of workplace safety rules. Skim a workplace form and list its main headings or parts. Skim a workplace schedule and list its main headings or parts. Skim a workplace pay and list its main headings or parts. Read a short case study of a new worker's pay and benefits and fill in a blank pay stub accordingly. Read a short case study of a request for a schedule change and fill in a blank schedule accordingly. Read a short case study of a workplace accident and fill in a blank accident report form accordingly.	Shift changes Ongoing problem solving Work instructions Updates from supervisor or human resources Training new co-worker Training programs New equipment or procedures Job interviews Job evaluations Workplace forms	Order a list alphabetically Identify familiar words Skim for overview Read for specific information Transfer information to another test Fill in forms	Have students work in pairs and one read the document and the other student record the appropriate information.	Pay and benefits and fill in a blank pay accordingly. Skim various workplace documents and list workplace information.

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Intermediate ESL AT WORK I

The topics in this course include asking for and responding to feedback from a supervisor, asking for clarification about disciplinary actions in the workplace, giving and responding to instructions about unfamiliar tasks, reading and completing work orders, and reading safety manuals.

COURSE GOALS

Speaking Goal: Give basic workplace instructions.
Listening Goal: Identify and respond to a basic workplace instruction.
Reading Goal: Scan workplace texts for specific information.
Writing Goal: Write and use checklists in the workplace.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS

The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES

The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.	☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.	☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

INTERMEDIATE ESL AT WORK 1

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
Speaking Goal: Give basic workplace instructions. **Listening Goal: To identify and respond to a basic workplace instruction.**				
Review for ESL At Work 3 Give and respond to a variety of safety warnings in the workplace	Team or group meetings	Ask and respond to questions	Give a simple initial oral instruction on how to do something that is familiar to everyone, e.g., punching a time clock. Have students go around the room and continue the instruction one step at a time. Each instruction should be chronologically ordered.	Give simple instruction to a co-worker on how to perform a task that is unfamiliar to him/her.
Ask and respond to questions about why safety problems occur.	Machine set-up or break-down	Give and respond to warnings		
Ask and respond to feedback about your work from a supervisor	Shift changes	Ask for and respond to feedback	Teacher will describe a workplace scenario and learners will give and respond to safety warnings in that context.	
Make a judgment about the appropriateness of discipline from a supervisor	Ongoing problem solving	Evaluating appropriateness		
Respond appropriately to justified criticism of one's work	Work instruction	Ask for clarification	Each learner will offer two reasons as to why he or she thinks accidents occur at the workplace.	
Respond appropriately to unjustified criticism of one's work	Updates from supervisor or human resources	Understand cause and effect		
Ask for clarification about the consequences of a disciplinary action at the workplace	Training new co-worker	Make lists describe a process		
List reasons an employee could be fired	Training programs			

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Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Identify vocabulary which describes the *job-task* and *steps*	New equipment or procedures	Order chronologically		
Give an overview of the production process in the workplace	Job interviews	Describe a task	Learners will create and perform a roleplay in which a supervisor and an employee discuss these points: 1) feedback from supervisor; 2) justified criticism of one's work; 3) unjustified criticism of one's work.	Respond to a co-worker's simple instruction on how to perform a task that is unfamiliar by asking for clarification.
Use chronological order to list the tasks involved in each part of the production process	Job evaluations	Order according to criteria of importance		
Give simple instructions on how to perform the most important tasks in your job	Workplace forms	Give and respond to oral instructions	Each learner will list two reasons he or she thinks an employee could be fired, and then will research these points to verify them.	
Ask and respond to basic questions about unfamiliar tasks				
Give simple instructions to a co-worker on how to perform a task that is unfamiliar to him or her				
Respond to a co-worker's instructions about how to perform an unfamiliar task, asking for clarification, if necessary				

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Reading Goal: Scan workplace texts for specific information. **Writing Goal: Write and use checklists in the workplace.**				
Review from ESL At Work 3 Skim a workplace form and list its main heading or parts. Read a case study for a customer's special request and fill in a blank work order form. Skim a list of workplace safety rules for the main idea. Skim a job posting to see if you are qualified to do the job. Create a checklist of specific information to look for in a workplace work order. Scan a work order form to find specific information. Use a work order checklist to check off information when found. Create a checklist of specific information to look for in a workplace schedule.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instruction Updates from supervisor or human resources Training new co-worker. Training programs	Skim for overview Read for specific information Transfer information from one text to another Fill in a form Understand the main idea Connect ideas Make lists Scan for detail Use a checklist	Bring various workplace texts into the classroom and have students scan them to get the main idea. Brainstorm types of information often found on workplace work orders.	Scan a schedule to find specific information Evaluate, by scanning, specific information on workplace schedules, checklists, and pay stubs.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Scan a schedule to find specific information. Use schedule checklist to check off information when found. Create a checklist of specific information to look for in a workplace pay stub. Scan a pay stub to find specific information. Use pay stub checklist to check off information when found. Create a checklist of specific information to look for in a workplace floor plan. Scan a floor plan to find specific information. Use floor plan checklist to check off information when found.	New equipment or procedures Job interviews Job evaluations Workplace forms		Each student is given a workplace floor plan and is required to scan and locate information as orally presented by the instructor.	

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Intermediate ESL AT WORK II

The topics in this course include giving and responding to advice on workplace errors, selecting and identifying potentially problematic work orders, and writing brief notes about information found in graphs.

COURSE GOALS

Speaking Goal: Give advice on workplace problems.
Listening Goal: Identify main ideas and respond to advice on workplace problems.
Reading Goal: Understand the main idea and organization of workplace charts and graphs.
Writing Goal: Write a workplace note using phrases.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ GOALS

The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ LEARNING OBJECTIVES

The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐ **WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

INTERMEDIATE ESL AT WORK 2

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Give advice on workplace problems. **Listening Goal: Identify main ideas and respond to advice on workplace problems.**				
Review Intermediate ESL At Work 1 Give and respond to basic workplace instructions. Skim and scan workplace texts and materials to locate appropriate information. Ask an appropriate question to a co-worker about his/her absence from work. Give and respond to a safety warning related to a new piece of equipment. Request and respond to instructions on how to use a new piece of equipment. List common workplace problems. Order list of common workplace problems in terms of type, frequency, difficulty and importance. Describe what typically happens when a specific workplace problem occurs.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instructions Updates from supervisor or human resources Training new co-worker	Give and respond to instructions Ask for clarification Ask questions Evaluating appropriateness Make lists	Role play a scene of advice being given appropriately and another scene of advice being given inappropriately. Discuss the difference through the reality of giving advice in the workplace. Have students work in pairs to generate a list of common workplace problems. Have them share the results and then prioritize the frequency and importance of the problems.	Identify and state workplace problems.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Describe options in solving specific workplace problems. List the workplace problems that you can help solve. List various ways to give advice in the workplace. Determine appropriateness of giving advice in terms of who you give advice to, when you give advice, how often you give advice, and how much advice you give. Give appropriate advice on solving a specific workplace problem that is familiar to you. Respond to a co-worker's appropriate advice on how to solve a workplace problem that is unfamiliar to you by asking for clarification. Ask for and respond to appropriate advice about how to solve a scheduling problem. Give and respond to appropriate advice about: • producing too much scrap • breaking a safety rule	Training programs New equipment or procedures Job interviews Job evaluations Break time Safety training videos Safety trainer	Describe a situation Order according to given criteria Give and respond to advice Sequence information Listen for key words and phrases	Give students 2 - 3 case studies of workplace problems and have them create and record various approaches to solving the problems. Have the company safety trainer come to class and the students ask pre-determined safety questions: about issues and for clarification. Listen to various advice on solving and to solutions to workplace problems and then evaluate the process and outcome by either creating a checklist or by small group discussion.	Interpret advice of workplace problems as to its appro-priateness, to whom it is given, and to when it is given. Respond to workplace problems.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Reading Goal: Understand the main idea and organization of workplace charts and graphs. **Writing Goal: Write a workplace note using phrases.**				
Review from Intermediate ESL At Work 1 Skim a work order and list its main headings or parts.	Team or group meetings	Skim for overview	Before writing a note, go around the classroom asking students to say one thing that they will include in the note. Other students can take notes on what they hear and decide whether they will include that information in their own note.	Create a checklist of specific information to look for in workorders and graphs.
Identify the key words and new vocabulary on a work order.				
Identify the main idea of a work order.	Machine set-up or break-down	Make lists		
Create a checklist of specific information to look for in a work order.	Shift changes	Identify key words	Identify correctly completed work orders from a combination of those completed both correctly and incorrectly.	
Scan a work order for specific information.				
Use the work order checklist to check off information as it is located.	Ongoing problem solving	Understand the main idea		Write a note using phrases to a co-worker about specific information that is found in a specific graph or chart.
Identify correctly completed work orders.	Work instructions	Use a checklist	Pass out various charts and graphs to small groups and have them explain to entire class the information located on the document.	
Create a "to do" checklist for your job.				
Identify and gather copies of the different charts used in the workplace.	Updates from supervisor or human resources	Scan for detail		
Select and identify which work orders may cause workplace problems.				
Skim a workplace chart and list its main headings or parts.				
Identify the key words and new vocabulary on a chart.				

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
Identify the main idea of a chart.				
Create a checklist of specific information to look for in a chart.	Training programs	Read a graph		Interpret information located on charts, graphs, and work orders.
Scan a chart for specific information.			Use one specific workplace chart or graph and place students in groups of 3 - 4. The students, one by one explain one feature of the graph or chart and then pass it on to the next student for explanation.	
Use the chart checklist to check off information when found.	New equipment of procedures	Read a chart		
Write a note in phrases about specific information that is found in the chart.				
Identify and gather copies of the different graphs used in the workplace.	Job interviews	Use phrases		
Skim a workplace graph and list its main headings or parts.	Workplace forms	Write a note		Write a brief description of a workplace chart or graph.
Identify the key words and new vocabulary on a graph.	Job evaluations		Have the students choose a specific workpoace problem or topic and have them, in groups, create a chart or graph to illustrate and explain the information.	
Identify the main idea of a graph.				
Create a checklist of specific information to look for in a graph.				
Scan a graph for specific information.				
Use the graph checklist to check off information when found.				
Write a note in phrases about specific information that is found in the graph.				

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Advanced ESL AT WORK I

The topics in this course include discussing and solving workplace problems, reading written job descriptions, and writing one's own job description.

COURSE GOALS

Speaking Goal: Restate or paraphrase an oral workplace instruction.
Listening Goal: Distinguish variation in oral workplace instructions.
Reading Goal: Understand the main idea and organization of memos and other simple notices on workplace bulletin boards.
Writing Goal: Write workplace procedures using basic sentence structures.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ **GOALS** The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.

☐ **LEARNING OBJECTIVES** The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐**WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.
☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

ADVANCED ESL AT WORK 1

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Restate or paraphrase an oral workplace instruction. **Listening Goal: Distinguish variation in oral workplace instructions.**				
Review from Intermediate ESL at Work 2 Describe the best way to solve workplace problems. Give and respond to appropriate advice about producing too much scrap. Give and respond to instructions of how to use a new piece of equipment. Listen to various examples of oral workplace instructions and their paraphrases and identify differences and similarities. Listen to a description of how a co-worker solved a workplace problem and restate or paraphrase the description. List words or phrases in the co-worker's description of the problem and restatement that have the same or equivalent meanings.	Team or group meetings Machine set-up or break-down Shift changes Ongoing problem solving Work instructions Updates from supervisor or human resources	Describe a plan Give and respond to advice Evaluating appropriateness Make lists Order lists chronologically Give and respond to instructions Ask and respond to questions	Select a number of proverbs that could relate to the world of work. Ask students to restate or paraphrase what these proverbs mean to them. Ask them to relate whether the proverb exists in their first language and to share what differences, if any, there are. Have students listen to a variety of workplace instructions and SOP's (Standard Operating Procedures) and then have them restate or paraphrase the information. Have students restate and rephrase ideas discussed in company and department team meetings.	Given a list of different oral workplace instructions, restate or paraphrase each one.

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Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
List different oral workplace instructions that you recall your supervisor giving you. Paraphrase each of the supervisor's instructions. Discuss whether the meaning is the same or different in the paraphrased version of the supervisor's instruction. Listen to a co-worker's instruction on how to perform a task and restate the instruction. List words or phrases in the co-worker's instructions and restatement that have the same or equivalent meanings. Look up selected words in the dictionary or thesaurus to identify synonyms. Discuss whether the meaning is the same or different in the paraphrased version of the co-worker's instructions.	Training new co-worker Training programs New equipment or procedures Job interviews Job evaluations	Use dictionary and thesaurus Compare and contrast ways of presenting information Restate information Paraphrase information Use and understand connotations and inferences.	Brainstorm a list of common supervisor instructions. Ask the students to record a supervisor instruction, bring it to class, and paraphrase for either small groups or the class as a whole.	Restate or paraphrase supervisor instructions.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Reading Goal: Understand the main idea and organization of memos and other simple notices on workplace bulletin boards. **Writing Goal: Write workplace procedures using basic sentence structures.**				
Review from Intermediate ESL at Work 2 Skim and scan a workplace chart and describe what specific information is found in a note to supervisor. Write a note to workers on the next shift describing the status of an ongoing problem. Read a written job instruction and respond with note asking for clarification.	Break time Team or group meetings Machine set-up or break down Shift changes Ongoing problem solving	Skim for overview Scan for detail Describe facts Write a note Describe a situation	Using a series of photos taken of people performing workplace tasks, write one simple sentence to describe what they are doing in each photo. Change the sentence to a command sentence/procedure for doing the task. Think of other examples from the workplace to change from a simple sentence to a command.	Write a four-step job instruction for a specific task.
Skim a memo and list its main headings or parts. Scan a memo to determine what is being said. Identify the key words and new vocabulary in the memo. Identify various simple sentences in the memo and describe their sentence structure. Write a note using basic sentence structure to reply to the memo.	Work instructions Updates from supervisor or human resources	Read job instructions Ask for clarification Understand the main idea	Have the students practice writing a memo to supervisors and have supervisors respond, where and when appropriate. Have the students practice writing a memo to a company or community individual.	Identify and use the sentence structure, pattern, and form found in memos.

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Skim a notice on the workplace bulletin board and list its main headings or parts.				
Scan a notice on the bulletin board to determine what is being announced.	Training new co-worker	Identify key words	Have the students create a memo or notice about their class or a class-related workplace situation/event and post on the workplace bulletin board.	Identify structure and interpret the information found in workplace notices.
Identify the key words and new vocabulary in the notice.	Training programs			
Look up synonyms for specific words in the dictionary or thesaurus.	New equipment or procedures	Use a dictionary or thesaurus		
Identify various simple sentences in the notice and describe their sentence structure.		Use basic sentence patterns and forms		
Write a note using basic sentence structure to paraphrase the notice.	Company events			Write a brief description of a workplace job in a variety of forms.
Write a statement about your job using different sentence patterns, e.g., subject-verb-object.		Write job instructions		
Rewrite a statement about job and change it into different forms, e.g., a question, a command, and an exclamation.				
Write a job instruction for a specific task and identify what sentence pattern and form is used.				

ESL AT WORK I-VII

These courses are designed in modular fashion. They address the areas of listening, speaking, reading, and writing in the context of the workplace. The courses are presented and structured in terms of difficulty, priority, and frequency of use. A functional approach to language learning involves performing communicative tasks that are appropriate for specific workplace situations. Thus the goals of the seven courses are generalized while the objectives are specific, measurable tasks. Topics range from basic clarification to interacting in a performance evaluation.

Advanced ESL AT WORK II

The topics in this course include applying and interviewing for company promotions, participating in performance evaluations, and writing notes for the next shift.

COURSE GOALS

Speaking Goal: Understand the promotion and performance evaluation process.
Listening Goal: Identify main ideas and appropriate responses in the promotion and performance evaluation process.
Reading Goal: Read a performance evaluation form and job postings.
Writing Goal: Write job descriptions and complete promotion evaluation forms.

EXPLANATION OF COURSE OUTLINE FORMAT

This format is designed as an outline for each workplace course. The course outline is the instructor's general guide to the course, and offers a starting point from which the instructor may begin to customize for a specific workplace. On the first few days of class, the instructor can determine, along with the students, which goals and objectives are most appropriate to their learning needs. Using the course outline throughout the course, the instructor will continue to make adjustments and adaptations as students' needs become more apparent.

The course outlines for each basic-skill area are preceded by an overview of the course content with a list of the course goals. The following information identifies and describes each part of the course outline.

Learning Objectives	Workplace Contexts	Basic Skills	Possible Activities	Outcome
☐ Goal #1:				
☐	☐	☐	☐	☐

☐ **GOALS**	The goals in each course represent the expectations for the students' skill development. They are ordered in terms of difficulty of the skills involved. The goals are generalized across six workplaces and should be customized to a specific workplace with input from the students and the employer.
☐ **LEARNING OBJECTIVES**	The learning objectives are measurable steps that build toward the completion of the stated goal. They are sequenced in terms of complexity and progressively build the students' skills. Critical thinking skills are integrated into many of the learning objectives. The objectives should be customized to a specific workplace with input from the students and the employer.

☐ **WORKPLACE CONTEXTS**	The list of workplace contexts provides the instructor with possible materials, situations, interactions, issues, questions, dilemmas, controversies, or decisions in the workplace in which the learning objectives or skills that relate to them can be practiced.
☐ **POSSIBLE ACTIVITIES**	The possible classroom activities relate to a learning objective or a cluster of learning objectives. They can be used as is or expanded upon to suit the students' needs. Each activity illustrates a specific method or approach, but instructors may rewrite the activity to suit other methods or approaches. They may also use the activity as a springboard to create other activities.

☐ **BASIC SKILLS**	The list of basic skills relate to the skills that are involved in achieving the learning objectives. The list should be customized to each workplace with input from the students and the employer.
☐ **OUTCOME**	The outcome is a description of a measurable assessment of student performance.

ADVANCED ESL AT WORK 2

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Speaking Goal: Understand the promotion and performance evaluation process. **Listening Goal: Identify main ideas and appropriate responses in the promotion and performance evaluation process.**				
Review from Advanced ESL At Work 1 List different oral work instructions that supervisors give in meetings and on the floor. Paraphrase the supervisor's instructions. Discuss whether the meaning is the same or different in the paraphrased version of the supervisor's instructions.	Team or group meetings Job interviews	Make lists Restate or paraphrase information Compare and contrast ways of presenting information	Role play a promotion interview and have students critique the role play.	Make and respond to appropriate suggestions on how to improve job.
Describe the process in applying for promotion in your company. State the application sequence. Identify and respond to key words, phrases, and vocabulary found in the application form. Respond to and ask for clarification about instructions concerning the application process. Explain reasons for desiring promotion.	Ongoing problem solving Work instructions	Give and respond to advice and feedback Evaluate appropriateness	Have students find out about and bring in company promotion opportunities and discuss possibilities and process for application.	Describe the promotion and performance evaluation components and process.

Learning Objectives	***Workplace Contexts***	***Basic Skills***	***Possible Activities***	***Outcome***
Listen to and paraphrase a co-worker's reason(s) for applying for a promotion.				
Demonstrate appropriate structures and conversation used when applying for a promotion.	Special requests to supervisor or human resources	Ask and respond to questions		
List the possible questions one might encounter in a promotion interview, if appropriate.		Ask for clarification		Apply for a company promotion, when appropriate.
Distinguish between appropriate and less appropriate responses one might give in an interview for promotion.	Job postings	Understand language subtleties	Tape record or video tape students as they role play performance evaluations and allow them to critique themselves or ask other students for advice and support.	
Describe the performance evaluation process.	Company performance evaluation forms			
Identify the different categories of a performance evaluation form.		Summarize and rephrase information		Demon-strate a perform-ance evaluation.
State main idea of performance evaluation categories.				
List various ways to best prepare for the performance evaluation.				
Identify most effective methods to receive and give feedback during the performance evaluation.				
Summarize action to be taken as a result of performance evaluation.				

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Reading Goal: Read a performance evaluation form and job postings. **Writing Goal: Write job descriptions and complete promotion and evaluation forms.**				
Review from Advanced ESL at Work 1				
Write a statement about job using different sentence patterns.		Use different sentence patterns and forms		
Write a job instruction for a specific task on a new piece of equipment and identify what sentence pattern and form is used.	Shift changes	Write a job instruction		
Write a note using basic sentence structures giving work instructions to workers on the next shift.	Ongoing problem solving	Write a note Skim for overview	Have students write a job description and have other students decide whose job it is.	Read and write a brief description of job responsi-bilities and tasks.
Skim a section of a performance evaluation for the main idea.	Workplace forms	Scan for detail		
Scan sections of job postings and performance evaluations.	Work instructions	Understand the main idea		
Read a co-worker's list of statements about his/her job.	Special requests to supervisor or human resources	Write legibly Read handwriting		
Underline the words that are difficult to understand.				

Learning Objectives	*Workplace Contexts*	*Basic Skills*	*Possible Activities*	*Outcome*
Ask for clarification on the difficult words.				
List words that are often used in applying for promotion and in performance evaluation.	Training programs	Give and respond to feedback		Demon-strate the steps in applying for a job promotion.
State definitions of unfamiliar words in written form. Apply dictionary and workplace meaning.	New equipment or procedures	Ask for clarification Make lists	Have students read various job postings and determine main ideas and rephrase the posting by telling a fellow student about the job opportunity.	
Write a brief description of why one is the appropriate candidate for a promotion.	Company performance evaluation forms	Make and respond to suggestions		Fill out appropriate sections of perform-ance evaluation form, if appropriate.
Fill out an application for promotion.	Job postings	Write a memo	Have students fill out a company performance evaluation f orm, if appropriate.	
Fill in different categories of a performance evaluation form.		Fill out forms		
Write a response, if appropriate, to a performance evaluation.				

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