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Application of adult education principles to workplace literacy program descriptions. (Volumes I and II)

Chaney, Brenda McKim, Ph.D.
The Ohio State University, 1994

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APPLICATION OF ADULT EDUCATION PRINCIPLES TO
WORKPLACE LITERACY PROGRAM DESCRIPTIONS
Volume I
DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy
in the Graduate School of The Ohio State University
BY
Brenda McKim Chaney, B.A., M.A.

* * * * *

The Ohio State University
1994

Dissertation Committee:

W. D. Dowling
Susan Imel
Kevin Freer

Approved by

W. D. Dowling
Advisor
College of Education
DEDICATION

This paper is dedicated to my Mom.
Acknowledgments

I wish to acknowledge the patience of my family during the process of taking general exams and writing of this paper. I also wish to thank the friends who spent many hours listening to me vent frustration during this ordeal.

The Adult Education faculty is to be commended for making graduate education tolerable—not easy, but tolerable. Dr. Dowling receives an extra thank-you for his patience and guidance. He went beyond the boundaries of what is expected from an advisor and I do appreciate him.
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CHAPTER I

INTRODUCTION

Reported lack of educational levels of the American workforce has received a considerable amount of attention by government, education, the media, and, of course, industry. It is feared that lack of educated workers will reduce the economic competitiveness of American business. Evidence of the concern is the number of conferences, books, and articles on the topic. For example, the U.S. Departments of Labor, Education, and Commerce jointly produced Building a Quality Workforce (1988), an attempt to develop solutions to the education and training needs of workers.

Conferences held to discuss worker education deficiencies and how to remedy them include those discussed in the following publications: Taylor, 1989; Jurmo, 1991a; Galin, 1990; Baumann, 1991; Askov and Brown, 1990; Spikes, 1991; Sarmiento, 1989. Numerous authors have predicted increasing economic problems due to the educational deficiencies of the workforce (see Askov and Aderman, 1991; Sarmiento and Kay, 1990; Hull, 1991; MacLeod, 1991; Imel, 1989).
Labor market changes and new technology require workers with more education than was considered necessary in the past. Workers with basic skills deficits need to improve their skills. The challenge for industry and for educators is to design programs for workers based on educational principles.

Americans tend to look for "quick-fix" solutions to problems without properly identifying the source of the problem (Stitcht, 1988). Educational programs are planned to solve social problems, evidence of the belief of policy makers that there is a link between individual change and larger social change (Fingeret, 1990). Spring summarized this tendency as follows, "A continuing dilemma for education has been the tendency to use it to solve problems existing in other parts of society because this avoids any real confrontation with the root cause of the problem" (Spring, 1980, p.25).

An example of policy makers linking individual change with larger social change and misperception of education exists in the criminal justice system. For example, many researchers (e.g. Roberts, 1971; Holloway and Moke, 1986; Blackburn, 1981; Hassel, 1988; Cogburn, 1988; Austin, 1987,) claim education in prison is the solution to the problem of repeat offenders. However, other researchers take a different perspective. "The
studies to date are not conclusive and only inferential relationships can be established between educational program participation and post-release success." (Ryan, 1987, cited in Jenkins 1990, p.41) Jenkins (1990) concluded that the research evaluating prison education was filled with methodological errors and no conclusions could be made on whether education affected the recidivism rate. In 1976, Martinson stated that the reasons people commit crime have nothing to do with education (Martinson, Palmer, and Adams, 1976). Despite the tenuous link between education and crime, policy makers continue to offer education as the solution to crime.

Believing that American economic problems can be solved with educational programs for workers is analogous to believing that the crime problem can be solved with education. Prisoners have educational deficiencies, yet those deficiencies are not the cause of crime. Education programs in prison can improve the educational abilities of prisoners, but not eliminate crime. Educational programs for workers will prepare them to meet the demands of new technology, not solve the nation’s economic problems. The challenge for industry and education is to plan educational programs based on educational principles and not "quick fix" solutions.
Adults who enter workplace literacy programs are productive members of society; they have jobs and families and participate in their communities. These learners should be allowed to have a voice in the planning and implementation of their learning programs. The learning programs should be based on the strengths of the learners. Adult education can provide the educational principles for planning learner-centered workplace literacy programs. Most adult educators agree that educational programs for adults should be learner-centered, with the learner having an active role in planning, implementation, instruction, and evaluation. For a few examples of this conviction see Brookfield, 1986; Knowles, 1980, 1984; Connelly and Light, 1991; Draper, 1991; and Lindeman 1926; (cited in Merriam, 1984).

**Statement of the Problem**

The questions for study are:

1. Are there concepts of adult education that can be used to plan an educational program, and, if there are, what are they?

2. What characteristics would a workplace literacy program have if based on the concepts of adult education?

3. To what degree are current workplace literacy programs based on the concepts of adult education?
After establishing the concepts of adult education used in program planning, a model of workplace literacy education can be developed that incorporates these principles. Then, current workplace literacy programs can be examined to determine the degree to which their planners used the knowledge base of adult education.

**Research Design of the Study**

Education programs based on the concepts of adult education meet certain criteria of practice involving the role of the learner, the role of the teacher, program planning, methodology, and evaluation. To determine the extent to which workplace literacy programs meet these criteria, program descriptions can be analyzed using content analysis.

Content analysis is the systematic analysis of communications (Merriam and Simpson, 1984). It is a method for objective, systematic, and general description of the manifest content of a text. The purpose of content analysis is to obtain information for describing and explaining social phenomena. One method of gathering this information is quantitative analysis of manifest content, which involves frequency counts of words or symbols in a document. The researcher chooses units of content—usually words, themes, characters, items, and/or space-time measures. Words and phrases are counted to infer the
preferences or values of the author of the material (Merriam and Simpson, 1984).

Some information cannot be gathered through quantitative analysis. Researchers need to determine latent rather than manifest meanings in the document. To do this researchers use qualitative content analysis, which uses the occurrence or nonoccurrence of attributes for inference (George, 1959). Program descriptions will be analyzed to determine if workplace literacy programs are based on the assumptions of adult education. Simply counting words does not reveal the role of the learner in planning and implementation of a program. Descriptions must be read and interpreted. A program may involve learners but the description may not state it explicitly. This determination would have to be made based on the words used to describe the involvement of the learners. Frequency counts of words or phrases would not allow these distinctions to be made.

Maximum variation sampling (Patton, 1990) will be used to obtain information rich cases for in-depth study. Information-rich cases are those from which one can learn about the issues of central importance to the research. Any common patterns that emerge are important in capturing the experiences and shared aspects of a program. A small, diverse sample will yield two types of data: high-quality,
detailed descriptions of each case and important shared patterns that cut across cases and are significant because they arise out of heterogeneity.

Sample size depends on what the researcher wants to know. Patton states that validity, meaningfulness, and insights gained from qualitative study have more to do with the information-richness of the cases selected for study and the observational/analytical skills of the researcher than with the sample size. If the purpose of the study is to maximize information, then sampling ends when no new information is discovered. Therefore, Lincoln and Guba (1985) identify redundancy as the primary criterion in sampling.

The unit of analysis in this study will be program descriptions of workplace literacy programs entered into the ERIC document service between January 1986 and February 16, 1992. The documents were selected from the ERIC database using the key words workplace and literacy. Only documents describing actual programs will be used. English as a Second Language and workforce education programs will not be included. Workplace literacy programs that include English as a Second Language as one part of the program will be included. Criteria for workplace literacy programs based on the principles of adult education will be drawn from the work of Jurmo,
1989, 1991; Fingeret, 1989; and Soifer, Young, Irwin, 1989, and used to analyze the documents.

Thick description will be used to analyze documents (Patton, 1990). This refers to using description and direct quotation to allow the reader to enter the situation being represented. Thick description makes interpretation of findings possible and can link individual cases to larger social issues.

Significance of the Study

In the search for "quick fixes" to educational problems, educational program decisions are based on the values, wishes, and good intentions of people with decision-making power. However, these programs may not be based on educational principles which govern practice. The principles of the field can be discovered by reviewing the literature.

One of the characteristics of adult education that makes it unique is its concern for the emotional, personal dimension of the learner. Rather than focusing solely on cognitive skills, adult educators are concerned with the whole person, including the affective area. Therefore, educational programs should include more than developing cognitive skills (see Lindeman, 1926, (cited in Merriam, 1984); Rogers, 1982; Dewey, 1916; Brookfield, 1985a). Workplace literacy programs should focus on teaching basic
skills and on helping the learner to become an independent
learner, a learner who can transfer skills from one
learning situation to another. In order to achieve these
goals, the educational programs should be learner-
centered.

Definition of Terms

Adult education is a process whereby persons whose major
social roles are characteristic of adult status undertake
systematic and sustained learning activities for the
purpose of bringing about changes in knowledge, attitudes,
values, and skills (Darkenwald and Merriam, 1982).

Workplace literacy refers to the basic skills necessary to
function effectively in the economy. The basic skills
are: reading, writing, communicating in English, and math
and problem-solving skills. Chisman and Campbell (1990)
also include the ability to work and learn independently,
work cooperatively with others, respond quickly to new
situations, juggle multiple tasks, and decide what one
needs to know and then find the information.

Participatory literacy education is a model in which
power is shared equally among learners and staff.
Participatory literacy education concepts include:
learners have substantial amounts of control and
responsibility in program decision making and operations.
Also, participatory literacy aims to enhance cognitive and
social traits—self-esteem and reading and writing. The student's knowledge, skills and experience are valued and respected and provide the foundation upon which further learning is based (Jurmo, 1989a).

**Content analysis** is the systematic analysis of communication. It is used to obtain information for describing and explaining phenomena (Merriam and Simpson, 1984). Most content analysis is quantitative—it relies on frequency counts of manifest content. To get hidden or latent meanings researchers use non-frequency, or qualitative analysis. Qualitative content analysis uses the presence or absence of characteristics (in this case, characteristics of workplace literacy programs) as content indicators.

**Organization of the Study**

The literature on adult education philosophy and goals is reviewed in Chapter II. The purpose of this review is to arrive at agreed upon assumptions for practice. The assumptions for practice are then applied to literacy program planning; the result is known as participatory literacy education.

Chapter III is a review of workplace literacy literature. Definitions of workplace literacy are discussed, challenges to some commonly accepted beliefs about workplace literacy are made, and different
approaches to planning workplace literacy programs are described. Finally, the assumptions of adult education found in Chapter II are applied to workplace literacy programs. Methodology and analysis of the data are presented in Chapters IV and V. Chapter IV describes content analysis, the rationale for using qualitative versus quantitative analysis, and gives the criteria to be used for analysis. The data gathered from the content analysis are discussed in Chapter V and conclusions made on the degree to which workplace literacy programs are based on adult education principles. Summary, conclusions, and suggestions for further study are in Chapter VI.
Chapter II

ASSUMPTIONS OF ADULT EDUCATION

Adult education practice is based on assumptions about the roles of the learner and teacher, teaching methods, and curriculum content. These assumptions guide program planning. Darkenwald and Merriam (1982) reviewed the literature of adult education and identified five philosophical orientations:

1. The cultivation of the intellect, a position focusing on the development of rational human beings through liberal studies. The role of the student is subordinate to the role of the teacher, who is to make choices about worthwhile content. The instructional method is teacher-centered.

2. Individual self-actualization as a philosophy of adult education focuses on the affective aspects of education. This humanistic philosophy emphasizes personal development and realization of potential. Self-directed learning and teachers aid learners in developing their full potential and attaining the goal of self-actualization. This position stresses that the source of knowledge is the background and experience of the learner.
3. Personal and social improvement, like self-actualization, includes self-directed learning and background and experience of the learner as components of education. The teacher and learner are in a partnership in a setting conducive to learning. Education provides the skills necessary to evaluate experience through critical reflection, use of the scientific approach, and problem-solving.

4. Social transformation theorists also see the teacher and learner in a partnership, learning simultaneously from each other through dialogic-problem solving and praxis. Generative themes developed from the learner's experiences make up the content of education. Those who hold this position believe the goal of education should be social change.

5. The final philosophical position identified by Darkenwald and Merriam is organizational effectiveness. The goal is to increase profit for private industry and enhance service to the public by persons employed in the public sector. Organizational effectiveness draws from the behavioristic model for methods of teaching and evaluation.

The content of educational programs with the goal of organizational effectiveness is based on the needs of the organization and is utilitarian in nature. The teacher
determines how to meet the needs of the organization through training and education of employees.

Elias and Merriam (1980) described six philosophical positions in the field of adult education: liberal adult education, progressive adult education, behaviorist adult education, humanistic adult education, radical adult education, and analytical adult education. These correspond with the Darkenwald and Merriam descriptions with the exception of the analytical philosophy which Darkenwald and Merriam do not include. The philosophies, named differently in the two books, correspond as follows:

- cultivation of the intellect—liberal adult education
- individual self-actualization—humanistic adult education
- personal and social improvement—progressive adult education
- social transformation—radical adult education
- organizational effectiveness—behavioristic adult education

Meeting the assumptions of adult education means planning a learner-centered program. The experience and background of the learner will be included in the learning process, representatives of the learners will be participants in the planning, implementation, and
evaluation of the program. These assumptions for practice cut across philosophical lines and are the foundation of practice in adult education. For example, in Darkenwald and Merriam, of the five philosophical positions described, three are learner-centered.

Cultivation of the intellect, a teacher-centered position, has not been widely accepted by American adult educators (Darkenwald and Merriam, 1982). Organizational effectiveness through the development of human resources also does not appear to be learner-centered. The goals of the educational program are set by the organization and are external to the learner. However, achieving organizational effectiveness can be learner-centered.

Argyris and Schon (1977) describe learner-centered education in an organization:

Members learn, too, about previous contexts for learning. They reflect on and inquire into previous episodes of organizational learning, or failure to learn. They discover what they did that facilitated or inhibited learning, they invent new strategies for learning, they produce these strategies, and they evaluate and generalize that they have produced. (p.27)

In "Adult Learning: Theory and Practice," Malcolm Knowles (1984b) outlines a process for basing human resource development on principles of adult education. Most human resource development programs are based on a behaviorist or cognitive model, but, as Saint (1974) comments, approaches (such as behavioristic approaches)
that emphasize instructional methods and programs will lose productiveness. Organizations need to recognize that for an individual to learn, the individual has to be aware of the need to learn. Workers need to see the connection between what they know and what they are expected to learn. "Successful approaches have integrated different individual needs with the achievement organizational objectives. Although individuals may have goals in common, these approaches recognize that each individual achieves his objectives in ways in which he can best learn and grow" (Saint, 1974, p.100).

Laird (1985) recognizes the benefits of learner-centered programs. He notes that not all educational programs within organizations can permit full delegation of learning goals to the learner, but none prevent activities which allow the learners to analyze learning goals and come to an understanding of why they are important to the organization and to the learner. Learners are encouraged to invest their pretraining experience in new learning.

Laird also discusses the application of humanistic education to the workplace. Organizations are generally not willing to alter standards in order to permit craftspeople to fulfill themselves. Programs for supervisory staff, managers, and executives are more
likely to be based on humanistic principles. Laird cautions that as more schools and universities adopt facilitative principles and humanism, corporations will find more workers unwilling to accept education in which all the decisions about goals and methods are made by the organization.

American adult educators differ on some of the philosophical foundations of the field. Yet, the one area in which there is agreement is the active role of the learner in educational planning. "Perhaps the most venerable and widely espoused principle of adult education is that adults should be involved in planning their own educational experiences" (Rosenblum and Darkenwald, 1987, p.47).

In the next section, reasons for the emphasis on the role of the learner in adult education programming will be discussed.

The Influence of Progressivism

The progressives have had a major influence on philosophy in American adult education.

Elements of progressive thought are found in the writings of all major theorists in the field of adult education including Knowles, Rogers, Houle, Tyler, Lindeman, Bergevin, and Freire. (Darkenwald and Merriam, 1982, p.45)

It could be argued that humanistic, radical, and behavioristic adult education are all in some ways dependent upon progressive education for some of their chief ideas. Humanism took hold of the
learner-centeredness of this approach; radicalism carried to further lengths the social change impulse of progressivism, and behaviorism placed an emphasis on the experimental and scientific dimensions of progressive thought. (Elias and Merriam, 1980, p.68-69)

Elias and Merriam describe several contributions of adult progressive education to adult education. These are:

1. Education should be a lifelong process.
2. Education should not be restricted to schools.
3. Adult education should include education for work and leisure.
4. The experience of the learner should be the center of education.
5. Curriculum should be learner-centered, not subject-centered.
6. The method for teaching is to be based on the scientific method, also known as problem solving.
7. Problem-centered methods are focused on the learner.
8. The role of the teacher is to guide, direct, evaluate the experiences of the learner and to share his/her own experience.
9. Education should lead to social change, learners should be able to fit into the existing society and also change society. There should be respect for the freedom of the individual to be true to his/her own convictions.
Adult education is centered on individuals and the ways they find meaning and fulfillment in their lives (Kreitlow, 1981). It is built on the belief that human beings are purposive and self-directed. Kreitlow maintains that the belief that adult education should be the means of individual growth within a social medium has emerged as the core tradition of adult education.

According to Lindeman (1926, cited in Merriam, 1984), adult education should be based on what adults want. Adult education should help adults develop the skills to determine what they want to learn and should arrange access to the persons and institutions who can help them achieve their goals. McGinnis (1981) described human liberation as the goal of adult education. Individuals moving toward that goal are increasingly in control of themselves.

McKenzie (1979) described the development of the Promethean spirit. The adult is transformed from acquiescent to autonomous, the adult has a sense of control, the adult is critical and suspicious of authority. The transformed adult values self-determination, creativity, interdependence, and collaborativeness. The means of attaining the Promethean spirit is through the learning process. The facilitator or teacher can refuse to control the learning situation
and can emphasize self-directed learning. The teacher serves primarily as a resource person who encourages learners to set their own goals. The teacher structures the learning environment so a community of learners is formed where trust and personal acceptance thrive.

**Conclusion**

The emphasis of adult educators on learner-centered education is largely the result of the progressive school. The progressives influenced the humanists, the radicals, and behaviorists. The primary contribution of the progressives was the focus on the learner as the center of the educational experience. The learner should be involved in the planning, implementation, and evaluation of the educational program.

Next, learner-centered education will be discussed in more detail. Before that discussion however, recognition should be given to the biases of the researcher. Another adult educator could read the literature on adult education and learner-centeredness and not come to the same conclusions that this researcher has made.

This researcher also has not chosen one philosophical position over another, instead focusing on the degree of learner-centeredness found in each position. Adult educators who strongly advocate one position over
another could find fault with the decision to not advocate a particular philosophical approach.

Principles of Learner-Centered Education

Knowles (1980) describes the conditions for learning and principles of teaching as follows:

1. The learner feels a need to learn. The teacher is a resource person who helps the learner clarify aspirations for improved behavior and diagnose the gap between aspirations and current level of performance.

2. The learning environment is physically comfortable and there is an atmosphere of mutual trust, helpfulness, freedom of expression, and acceptance of differences. The teacher accepts and respects each learner. The teacher and learner act as co-learners in the learning process by exposing their feelings and contributing resources.

3. The learners perceive the goals of the learning experience as their own. The teacher and the learner share involvement in the process of formulating objectives which meet the needs of the learner, institution, teacher, subject matter, and society.

4. The learners accept a share of the responsibility for planning and operating the learning experience and have a sense of commitment to it. They share in the
design of the learning experience and in the selection of materials.

5. The learning process is related to and makes use of the experience of the learner. The teacher helps the learners use their own experiences as resources for learning. The teacher presents resources at the level of the experience of the learner, helps the learner apply the new knowledge to their experience and make it more meaningful.

6. The learners have a sense of progress toward their goals. The teacher involves the learner in developing mutually acceptable criteria and methods for measuring progress toward learning objectives. The teacher helps the learner develop and apply procedures for self-evaluation.

Knowles also maintains that the learning process should be concerned with developing the skills of inquiry and that adult education should be concerned with providing resources and support for self-directed learning. The teacher acts to facilitate self-directed learning and serves as a resource for the learners. The teacher involves the learner in the analysis of personal goals, how to meet the goals, diagnosing obstacles that must be met and overcome, and planning strategies for accomplishing the goals. The teacher recognizes the
importance of learners knowing how to ask questions and find answers themselves. The ultimate objective of the teacher is to help people grow in their ability to learn.

Learning activities should be based on the needs and interests of the participants. A group representative of the learners should determine policies. All members of the organization share responsibilities and carry out decisions.

Connelly and Light (1991) suggest a code of ethics for adult education. One of the principles of practice that should be included is respect for learners.

Adults should be treated as autonomous agents, as possessing the right of self-determination and freedom of choice in learning. Adult learners can decide what is good for them to learn. Authoritarian and paternalistic attitudes in educators therefore are incompatible with the principle of respect for learners. (p.236)

The Cedar Glen Declaration, the result of a Canadian conference on literacy, states:

All adult learners have a right to a voice in decisions regarding the content of their learning. Educationally disadvantaged adults, in particular, need this voice in order to become informed of their rights, their individual and group strengths, and avenues for their participation. The involvement of the learners is essential. All programs should recognize this principle of adult education. (Draper, 1991, p.99)

Freire (1970) criticized the "banking" concept of education. Banking education turns learners into receptacles to be filled by the teacher. The more
learners the teacher fills, the better the teacher, the more meekly the learners permit themselves to be filled, the better students they are. The teacher makes deposits which the student receives, memorizes, and repeats. In the "banking" concept of education the only action allowed of learners is receiving, filing, and storing the deposits.

According to Freire, problem-posing education must replace "banking education." In problem-posing education the teacher-student relationship changes. The teacher not only teaches but is taught. The students and teacher become jointly responsible for learning. Arguments based on authority are no longer valid, no one teaches another, nor is anyone self-taught. Students teach each other. The students become critical co-investigators in dialogue with their teacher. The teacher presents material to the students for their consideration and re-considers earlier beliefs as students express theirs.

Pine and Horne (1969) identified principles and conditions of learning which can be translated into bases for educational programs for adults in a variety of situations. These principles and conditions allow adults to learn how to govern their own lives and become fully-functioning and productive members of society.

Principles of Learning:
1. Learning is an experience which occurs inside the learner and is activated by the learner. No one teaches anyone anything of significance.

2. Learning is the discovery of the personal meaning and relevance of ideas.

3. Learning is a consequence of experience.

4. Learning is a cooperative and collaborative process.

5. Learning is an evolutionary process.

6. Learning is sometimes a painful process.

7. One of the richest resources for learning is the learner.

8. The process of learning is emotional as well as intellectual.

9. The processes of problem solving and learning are highly unique and individual.

Conditions which facilitate learning:

1. An atmosphere which encourages people to be active facilitates learning.

2. An atmosphere which promotes and facilitates the individual’s discovery of the personal meaning of ideas.

3. An atmosphere which emphasizes the uniquely personal and subjective nature of learning.

4. An atmosphere which appreciates differences.
5. An atmosphere which recognizes the person's right to make mistakes.
6. An atmosphere which tolerates ambiguity.
7. An atmosphere in which evaluation is a cooperative process with emphasis on self-evaluation.
8. An atmosphere which encourages openness.
9. An atmosphere which encourages people to trust in themselves as well as in external sources of knowledge.
10. An atmosphere in which people feel respected and accepted.
11. An atmosphere which permits confrontation.

Bergevin (1967) described the purpose of adult education: to discover and present to the adult the opportunity to advance as a maturing individual and to help the learner contribute to the civilizing process. This philosophy advocates the use of adult education for the development of free, creative, and responsible persons. Bergevin criticized traditional teaching procedures as inadequate, because the programs are usually subject-oriented and mechanistic, better fitting the administrators' needs than the learners' needs. Rather than taking the time to discover the needs of the learner, traditional education fits subjects to people.

The learner must be seen as the reason for the learning program in adult education. The learner's
background and experience must be discovered and utilized in planning and conducting the learning program. Each adult participating in a learning experience should have the opportunity to help diagnose, plan, conduct and evaluate that experience along with fellow learners and administrators. Regardless of the nature of the educational program, the adult learner should become a participant and should be dynamically involved in the experience, sharing responsibility for it with other learners. The learner should help those who are operating the educational program to determine need, conduct the program, and evaluate the results of the education.

The adult learner should be part of the learning process. Passive listening is not enough. When the learner is told how to think and what to know, the learner does not have the opportunity to exercise judgment, cannot practice observation by questioning, and cannot participate in organized discussion because the skills have not been learned. The learner will only know how to ask questions of authority. Full adult growth depends on how ideas are taught, and on whether adults are encouraged to approach problems and truths as full partners in the learning process. When given this opportunity, adults will attack the learning problem as partners, they will contribute to the ideas, and they will learn to discover
and share in the excitement of free and disciplined creative inquiry.

**Conclusion**

The adult educators reviewed shared assumptions about the education of adults, even though their philosophical orientations differed. These shared assumptions are:

1. The experience and background of the adult should be included in the learning process.

2. Representatives of the learners should be participants in the planning of the learning program.

3. Learners should be participants in the implementation of the learning program.

4. Learners should be participants in setting goals for the learning program.

5. Learners should be participants in evaluating the achievement of their learning goals.

6. Adult learners are capable of directing their own learning experience.

7. Teachers should serve as resource persons, facilitators, co-learners.

8. Learning should be directed toward developing the skills of inquiry.

9. Learning is best accomplished in an accepting, trusting atmosphere.
Program Planning

Translating assumptions about adult education into reality means designing educational programs which reflect the assumptions of adult education. Several adult educators have commented on the practice of calling a program adult education because adults are in attendance:

... can't call a program of instruction adult education simply because the learners are adults.

Simply because individuals who are legally and chronologically adult are in attendance does not make a gathering an automatic example of adult education. (Brookfield, 1985a, p.47)

It is inappropriate to attempt to specify the nature of instruction simply by describing the characteristics of the learners. (Valentine, 1985, p.108-109)

There is adult education and there is education for adults. (Brookfield, 1987, p.32)

Meeting the assumptions of adult education means that the program is learner-centered. The experiences and background of the learner will be included in the learning process, representatives of the learners will be participants in the planning, implementation, and evaluation of the program. In this section models of program planning will be reviewed to determine which agree with the assumptions of adult education concerning the role of the learner, the teacher, evaluation and methods of instruction.
Models of Program Planning

The concept of program in adult education is comparable to the use of the word "curriculum" in ordinary educational language (Long, 1983). The planning model most frequently used in education is that developed by Tyler (Brookfield, 1986, Grundy, 1987). Tyler's concepts of program planning underlie most modern educational theory and practice (Houle, 1972). As described by Boone (1985), this model is organized around four main questions:

1. What educational purposes (objectives) should the organization seek to attain?
2. How can learning experiences be selected that are likely to be useful in attaining these objectives?
3. How can the selected learning experiences be organized for effective instruction?
4. How can the effectiveness of these learning experiences be evaluated?

The educational philosophy and social values of the organization determine what will be attempted. Educational objectives focus on behavioral changes in learners desired by the organization. The content of those objectives specifies the domain of desired behavior.

Tyler defined learning experiences as the interaction of learner behavior and the learning
environment, and proposes five general principles of selection:

1. the opportunity to practice the desired behavior is provided;
2. satisfaction is gained from behavior produced;
3. the desired reactions are possible;
4. many experiences can fulfill any objective; and
5. one experience can lead to multiple outcomes.

Tyler's primary focus is desired results, with secondary concern for curricular strengths and weaknesses. Tyler looked for behavioral change and valid evidence with regard to standards and recommended sequential evaluations.

Programs should be evaluated at four different stages. Evaluation should be used to determine if there is evidence from earlier experience that indicates the effectiveness of ideas when they are proposed for inclusion in a program. Evaluation should also be used in the implementation stage to insure that the ideas of the planner are actually being used. The third stage of evaluation should be during actual operation of the program, at which point it is used to guide development during early trials and in monitoring continuing use. Finally, evaluation should be conducted to determine the
extent students actually developed the behaviors intended by the program (Tyler, 1981).

The primary interest in Tyler’s type of planning is controlling or managing the learning environment and the learners. The students need to be controlled so they will achieve the prespecified objectives. Knowledge is viewed as a set of rules, procedures, or unquestionable truths in this model (Grundy, 1987). The traditional Tylerian model claims to be objective, untouched by beliefs and values (Giroux, 1981). Tyler insists that economic and political issues are not part of curriculum (Zais, 1981).

Freire (Boone, 1985) provides a planning model different from that of Tyler. Freedom from oppression and a humanizing and humanistic liberation are Freire’s concerns. His methodology is based on resolving the contradictions inherent in the perspectives of the oppressed poor and utilizes a reflexive pattern of analysis and active dialogue (praxis). His aim is problem-posing pedagogy in which learners begin to question, analyze, and act upon their world— the result being liberation from oppression.

According to Freire, the central activity is to study an area and its people and then to present to the people the themes distilled from that analysis along with feedback gathered from them in the process of data
collection. The basic process is to perceive existential contradictions, to codify or present them in oral and or visual form, to have the people decode those contradictions, to develop themes for the decoding, and subsequently to prepare the didactic materials.

Freire presented an inductive model, contrasted to Tyler's deductive model, that evolves from a praxis of thought and action set in the context of an ongoing dialogue with a target group. Continual evaluation is built into the process as a review of both information and perceptions about that information. The content of applied Freirean pedagogy depends on the focus of the adult education organizations, the instructors involved, and the themes identified by the target groups. The main criticism that has been made of Freire's method is that it does not easily adapt to the varied settings where education may occur (Grundy, 1987).

Brookfield (1986) pointed out that attempts to develop programs based on principles of adult education, such as collaboration, are not accepted because of institutional constraints. Although Tyler claims his model is objective, the values of the organization and the planner determine the content of the program, the behavioral objectives to be set, the means of attaining those objectives, and the evaluation methods. The only
learner participation is during the first step when learner needs are considered in determining the educational purpose the organization seeks to achieve. This means that whatever values the planning organization holds will determine the content and implementation of the program.

Brookfield concludes that using models similar to Tyler's results in:

1. The assumption of authority by the educational institution.

2. The determination of objectives prior to the educational encounter. These objectives are representative of the aims of the providing agency and provide the basis for program planning and evaluation, although they may be modified by the teacher.

3. The selection of methods of instruction based on their effectiveness in achieving previously determined objectives.

4. The teacher's roles are instructional planner, manager of instruction, diagnostician, and evaluator.

5. The assumption by the learner of a dependent role in determining learning objectives and evaluative criteria; the learner's task is to achieve the stated objectives.
6. The evaluation is criterion-referenced. Criteria are based on the achievement of the prescribed objectives. The purpose of the evaluation is to assess the effectiveness of instruction in assisting learners to achieve the prescribed objectives, to improve the program, and to diagnose learning difficulties.

Brookfield examined research on models of program planning and concluded that the "question of who decides what are to be the appropriate objectives for a course" is at the center of the dichotomy between student-centered and teacher-centered approaches to learning. A student-centered approach emphasizes the constant renegotiation of goals through the exploration of the processes of learning. The teacher-centered style of education is more in agreement with the technological and behavioristic modes of thought. As Bergevin (1967) stated in a discussion of planning programs in adult education, "Learning programs are established to meet the needs of a few influential persons" (p.142).

Jones (1982) comments on teacher-centered curriculum. External imposition of educational objectives excludes the student from having objectives. Student-centered curriculum weakens the hierarchies in education. Knowledge arises from social interaction on equal terms, between the educator and the learner. Knowledge is
socially constructed and arises out of the process of social interaction. If educational objectives are to be set at all, the process should be informal, unstructured, and carried out openly with the students involved.

Long (1987) described the alliance between the federal government and industry which has expanded to include higher education. Education increasingly reflects the needs of the coalition. Education has become defined by the "bottom line" syndrome in which decisions are based on the relationship between assets and liabilities or profit margins. The education system may be damaged by the competitive strategies that characterize industry. These strategies may lessen emphasis on educating the whole human being and instead focus on preparing the human to be a worker. This attitude toward education reduces the purpose of the human to one whose main purpose in life is to fill a role in an economic organization. Decisions are made based on what is best for the organization, and on what will aid in achievement of corporate goals. These goals are not congruent with educational programming based on the involvement of the learner, or on full participation of the learner and teacher.

Planned learning is critical to adult life and is a necessity for most adults because of societal changes which require successful adjustment (Boggs and Robbins,
Persons responsible for the education of adults must consider the learning-related characteristics of their learners. Adults want to be partners in the instruction/learning process. They are responsible members of society who resent being subordinate. The interest and commitment of adult learners are enhanced when they are involved in the planning process. Educators need to find ways to include adults in identifying needs, setting goals, determining priorities, and deciding acceptable performance levels. Adults are often cautious when participating in learning programs, especially those adults who have had unsuccessful learning experiences in their pasts. Educators must be aware of those adults who fear the educational setting.

Conclusion

The model most frequently used in program planning of education is Tyler's. This teacher-centered planning approach only minimally involves the learner. In contrast is Freire's model which actively involves the learner. In this model the content of the program flows from the experiences of the learners.

Another criticism of teacher-centered programs is that they are established to meet the needs of a few influential people. Alliances between education and other organizations influence the type of educational program
which will result. Emphasis is placed on the goals of the alliance rather on the learner.

Values in programs planned using the Tylerian, teacher-centered model are based in those of the planning organization. In student-centered learning programs, the learner is actively involved in determining content and objectives to be achieved.

Role of Learners

Merriam (1977) found the roles of learner and teacher to be inter-related. If an educational program is designed to be student-centered, and the teacher is student-centered, the role of the learner will be that of an equal to the teacher. The learner will be actively involved in planning, setting objectives, implementation, and evaluation.

Active participation in learning activities takes different forms. The learners help, "clarify preferences, make choices, ask questions, seek answers, select activities, practice procedures, and give feedback on their progress and satisfaction" (Knox, 1986, p.35). Learners who are apprehensive about taking responsibility for their learning still prefer to select learning activities that fit their backgrounds and interests.

Knox suggests that one way to actively involve learners is to include them in needs assessment and
objective-setting. Some of the objectives and preferences of the learners may not match the purposes of the program, but allowing learner participation clarifies the expectations of the teachers. Including the learners in planning activities also increases their commitment to the goals of the program.

Having the learner assume responsibility for learning activities facilitates learning. When the learner can relate experiences to the current learning activity, the learning contributes to an active search for meaning and sharing with other participants.

Giroux (1992) describes the benefits of active learner participation in evaluation. Self-assessment helps the learner to become more independent and self-reliant in future learning. When learners have no voice in the learning process they learn they do not matter, that they are unimportant. Narration with the teacher as narrator and the student as receptacle leads the student to memorize narrated content. Freire (1970) criticizes this type of education because it does not allow the learner to develop a critical consciousness which would result from participation in the process.

Long (1983) reviewed research studies dealing with learner participation in education. In five of the seven articles reviewed, participation had a positive impact on
achievement and attitude. The findings in the remaining studies were not as favorable to active participation, yet Long found that the findings of the research are weighted in favor of active participation in goal setting and learning activities. Long concluded that learner participation in the planning and management of educational programs is one of the pervasive characteristics of adult education. Learner participation in planning and operating the learning experience has a rich philosophical history in adult education, and is praised by many of the contemporary leaders in the field.

Cole and Glass (1977) studied learner participation in classroom program planning. They concluded that learner participation in program planning had a significant effect on student achievement. Involved learners had higher achievement scores and more positive attitude scores than learners who did not participate in planning. However, learner involvement in planning did not appear to increase retention of information.

Bergevin (1967) advocated the participation of adults in the learning process. Adult education is based on the belief that traditional teaching procedures and learning facilities are inadequate. Each adult participating in a learning experience should have the opportunity to help diagnose, plan, conduct and evaluate that experience.
Time and energy are wasted by adult educators who plan programs without considering the nature of the learner and make little effort to fit the program to that nature. To bring about learning, an educational program must be oriented to the learner (Bergevin, 1967). Educators should not deny learner experiences or the relevance of these experiences to learning. Learners have memories, families, religion, feelings, languages, and culture that give them a distinctive voice (Giroux, 1992).

**Conclusion**

Many adults prefer to be active participants in their learning activities. Student-centered programs which give learners an active role will be based on the following assumptions of adult education:

1. The role of the teacher and the learner are inter-related. The teacher must believe in the active involvement of the learner in the education process.

2. Adults prefer learning activities where they have control.

3. Involvement in planning increases commitment to the learning program. Participation also has a positive impact on achievement, attitude, and goal setting.

4. The adult learner has a need to relate the learning activities to experiences. Adults bring many
experiences from their roles as adults that can have an impact on their learning.

Next, the role of teachers in learner-centered adult education will be examined.

**Role of Teachers**

Instructors who believe in student-centered education structure the learning experience to allow the learner to participate in planning and decision making in the educational process. The educator abandons the "banking education" approach criticized by Freire (1970), Brookfield (1986), Hiemstra and Sisco (1990). The instructor is responsible for managing and facilitating the learning process, not for imparting knowledge.

Brookfield (1986) described the role of the student-centered teacher as facilitator who engages in democratic, student-centered activity. Facilitators understand that the responsibility for setting the method and direction of learning is as much the responsibility of the learner as the teacher. Facilitators have a high regard for the learner's self-planning competencies. They view themselves as participating in the learning situation as equals, not as superiors to the learners. Facilitators are open to change and want to learn from their helping activities with the learners.
Facilitators are sensitive to the learner's self-concept. Facilitators include the learner's experiences as educational material, they are willing to share their experiences with learners, and are open to suggestions from the learners. Long (1983) also included the learner's experiences as part of the adult learning process. Adult learning can be understood by the instructor of adults only after understanding the role of experience in the adult learner's learning activity.

Hiemstra and Sisco (1990) describe the traditional role of the instructor as one of imparting knowledge to receptive learners. They advocate instead, that instructors facilitate or manage the learning process. The learning process is more important than the content of the course or body of knowledge. The instructor must believe in the overall potential of promoting self-direction in learning, accept learner input, criticism, independence, and seek a wide range of learning resources.

Individualizing instruction is based on the facilitative model. The instructor creates an educational environment in which learning can occur. According to Hiemstra and Sisco, the role of the facilitator or manager of instruction is to:

1. serve as a content resource.
2. take responsibility for managing a process of assessing learner needs rather than presupposing what all those needs might be.

3. arrange and employ resources necessary for learners to accomplish their personal goals.

4. use a wide variety of instructional techniques and devices to maintain learner interest or to present information. This gives the learner more control by giving them a wider range of choices.

5. be aware of techniques for stimulating and motivating learners so they can reach their full potential.

6. help learners develop positive learning attitudes and positive feelings about their ability to be independent.

7. determine whether learners are reflecting on what they have learned.

8. evaluate learner achievements in a variety of ways—from traditional testing to critique of written material or personal interviews. They also need to stimulate self-evaluation.

The educator creates "classroom practices that provide students with the opportunity to work collectively and to develop needs and habits in which the social is felt and experienced as an emancipator rather than
alienating" (Giroux, 1992, p.224). This practice is in opposition to the traditional, individual, competitive approach to education. Educators need to be aware of claims of superiority, and how others (learners) name their experiences, label their sense of reality, and use their history and culture.

Freire (1970) lists the characteristics of the teacher in banking education as being:

1. the teacher teaches and the students are taught;
2. the teacher knows everything and the students know nothing;
3. the teacher thinks and the students are thought about;
4. the teacher talks and the students meekly listen;
5. the teacher disciplines and the students are disciplined;
6. the teacher chooses and enforces personal choices, the students comply;
7. the teacher acts and the students have the illusion of acting through the action of the teacher;
8. the teacher chooses the program content, and the students (who were not consulted) adapt to it;
9. the teacher confuses the authority of knowledge with professional authority, which is set in opposition to the freedom of the students;
10. The teacher is the subject of the learning process, while the pupils are mere objects.

Problem-posing education breaks the patterns of banking education. Through dialogue, the traditional roles of teacher-student cease to exist. The teacher no longer only teaches but is also taught. The teacher-student become jointly responsible for the process. There is no authority, the teacher presents material to the students for their consideration and reconsiders as the students express their own ideas.

Knox (1986) views the interaction between adult learners and teachers as a transaction. By involving learners in decisions about planning, implementation, and application the quality of the educational program is raised and continued involvement is encouraged. Knox challenges educators to consider how they can improve their instructional decisions by reflecting on:

1. The balance between presentation and active learner involvement.

2. The opportunities for participants to engage in active learning, such as discussion, practice, and problem solving.

3. Assistance to learners in their search to make the learning experience meaningful.
4. The use of a variety of teaching methods to avoid boredom for the participants and achieve the objectives of the learning experience.

5. The shift in the instructor role as the learning experience progresses from beginning to end. The instructor needs to adjust to the stage of the process.

6. How they attend to the affective and cognitive aspects of the role.

7. The attention given to interpersonal relations with and among participants.

8. Whether learners can relate the content of the learning experience to their current proficiencies and to the applications which they intend.

9. The reasons the participants enrolled in the learning program.

10. Combining an informal and supportive environment for learning with content and procedures that are challenging enough that achievement and learner satisfaction occur.

11. Providing models and examples of the proficiencies that learners are expected to achieve.

12. Giving attention to helping learners learn how to learn, explore and assume responsibility for their learning activities.
13. Helping learners become confident in their role as learners.

14. Providing feedback to the learner.

15. Maintaining flexibility so plans and procedures can adapt to opportunities or problems that arise.

Lack of specialized training for instructors is an issue in adult education. Ulmer (1974) describes the common practice of recruiting public school teachers for adult remedial education, providing them with training, and putting them in the classroom. Teachers are provided with "code words" but the training does little to change their basic orientation to teaching from the practice of imparting knowledge.

Luke (1972) made the following suggestions for teacher training:

1. The teacher should learn that his/her perceptions of the learning climate are not necessarily shared by others.

2. The instructor should learn the necessity of checking with a variety of sources to determine the general learning climate in the classroom at any one time. The remarks of one student may not represent a consensus.

3. The teacher should recognize that learners come to class with two levels of needs—one is to acquire content knowledge or master subject material. The other need is
to feel accepted as a person and to be able to work comfortably with other learners.

Shor (1987) offers suggestions for teacher education based on the Freirean model:

1. Practice in leading dialogic inquiries in the classroom. The dialogue-method reduces learner withdrawal and teacher-talk in the classroom. This will require making the teacher education curriculum dialogic. Shor also suggests study in group dynamics, the social relations of discourse, and the linguistic habits of the students in their communities.

2. Use all the courses in the curriculum to develop reading, writing, thinking, speaking, and listening habits in critical literacy. Critical literacy leads to inquiry into self and society and into the subject under study. Critical literacy establishes teaching and learning as forms of research and experimentation. Teaching/learning as research means that teachers constantly observe students' learning to make teaching decisions, while students are also researching their language, their society, their own learning.

3. Situated pedagogy asks the teacher to locate the learning in the student's cultures. The goal is to integrate experiential materials with conceptual methods and academic subjects.
4. A teacher education program needs components in ethnography and cultural anthropology so the teacher can study the population being taught.

5. To be egalitarian change-agents, teachers need to study community analysis and models of community change. Future teachers can benefit from studying histories of organizing change in the classroom, in schools, in communities.

6. The future teacher can study inequality in school and society through sociology, economics, history, and psychology.

7. Teachers can benefit from voice and drama training to improve their skills of presentation and discussion-leading. The teacher is a creative artist whose craft is instruction. Engaging students in provocative dialogue requires an exciting teacher.

Freedman (1985) sees the adult learner "as adjunct faculty with personal experience that can be applied to the topic" (p.97). For adults the art of teaching is helping people learn. The teacher is a "tour guide who starts at the beginning of the knowledge trip and moves with the student past twists and turns, through thickets and onto peaks" (p.99). The learning climate must be accepting, with little control, with the teacher having the option of using a more directive style on occasion.
Conclusion

Traditional teacher training programs do not prepare teachers to fit into adult education programs which are student-centered rather than teacher-centered. Teacher-education programs need to change if teachers are to be prepared to make their learners part of the planning and implementation of the learning process. Teacher-centered programs, also referred to as banking education by Freire (1970), create a situation in which the learner is subservient to the teacher. The role of the teacher in educational programs based on the assumptions of adult education is:

1. that of facilitator or manager of education, in which the process is democratic and student-centered with shared responsibility for learning. The teacher relinquishes authority and becomes an equal with the learner.

2. one that considers the experiences of the adult learner.

3. to create an environment in which learning can occur.

Like the role of the teacher in a learner-centered program, methods of instruction differ from those in traditional programs. Next, the methods of instruction to be used in a learner-centered program will be reviewed.
Methods of Instruction

The literature of adult education advocates student-centered teaching methods. A recurring theme in adult education literature is, "how we are taught is as important as what we are taught" (Bergevin, 1967, p.4). Shor states that educators should focus on the quality of the learning activity, not on the quantity of skills or facts memorized. The process should be "participatory, critical, values-oriented, multicultural, student-centered, experiential, research-minded, and interdisciplinary" (Shor, 1987, p.22).

Knowles (1984) described the method of teaching adults:

1. Adults are motivated to learn as they experience needs and interests learning will satisfy; therefore, these are appropriate points for organizing learning activities.

2. Adults' orientation to learning is life centered; the appropriate units for organizing adult learning are life situations, not subjects.

3. Experience is the richest resource for adult's learning; therefore, the core of methodology of adult education is the analysis of experience.

4. Adults have a need to be self-directing; the role of the instructor is to engage in a process of mutual
inquiry with the learners rather than to transmit expert knowledge and then evaluate their acquisition of it.

5. Individual differences among people increase with age; therefore, adult education must make provision for differences in style, time, place, and pace of learning.

Learners who have ownership of their learning have a more positive attitude toward the content, instructional process, and facilitator. These adults have a greater desire to study further after formal learning has ended. The instructor creates an environment in which learning can occur. A variety of instructional techniques can be used. The learners are expected to assume responsibility for content determination and acquisition (Hiemstra and Sisco, 1990).

The role of the teacher is one of facilitator, manager of instruction, helper, co-learner. This description suggests that typical methods of instruction may not apply in adult education settings. Adult educators have been vague about the types of instructional methods used by the facilitator of instruction. If Bergevin (1967) is correct and how we are taught is as important as what we are taught, practitioners need more guidance on how to teach.
Carl Rogers (1982) explains his conception of teaching:

My experience has been that I cannot teach another person how to teach. It seems to me that anything that can be taught to another is relatively inconsequential and has little or no significant influence on behavior. I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning. (p.223)

Rogers then suggests that:

We do away with teaching. People would get together if they wished to learn. We would do away with examinations. They measure only the inconsequential type of learning. We would do away with grades and credits for the same reason. (p.224)

Long (1983) discusses the selection of appropriate techniques:

The educator of adults should consider more than the efficacy of the technique or the nature of the subject matter. As he or she seeks to establish a functional relationship for learning between the student and the content, the educator of adults needs to have a perception of the nature and previous educational experiences of the learner so that the choice of technique will be acceptable to that learner and develop his or her security in the learning process. The technique should not make greater demands on the learner's time and interest than he or she is willing to meet, and it must be continuously challenging. (p.253)

Brookfield (1985b) describes discussion as the method of adult education. This perspective is based on Lindeman and his emphasis on the role of discussion in adult education. Discussion as an instructional method reaffirmed the democratic nature of adult education.
There are different definitions of discussion. The definitions vary on the degree of control that the teacher exercises over the procedure and content. At one extreme is a collaborative search for meaning, at the other extreme is controlled discussion-teaching in which students may raise questions or comments but the direction of the discussion is guided by the teacher.

By definition, discussion is free and open. Guided discussion is "conceptual nonsense" (Brookfield, 1985b, p.57). Greater emotional involvement in learning results from discussion and increases identification with the subject.

Knox (1986) takes a different approach to choosing teaching methods. The instructor should choose a variety of methods based on learner characteristics, desired outcomes, and program objectives. If the program emphasizes skill building, the methods should demonstrate the skills and provide practice until mastery is achieved. If the objective is modification of attitudes, the method should help learners consider different attitudes as well as influences on their current attitudes.

Conclusion

The descriptions of instructional methods are vague. Student-centered teaching methods are encouraged, yet the literature is not clear on what this means. Shor states
that the process should be participatory; Knowles suggests that the core of methodology is analysis of experience. Hiemstra and Sisco find that individualized instruction leads to a more positive attitude on the part of students and encourages further study after formal learning has ended. Knox and Hiemstra and Sisco recommend using a variety of instructional techniques based on learner characteristics, desired outcomes, and program objectives. The methods chosen should fit the specific learning situation. Learning should be organized around life-situations, not subjects.

Rogers' humanistic view of education supports the student-centered view of adult education; however, he gives little guidance on how to carry out the philosophy in a classroom setting. The same is true of Brookfield and Lindeman. Discussion may aid in the democratic process, but educators need practical advice on how to use the discussion process when content mastery is an issue.

Evaluation

One of the most troublesome areas of programming for adult educators has been evaluation. External standards which are contrary to principles of learner-centered education are applied to educational programs. Involving the learner in evaluation despite external constraints is described in the following section.
Adult education programs based on the assumption of the adult as active participant will include the learner in evaluation of the program and personal evaluation of progress toward learning goals. This presents a dilemma for practitioners. They are committed to providing a supportive atmosphere for the learner yet also must ensure that program objectives or individual goals have been achieved (Merriam, 1977). A means of evaluation should be used that involves the learner in its implementation.

Traditional evaluation of students usually involves tests, measurements, grades, judgment of achievement. Adult educators need to be aware of their students' backgrounds and use evaluation methods which do not threaten the student.

Evaluation is intrinsically value-laden. The determination of objectives—of the program or the learners—reflects the values of the planners. The stakeholders in the program need to be identified. There may be a variety of individuals who have an investment in a particular outcome which is unrelated to the success or failure of the learning activity. Knowles (1990) stated the primary purpose of evaluation is to improve teaching and learning, not to justify what we are doing. In an earlier work (1989), Knowles described the purpose of evaluation, "The basic purpose of evaluation is to
stimulate growth and improvement. Whatever other worthy purposes exist are only facets of the all inclusive effort to assess present conditions as a basis for achieving better ones. Evaluation that does not lead to better teaching is sterile" (p. 101).

Adult education programs take place in a variety of institutions and organizations, yet the models of evaluation applied to the programs are drawn from those used in secondary schools and higher education. These models are based on Tyler’s ideas which also dominate the curriculum planning literature (Brookfield, 1986, Long, 1987). Brookfield describes these models as emphasizing behaviorally stated objectives as criteria and indicators for evaluation. This model has already been criticized as being teacher-centered rather than learner-centered. Further, due to time and money constraints, adult educators frequently bypass a systematic evaluation, instead writing up a report made up of personal, intuitive observations about the beneficial outcomes of an activity. These evaluations have limited replicability because of their subjectivity.

Hiemstra and Sisco (1990) identify two types of evaluation. Summative evaluation is to assess learner performance, justify the worth of a program, or ensure
that a course has been effective. Summative evaluation occurs after the learning experience has ended.

Formative evaluation occurs while the instructional process is being implemented. The goal is to use the resulting information for improvements or changes. This type of evaluation assesses how well the instructor and learners are doing so problems or shortcomings can be corrected.

Knowles (1990) describes the goal of evaluation as improving teaching and learning. He identifies four steps in the process:

1. **Reaction evaluation**—getting data about how the participants are responding to a program as it takes place, what they like most and least, what they consider positive and negative about the program. This type of information can be obtained through meeting reaction forms, interviews, and group discussions.

2. **Learning evaluation**—gathering data about the principles, facts, and techniques which were acquired by the participants. This step should include pretests and posttests so specific learning gains can be measured. Performance tests are necessary for skill learning.

3. **Behavior evaluation**—requiring data such as observers’ reports about actual changes in what the learner does after the training compared with before the
training. Data sources include productivity or time and motion studies, observation scales, interviews, or questionnaires.

4. Results evaluation—data are contained in the routine records of an organization, effects of turnover, costs, efficiency, quality control rejections.

Evaluation of learning based on the Freirean model requires a different approach than other teaching methods (Wallerstein, 1987). The curriculum constantly evolves from student issues, teachers cannot measure fulfillment of predetermined objectives or test outcomes. Problem-posing evaluation concerns a broad spectrum of student abilities. Student abilities change over time; therefore, problem-posing education requires evaluation of both the expected and unexpected change. Evaluation can be used for empowering the learner. Students can learn to evaluate their own learning and to reflect as a group about the actions they have taken.

Brookfield (1986) describes a form of participatory evaluation that is based on the central features of adult education. Participatory evaluation results in: adult learners participating in and controlling the evaluation of their learning, increased accuracy of data, prompt learning of staff and learners, improved awareness and communication, external support for the program. This
model is an alternative to the Tylerian subject-centered, summative evaluation of outcomes in which the institution determines the criteria for success.

Brookfield repeats Lindeman's (1935, cited in Brookfield, 1987b) argument that evaluation should exhibit the same sense of freedom and democracy that characterizes the learning process. Adults need to learn to evaluate their own successes. Forest (cited in Brookfield, 1986) also rejected the behavioral objectives approach to evaluation. As an alternative, he suggested a framework in which the accountability would be to students, criteria would be individual and varied, data collection would be subjective, and control would rest with the students.

Knox (1986) noted benefits of learner involvement in evaluation. Participant cooperation aids with program evaluation, and self-assessment helps learners become more independent, creative, and self-reliant in future learning activities. Feedback from the educator can assist learners in realizing how their ability and effort contribute to educational achievement.

Brookfield cautions that participatory evaluation may lure adult educators into using a felt needs rationale. Participants may judge a program to be successful if it meets needs that are not educationally
worthwhile. Educators should provide evaluative criteria to program participants to avoid this problem.

Conclusion

Adult education has traditionally relied upon the Tylerian model for evaluation. This model is subject-centered, based on behavioral objectives, and does not involve the learner in planning or implementation. Brookfield and Knox describe the benefits of learner involvement in evaluation. Using evaluation models that include the learner will aid the learner in future learning projects, increase commitment of the learner to the program, result in more accurate data, improve communication, and help develop external support for the learning program.

An adult education program which is based on the assumptions of adult education will include the learners in both summative and formative evaluation. Educators need to provide structure for the evaluations to avoid data based on felt needs which is not educationally relevant. Educators also need to be aware of the stakeholders in a program who may desire evaluative outcomes which are not based on the quality of the learner's educational experience.
Application of Adult Education Principles to Adult Literacy Programs

The philosophical position which has had the most influence in adult education is progressivism. This means that the principles guiding practice have focused on learner-centered education with an emphasis on the experience of the learner. Curriculum is to be learner-centered, not subject-centered. The method of teaching/learning is to be problem-solving with the teacher acting as facilitator, helper, and guide, not authority figure. Applying these principles to literacy education results in a program model which is learner-centered and meets the requirement of active involvement of the learner in program planning, instruction, and evaluation. Participatory literacy education meets these requirements.

Participatory literacy education is based on "the belief that learners-their characteristics, aspirations, backgrounds, and needs-should be at the center of the literacy instruction" (Fingeret, 1989, p.5). Fingeret and Jurmo co-authored Participatory Literacy Education in 1989 to present examples of participatory literacy in action and to provide a framework for thinking about adult learner involvement in literacy education (Fingeret and Jurmo, 1989).
Jurmo (1989a) offers three arguments for learner participation in program management and instruction: efficiency, personal development, and social change. These categories originated with Paulston's (1979) work on educational reform. Paulston identified two categories of reform efforts: liberal (individually-oriented, gradual-change) orientation and critical (social structure-oriented, politicized, confrontational). The final category, efficiency, evolved from Jurmo's (1987) review of the literature on the immediate, practical applications of learner participation.

Efficiency refers to encouraging learner participation for the purpose of greater technical efficiency. Learners take on active roles to make printed language meaningful to themselves and others. They relate printed forms of language to what they already know about the content and forms of language. This perspective stems from the work of whole-language proponents such as Smith, (1978); Goodman and Niles, (1970).

The next argument for learner participation is personal development. Efficient reading and writing are not adequate goals for literacy programs. Learners come to literacy programs lacking in "cognitive and social traits" (p.20). Therefore, literacy programs need to enhance those characteristics. These characteristics are
basic to the development of a mature, healthy adult. Otherwise, the learner is likely to remain passive and not use the technical skills he/she has. By providing the learner opportunities to set goals, explore options, and develop strategies for meeting goals, the educational process is aiding in achievement of these goals. This perspective is found in the work of humanistic educators such as Knowles, (1975); Rogers, (1969); Curran, (1976); Ashton-Warner, (1963); and Fader, (1976).

The final argument for learner participation is social change. Efficiency and personal development "do not go far enough in getting at the fundamental causes of the problems faced by most uneducated adults" (p.22). Fingeret (1989) describes life for many illiterate adults in the United States as characterized by poor physical conditions, poor-quality education, inferior social status, and a lack of economic and political power. Advocates of the social change position believe it is up to adult education to participate actively in changing these conditions. This perspective is rooted in the work of Freire, (1985); Hunter, (1987); Fox (1986); and Shor, (1980).

The goals of personal development and social change are familiar to adult educators (see discussion of adult education perspectives in Chapter II). Efficiency borrows
from the research in reading with elementary age children. Like many of the ideas which have had an impact on adult education, for example, Freire’s social change perspective and Rogers’ humanistic perspective, participatory literacy started outside the adult education discipline. Yet, it meets the criteria for practice established in the review of adult education literature.

Table 1 compares adult education principles with participatory literacy education. Participatory literacy education is in agreement with the principles of adult education: both support active roles for the learner in planning and implementation of their educational programs.
Table 1
Comparison of Adult Education Principles and Participatory Literacy Education

<table>
<thead>
<tr>
<th></th>
<th>Adult Education Principles</th>
<th>Participatory Literacy Education</th>
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<tbody>
<tr>
<td>Experience and background of learner included in learning process</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Representatives of learner participate in the planning, implementation, evaluation of the program</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Learner and teacher equal partners in learning process</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Learner evaluates self</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Teacher serves as a content resource</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Teacher uses a variety of instructional techniques</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Teacher creates a classroom where students work collectively</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Teacher provides evaluative criteria to learners</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Instruction builds on life experiences</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Instruction focuses on issues that have meaning for the learner</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Learners assess own learning needs and objectives</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Learners participate in evaluation of instructional activities</td>
<td>X</td>
<td>X</td>
</tr>
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</table>
Participatory Literacy Education

The following description of participatory literacy education programs is taken from Paul Jurmo (1989a; 1989b).

Goals

The goals of literacy programs based on a participatory model will be:

1. To enhance cognitive and social traits; efficient reading and writing are not adequate goals. The cognitive and social traits include: critical thinking or problem solving, the ability to work collaboratively with others, enhanced self-esteem, and interest in continuing one's education. The personal qualities are those considered necessary to the development of a mature, healthy adult. Without the development of those skills, the individual will remain passive and not use the skills learned.

2. To help the learner develop the skills of inquiry that enable the individual (with or without the help of others) to take the initiative in a self-directed learning process.

3. To assist learners in achieving a deeper understanding of questions of personal concern to themselves so they can develop their basic skills by using them in personally meaningful ways. Learners will be able to enhance their self-image and reduce anxiety levels.
4. To learn the abilities to take an active role in transforming the world outside by developing the needed abilities within the educational program setting.

Role of Learners

1. To take an active role in the learning process to make language meaningful to themselves and others.

2. To discuss and teach each other from reading materials relevant to their lives.

3. To assess one's own learning needs and objectives, identify human and material resources, develop, implement, and evaluate appropriate learning strategies.

4. To actively analyze and shape tasks facing them, to learn by doing, take an active role in transforming the world by developing the needed abilities within the educational program setting.

Evaluation

Evaluation should be based on the ability of the learner:

1. To make and correct mistakes.

2. To distinguish between forms of language that help and hinder the acquisition of meaning.

3. To participate actively in the evaluation of instructional activities by giving informal feedback to staff on activities as they occur.
Content

Content is developed:

1. To focus on issues that have meaning for the learner.

Method

Method in participatory programs should be a process that will:

1. Set goals, explore options, develop strategies for meeting goals through active experimentation.

2. Use methods which promote self-expression and dialogue.

Role of the Teacher

The role of the teacher in participatory programs is:

1. To set up a learning environment that encourages the learner to explore a variety of forms of written language and find ones that are particularly meaningful.

2. To facilitate evaluation by providing multiple opportunities to test written language hypotheses in a low-risk environment.

3. To provide a meaningful context for learning symbols. Since some learners do not have a sense of who they are, educators need to develop reading and writing instruction focused on issues that have meaning for the learner.
Program Planning

Much of what goes on in literacy programs is not strictly instructional. Recruitment of new learners, fund-raising, public relations, setting program policy, staff training, program logistics, and other non-instructional activities provide the framework of resources within which instructional services can be provided.

In traditional programs these management related activities are performed by program staff. Learners have become increasingly involved in the management of their programs. Participation of learners in management activities increases the efficiency of the program operations, enhances the self-esteem and other personal attributes of the learners involved.

Learners involved in management of literacy programs function:

1. To recruit new students. They are able recruiters for new students because they can give presentations to potential learners of their own personal success stories.

2. To assist with the intake process-initial interviews, scheduling, and needs assessment. Early experiences in a program can make or break a newcomer’s willingness to stay in a program. Veteran learners can help newcomers make it through the initial process.
3. To serve as mentors to new students. Experienced students who serve as mentors are useful in reducing dropout rates and absenteeism and in maintaining learner morale and interest in the program. The same purposes are achieved through self-help support groups and social activities. In peer-support activities experienced students explain how they dealt with problems and successfully completed the program. The stories of successful students are believable and give new students confidence in the program staff.

4. To make the programs more responsive to their own needs and interests. Learner participation in management of the program enhances learner ownership of the program, smooths communications within the program and clarifies the learners' interests.

5. To promote sociopolitical empowerment through active participation in democratic decision-making.

In this chapter, the literature of adult education has been reviewed and principles for practice established. These principles were then applied to a literacy program model, participatory literacy education. In the next section of the paper, the literature on workplace literacy will be reviewed and the principles of adult education and participatory literacy applied to workplace literacy education programs.
Chapter III

WORKPLACE LITERACY

Educators, businesses, labor unions and the media have shown increased interest in workplace literacy during the past few years. *Workforce 2000* (Johnston & Parker, 1987) described the need for more basic skills education for the workforce going into the 21st century. In 1988, the U.S. Department of Labor published *Building a Quality Workforce*, calling for more basic skills education for workers. *Workplace Basics: The Skills Employers Want* (Carnevale, 1989) emphasized the need for more basic skills programs in workplaces. These are only three of many publications during the past five years which have described deficiencies in the workforce that result in the loss of efficiency, international competitiveness, and cause injuries to workers. Numerous authors have commented on the need for increasing the skill/education level of workers. Some examples of the worker deficiencies cited in the literature:

Twenty-seven million adults only qualify for jobs requiring less than a 4th grade reading level; 18 million adults who can read up to the 8th grade level have trouble with types of information presented in mid-skill level jobs, 27 million who can read above the 8th grade level need training to read and
understand technical manuals. (Askov and Aderman, 1991)

Three-fourths of the people who will be working in the year 2000 are already out of school and in the workforce where they will need further education and training. Existing adult education programs are not prepared to meet the needs of the workplace. (Sarmiento and Kay, 1990)

Government officials, employers, and literacy providers agree that American workers are "illiterate," that higher levels of literacy are necessary, that American workers are at least partly responsible for the lagging economy. (Hull, 1991)

By the year 2000, there will be more jobs than there are qualified people to fill them. (Imel, 1989)

Twenty-five percent of quality circle meetings in one manufacturing concern had no employee capable of taking and writing notes which could communicate to a person not attending the meeting. (Mikulecky, 1989)

According to Elizabeth Dole, former Secretary of Labor, young people don't have the education and skills needed to survive in today's workforce. America's workforce is unready for the new jobs, unready for the new realities, unready for the new challenges of the 90's. (Passmore, 1990)

These examples illustrate the current popular belief that the American worker is deficient in skills and in need of more education. Concern for the education level of workers is not new in this country. Since the 1800's there have been periodic outcries about the state of literacy of the American adult population. It has been defined as America's "phoenix problem." Discovered and attacked every twelve years, interest then wanes and the cycle is repeated in a few years (Soifer, Irwin, Crumrine, Honzaki, Simmons, Blair & Young, 1990).
Stitcht (1988) describes the "crisis" nature of literacy.

Generally, this concern leads to some sort of transient activity: a national commission is established or an initiative is begun; journalists write about the problems of adult literacy; researchers gather a little data; volunteer classes proliferate; and then, in a few years, everything settles down again until the next crisis. This "crisis mentality" has spawned numerous and largely unsuccessful "quick-fix" programs. (p.62)

Next, the types of programs offered in the past, the goals of these programs, and how they influenced the present will be reviewed.

Worker Education--Past to Present

Two hundred years ago, in the late 18th century, educational programs were designed with the goal of improved work performance (Askov and Aderman, 1991). The 19th century saw the development of many worker education programs. The Franklin Institute in Philadelphia and self-help worker groups were designed to advance worker’s education. Also, because many immigrants were in the work force during the late 1800s, worker education had the double purpose of improving worker skills and teaching the English language and culture (Fingeret, 1989). Some industries in Detroit refused to hire recent immigrant men who were not attending night school or factory school. These schools offered instruction in citizenship, English, work habits and safety (Seller, 1977).
Union-sponsored worker education programs have existed since the labor movement began in this country. Labor unions established residential colleges in the 1930's. Workers could study subjects as diverse as history and poetry in addition to work-related topics (Literacy Beat, August, 1991).

Content of educational programs for workers included attempts to influence the home life of the worker through cooking classes for the wives of workers. The rationale for the cooking classes was that if a man went home to an attractive, inviting meal, he would be less likely to stop at a saloon on his way home from work and as a result, be a better employee. In 1901, Sherwin Williams Paint Factory established a company library for its workers. Libraries became standard features of new factories, including companies such as Pullman, National Cash Register, Seaboard Air Line Railroad, and Southern Pacific Railroad (Spring, 1972).

Spring also describes attempts by companies to ensure an educated workforce. Schools were established for the children of workers, "The children are coming into your shop in a very few years, how much better for you that their bodies have been somewhat strengthened by exercise, and their minds disciplined by regulated play" (p.36).
The National Cash Register Company provided a kindergarten, called the house of usefulness. The philosophy of the school stressed that, "the lessons of order and neatness, the discipline of regulated play, are acquisitions, making the child of greater value to himself, and if he can follow up the good start which has been made for him, tending to make him of greater wage earning capacity" (p.37).

It was common for retail stores to provide education for their employees. Many stores provided classes during working hours in a variety of subject areas such as history, reading, spelling, geography, and current events. E.A.Filene's Department store believed there was a direct correlation between the moral and mental condition of their workers and job efficiency. Employees took classes in practical subjects and elementary psychology. It was also common for companies to offer classes in leisure time activities such as music, chorus, and dancing.

The development of highly complex industrial processes meant corporations had to develop training programs for specific industrial skills. In 1902, Westinghouse Corporation opened the Casino Technical Night School in East Pittsburgh. Insurance companies offered classes in higher mathematics free of charge to employees. The National Association of Manufacturers (NAM) supported
trade schools for employees as a means of limiting the power of the labor movement. Unions wanted to control the apprenticeship systems to assure that future workers would be union members. NAM wanted to destroy union influence over trade training because they felt that union control of the apprenticeships was being used to maintain high wage levels by limiting the size of the labor force. The conflict between manufacturers and labor unions over the trade schools continued until 1917, when the NAM agreed to include a representative of labor on the Board of Industrial Education (Spring, 1972).

The original worker programs emphasized traditional literacy instruction (Collins, Balmuth, & Jean, 1989). In the 1960's there was an increase in the number of companies offering ABE/GED services on site for workers. Unions began to offer instruction as one of the member benefits. The federal government established training and basic skills instruction through the Job Corps and Comprehensive Education and Training Act (Askov & Aderman, 1991).

What is now known as workplace literacy had its beginnings after the technology surge of the 1970s (Mathes, 1988). Workplace literacy programs contrast with community-based programs which may have larger social goals, only one part of which is literacy. Workplace
literacy also differs from workforce literacy. Workforce literacy refers to programs which prepare clients for the workforce or retrain displaced workers for new jobs (Askov & Aderman, 1991).

Definitions of Workplace Literacy

Workplace literacy has been defined in a variety of ways, ranging from the simple, "written and spoken language, math, and thinking skills that trainees and workers use to perform training and job tasks," (Askov & Aderman, 1991, p.16.) to the detailed requirements of the American Society for Training and Development (ASTD).

The American Society for Training and Development and the U.S. Department of Labor surveyed employers and found that they want employees to be competent in seven basic skill groups. These skill groups indicate that the educational demands of employers go far beyond the simple requirement of written and spoken language, math, and thinking skills. The seven skill groups are:

1. foundation--learning how to learn
2. competence--reading, writing, and computation
3. communication--listening and oral communication
4. adaptability--creative thinking and problem solving
5. personal management--self-esteem, goal setting, motivation, and personal and career development
6. group effectiveness—interpersonal skills, negotiation, and teamwork

7. influence—organizational effectiveness and leadership (Galin, 1990).

Sarmiento and Kay (1990) view workplace literacy as more than having the narrow skills necessary for a specific job. In their work on the union role in workplace literacy, they use the definition of the National Assessment of Educational Progress. Workplace literacy includes the full range of basic skills that allow a person to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential.

Other definitions used in the literature:

The literacy skills needed to perform work successfully are commonly referred to as job-related or workplace literacy skills. (Imel, 1988, p.3)

Written and spoken language, math, and thinking skills that trainees and workers use to perform training and job tasks. (Askov and Adermen, 1991)

The functionally literate worker is expected to exhibit interpersonal, listening, and metacognitive skills, establish and implement goals, use computers, work in teams, and solve problems in addition to other assorted requirements. (Passmore, 1990)

Chisman and Campbell (1990) also include more than basic reading and writing in their definition. They list five basic skills: reading, writing, communicating effectively in English, math, and problem-solving. They
also cite the need for skills such as the ability to work with others, respond quickly and flexibly to new situations, juggle multiple tasks, and to decide what one needs to know and then find the information.

Some authors use a "functional" definition of workplace literacy. This means relating literacy to job tasks, basing instructional materials for literacy training on texts that are used on the job (Hull, 1991). Sticht (1988) states that general literacy skills instruction does not transfer well to the workplace. Basic skills are selected for instruction only if they promote knowledge of job-related tasks and content.

**Challenges to the Conventional Wisdom of Workplace Literacy**

Not everyone accepts the image of the American worker as illiterate, in need of basic skills training, and responsible for the economic problems of the nation. This negative image is repeated frequently, not only in education and work related publications, but also by the mass media. Since these descriptions have become the "conventional wisdom" of workplace literacy, this section will look at some challenges to the conventional wisdom.

Hull (1991) writes that researchers are not accustomed to studying the workplace from the perspective of the worker. Jurmo (1991) calls on the media to go
beyond merely repeating what is already known or claimed about workplace literacy. Instead, journalists need to do more digging and uncover what kinds of basic skills are really needed and show the public what is being accomplished or not accomplished with current basic skills efforts.

Challenges to the conventional wisdom have been made in the following areas:

1. Workers are to blame for the country's economic problems. If their skills were improved, the problems would be solved.

Sarmiento and Kay (1990) state that workplace literacy programs are often promoted as the solution to workplace problems, ignoring that these programs can be effective only if labor and management work together to solve problems. Hull (1991) comments that the assertion that the American worker is responsible for the lagging economy and the failure of business at home and abroad is not true. The current characterizations of the workers are "inaccurate, incomplete, and misleading" (Hull, 1991, p. 2).

Hull claims that the American worker is being made the scapegoat for problems which are much broader than the workplace. In fact, according to Hull, if the American public can be convinced that illiterate American workers
are to blame for the economic problems of the country, workers' efforts to increase wages and benefits will be undermined. Since there is already a tendency to be skeptical of the abilities of workers who perform physical labor, these people are doubly stigmatized by the claims of worker deficiency. Harman (1987) reports that workers with lesser amounts of formal schooling are overrepresented among the unemployed. Furthermore, unemployment is caused by economic conditions, not educational gaps. If all workers were college graduates with high level reading skills, but economic conditions were such that full employment could not be maintained, there would still be unemployment.

Hull (1991) further challenges the negative presentation of the worker by explaining that when job performance is examined a different picture is presented. Researchers have shown that people carry out work practices beyond measured grade levels. The Business Council for Effective Literacy, in its guide for planners of employee programs, also emphasized that there is no one-to-one correspondence between grade-level completion and grade-level reading equivalency (BCEL, 1987). Mikulecky (1987b) reports that workers demonstrate more competence in reading work-related materials than reading for general purpose. Workers read for specific
information and this type of reading tends to be repetitious. Workers have background knowledge in their jobs; therefore, a high concentration of job relatedness in reading materials can account for several grade levels of difference. Therefore, grade level achievement is not a good indicator of job performance.

Collins, Balmuth, & Jean (1989) also emphasize that generically determined grade level standards in reading do not reflect the literacy standards necessary for specific job functions. The traditional concept of a literate person is not relevant to the education of adult workers. Soifer, Young, & Irwin (1990) challenge the conventional wisdom by stating that grade level scores are inappropriate for measuring the learning process at all ages, especially with adults.

Graff (cited in Hull, 1991) calls the tendency to associate the value of reading and writing with economic development the "literacy myth." Higher levels of literacy in modern times have not been associated with economic development. The belief that economic development, increased national product, and modernization automatically follow increased literacy levels are not based on fact (Hunter and Harman, 1979). Spring sums up this approach to blaming the worker for economic problems: "A continuing dilemma for education has been the tendency
to use it to solve problems existing in other parts of society because this avoids any real confrontation with the root cause of the problem" (Spring, 1980, p.25).

2. A large percentage of American workers cannot read simple sentences or solve simple math problems.

Sarmiento and Kay (1990) and Hull (1991) claim that is simply not true. The majority of American workers do know how to read, write, and compute. They also are aware that their skills need upgrading. The problem is how literacy is being defined.

Galin (1990) challenges the claims that many workers lack necessary skills. He provides evidence that the criteria used by ASTD and The U.S. Department of Labor in "Workplace Basics: The Skills Employers Want," to determine literacy are different from the standards usually used to determine literacy.

Harman (1987) reports that in a survey by the Center for Public Resources, "Basic Skills in the U.S. Workforce," companies responding to the survey indicated that reading skills of out-of-high school employees met or exceeded specific job needs. Reading deficiencies are not as severe as some figures indicate. Basic skill deficiencies tended to be in such areas as writing, mathematics, reasoning, speaking, and science, not reading.
Mikulecky (1987a) reports on a National Assessment of Educational Progress (NAEP) study which measured the reading abilities of 17 year olds. The study found improvement from 1980 to 1984. Nearly 100 percent of the group could read at the basic level, 84 percent could read at the intermediate level (approximately eighth grade level), and 40 percent tested at the adept level (approximately eleventh grade). Mikulecky (1987a) and Stitcht (1988) both found that workers are able to read work-related materials from one to four grade levels higher than tested grade level.

NAEP has regularly tested the educational achievements of fourth, eighth, and twelfth grade students in this country's public and private schools. The test results are contrary to the conventional wisdom of declining academic performance; overall, student performance levels have changed very little in the past 20 years. Rather than performance levels declining, the demands of the work environment have changed (Stone, 1991).

3. Pre-packaged, programmed instructional materials are acceptable for use in workplace literacy programs.

Educational materials needed for workplace literacy programs have created a new market for workbook instruction. These materials give tips on how to relate
literacy training to job tasks, thereby providing functional context training (Hull, 1991). Jurmo (1991) calls on vendors of workbooks, computer software and hardware, videos, and consulting services to look beyond traditional forms of education and to create more meaningful instructional approaches.

According to Jurmo (1991b), there are too many vendors selling questionable products and services and using misleading sales pitches. In fact, many of the software packages being marketed for employee basic skills are traditional fill-in-the-blanks workbooks in a different form.

Soifer, et al., (1990) object to packaged lessons by stating that a prescribed scope of content cannot respond to the varied backgrounds, purposes and changing situations of adults. Harman (1987) recommended a focus on the process of learning rather than reliance on packaged curricula and instructional approaches that would not allow customizing programs to meet the needs of the worker.

Programmed instruction is broken into sequences of steps or objectives to be tackled one at a time, with self-testing along the way to determine when each step has been learned. This process is often termed "individualized instruction," where everyone can learn at
his/her own rate, although each step has been predetermined and what is to be learned has been predetermined. Someone outside the classroom has decided what teachers should teach and what students should learn (Smith, 1986). Schultz (1992) refers to these materials as "teacher proof"—written by outsiders for rather than with teachers.

4. Employers are spending large sums of money to educate workers in need of basic skills.

Sarmiento (1991) clarifies the assertion that large sums of money are being spent to educate the worker in need of basic skills. He writes that only a small percentage of the American workforce receives any training once on the job. Galin (1990) reports that because the cost/benefits of literacy and basic skills education are not clear, employers are reluctant to invest in these programs.

Stone (1991) found that U.S. employers spend between $30 billion and $44 billion on formal training every year. Most of this money is spent by a few companies ($27 million is spent by 0.5% of all U.S. employers). Almost two-thirds of the money spent on corporate training goes to men and women in professional, managerial, professional sales, technical, and supervisory jobs. Front-line workers receive very little formal training. The training
they receive is tied to some specific occasion or event—when new equipment is installed, for example. Though companies encourage workers to improve basic skills, few give any active support, such as paid release time.

Remedial education spending from all sources—companies, the government, unions, and workers—comes to less than $1 billion a year, one-thirtieth or less of all the corporate funds spent on formal programs. Chisman and Campbell (1990) also report that most training dollars go to managerial and technical employees; only a small percentage goes to basic skills education. According to Schultz (1992) about thirteen percent of the employees of U.S. companies participate in on-the-job training and most of these employees are already highly educated.

5. Expansion of training and education in the workplace can occur without changing currently held ideas on work organization.

Stein (1991) compares corporate approaches to production and services that make labor and management adversaries and approaches that unite labor and management to achieve higher quality, enhance responsiveness to the customer, and increase productivity. Not only is management reluctant to change, but workers see the introduction of changes in the workplace as threatening. The changes are seen as attempts to undercut their union
organization, to get more for less, or as a threat to their jobs.

Sarmiento (1991) argues that any major expansion in training will require American companies to abandon their ideas of work organization based on scientific management and Taylorism—the practice of breaking complex work into simpler, repetitive jobs. For decades, the philosophy of scientific management—from the top-down has characterized the workplace (Stanton, 1989). Spring (1980) describes the goal of scientific management as producing maximum productivity and controlling workers' actions on the basis of scientific knowledge. The worker does not solve operative problems encountered during work; managers train workers on how to best perform a job. There is a separation between planning and performance. Management does the planning and workers are trained to fulfill the plans of management.

Management promotes the use of testing, personnel management and sorting as a means of matching abilities with industrial needs. The assumption is that those with the most intelligence will manage and those with less intelligence will be managed. According to Sarmiento (1991), 95 percent of American companies hold these ideas of work organization.
Sarmiento describes workplace literacy in scientific-management companies as following a narrow-job specific basic skills approach. The goal is to fill gaps in a worker's ability to do a specific job. These companies are likely to have mandatory testing through literacy audits to gain information to convince top management that a workplace literacy program is needed. The information is also used to target workers most in need.

Smith (1986) criticizes the practice of reducing large, complex activities into sequences of small tasks, or objectives, each of which has to be accomplished before there is progress to the next task. This practice is the basis of a job literacy task analysis, a method of obtaining information about the specific parts of a job that require literacy skills such as reading, writing, computation, creative thinking, problem solving, personal management, and team work skills (Taylor and Lewe, 1991).

Phillipi (1991) describes the process of turning information gathered during a literacy task analysis into instructional material. If the task is too complicated to be taught in one lesson, it is broken down into subtasks for units of instruction. The main goal of the instruction is to bridge the gap between skill development and skill application. This type of instruction fits very well into the management structure described by
Sarmiento and Spring as scientific management--the worker does not need to know how to solve problems, only how to best perform a job.

An alternative to scientific-management is a business strategy that gives workers more responsibility: they use their best judgment to decide how to best perform their jobs. This alternative sees worker literacy programs as being less job-specific. The programs are integrated into other worker training and education programs offered at the workplace. Workplace programs on their own cannot guarantee a productive workplace and strong economy, other changes must be made in the environment of the workplace.

Stein (1991) lists some of the changes necessary to change traditional workplaces into high-performance, productive organizations: participatory management, fewer layers of management, workers treated as partners with management, individuals work in teams, emphasis on problem-solving, workers rewarded for improvement, education and training part of a long term plan for improvement, goals for education are long-range and short-range, focus is on building skills rather than remedial, there is no conflict between production and education, management is vested in setting goals and outcomes for workplace education, participatory planning, implementation and evaluation, involving management,
workers, union, and educators. Also, testing is integrated into instruction, basic skills taught in a framework which focuses on continuous improvement, and education is integrated into on-the-job practices. Stein concludes that a company cannot implement a continuous improvement strategy without also implementing a continuous learning strategy. "Education is the means to achieve our goals, not the goal itself" (p.25).

Different Approaches to Workplace Literacy Programs

It is clear from this discussion there is not agreement on the definition of workplace literacy, or on the skills necessary for the successful employee. In addition to the different definitions of workplace literacy, there are different approaches to presenting workplace skills. These approaches reflect the values of the planners and management, the attitudes of the funding agency toward the learners, and the goals of the program.

"Values, assumptions and philosophies are expressed in a number of ways: through an agency's mandate or statement of purpose, through a teacher's lesson plan, through a company's policy statement on continuing education of employees, and or through a variety of conference declarations" (Draper, 1991, p.99).

Jurmo (1991b) identifies three program approaches which reflect what educators and employers want to accomplish and how they think those goals can best be accomplished.
The first approach identified is the traditional, academic approach. These programs have adopted the academic instructional approaches found in schools. The problem is that research has shown that the content of these approaches has little to do with present or future job tasks. Jurmo identifies the assumptions of how people learn to read and write as another problem with these approaches. These programs place emphasis on rote mastery of fragmented pieces of written language which are irrelevant to the adult learner's life. Also, these programs do not help adults develop strategies to make meaning out of written language. The traditional approaches are teacher-centered and subject-centered, with little input from learners. Harman (1987) describes traditional literacy programs as being a frustrating experience for adult learners because the content has little relationship to their lives.

A second approach is that of the contextualized or functional program. This approach uses written language to accomplish real world tasks of interest to the reader and writer. Stitcht (1988) reasons that general literacy skills instruction does not transfer well to the job-related basic skills necessary for job performance. Therefore, basic skills are selected for instruction in
the workplace only if they promote knowledge of job-related content and tasks.

Materials from the workplace are to provide the functional context for basic skills instruction. Stitcht claims that job-related basic skills education improves general basic skills while improvement in general basic skills does not improve job-performance. Therefore, it makes sense to focus on functional skills in the workplace. The learner practices the strategies of reading and writing in real, meaningful activities. The National Workplace Literacy Program of the U.S. Department of Education includes as part of its evaluation criteria that a proposal demonstrate a strong relationship between skills taught and the literacy requirements of actual jobs (Hull, 1991).

The problem with these contextualized or functional programs, according to Hull, is that practitioners are defining the context narrowly for the learner, assuming that because the learner is involved in a particular work task, the basic skills curriculum should focus on literacy tasks associated with that task. Schultz (1992) also criticizes the functional approach to literacy:

"By narrowing the definition of literacy to include only functional literacy, the programs described (and others like them) limit their scope and thus their ultimate impact on both the workplace and on learners' lives. When learners are presumed to be functionally illiterate, the multiple ways in which
they use literacies—both their native and second language literacies—in their daily lives, including in their work and community settings, are left unexplored.

By defining its goal as helping people to "become" functionally literate, the hotel program further narrows its purposes to providing the learners with a set of predetermined skills that will be useful in a narrow context (e.g., cleaning hotel rooms) so that they can become someone different (e.g., a literate worker) rather than striving for the broader goal of educating for citizenship or participation in democracy.

The definition of literacy as functional literacy necessarily constrains both curriculum and instruction by tying teaching to the delivery of discrete skills and curriculum to a sequence of lessons in which competencies are mastered. "(p.15-16)

"If literacy is perceived as a set of skills, then a curriculum can be viewed as composed of discrete lessons based on the diagnosis of deficits and the assessment of competencies. In its isolation and drill of discrete, decontextualized skills, functional context curricula replicate the social organization of work in traditional, Tayloristic workplaces, factories where work is broken down into discrete and repetitive tasks." (p.19)

A third approach to planning literacy programs is one which rejects the two instructional approaches just described—the academic approach and the job-specific model. The alternative model is known by several names: participatory, collaborative, learner-centered, worker-centered, or partnership education. This model supports the use of the "functional context" principle of centering literacy education around the uses of literacy which are meaningful to the learners. However, the collaborative
model has learners represented in the planning and implementation of the program (Jurmo, 1991b). These programs reject the idea that the worker is a receptacle into which the teacher deposits knowledge. The worker is seen as a learner with considerable strengths and interests which can be utilized in the learning process.

Participatory, worker-centered programs are also favored by labor unions (Sarmiento and Kay, 1990). Participatory programs recognize that learning is a democratic process. The needs of the workers determine how the programs are designed, what they offer, and how they are taught. Individual needs and differences are respected, and each learner takes the responsibility for setting his or her learning goals. Worker-centered programs do more than help workers acquire new skills and knowledge. They enable workers to gain confidence in their individual and collective activities and to assume greater control over their lives.

Collins, Balmuth, and Jean (1989) call this type of educational program student-centered. In a student-centered program, power is shared; there is an understanding by the teacher and the student that students bring goals, objectives for learning, prior knowledge, and the experience necessary for new learning into the classroom. Goals and objectives are negotiated in the
classroom; from these negotiations emerge the topics to be covered, the tasks to be accomplished, and the methodology to be used.

**Participatory Programs in Practice**

In this section, some activities that provide learners with active participation in their literacy programs will be examined. This information is based on the research of Paul Jurmo (1989a; 1989b).

**Instruction**

In traditional literacy programs, learners are told what topics, materials, and activities they will learn. In participatory programs, learners have some control in the planning of instructional activities. Programs with lesser amounts of learner participation may have learners choose from topics, materials, and activities. In active programs, learners develop the topics, materials, and activities.

**Evaluation**

Learners are commonly encouraged to give feedback on instructional activities. Some programs may develop formalized evaluation procedures, such as regular feedback sessions between learners, instructors, and program supervisors. Learners also participate in recordkeeping, recording attendance, what they did in the session, plus
assessing their own performance and that of the instructor and the materials used.

Method

Learners can take an active role in instructional activities. In some programs, learners serve as peer teachers of fellow students who are at the same or a lower level. Learners who have successfully completed a program or achieved higher levels serve as instructors to fellow learners who are at a lower level. Learners also work in teams to give feedback and guidance to each other around their performance in instructional activities. Learners provide instructional help to individuals who are not in adult literacy programs; for example, in intergenerational family reading programs.

Management

Learners take increased responsibility for various aspects of the management of their literacy programs. For examples, learners serve on program boards' of directors or student advisory boards, and are usually elected by fellow students or appointed by board members. Learners give feedback to the program staff about student concerns. Learners also serve as paid or volunteer staff within literacy programs. Learners help recruit, select, and train staff. Learners advise program staff on the suitability of new volunteers and staff. Learners
participate in the training of new staff by making presentations, joining in discussions, and participating in role playing during staff training workshops.

Learners have proven to be able recruiters of new students. Programs are using both current students and graduates to recruit and orient new participants. Recruitment can occur informally—the learner tells family, friends, neighbors about the program. Recruiting can also occur formally through participation in public service announcements, media interviews, and presentations to community groups.

Learners who have completed a program or are advanced in it can help make new learners feel comfortable. Experienced learners are asked to assist with the intake of recruits. Learners hold student orientations sessions and open houses for new students.

Through participation in support activities such as support groups, recognition events, and social activities, learners bolster morale, self-esteem, group identity, and cooperative spirit. These activities also achieve technical goals such as improved communication.

Participatory Workplace Literacy in Action

Soifer, Young, and Irwin (1989) describe a workplace literacy program based on the participatory model. Eastern Michigan University began the Academy in 1979 as
an adult literacy project on the Eastern Michigan University campus funded by a federal Right-to-Read grant. In 1984, union and management at a nearby auto plant asked the Academy to set up a basic skills program for hourly workers. Three principles are basic to the Academy's approach:

1. Learner's strengths are recognized and built on.
2. Teachers and learners collaborate as equal partners.
3. The environment has a significant impact on the quality of learning and teaching. (p.66)

**Learners' Strengths**

Learners need to be guided to recognize their strengths. Many have a poor self-concept resulting from working in a directed, repetitive situation, while others have had unpleasant previous educational experiences. In order for people to move into the frame of mind necessary to become successful learners and improve their abilities to communicate and compute, they must confront and eliminate their feelings of inadequacy and failure. Learners need to be reminded of their strengths--the things they can do. They need to be reminded they have accumulated skills, information, and experiences.
Collaboration

Collaborative teaching and learning help to bring out learners' strengths. To encourage collaboration, learners meet in groups where ideas can be shared and each group member, including the teacher, is a resource and support for every other person. The teaching must be challenging and nonthreatening to stimulate interaction within the group and to assist learners in overcoming self-doubts about their ability to learn. By participating in groups, learners receive reinforcement of what they know, and they come to see things from more than their own perspective. Learners can also find out what they do not know and become receptive to new ideas.

In the group, learners discuss, read, and write about situations and provocative issues related to their own lives. Staff select content materials to provoke powerful oral and written language from learners and expand their knowledge of a particular topic.

Open-ended questioning, justifying, clarifying, and examining issues from personal and collaborative perspectives engage learners in problem-solving. Learners' views of themselves gradually improve as the teacher and other learners demonstrate interest in their ideas through dialogue. They increase their competence in basic skills by putting their thoughts into words for an
audience. In the collaborative process, the teacher must act as a facilitator, not as an authority figure who knows and attempts to impart knowledge in the sequence and manner he or she believes acceptable. An effective facilitator recognizes that learning is a reciprocal process; as the teacher learns from the learners, the learners learn from the teacher. Learners are encouraged to ask questions and agree or disagree with their peers and the facilitator.

The Learning Environment

The physical and psychological environment should convey a message of respect and offer a contrast to the noise and distractions of the workplace. The learning center should be easily accessible to the workers, and the classroom arranged so groups can work comfortably around a table. Essential teaching and learning materials are convenient to the learners. The Academy also has its own library in the learning center.

The psychological environment is especially important since there is a personal risk when adults return to the classroom. Small-group settings are ideal for helping learners to build peer support and increase their self-esteem by allowing them to take advantage of the knowledge of each group member. Not only does the group setting provide language, but it simulates the settings--quality
circles, self-directed work groups, collaborative work teams—used in many workplaces today. The learner gradually begins to transfer some of the group processes learned in the classroom to the work groups and family relationships. As the learners become more comfortable with the learning environment, they are encouraged to take part in additional activities in the program: hosts and speakers at awards ceremonies, media interviews, articles to publications, letters to the editor, union newsletters.

Instruction

Learners determine the ways in which classes will be scheduled, choose materials, deliver instruction, and integrate technology.

Scheduling

Classes are scheduled before and after work shifts. The classes meet for one-and-a-half hours twice a week. All classes are scheduled for eight-week periods, in contrast to the drop-in arrangements common at industrial learning centers. Regular and continuous instruction and practice are necessary for any learning. Scheduled sessions allow learners to commit themselves for a predetermined amount of time. Teacher and learners meet to review learners' work at the end of the eight-week session, and the learner then decides whether to continue, move on to another class, or not return.
Materials

Materials are used which are based on the learners' ideas and experiences. Authentic materials such as newspaper articles, magazines, and visuals including pictures, films, cartoons, are used to build on prior knowledge and relate to the learners' personal and work lives. Materials on provocative topics are deliberately chosen for their connections with important work, social, and political issues. Staff keep themselves informed of important workplace issues through shop talk with workers and by reading newsletters and other materials dealing with industry concerns. Using these topics, learners generate writings that are then used for further instruction. The teacher uses these materials to create real-life language learning situations in which reading manuals and writing have specific purposes.

Learning Strategies

The purpose of instruction is to help learners develop their own useful learning strategies, such as predicting, previewing, connecting ideas with previous experiences, questioning, and summarizing. When introducing a strategy, the teacher explains it, how it is done, and when it is best used. The teacher models the strategy in all instruction so learners see it used
consistently. Learners practice it with different materials until it becomes their own.

**Technology**

A work force that has learned how to learn is one of the most important competitive levers an organization can have in an environment of ongoing technological change. It is important to make sure that the way in which computers are used and that what is taught about computers is relevant to the learner and consistent with sound principles of instruction. The Academy does not use computers for independent drill and practice on discrete skills or to manage instruction through computerized testing. Instead, software that is congruent with a learner-centered program—such as word processors, data bases, spreadsheets, and graphics—is used to promote learning. With word processors, learners can enter and edit their own texts, and the teacher can create personalized activities, such as open-ended sentences and guided writing. Data bases provide opportunities for creating and accessing collections of data about any topic of interest to the learner. The computer is another tool in class that can augment learners' listening, speaking, reading, and writing activities. The teaching is not about computers; rather, learners are becoming comfortable with computers in order to perform meaningful tasks.
Evaluation

The most troublesome area of the program to the Academy has been evaluation. One reason is that adult basic education programs have traditionally been measured by numerical scores on standardized tests. Funders of workplace literacy programs often require numerical data as a measure of a program's success. The problem is that standardized tests cannot assess the affective and cognitive results of the Academy's instructional approach. These standardized measures are inappropriate for adults because they do not account for the effects of life and work experience or reflect the tasks performed in real life.

Evaluation is an ongoing process that uses a variety of indicators and involves both the teacher and learners. A portfolio of measurements is a more comprehensive way of assessing learning than a test score. The primary purpose of evaluation—to enable teachers and learners to be aware of progress—must be constantly kept in mind. The Academy uses evaluation to measure success instead of deficiencies.

In a learner-centered program, learners monitor their own progress in a variety of ways: by graphing spelling success, listing the books they have read, recording and dating their writings, and tracking their attendance.
Learners regularly write anecdotal records of incidents that are related to the Academy classes. Learners also complete pre-and post-reading-behavior questionnaires that assess the reading strategies they use. Pre and post writing assessments consist of actual writings that are evaluated for authenticity, organization, and mechanics. These formal measures are reviewed by both the learners and the teacher.

Affective factors are important but can only be assessed informally. Self-concept has a powerful influence on how the learners perform, but cannot be measured or quantified. The best means of assessing affective change's is through observation by the teacher and through the learners' growing feelings of confidence and power.

**Recommendations for Establishing a Participatory Workplace Literacy Program**

For a learner-centered approach to work in an industrial setting, communication, preparation, and commitment are necessary. In a workplace program, labor, management, and teachers should plan together. Collaborative planning builds on the resources of everyone and sends a message to workers and management that education plays a significant part in the manufacturing of quality products. When everyone has contributed
resources—whether it be ideas or space—each individual feels a sense of ownership and responsibility for success. Success is the result of a team effort.

To increase the effectiveness of the teaching-learning process, the teachers should learn about labor history and plant culture. Soifer, Young and Irwin (1989) report that teachers will feel more comfortable and knowledgeable about the worksite if labor and management personnel give them some orientation to the workplace before classes begin. Once classes have begun, teachers routinely need to go out on the shop floor to increase their understanding of how instruction can be related to the work situation.

Teachers must be carefully selected for their understanding of adult learning, for their understanding of the connections between listening, speaking, reading, writing, and for their preparation in specific content areas.

One of the most difficult tasks for teachers is to hold on to what they believe. The adult educator will face many challenges from people who do not understand the implications of learner-centeredness. Everyone who is associated with workplace literacy must get used to the idea of workers who can think, make decisions, and contribute.
Conclusion

There are principles of adult education which can be used to plan workplace education programs. These programs will be learner-centered, with the learner having an active role in planning, implementation, and evaluation.

In the next chapter, workplace literacy program descriptions will be reviewed to determine to what degree these programs are using the criteria set by adult education.
Chapter IV

Methodology

Education programs based on the assumptions of adult education satisfy certain criteria. These criteria were established in the previous chapters and applied to participatory literacy programs. The purpose of this research is to determine if workplace literacy programs meet these criteria. This will be accomplished through the content analysis of workplace literacy program descriptions.

Content analysis is the systematic analysis of communications, whether it be visual, aural, or printed (Merriam and Simpson, 1984). Content analysis dates back to the late 1600s' when studies were commissioned by the church to determine if nonreligious matter was being spread through newspapers. Records exist of content analysis being used by the church in 18th century Sweden to determine the content of songs which were suspected of purveying dangerous ideas. In 1893, New York newspapers were analyzed and found to carry more gossip, sports, and scandal reporting than news. This determination was made by measuring column inches devoted to particular topics.
Early content analysis was used to gather information to support arguments using what were considered to be scientific methods. To be considered scientific, the information had to be quantitative; in other words, it had to be numbers (Krippendorff, 1980).

Holsti (1969) defines content analysis as a method for objective, systematic, and general description of the manifest content of a text. The purpose is to obtain information for describing and explaining social phenomena. Holsti lists the following characteristics as those which separate content analysis from careful reading of documents:

1. **objectivity**—each step in the process must be carried out on the basis of explicitly formulated rules and procedures. These rules lessen the likelihood that the findings reflect the analysts’ subjective predisposition rather than the content of the documents.

2. **systematic**—including and excluding content or categories is done according to consistently applied rules. This eliminates analysis in which only materials supporting the investigators hypothesis are admitted as evidence.

3. **generality**—requires that the findings have theoretical significance. Information that is descriptive of content but unrelated to other attributes of the
document or characteristics of the author has little value. Therefore, all content analysis is concerned with comparison, and the type of comparison is determined by the researchers theory.

Guba and Lincoln (1981) describe four characteristics of content analysis:

(1) it is a rule-guided process--certain steps are adhered to in the process;

(2) it is systematic--steps are completed routinely and consistently;

(3) it is a process that aims for generality or application to other contents;

(4) it deals with manifest or apparent content--what can be seen.

Content analysis answers the following question: Who says what, to whom, how, and with what effect (Babbie, 1975; Merriam and Simpson, 1984). These questions are answered through the quantitative analysis of manifest content in documents which occurs through frequency count of words or symbols in documents. The researcher chooses units of content, usually words, although there are five units of content identified: words, themes, characters, items, and space-time measures. By counting the number of times words or phrases are used, it is possible to infer
the preferences or values of the author of the material (Merriam and Simpson, 1984).

A limitation of quantitative content analysis is that counting words may not reveal hidden or latent meanings. Counting the number of times a word or phrase is used will not tell the researcher the definition of the word being used or assumptions held by the author. This is not easily discovered through counting words. To discover latent, hidden meanings in communication, researchers use qualitative content analysis.

George (1959) describes nonquantitative, nonstatistical content analysis as using the presence or absence of certain content characteristics or syndromes as a content indicator. This is necessary because frequency tabulations on their own do not give clues to the meaning of the content in question. Therefore, occurrence or nonoccurrence of attributes is used for inference.

Program descriptions can be analyzed to determine if workplace literacy programs are based on the assumptions of adult education. Simply counting words will not reveal the role of the learner in planning and implementation of a program. Learners may be involved in program planning, but this may not be stated explicitly. The researcher must make the determination based on the words used to describe the involvement of the learner. It is also
possible that a program description would state that learners were actively involved, yet the description would reveal that the involvement was minimal. Frequency counts of carefully chosen words or phrases would not allow these distinctions to be made.

**Strengths and Weaknesses of Content Analysis**

Babbie (1975) and Merriam and Simpson (1984) recognize economy of time and money as advantages of using content analysis. There is no requirement for a large research staff, and no special equipment is required. As long as the researcher has access to written material, content analysis can be used. Content analysis has application to a wide range of materials and can be done with a great deal of objectivity and reliability. Merriam and Simpson point out that if the researcher makes an error in coding a portion of the data, that portion might need to be repeated. In an experiment or survey, the entire project might have to be redone to correct one mistake.

Another characteristic of content analysis is that it may be used for historical research. As long as historical records exist, content analysis can be used to study the past. Another advantage of content analysis is that it is unobtrusive. The analyst has no effect on what
is being studied. This advantage is not present in all research strategies (Babbie, 1975; Krippendorf, 1980).

Further, content analysis is useful in analyzing unstructured material. Krippendorf (1980) explains that a researcher may be interested in unstructured material, with unexpected forms of expression, this material is suitable for content analysis. Content analysis is also context sensitive, it can be used to process symbolic forms of expression.

Another advantage to content analysis, according to Krippendorf, is that it can be used to analyze large quantities of data—although this may require more researchers, longer processing time, and computer assistance. While analyzing large quantities of data makes content analysis more complicated, it is still possible.

A disadvantage to the use of content analysis is that the material to be analyzed must appear in some recorded form, whether oral, written, or graphic. Another problem with content analysis may be validity. The researcher may have difficulty developing counting and coding methods that accurately represent the theoretical constructs.

Steps in Content Analysis

The following steps are used in content analysis:

1. Choose units of content
2. Choose a sample
1. **Choose Units of Content**

The customary units of analysis are words, themes, characters, items, and space-time measures. When meaning must be inferred from the content of the message, these units of measurement are not appropriate.

Following is an example of the different results obtained depending on the unit of content.

Jurmo (1989a) writes that when learners and practitioners are asked to define active participation, there is a wide range of answers. Participation varies from simple attendance to active control of one or more program activities. Learner participation is illustrated by ranking different levels of learner participation:

- Learners have greater degrees of control, responsibility, and reward vis-a-vis program activities.
- Learners are consulted for some input into the instructional and/or management process.
- Learners cooperate with the rules, activities, and procedures developed by program staff.
- Learners are present (physically or on paper) in the program.

If learner participation was chosen as a key phrase to count in frequency analysis, it would be counted each time it appeared in the text. However, this would not reveal if it meant being physically present or actively involved in the control and responsibility of daily
program activities. The only way to determine what is meant by learner participation is to read and infer from the context the meaning of learner participation. In this research, meaning will be inferred from the content of the program descriptions to determine whether the program meets the criteria for participatory literacy.

Research dealing with attitudes, values, and concerns is not amenable to the use of frequency counts because frequencies do not measure intensity of communication. Qualitative analysis can be used to measure meanings that are embedded in content. To maintain objectivity, the researcher must record only messages actually appearing in the document (Lasswell, Learner & Pool, 1952).

2. **Choose a Sample**

Merriam and Simpson (1984) identify a sample as a means of identifying subjects or events for study in a systematic way. A sample should meet the standard of representativeness in a particular study. Babbie (1975) writes that in content analysis of written prose, sampling may occur at any of the following levels: words, phrases, sentences, paragraphs, sections, chapters, books, writers, or the contexts relevant to the works. Conventional sampling procedures such as random sampling, stratified sampling, or cluster sampling may be used in content analysis. According to Kassarjan (1977), drawing a sample
of documents may present some unique problems, but the concerns of the researcher do not differ from other types of research: a sample is needed that is of manageable size, randomly drawn, and representative of the defined population so that generalizations are possible.

Sampling in quantitative studies aims for representativeness and generalizability. This requires selecting samples that are representative of the larger population. Patton (1990) and Lincoln and Guba (1985) describe the goal in qualitative analysis as selecting information-rich cases for in-depth study. Information rich cases are those from which one can learn about the issues of central importance to the research. These cases are selected using purposeful sampling. There are different types of purposeful sampling; in this study maximum variation purposeful sampling was used.

Maximum variation sampling captures and describes the central themes that cut across a great deal of participant or program variation (Patton, 1990). Any common patterns that emerge are important in capturing the core experiences and shared aspects of a program. Maximum variation sampling involves identifying diverse characteristics for constructing the sample. A small sample of great diversity will yield two types of data: high-quality, detailed descriptions of each case and
important shared patterns that cut across cases and are significant because they arise out of heterogeneity. Even though one source was used for all the program descriptions--the ERIC database on CD ROM; a variety of programs were analyzed. The sample included U.S. Department of Education grant-funded program descriptions, a conference report, programs funded jointly by employers and educational institutions (including public school systems and colleges), a state-grant funded project, and at least one program which was funded, planned, and implemented entirely in-house. The sample included programs for employees in a hospital, a poultry processing plant, hotel, restaurant and at a newspaper. Participants included state employees, customer service employees, truck drivers, production employees, housekeeping, food service and laundry staff. The sample included both union and non-union employers.

Sample size depends on what the researcher wants to know. Patton states that validity, meaningfulness, and insights gained from qualitative study have more to do with the information-richness of the cases selected for study and the observational/analytical skills of the researcher than with sample size. Lincoln and Guba describe selecting samples to the point of redundancy. If the purpose of the study is to maximize information, then
sampling ends when no new information is discovered. Redundancy is the primary criteria in sampling. After analyzing twelve programs, this researcher decided that no new information was forthcoming and the point of redundancy had been reached. Therefore, the sample consists of twelve program descriptions.

3. **Collect Data**

The unit of content for this project is descriptions of workplace literacy programs obtained from the ERIC document service. The time parameter includes documents published between 1985 and February, 1992. According to Jurmo (1991), the current interest in workplace literacy began in the mid-1980s; therefore, 1985 was chosen as the beginning date for selecting documents. The documents were selected using the key words workplace and literacy and only documents describing actual programs were used. Program descriptions which include English-as-a-Second-Language (ESL) as one of its topics are included, but not workplace programs which are primarily ESL education. ESL programs are not included because their focus is teaching learners a language, rather than improving skills. Workforce programs or those held outside the worksite also are not included in the analysis. Community-based programs are not included because their focus may be different than that of workplace programs.
Content analysis is basically an operation of coding. Communications are coded or classified in terms of certain criteria. The following criteria, chosen from descriptions of participatory workplace literacy programs (Jurmo, 1989a, 1989b, 1991; Fingeret, 1989; Soifer, Young & Irwin, 1989) are used to evaluate the description of workplace literacy programs.

Program Planning in Participatory Programs

The learner is involved in:
- choosing materials
- delivering instruction
- recruiting new learners
- scheduling classes
- fund raising
- public relations
- setting program policy
- intake procedures
- initial interviews of new learners
- needs assessment
- mentoring new students
- participating on the board of directors through appointment or election
- staff training

Program Evaluation in Participatory Programs

The learner is involved in:
- regular feedback sessions involving learners, instructors, and program supervisors

Instructional Evaluation in Participatory Programs

The learner is involved in:
- informal feedback to staff on activities as they occur
- formal measures of evaluation reviewed by learners and teachers

Personal Evaluation in Participatory Programs

The learner is involved in:
- assessing own learning needs and objectives
- correcting mistakes without depending on others
- monitoring his/her own progress
- personal evaluation of progress toward learning goals
keeping a portfolio of measurement to be aware of progress

The teacher is involved in:
- evaluating authenticity, organization, mechanics of learner writings
- providing multiple opportunities to the learner to test written language in a low risk environment
- evaluating personal progress with the learner
- deciding with the learner whether he/she should continue, go to another class, or not continue

Instructional Methods in Participatory Programs

The learner is involved in:
- planning instructional activities
- teaching peers
- collaborative teaching
- serving as a resource to other learners and teachers
- feedback and guidance to each other
- discussing, reading, writing about issues related to their own lives
- determining learning strategies
- self-directed work groups
- collecting information about work procedures by reading manuals or by direct observation
- interpreting and recording work related information in graphs, charts, written form
- problem solving

The teacher is involved in:
- using methods which will promote self-expression and dialogue
- developing methods for meeting goals through active experimentation
- selecting content materials to provoke oral and written language and to expand language
- open-ended questioning
- regularly scheduled instruction
- introducing and modeling learning strategies

The teacher in participatory programs:

The focus is on issues that have meaning for the learner:
emphasis on real speaking and writing
materials build on prior knowledge and related to personal work lives
materials are related to workplace issues

Technology in participatory programs:
The instruction about computers is relevant to the learners' instruction:
- focus on word processing, data bases, graphics,
  entering and editing texts
- used to augment learners listening, writing, and speaking skills

4. Data Analysis

Each program description chosen for analysis was compared against the criteria for participatory workplace literacy programs. Careful reading of the documents revealed which met the criteria selected for comparison. The data are reported in what Patton (1990) refers to as thick description, which means using description and direct quotation to allow the reader to enter into the situation being represented. Thick description makes possible interpretation of findings and can link individual cases to larger public issues.

In thick description, details, context, and webs of social relationships are described and the significance of an experience or sequence of events is established. For each criterion, information was gathered which could allow for a decision to be made on whether the program was based on principles of adult education. The process of choosing material, evaluation, intake, the instructional methods, intake procedures, recruiting procedures, and
The steps used in gathering and analyzing data in this study were:

1. After choosing documents to be analyzed, they were read with the intent of becoming familiar with the format of the publication. No notes were taken on content during the first reading.

2. Next, each article was read with the list of participatory workplace literacy criteria as a guide. Information from the program description was gathered for each category.

   Example: Program Planning in Program I
   The learner is involved in:
   choosing materials

   The article was carefully read for any information that would reveal the learner’s role in choosing materials. Any mention of choosing materials, whether the learner was involved or not, was written down under the heading "Program Planning-Choosing Materials."

3. After reading the article several times and taking notes on all mentions of choosing materials, a decision was made on whether or not there was learner involvement in choosing materials.
Sample of information from Program I on choosing materials:

"Despite such heavily weighted needs for early independent word identification skill material, those at the headquarters library consisted of supplementary paperbacks suitable for independent by fairly competent readers. Moreover, while student interest and comprehension needs, were, fortunately, stressed, at least some of the tutors were not encouraged to try to offer structured phonics instruction of the kind that has been demonstrated to be effective with a considerable number of those with severe reading materials. Neither were materials for such instruction readily available. At the present time criteria for the materials and methods used in tutorial sessions are determined largely by tutors with rare consultations from a Literacy Volunteer consultant."

"The PALS system is a structured, developmental literacy skills program, which utilizes IBM software and interactive videodisc equipment in office-like laboratories."

The decision made by the researcher on Program I was that learners were not involved in choosing materials.

4. As the process of finding evidence for each criterion in the program descriptions continued, it became apparent that some of the categories were overlapping. Some criteria were so closely linked with other criteria that they had to be considered together. The original list of criteria for evaluation listed several categories of evaluation: Program Evaluation in Participatory Programs, Instructional Evaluation in Participatory Programs, and Personal Evaluation in Participatory Programs. Each of these categories included subdivisions
for learner and teacher. After reading the program
descriptions several times, it became clear that it would
be difficult to separate the learner and the teacher role
in evaluation. The two interact in order to evaluate each
other and the program; therefore, the categories were
condensed and some subdivisions combined.

This process was followed throughout the analysis:
reading, re-reading, writing down information, combining
categories, making decisions on whether the material did
or did not meet the criteria for participatory workplace
literacy.

In some program descriptions, there was not enough
information to make a decision on whether criteria were
being met. In these cases, the decision was made to code
the criteria as NI, no information. In other cases, there
were some criteria which were inappropriate for the
program being analyzed; these were labeled NA, not
appropriate.

An example of not appropriate criteria can be found
in Table 2, Learner Participation in Program Planning.
The criteria, "Union representative on planning board" was
labeled NA because there was no union involvement in this
workplace.
The information from the analysis will answer the question:

To what degree are workplace literacy programs reported in the ERIC database from 1986 to February, 1992, based on the assumptions of adult education as found in descriptions of workplace literacy in the work of Jurmo, Fingeret, Soifer, Young and Irwin?

Limitations of the Study

The written material that was analyzed for this study may not represent what actually occurred in the workplace literacy programs. The analysis of written material is subject to a variety of measurement errors:

They may be incomplete or inaccurate. They may be selective in that only certain aspects of a program (that is, positive aspects) are documented. Files and records are highly variable in quality, with great detail in some cases and virtually nothing for other programmatic components. (Patton, 1990, p.245)

The program descriptions analyzed in this research come from a limited time-period. It is possible that these programs are not representative of either the workplace literacy programs of that time period or the workplace literacy programs from before or after the time period.

Another limitation comes from the types of documents used. The documents used reflect different parts of the country, different funders (although 8 of 12 were funded by the Department of Education), different workplaces,
some are union, some are not. Since the goal for this project was maximum variation sampling, having different types of program descriptions is desirable. The problem is that these different types of programs will result in different types of information in the program description.

Also, this analysis does not attempt to answer the question: Which type of literacy program is most successful in improving cognitive performance? Brookfield (1986) writes that it is important to consider the nature of the teaching-learning transaction, the extent to which mutual respect, negotiation, collaborativeness, and praxis are present. These aspects of learning are important to the learner as well as the advancement in cognitive skills. To discover which type of reading program results in the greatest advancement in cognitive skills would require a different study.

This study also does not measure participant satisfaction or whether attrition is higher or lower in participatory programs. The research can only answer the questions related to whether a program is based on the assumptions of adult education as applied to participatory literacy programs as described by Jurmo, Fingeret, Soifer, Young, and Irwin.

The next chapter contains a discussion of objectivity and subjectivity in research. Means of establishing
credibility in research are reviewed, plus the method used
to establish the credibility of this research. Following
this discussion, the data from the workplace literacy
programs are presented and analyzed.
CHAPTER V
PRESENTATION AND ANALYSIS OF DATA

The previous chapters have established principles of adult education which can be used to plan programs. Programs planned using these principles will be learner-centered, with the learner involved in planning, curriculum decisions, methods, and evaluation. Participatory literacy education was found to be learner-centered. Criteria were established for workplace literacy programs using participatory literacy education. In this chapter those criteria will be applied to workplace literacy program descriptions to determine if the programs meet the standards established.

The articles to be analyzed come from the ERIC database. A CD ROM search using the key words workplace and literacy resulted in over 300 citations. The time period for the search was 1986 to February, 1992. Citations were identified which dealt specifically with workplace literacy programs. English as a Second Language programs were eliminated, as were workforce education programs. The final selection included only program descriptions from basic skills programs held in a work
setting. Sixteen programs fit these criteria. To eliminate bias in selecting which of the 16 to include, or in which order to analyze them, a random number table was used to order the sample. The sampling technique chosen was redundancy sampling—sampling until no new information is found. After analyzing twelve articles, no new information was discovered and sampling ended.

Objectivity and Subjectivity in Research

One of the concerns of readers and users of research is objectivity. This is especially true when the research is qualitative because credibility in research is judged using the criteria for quantitative research (Wolcott, 1990; Donmoyer, 1990; cited in Leptak, 1991). Because of the belief that quantitative research is more objective than qualitative research, qualitative researchers attempt to make their research accepted by consumers of research by using what Wolcott describes as "research rituals" such as member-checking (p.127).

Patton (1990) also discusses the difficulty in establishing credibility for qualitative research. The conventional means for controlling subjectivity and maintaining objectivity are those accepted by quantitative researchers: distance from the setting and people being studied, formal operationalism, quantitative measurement, manipulation of isolated variables, and experimental
designs. Patton sums up the issue of subjectivity versus
objectivity that is frequently used to criticize
qualitative analysis: "Numbers do not protect against
bias; they merely disguise it. All statistical data are
based on someone's definition of what to measure and how
to measure" (p.480).

Scriven (1971) (cited in Lincoln and Guba), points
out that the standard usually used to judge objectivity is
intersubjective agreement: What a number of individuals
experience is objective and what a single individual
experiences is subjective. Scriven refers to this as the
"quantitative" sense of objectivity.

Guba (1981, cited in Patton, 1991) maintains that
qualitative rigor has to do with the quality of
observations made by the evaluator. Guba suggests
replacing the traditional goal of being objective with a
goal of being, "balanced, fair, and conscientious in
taking account of multiple perspectives, multiple
interests, and multiple realities" (p. 481). A
qualitative definition of objectivity removes the emphasis
from the investigator and places it on the data. The
issue is not characteristics of the investigator but
characteristics of the data: "Are they or are they not
confirmable?" (Lincoln and Guba, p.301).
The literature presents strong arguments for the acceptability of qualitative research. This researcher has attempted to be balanced, fair, and conscientious in the analysis of the workplace literacy program descriptions. Yet, to reduce skepticism of the validity of the findings, the decision was made to perform a member check. Five program descriptions were given to ten people for analysis. Because workplace literacy program planners have a variety of backgrounds, the participants in the member check were selected for diversity. The participants included: a nurse, a professor of adult education, a lobbyist, a high-school vocational education teacher, an adult educator who had previous workplace literacy experience, a free-lance journalist, an administrator in a vocational-rehabilitation agency, a computer programmer, an employee of a large department store, and a computer analyst in a human services agency. The results of the member check are found in Appendix A.

The description of the research process makes up what Lincoln and Guba call an audit trail. Audit trails can be used to establish credibility in research. The auditor examines the process of the inquiry, the dependability of the inquiry, the product (data, findings, interpretations, and recommendations) of the inquiry and attests whether it can be supported by the data.
The following audit trail has been established so that the research can be replicated. Another researcher may not come to the same conclusions as this researcher. The audit trail simply ensures that another researcher could replicate this research.

1. Perform a CD Rom search using the key words "workplace" and "literacy" for the time period of 1986 to February, 1992.

2. Read the abstracts for each of the articles which appear in the CD ROM search. Choose those articles which describe workplace literacy programs rather than those with information about workplace literacy as a topic, information on how to plan workplace literacy programs, debates over philosophical concepts in workplace literacy, or any other discussion which does not include a description of a workplace literacy program. The programs should not be work force education, community literacy, or ESL programs.

3. Use a random number table to order the articles selected for analysis to eliminate bias in the order in which the program descriptions are analyzed.

4. Analyze the program descriptions using the steps in Chapter IV.

5. Based on the data, decide whether the program met the criteria for participatory workplace education.
This analysis reflects the perspective of this researcher. There were instances when program descriptions did not clearly describe whether the activities met the criteria for participatory literacy education. In these cases, inferences were made based on information in the article. In other cases, there was not enough information to make a determination. In those instances, the designation NI (No Information) was used. In some cases, criteria were not applicable for a particular program. In those instances, the designation NA (Not Applicable) is used. When the criteria were met, the designation X is used. When the criteria were not met, the space in the chart is left blank.

The program descriptions were analyzed using thick description. Thick description uses description and direct quotation to allow the reader to enter into the situation being represented to interpret findings (Patton, 1990). For each program analyzed the information used from the program description to make determinations is included, allowing the reader to visualize the workplace situation being analyzed. This information is found in the appendices.

The criteria for participatory workplace education programs listed in Chapter IV is used to analyze the programs. The categories overlapped so the list was
condensed to avoid repetition in the analysis and the following categories resulted:

- Program Planning
- Learner and Teacher Role in Evaluation
- Learner and Teacher Role in Instruction
- The Union Role in Program Planning
- The Union Role in Job Analysis
- The Worker-Centered Classroom
- Assessment in the Worker-Centered Classroom
- Participation in Worker-Centered Programs

**Analysis of Documents**

The documents were analyzed using the criteria for participatory literacy described in Chapter IV and condensed into the categories described above. The programs analyzed may not be representative of workplace literacy programs in general, or of current workplace literacy programs. There are more workplace literacy programs now than there were only a few years ago. The new programs may not be the same as those analyzed.

None of the programs could be considered participatory workplace programs, although there were elements in some programs which met the standards. The analysis relied on the descriptions as written. No observations were made to determine if the descriptions were accurate. The programs that were analyzed may have met the requirements of the funding agencies but not those for participatory literacy. It is also possible that the descriptions do not accurately represent the events of the program.
In the following section, the question, "To what extent are current workplace literacy programs based on the principles of adult education?" is answered using information from a content analysis of workplace literacy program descriptions.

**Program Planning**

In participatory programs, learners are involved in all aspects of program planning. This includes: choosing materials, recruiting new learners, scheduling classes, fund raising, public relations, setting program policy, intake procedures, initial interviews of new learners, needs assessment, mentoring new students, participating on the board of directors either through appointment or election, and staff training.

The analysis of the data of this study shows that learner involvement in program planning is not common in workplace literacy programs. In only two of the programs were learners involved with the board of directors or advisory board. However, in four programs there were union representatives on the advisory boards to represent the interests of the workers. Materials were chosen by planners, not by learners. Outside agencies were contracted to do needs assessments or literacy audits in most of the programs. New learners were recruited through on-the-job meetings or bulletin board announcements. In
some cases students were referred by their supervisors, other management personnel, or by their union representative.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Program Number</th>
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<tbody>
<tr>
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<td>1</td>
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<tr>
<td>I. Choosing materials</td>
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<td>II. Recruitment</td>
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<td>III. Scheduling</td>
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<td>IV. Fund raising</td>
<td>NA</td>
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<td>V. Public relations</td>
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<td>VI. Setting program policy</td>
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<td>VII. Intake procedures</td>
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<td>VIII. Needs assessment</td>
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<td>IX. Mentoring</td>
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<td>X. Participation on board</td>
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<tr>
<td>XI. Staff training</td>
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<tr>
<td>XII. Union representative on planning board</td>
<td>X</td>
</tr>
</tbody>
</table>

NI=No Information
X=Meets criteria for participatory literacy
Blank=Does not meet criteria for participatory literacy
Program One

In this program, choosing materials, recruitment, scheduling, fund raising, public relations, setting program policy, intake procedures, needs assessment, and staff training were the responsibility of the advisory board.

Materials for the tutor program were chosen by the LVA trained tutor. There was a lack of material for very low-skilled readers. PALS was a structured-developmental literacy skills program which utilized IBM software and interactive video equipment in office-like laboratories. PALS used preprogrammed computer programs.

At the present time criteria for the materials and methods used in tutorial sessions are determined largely by tutors with rare consultations from a Literacy Volunteer consultant.

Despite such heavily weighted needs for early independent word identification skill material, those at the headquarters library consisted of supplementary paperbacks suitable for independent reading by fairly competent readers.

Recruitment was a problem for the tutor program. More tutors were recruited than students. Learners were not officially involved in recruiting. Volunteer tutors were recruited from the workplace in an effort to get tutors who understood their learners. Any employee who had graduated from high school was eligible for tutor training. Tutor volunteers were trained by Literacy Volunteers of America (LVA). Tutors who had instructional
questions gave the questions to program administrators who would call LVA, then relay the answers back to the tutor.

Initial worker turnout for the tutoring program was low. After the program started, word-of-mouth publicity from present or former students was the most effective recruitment. There was no formal involvement of students in recruitment.

It is not surprising that the initial recruitment efforts have resulted in a relatively small number of volunteer students.

Students at ... were carefully selected from the groups of applicants to match the description in the PALS manual.

Tutoring is a flexible approach since tutor and student mutually agree to the time and place for sessions, usually two or three per week.

The teachers for the computer-assisted literacy (CAL) classes were trained by IBM to use interactive programs. The CAL classes were held at different sites; at each site instruction, scheduling, and class structure varied. The CAL classes were scheduled as a 20-week course. One-half of the 20 weeks was spent working with the videodisc course provided by IBM, the other ten weeks the class concentrated on using word-processing programs. Tutors and students arranged their own schedules. They met for one 2-hour session each week during work time. The volunteer tutors and students were asked for a 12
month commitment. They were given 1-hour of paid release time for each session held during working hours.

Students and tutors from the workforce committed two hours a week over a twelve-month period to tutoring sessions. Half the tutoring sessions were held on state release time, based on contractual union agreement; the other half was the employees own time.

(Referring to the PALS program): There are four classes in the program each meeting three times a week for 75 or 90 minutes at a time.

Program staff were responsible for intake and initial interviews of new students. There was no mention in the program description of learner involvement in public relations. There was no learner involvement in fund raising because the program was grant funded.

Program One was one of four which had an advisory board made up of representatives of management, education, and labor unions. Labor representation does not necessarily mean that the representative was a learner in the education program. In some cases, the representative was a union member who was not in the education program. No learners were on advisory boards in these workplaces. However, according to Sarmiento and Kay, (1990), "Unions' education and training programs are rooted in the needs of the their members, the learners. They are worker-centered. This means that workers, through their union, have a central role in developing the programs. Their
needs determine how the programs are designed, what they offer, and how they are taught" (p.25).

**Program Two**

Based on the program description, there was no learner involvement in any aspect of planning and implementation in this program. Materials were based on a literacy audit that merged literacy instruction with job requirements.

Following the completion of the literacy task analysis, the staff designed and developed a specialized curriculum, which merged literacy instruction with job requirements of the customer service job classification. A teacher’s manual and student workbook were produced to include nine performance modules, 27 communication modules and 13 computational modules. Each module contained both pre-and-post tests that incorporated problem-solving skills, critical thinking strategies, work attitudes and safety skills.

Learners were recruited through company communications and referral from community adult schools. Learners were not part of the recruitment effort.

Relative to the delivery of the workplace curriculum were the recruitment of project participants by means of a company’s communication channels and through referrals from community adult schools; the retention of workers throughout the instructional program by means of paid release time, cash bonuses, formal recognition and promotion opportunities; and a tailored assessment system which paid close attention to a worker’s employment and educational history.

Scheduling was a problem for this (and many other) programs. Workers who car-pooled would find they had no transportation for after-work classes. Employees were
given paid release time if there were classes held during their workshift. Classes met from 4-10 hours per week for five to twelve weeks.

...the staff undertook the following tasks: Arrangement of convenient class schedules for workers at various worksites and at community adult schools (4 to 10 hours per week for 5 to 12 week sessions).

The convenience of work-based learning makes it possible for many students to receive schooling who otherwise could not possibly do so. Yet, even this did not solve all of the scheduling problems. Often a central workplace was used and students had to commute by bus, sometimes twenty miles or more. Many classes were missed because students could not give up their car pools on inclement days. Or work and personal schedules intervened, or a ride never materialized to the central workplace where the classes were held.

Learners were not involved in public relations.

A logic segment of project time was spent on a public awareness campaign.

Recommendations: Workplace literacy programs should allow start up time for an effective marketing program or public awareness campaign regarding the benefits of workplace literacy efforts.

In addition to the presentations, workshops, inservices and meetings listed below, we continue to respond to numerous telephone calls, office visits and classroom/worksite visitations.

There were no workers in advisory or planning groups. The program description included a long list of names and titles of advisory board members. The list did not include any learners. Intake was the responsibility of staff members, there were no learners involved in intake procedures.
Needs assessment was based on a "tailorized assessment system which paid close attention to a workers' employment and educational history." The assessment system included the workers' employment and education history. The program attempted to match learning resources of the worker to the literacy demands of the job. Part of the assessment consisted of a test developed to determine if a worker could read well enough to take the education course. The California Assessment Test was also used after problems developed interpreting reading test results.

There was no mention of mentoring in this program. Teachers were all state-certified with experience in a variety of grade levels. Learners were not involved with staff training.

A final, but essential element, in the delivery of literacy instruction was the selection of state-certified teachers who were competent in handling a remarkably diverse student body.

A Michigan based information management consulting firm specializes in managing information and customizing it for specific purposes, using advanced technology. ...has designed curriculum and provided training in basic employability skills (including literacy skills) for dislocated workers, community services groups, (includes list of other groups). The firm agreed to provide the following services: An occupational and task analysis of customer service positions. A literacy audit of the reading, writing, speaking, listening, reasoning and problem-solving skills associated with each occupational task.
Development of curriculum for a customer service literacy skills course, including articulation of specific performance objectives. Training of staff to conduct literacy audits.

Program Three

There were no learners involved in planning and implementation of this education program. Materials were chosen by the planning committee.

Activity: Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance.

Staff: Curriculum specialists, Directors of GED, ESL, and Literacy

Recruitment was by brochures, news releases, interviews, presentations to company representatives, and person to person contact with company sponsors and employers. Efforts to increase participation focused on the company administration. Workers were encouraged to attend through the use of company incentives. Classes were held at the work site two times each week for two hours in a ten to fifteen week cycle.

Activity: Assist in internal on-site marketing of program (i.e., fliers, posters, presence at employee meetings, open-house registration, etc).

Activity: Schedule intensive classes meeting a minimum of two hours twice a week

Staff: Curriculum specialists, Directors of GED, ESL, and Literacy

The program was partially funded by the U.S. Department of Education. Additional funding came from cooperation between the college partner, the business
community, and labor and government agencies. Learners were not involved in fund raising or public relations.

Public relations was the responsibility of staff members:

From the very beginning, promotion of ... was considered a crucial element in implementing the program. In addition to designing and distributing attractive and informative brochures in English and Spanish and providing news releases and interviews, coordinators of the program conducted presentations to company representatives. Person-to-person contact with both the company sponsors for the program and with employee participants was viewed as crucial steps for the cooperation on which the educational partnership was based.

Setting program policy did not include any learners, although there was a union representative involved.

The following set policy: the Project Director, Industry and Educational liaison specialists, Educational Services manager, Directors of GED, ESL, and Literacy programs, a curriculum specialist, company on-site Coordinators, labor and Management representatives, Private Industry Council representatives.

Intake and needs assessment were by on-site education counselors and teachers. The program description did not mention student mentoring.

Activity:

4. Assess and interpret employee skill levels.
   a. Distribute Employee Data Sheets in order to gather information on previous education, language background, and other relevant information.
   b. Administer Degree of Reading Power test to determine employee reading level.
   c. Holistic scoring of writing which replicates writing activities performed on the job.

5. Discuss assessment results with each employee
   a. Acquaint employee with literacy skills needed to perform his/her job.
b. Link basic skills improvement to job performance in order to motivate employee.
c. Assist employee in overcoming obstacles which infringe on employee performance and success in the Project.
d. Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance.

Staff: Curriculum Specialist, Directors GED, ESL, Literacy

Learners were also not involved in staff training.

Activity:
Hire and train instructors, Educational Services manager, Directors, GED, ESL, and Literacy
Staff: Project Director

**Program Four**

Learners were not involved in planning this program.

The planning committee was responsible for choosing materials, setting policy, public relations, and recruitment.

Each...should create an internal literacy committee whose sole purpose would be internal literacy programs. This committee should include directors and upperlevel managers from:
Building Services
Circulation
Personnel
Production
Newsroom
NIE

The committee should oversee and approve each step in the development of a literacy plan. The committee should develop a program that is best suited to the individual company, meets the needs of the employees and is backed by the management.

The program description did not describe the recruitment procedure. There were three pages of fliers used to advertise the program.
Learners were not involved in scheduling classes. Employees were given work-release time to attend classes. If classes did not meet during the employees' scheduled work hours, they were paid their hourly wage for both travel and class time.

Employees will be paid to attend classes for four hours per week. Every effort will be made to schedule these classes during the employees' normal working hours; however, this may not always be possible. Due to scheduling difficulties, employees may have to attend on their own time. In such classes, employees will receive their hourly wage as other pay.

The program was funded by the company, learners were not involved in fund raising. Learners were not involved in planning needs assessment.

All the employees will take an assessment test to determine reading levels at the beginning.

Talk to managers and supervisors of different departments to assess the needs of the employers.

Public relations and recruitment focused on involvement of company personnel—supervisors, upper-level managers, personnel officers. Special attention was given to supervisors who had to be flexible enough to allow employees time to take classes. Intake and initial interviews were the responsibility of teachers who performed individual assessments to determine skills levels. There was no mention of mentoring, given the lack of learner involvement with other aspects of the
program, the conclusion is that there was no mentoring. There was also no mention of staff training. Once again the conclusion is that learners were not involved in staff training.

**Program Five**

This program was a partnership between a college and business. Business set aside room for the literacy project and paid for interactive video equipment for program use. The self-contained modular curriculum was selected jointly by the college and company representatives.

The program will serve as a educational resource to project partnerships in materials selection for upgrading skills, processes, and/or new product lines.

Only one partner entered into a formal materials selection process.

The selection of curricular materials for use at...served to establish a wide range of instruction, from beginning reading and math to relatively advanced applications.

Software selection was taken with the aim of integrating skills development in more than a single area.

A self-contained, modularized curriculum was selected jointly by...and project staff.

There was no learner participation in fund raising, public relations, setting program policy, intake, needs assessment, mentoring, participation on an advisory board, or staff training. The structure of this program was one
that allowed workers to drop in at the computer lab after work hours. Based on this practice, learners could schedule their own learning. However, the decision is that scheduling does not meet the criteria because workers did not have a role in planning the program.

Learners were not involved in public relations:

Area businesses that were regarded as potential partners were contacted by mail, by telephone, and by personal contact in an effort to establish new partnerships. This effort involved disseminating news of the projects success. Prospective partners were invited to tour the facilities in order to observe project activities firsthand. Dissemination also included presentations to groups of businesspersons.

The document included a flow chart which traced the steps in the intake process: Personal information sheet, 13 minute JTPA Reading test administered, Applied learning pretest administered, Individualized prescription developed for each participant, modules to be worked on formed, Individualized Study record, work in modules begins.

Program Six

This program offered a curriculum based on needs identified in a literacy audit. Materials were chosen by the staff based on the literacy audit. There was no specific description of choosing materials, however, in the timeline developed by the planners, there was mention that developing curriculum was the responsibility of the
Curriculum Coordinator. With no other information, the assumption is that developing materials was part of the curriculum development process and learners were not involved. Making the materials job-related was mentioned:

...a great deal of attention was placed on how to make the lessons as workplace specific as possible, i.e., using the forms of the workplace as lessons and using a functionally-based curriculum.

Recruitment was mentioned in the program description but the process was not described. The conclusion is that learners were not involved with recruitment.

Objective 4: ...a minimum of 20 ...employees needing basic skills improvements will have been recruited and trained in a 10-week session offering at least one or more of the following: job-related literacy skills; workplace literacy skills for adults with limited English proficiency; GED test and preparation; speaking and listening skills; reasoning and problem-solving skills.

This program was held at different job sites. Meeting times varied but all had in common that there was no release time or pay compensation for attending classes. Public relations was the responsibility of the Curriculum Coordinator:

Coordinator has shared information with people who are working in or interested in workplace literacy on a formal and informal basis. She has sent materials to those that have requested them. In addition, the coordinator has presented at a number of conferences.

Setting program policy did not involve the learners. According to the program description, setting policy was the responsibility of the Project Director, Lead Teacher,
and Curriculum Coordinator. There was an advisory board with a learner as a member. This board was responsible for answering questions such as: Is the class meeting the needs of the employee and employer? Is attrition a problem? Is the curriculum workplace specific? Are there suggestions for change? This advisory board was not directly involved in program planning: its function was evaluation. The decision of the researcher is that the program did not meet the criteria for participatory programming, despite the learner on the advisory board. This decision was based on the inconvenient scheduling, no pay for attending classes, and lack of involvement in other aspects of the program planning.

Intake and needs assessment were the responsibility of the staff, with no learner involvement.

...the Director and Lead Teacher/Curriculum Director will have completed a literacy audit (needs analysis)...and developed a curriculum based on the needs identified in the literacy audit.

There is no mention of mentoring in this program description. Given the description of the educational program, the conclusion is that mentoring did not occur. Staff consisted of teachers experienced in adult basic skills education and high school equivalency programs. Staff training focused on work place literacy issues such as curriculum writing, lesson planning, pre and post
testing, evaluation, and student support services. The goal was to make the curriculum workplace specific.

The coordinator worked very closely with staff and hired in terms of training. The instructors all had experience in adult education, however, only one of them had taught in a workplace situation prior to this project. Staff meetings and training were focused around workplace literacy issues. Topics included curriculum writing, lesson planning, pre-and post-testing, evaluation, and student support services.

Program Seven

There were no learners involved in the planning and implementation of this program. The advisory board consisted of project staff and industry representatives. The board assisted with the development of the schedule, recruitment, testing, program management, and acquisition of instructional material and equipment. Each class met daily for two to three hours, four days a week. Two three-hour classes were held on Fridays so workers who missed a class during the week could make it up.

An advisory committee was formed which consisted of representatives from the project staff at ...(the director, curriculum developer and staff development and materials evaluator).

The committee met monthly and assisted in developing the mobile unit's day and time schedule to different sites. Among the topics discussed at the meetings were methods of recruiting participants, the proposed testing program, management system and the acquisition of materials and equipment.

A project advisory board consisting of staff and ...industry representatives met monthly to assist in developing the instructional schedule and to maintain
cooperation and coordination between the project and
the industry.

The program used individualized instruction in a
competency-based curriculum. Workers were diagnosed with
a battery of competency-based mastery tests which resulted
in an individually prescribed program.

Following initial interviews and assessments, the
workers were diagnosed with competency-based mastery
tests and provided with an individually prescribed
education program.

Participants were assessed with the Test of Adult
Basic Education (TABE) and the Beder Reading
Inventory word list which appeared to be a more
accurate reflection of their reading level for
workers scoring in the lower range of the TABE.
Following an analysis of the TABE, the Comprehensive
Competencies Program (CCP) subject area mastery pre-
tests were administered in areas where the
participants showed a need or interest in studying.

There was no learner involvement in staff training,
no mentoring and no union involvement in this program.

...the project staff received an in-depth orientation
and staff development program. The two teachers, two
drivers/aides and the project's staff-development
person attended the orientation meetings presented by
the project director.

A five-day 40 hour workshop was conducted by a
...staff-development consultant who provided training
in how to operate and manage the ...program. This
includes:

a) The structure of the competency program.
b) How to test, plan, monitor and manage
individualized lessons.
c) Record keeping and reporting procedures for
maintaining students' lesson records, scoring tests
and using the management system.

The project staff was required to read ...training
manuals prior to the workshop and to pass a
competency tests on using the system.
Program Eight

In this program learners were not involved with the advisory board which was made up of representatives from a local literacy foundation, the city school's adult education department, and company representatives.

The lead instructor was responsible for materials selection, program planning and implementation, teacher orientation and planning sessions, monitoring and assisting with the instruction during the program and served as liaison between the instructional staff and company representatives.

This program differed from the others analyzed because it was a 2-week intensive program which met for 8 hours a day. Students had a total of 80 hours of instruction. They were given paid release time to attend.

Instruction was delivered 7:00 a.m. to 3:30 p.m. with two breaks and 30 minutes for lunch. The length of scheduled times consisted of eight hours per day for two weeks.

Teaching staff was selected on the basis of two factors: experience and qualifications. Learners were not involved in the selection or training of staff. In the classroom setting high skilled students helped low-skilled students.

Selection of instructional staff was based on two factors: experience and qualifications (certification). All had previous experience in similar workplace programs as well a experience in traditional adult education classroom instruction.

Learners were not involved in choosing materials. Intake and needs assessment were performed by staff.
Students were given the San Diego Quick Assessment test, an oral word recognition test, Reading for Understanding test, individual silent reading comprehension test, Form A Math Skills test, plus the Memphis City Schools Adult Education Placement test. Based on test results, an individualized program was planned using work-related and community materials (life coping skills). An interest survey at initial screening provided education staff with a guide to areas of interest to the learners. Materials used included workbooks, commercial reading kits, community and workplace materials.

Consumable basic skills workbooks, specially designed worksheets, commercial reading kits, dictionaries, Thesaurus, newspaper, and community and workplace materials comprised the general curriculum materials base.

...employees were administered the following reading and math diagnostic tests: the San Diego Quick Assessment, an Oral Word recognition test given in one-on-one settings; the Reading for Understanding Test, an individual silent reading comprehension test, and Form "A" Math Skills Test.

Preliminary to grouping, the participants were administered assessment instruments in reading and mathematics for determining beginning instructional levels and for selection and development of materials.

Program Nine

Learners were not involved in the planning or administration of this program. Materials were selected by staff.
Curriculum materials were both developed by...staff and adapted from other sources, including employers. Instructors share certain curriculum items such as the Oxford Picture Dictionary. In addition, individual Instructors designed materials of specific interest to their classes. This process allowed each Instructor the flexibility to be creative and to respond to the needs of their students.

Curriculum materials were developed with job-related literacy in mind.

Learners were not involved in recruitment, scheduling, public relations, or setting program policy. This program had union representation on the advisory board. This board was responsible for: finding future funding, public relations, communication, networking, hiring and training staff, designing worker assessment, designing record keeping procedures, gathering and developing curriculum materials, developing working agreements and schedules with unions and employers, and recruiting program participants. The advisory board was made up of college representatives plus representatives from the union and employers.

Program participants were recruited by employers and union representatives. Introduced by employer or union representatives, the Instructors presented the program to workers and conducted an initial assessment to determine who was eligible for the classes.

...delivers services to students in 12 classes at eight sites. The policy of ...is to limit class enrollments to 20 students. Each class is held twice a week for two to three hours each day.

The Committee is also involved in planning and carrying out public relations activities with other
employers, in networking, and in raising funds for the continuation of the partnership.

The ...Advisory Committee was designed to give the partners the opportunity to advise on a wide range of issues, including policy formulations, through participation in the ...Advisory Committee. The Committee also includes representatives from participating unions and employers.

The Steering Committee, known as the Advisory Committee, has met on a regular basis. Its primary purpose during the grant year has been public relations, rather than policy making.

Objective: To effectively and efficiently complete the start-up activities required to operate the demonstration program, including:
- hiring and training staff;
- designing worker assessment;
- designing record keeping procedures;
- developing detailed working agreements and schedules with union locals and employers;
- recruiting program participants.

Intake procedures and needs assessment were also taken care of without the involvement of learners.

Student-worker assessments were designed or adapted for both ESL and ABE skills prior to the service delivery period.

* "A Skills Check" developed by the ...teachers at ...evaluates math, reading and writing skills;
* The Adult Informal Reading Test (Form A) with six reading tests, developed by the University of Missouri;
* The Adult Informal Reading Test (Form B) with six reading tests, developed by the University of Missouri;
* Several word recognition tests lists, developed by the University of Missouri.

Record-keeping procedures were developed for the intake and assessment processes; the Individual Educational Plan; and the central files, including; the master list for termination, child care, etc., attendance forms, termination forms, and monthly reports.
There was no mention of mentoring. Given the structure of the program and lack of learner involvement in other aspects of planning and instruction, the conclusion is that there was no mentoring. Learners were not involved in staff training.

The staff is very well qualified in terms of workplace education experience and academic background, emphasizes the quality of its teachings, and is culturally diverse, reflecting the makeup of the student population.

All staff attended a one-day orientation. Topics and activities included the history, structure, and mission of workplace education as a concept in this specific situation, small group work sessions on curriculum development; and an overview of materials and instructional collaboration. Information and record-keeping requirements were presented to all staff at the orientation.

Staff also attended several workshops on curriculum development.

Program Ten

There were no learners involved in the planning or implementation of this program. Materials were based on a literacy audit performed by an outside team.

...reading, writing, oral communication, and problem solving were taught pragmatically through actual job materials and simulations. Generic materials applicable to all hospital employees (e.g., the personnel manual, paycheck stubs, insurance forms) were also used.

The reading, writing, and oral communication assessment measures were all based on actual workplace texts and scenarios, thus assuring their content validity for this job skills literacy program. The curriculum was developed on an integrated, whole language model.
Fliers were distributed, notices put in an employee newsletter, presentations made at departmental meetings by instructors. Employees volunteered to participate in the classes, but their supervisors made the final selection of who was allowed to attend.

Recruiting for the program was done within the departments targeted by the hospital’s Director of Personnel. Workers volunteered to attend but actual selection of who could be "spared from the job" at each class time was made by workers' immediate supervisors. This resulted in some participants who wanted to attend being excluded and others (57%) being recruited by their supervisors.

Recruitment of participants was a collaborative effort. Information about the program was presented to workers by the hospital staff through the supervisors in the three departments, the workers' front-line supervisors, and the training staff. Fliers were prepared, notices put up in the hospital newsletter, and presentations made at departmental meetings by the instructors. The instructor also made many personal contacts talking with workers about the program and encouraged their participation. The fact that the program was on job time and at the work site was an incentive to participate in the program, but their immediate supervisors made the final selection of who was to attend.

Supervisors also selected employees whose performance they wanted to reward by time off to participate in this program.

Classes were held during work hours twice a week for 36 weeks.

The classes were held on job time which was both a positive and a negative. By holding classes on job time, literacy classes were perceived in the same category as job training classes (e.g., typing, medical terminology) also held on job time. However, if the supervisor was short workers on a shift or had extra work to do, workers were not allowed to leave their jobs to attend class.
Learners were not involved with setting program policy. Policy was set by partners in the literacy project: the literacy center at a college and a hospital. Assessment and intake were also performed by the program staff without involvement by the learners.

Students were assessed before and after instruction by a Cloze reading test using passages from job materials, a writing sample yielding a writing process score, and role playing a job situation scored for oral communication.

The reading tests were 20-item modified Cloze tests based upon information in the employee handbook and job memos applicable to all departments. For the workers' writing assessment, the participants wrote an essay about "My Story," their lives at ... For the supervisor's writing assessment, the participants wrote a hypothetical complaint against someone explaining the complaint and the action they would like to have taken. The writing post-test asked the participants to write an essay on what job they would like to have at ..., whether they wanted to apply for it, and why or why not. Both essays were scored using a holistic scoring guide assessing written communication, not the mechanics.

There was no mention of mentoring in this program, the conclusion is that it did not occur. Staff training was the responsibility of staff without the involvement of learners.

During the first on-site visit, the [workplace literacy] consultant provided training for the project staff in conducting literacy task analyses in the workplace and the development of workplace literacy instructional programs from the results of the task analyses.

The training was attended by the project and assistant director, the classroom instructor and other consultants and staff involved with project curriculum development. Training consisted of an
overview of functional context research and rationale, hands-on instruction in conducting and documenting a literacy task analysis, and review/discussion of sample workplace literacy instructional materials resulting from literacy task analyses.

Program Eleven

This program also used the whole language approach to teaching reading. Learners were not involved in planning, scheduling, fund raising, public relations, intake, staff training, or setting policy. This program was unique in that it was an intensive two-week, five days per week, eight hours per day educational program. Learners did participate in choosing materials.

Days 2-5
Self-selection of reading materials, magazines, newspapers or other materials, such as paperback books.

(employer would)...identify a pool of candidates for reading improvement instruction, especially production personnel whose inability to read certain work-related terms might pose a safety hazard to themselves or others.

The personnel director of a local industry contacted the University requesting reading help for several employees. Many meetings later, and with the aid of a state funded grant, the following curriculum evolved.

Development of Screening Instruments
A. The objectives
1. develop industry-specific screening tests that can be administered and scored quickly.
2. identify a pool of candidates for reading improvement instruction, especially production personnel whose inability to read certain work-related terms might pose a safety hazard to themselves or others.
B. Procedures
Two types of tests were written. One, the Vocabulary Test, requires the participant to identify, instantly and out of context, 40 industry-related safety terms. The other type of test is a modified CLOZE Procedure. CLOZE tests are constructed by deleting every fifth word from a passage of approximately 250 words of running text, asking the examinee to fill in the blanks with the exact word or synonym.

4. identify levels of literacy and specific strengths and needs for individual participants.

Program Twelve

This literacy program was designed to help commercial truck drivers pass a federally required written examination. Failure to pass the test could result in drivers losing their jobs. The program was planned with no involvement from learners; however, there was a union representative in the planning group. The planning group was a partnership of the state department of education, an adult literacy agency, and the state worker’s union. All planning and program decisions were made by this group.

..is a basic skills course of interactive computer courseware and print instructional materials developed for the purpose of assisting truck drivers in the...to develop reading skills necessary to the test. The curriculum materials demonstrate three characteristics of functional literacy which recent research has demonstrated to be most effective in workforce education programs: integration of basic skills instruction with technical training; using technical content and reading tasks that are used on the job; and highlighting the learner’s role as worker or employee during instruction.

Courseware and print-based materials were developed at the...and tested at five sites throughout the state, including rural and urban areas.
...of the 142 who failed the QAT, 130 were given the Tests of Adult Basic Education (TABE) Locator Form. Those who scored below the advanced level on the vocabulary section, approximately 9th grade, were referred to the ...program.

Classes were held on Friday mornings for four hours.

The following recommendations were derived from the evaluation study:
All participants recommended that the program be disseminated to other potential users.

The partnerships, based on the success in the pilot sites, reapplied for funding in the second round of competition for the Workplace Literacy Grants; they were awarded another grant to complete the curriculum, develop a workbook an tutor's manual for those functioning at a beginning reading level, offer training workshops to other sites, and deliver services on a statewide basis.

The program, funded by a U.S. Department of Education Workplace Literacy grant, was developed through a partnership of the...Department of Education,...(labor union), and...Institute for the Study of Adult Literacy. The ...was the recipient of services. Planning and policy decisions were made by the partners.
Discussion

Learners were given little opportunity to participate in planning their workplace education program. In the majority of the programs, advisory boards were made up of representatives of industry and education. The programs were planned and implemented without learner involvement.

Even in those programs where there was learner involvement on a planning board, the programs did not meet the criteria for participatory literacy programs. For example, there was a learner representative on the advisory board in Program Six, yet the program did not meet the criteria for learner participation. The same was true in the programs which had union representatives on the planning boards. These programs did not involve learners in planning their educational programs. These findings, that even with a representative on the planning boards, the programs do not meet learner participation criteria, suggest that the learner representative may be a token-figure. Fingeret (1991) cautions educators to be wary of token learner-involvement. Simply having a learner representative on a planning or advisory board does not mean there will be active learner involvement in program planning.

Based on the analysis of these program descriptions, these workplace literacy programs do not meet the criteria
for participatory literacy education or incorporate principles of adult education in the planning process.

**Learner and Teacher Role in Evaluation**

In participatory programs, the learner is actively involved in evaluation of the program, instructor, and his/her own progress. The criteria for learner involvement in evaluation are:

1. Regular feedback sessions held with learners, instructors and program supervisors.
2. Formal measures of evaluation are reviewed by learners and instructors.
3. Learners assess their own learning needs and objectives.
4. Learners keep a portfolio of progress.
5. Learners evaluate programs upon completion. End of program evaluation can have different meanings. In some cases, the program was a grant-funded one-time program, with continuation based on program success (determined usually as academic gains). Other programs were on-going and end of program evaluation referred to the completion of a cycle of classes.
6. Teachers evaluate programs upon completion. The criteria for teacher involvement in evaluation is closely linked to that of the learner. Teacher and learner need to share the belief that regular feedback
sessions are necessary, that formal measures of evaluation should be reviewed by learners and teachers, that learners need to be able to assess their own learning needs and objectives, that learners should keep their own portfolio of progress, and that learners and teachers should evaluate the operation and planning of the program. Many of the programs defined evaluation as comparing academic achievement at the end of the program with academic levels at the beginning of the program. The discussion of evaluation which follows does not consider academic achievement.
Table 3
Learner and Teacher Role in Evaluation

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<th>Characteristics</th>
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<td>I. Regular feedback sessions with instructors and program supervisors</td>
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<td>II. Formal measures of evaluation reviewed by learners and instructors</td>
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<td>III. Learners assess own learning needs and objectives</td>
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<td>IV. Learner keeps a portfolio of measurement</td>
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<td>V. Learners evaluate program on completion</td>
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NI=No Information
NA=Not Applicable
X=Meets criteria for participatory literacy
Blank=Does not meet the criteria for participatory literacy

Program One

Part of this program used volunteer tutors as instructors. One of the problems experienced in the program was that logs which recorded learner progress were incomplete, lost, or unavailable. In the tutor program description, there is no mention of formal instructional evaluation measures. Learners were given pre and post assessment tests, the SKILLS Profile, and the Read test.
These tests were chosen by the education administrators, not by the tutors or learners.

Recommendation from evaluation team: The question of adequacy of instructional material cannot be disassociated from that of the instructional guidance. Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests, and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary.

At this time, although a required aspect of tutorial sessions, logs were not readily nor, if they had been, was there anyone on staff competent to evaluate and give appropriate assistance for any of the instructional features of the logs.

Learners were represented by their union in planning and implementation of the program. The union representatives may have been involved in selecting formal measures of evaluation, however, this is not stated in the program description.

The computer-assisted learning segment of the program was described both as being individualized, consistent with each students' goals and objectives and as being a structured skills program. There is no mention of learner involvement in evaluation with instructors and program supervisors in the computer assisted learning program.

PALS-evaluation team members, accompanied by a PALS specialist, made site visits to PALS labs. During the staff meeting discussion which followed, there was agreement upon the evaluator's data needs, in order to document an effective program, which would be met if the center agreed to supply the following information:
TABE reading scores of participants at the beginning; SKILLS Profile to assess participant's feelings about habits related to reading skills; Checklist to obtain identifying data about participants if no application was used for program entry; Vignettes related to human interest items.

The evaluation team was commissioned to begin its assessment function...the team made plans, developed assessment instruments, made several site visits to gather pre-test data, review reading materials, examine records, observe tutoring sessions, interview tutors/tutees.

A reading specialist was hired to do an end of program evaluation. The reading specialist compared pre-program reading scores with post-program reading scores. The only aspect of the program learners were asked to evaluate was recruitment. Tutors completed a questionnaire for the reading specialist and also evaluated recruitment.

The One-on-One component was evaluated in terms of site visits by a reading specialist and evaluation team members, the collection of pre and post test data for tutees, the analysis of questionnaire data obtained form the tutors, and an analysis of the recruitment procedures used in attracting participants to the program.

The PALS program was evaluated in terms of direct observation of three PALS labs and the collection of pre-and post-data with respect to reading levels (TABE), and self report of reading and writing skills (SKILLS Profile).

**Program Two**

There was no mention of regular feedback sessions with instructors and program supervisors. Formal measures of evaluation were selected by education staff without
input from learners. Success was defined for students by instructors using learner's objectives in combination with teacher objectives. There is no mention of learner portfolios.

A test was created to go with the curriculum and used for determining if the student read well enough to take the course and as an indication of progress. Because there was no way of knowing this test's reliability or validity a standardized test was sought to evaluate the program. Students took the California Assessment Test before and after the course to measure their improvement. Curriculum effectiveness was examined from a number of perspectives. One of these was quantitative in nature, using the CASAS assessment system test in which participating students were tested before and after instruction. Another was qualitative, using interview responses from participating students. A third was also qualitative, using questionnaire responses from teachers who implemented the curriculum.

Based on the program description, the primary learner involvement in evaluation was in anecdotal information gathered on the effectiveness of instruction after the completion of the program.

Evaluation in this program had three components: learner reaction, employer/organization reaction, and customer satisfaction. Academic progress was measured using the California Assessment Test (CASAS). Originally, the program intended to use its own test instruments, however, reliability and validity of the tests was unknown so the project used CASAS. Learners' scores improved only 2 percent, some students scored lower on the post-test
than the pre-test. The evaluator commented that the improvement might be better if the test matched the class content.

Ninety-two students were surveyed by the external evaluator at the end of the program. Of these students, 65 percent were very satisfied and 35 percent were satisfied. Students reported being very satisfied with the ESL instruction and would recommend it to others interested in improving their English-language skills. The students did not believe that the instruction was useful in obtaining a job or getting a promotion.

Phone surveys were used to determine employer and supervisor satisfaction with employee progress. Only two employers returned the survey mailed by the evaluator. Both responses were positive. Strengths mentioned were the understanding nature of the instructors and improvement in the student's English skills and self-confidence.

Seven of the fourteen teachers returned the questionnaires sent by the evaluators. Six of the teachers completed all of the items. One wrote extensive comments about the program. The teachers had mixed reactions to the program, half thought it was successful. Four of the six teachers thought the program contributed
to customer service skills. Only one teacher thought the program should continue as it was.

The anecdotal information was wideranging. When asked the major program strengths, 3 of the teachers responded either no strengths or no response. Four of the teachers listed strengths as curriculum, teacher's knowledge, director expertise, realistic subject matter, and student willingness. Shortcomings included identical pre-and-post tests, irrelevant materials, student overload with course content, nonworkable program format, slow pace of instruction, and poor on-site classrooms.

**Program Three**

There was regular learner assessment through weekly meetings of the learner with evaluation counselors. Formal assessment was not reviewed by the learners. Learners did not assess own learning needs and objectives. Curriculum specialists, along with the directors of GED, ESL, and literacy programs, designed classes to bridge the gap between employees' current skill levels and work-related levels determined by the literacy skills profile.

At the end of each session learners and instructors completed evaluation questionnaires. Student assessment plans also included an evaluation program by a customized assessment of battery of tests given to all employees as well as follow-up observation of the employees'
application of skills in the job setting. End-of-program evaluation forms were provided in both English and Spanish. Students rated the program as very good or excellent.

Activity:
14. Conduct exit interviews with employees and supervisors to determine change in perception of skills proficiency level.
Staff: Curriculum Specialist

Plans also included final assessment at the end of the program by means of a customized assessment battery given to all employees, as well as follow-up observation of employees' application of skills in their job settings.

At the end of each session, students and instructors completed evaluation questionnaires.

Program Four

There was no active learner involvement in evaluation in this program. Student progress was measured through formal tests given by the teachers. All students took an assessment test at the beginning of instruction and again six months later to determine academic progress. Students and teachers were not involved in end of program evaluation.

All of the employees will take an assessment test to determine reading levels at the beginning. The results of another test at the end of six months will show if the program is working.

Progress through grade levels will be determined through tests administered by the teachers.

After sign-up, students are individually assessed to determine skills level.
There was little information on evaluation in this document. Rather than NI (No Information) being the designation, the decision was that the program did not meet the criteria. The reason for this decision is that since the learners had no role in any aspect of planning or implementation of this program, there was no reason to believe that learners were involved in planning their evaluation.

**Program Five**

There were two types of evaluation in this program: a summative evaluation which was carried out by an outside evaluator and a formative evaluation which involved ongoing activities to monitor the success of the program. Learners were not involved in planning and implementation of either type of evaluation.

The formative evaluation involved maintenance of monthly instructor logs, establishment of a database containing records of achievement and prescriptions for all participants, regular review of software to determine its effectiveness and determination of whether there was a need for modification or replacement of the software. Instructors kept a computer data base containing records of achievement for learners.

Formative evaluation comprised numerous ongoing activities to monitor the success of the project. These included (1) maintenance of monthly instructor logs; (2) establishment of a computer database
containing the records of achievement and prescriptions for all project participants; (3) regular review of software to determine its effectiveness and any need for modification or replacement; and (4) continued contact with the coordinator.

Evaluation was a part of the flow chart described earlier. Staff administers post-tests; makes copies of the tests, then posts it in the data base; Applied Learning Pre-test is readministered; progress is measured by module completion and employee compensation is computed on this basis.

The ongoing evaluation mentioned in the program description referred to the computerized database system used to monitor participant progress. Learners and teachers were not involved in end of program evaluation.

Program Six

Ongoing evaluation and needs assessment were part of the process of curriculum and materials development. Major sections of the program evaluation were completed early so the planning team could take advantage of the results to plan, review, and strengthen program objectives.

There were four levels of evaluation in this project:

Each student was evaluated by instructors, supervisors, co-workers and self.

Each instructor was evaluated by students, program director and self.
Each course was evaluated by students, instructors, supervisors, program director, and the outside evaluator.

The program was evaluated by students, instructors, supervisors, program director, advisory board, and outside evaluator.

Information on the outcomes of the employees was gathered through comparisons of individual productivity records for the pre-and-post literacy class training as well as comparison of work-related tests given pre-and-post literacy training, and individual interviews.

The Workplace Literacy Coordinator and the instructor at each workplace developed pre-and post-tests geared to the specific curriculum of the workplace.

There was no mention of regular feedback sessions, review of formal measures of evaluation by learners and instructors, learners assessing own learning needs and objectives, or learners keeping a portfolio of measurement. Since there was no learner involvement in planning and implementation of the program, the conclusion is that learners were not involved in any of these activities. The only involvement of the learners in evaluation came at the end of the program.

Program Seven

Learners were not involved with any aspect of evaluation except end of program evaluation. Following initial interviews and assessment, the workers were
diagnosed with competency-based mastery tests. Participants were assessed with the TABE and the Bader Reading Inventory Word List. Following analysis of the TABE, Comprehensive Competencies Program subject area mastery pre-tests were administered in areas where participants showed a need or interest.

An individualized instructional program was developed based on information from the tests. Throughout the program the participants were continuously monitored with CCP mastery tests, GED pre-tests, and after 100 hours, the TABE test. The program description states that the students were continuously monitored with CCP mastery tests, GED pre-tests, and after 100 hours, the TABE test. The results of this monitoring were put into the program database. There is no mention of feedback sessions being part of this monitoring. Formal measures of evaluation were chosen by the planners, without involvement from the learners. Learners' needs and objectives were assessed by competency tests without input from the learner.

Throughout the program the participants were continuously monitored with mastery tests, GED pre-test and after 100-hours, the TABE test.

All demographic and test information were recorded in the management system. Data on student progress was analyzed monthly and reported to the advisory committee.

End of program evaluation included instructional staff, industry administrators, supervisory staff, and
learners. They were interviewed and completed a
questionnaire about the value of the educational program.

A survey questionnaire was administered to the project staff, industry administrative and supervisory staff and the workers to determine the value of the using a mobile learning center for literacy involvement. In addition to the survey instrument, interviews were conducted with all those involved in the project and observation visits were made to the mobile unit.

Program Eight

The criteria, "Regular feedback sessions with instructors and program supervisors," is Not Applicable in this program because of the structure of the program. Instruction took place in a two-week intensive program which met for eight-hours a day.

Students were assessed using the following tests (chosen by the lead instructor): San Diego Quick Assessment test, Reading for Understanding test, Form A Math Skills test, and the Memphis City Schools placement test. On the basis of the test results, individuals were placed in skill groups where they were encouraged to proceed at their own rate. At the end of the two-week session students were again tested to determine improvement in reading, writing, vocabulary and communication in job-related tasks. Students completed several program evaluation surveys on instructors, program arrangement and counselors. There was no mention of review of formal evaluation measures by learners and
instructors, assessment of own learning goals, or a portfolio of measurement. Based on the structure of the program, the conclusion is that these criteria were not met.

Program Nine

Involvement of the learner in evaluation is difficult to determine in this program description. There are no clear indicators of the evaluation procedures used by learners or instructors. Initial assessment included a battery of commercial tests: A Skills Check, the Adult Informal Reading Test (Form A), Adult Informal Reading Test (Form B), plus several word recognition tests. An individualized educational plan was developed for each student.

Educational progress was monitored by the education counselor and the student. There is no mention of how this was accomplished. Students, staff, employers, and union representatives completed an end-of-program evaluation.

The methodology used by ...in gathering information for the evaluation consisted of:
*personal interviews with a sampling of staff, students, union and employer representatives;
*a comprehensive review of key documents
*observation of meetings of the Advisory Committee.

Program Ten

The whole language approach to skills building was used in this program. Participants were assessed by
reading, writing, and oral communication. For the reading assessment, a modified Cloze test was used. For the writing assessment, participants wrote an essay on what type of job they would like to have, if they planned to apply for it, and why or why not. Both were scored using a scoring guide assessing written communication, not mechanics of writing. The program description conveys an attitude of respect for students, and concern that they not be intimidated by the educational program. However, based on this description, learners were not involved in reviewing formal evaluation measures. Learners did not assess their own learning needs and objectives, or keep a portfolio of progress. The learners were involved in end of program evaluation, but there is no mention of teachers being involved in evaluation of the program on its completion.

Following the literacy audit, a curriculum was developed and taught to classes for workers and supervisors during a nine-month instructional process. Students were assessed on reading, writing, and oral communication skills before and after instruction. Assessment instruments were also developed from workplace materials.

Each of the objectives for the project was assessed by appropriate quantitative and/or qualitative data analysis. Participants were assessed by reading, writing, and oral communication pre- and post-tests developed from workplace texts and situations.

Participants and supervisors were interviewed at the end of the program and anecdotal notes kept throughout the program. These data were analyzed to determine the participant’s assessment of the program
and its effect on their personal and job attitudes and their job performance.

Program Eleven

Learners had weekly assessment sessions with the instructor. They kept a journal of progress and were involved in setting goals for their educational program. The formal measures of evaluation were developed by program planners with the assistance of the instructors, but not the learners. End of program evaluation emphasized reading progress measured through testing. There is no evidence that learners or instructors were asked to evaluate the program after its completion.

Ongoing Procedures for Daily Instruction
Objectives
1. Continue progress toward meeting personal goals in reading
2. Build confidence and motivation through evidence of progress, e.g., writing portfolios.

B. Procedures for Initial Classes
Individual conferences with instructors for reading interview and goals setting

Program Twelve

There was ongoing quantitative and qualitative evaluation of participants in this program. Learners were evaluated on reading skills using content from a course manual and by TABE Survey forms. They were also given an attitude survey before and after instruction. This program was very structured with little learner involvement in the program outside of classroom
activities. Union representatives were included on the planning committee. The planning committee provided advice on the development of evaluation plans and monitored the implementation process. Learners were not involved in reviewing formal evaluation or assessing their own learning needs and objectives. There was no mention of learner portfolios in the program description.

The partners provided advice on the development of the evaluation plans and monitored the implementation process. They also helped in collecting data at various stages. The evaluation focused on the objectives of the project which related to developing the curriculum materials and implementing them in four counties at five sites. The evaluation was both formative and summative.

Data were continuously gathered to help make decisions about developing and carrying out implementation.

The major thrust of the evaluation was on measuring the changes among workers in gaining basic educational skills; but attention was also given to the curriculum materials and the process by which they were developed and used.

Tests were administered to the workers before and after the program to measure increase in reading skills and knowledge about content in the manual. Increase in basic educational skills was measured two ways: 1( by a Criterion Referenced test (CRT) which measured growth in specific reading skills using content from the CDL study manual; and 2) by the TABE Survey Forms.

Personal interviews were conducted by the external evaluator with the partners, the recipient of services,
teachers, student workers, county managers, and the curriculum development team.

**Discussion**

Based on the information in the program descriptions, teachers and learners were minimally involved in evaluation. Eight of the twelve programs included the learner and teacher in end of program evaluations. Programs Three and Ten had regular feedback sessions between learners and educators. Program Seven involved learners in ongoing evaluation sessions with educators, involved learners in assessing learning needs and objectives, and had learners keep a portfolio of their writing. Other than the involvement in these three programs, there was little evidence of involvement by the teachers and learners in evaluation.

Program One had volunteer tutors working with learners. They were trained in a two-day LVA workshop. These tutors used evaluation methods taught in the workshop. A tutor with two-days of training should not be expected to choose assessment tests, either independently or in cooperation with their student.

All of the programs used some combination of standardized assessment tests. The problems with the use of these tests are: the tests may not measure the skills taught, the tests may not be appropriate for adult
learners, the tests may not be appropriate for use in workplace programs. (See Chapter 6 for more discussion on testing in workplace programs)

Based on the analysis, the conclusion is that workplace literacy program planners do not value the role of instructors and learners in evaluation. In Program Three the program description stated that one of the tasks of the Curriculum Specialist and directors of GED, ESL, and Literacy was to, "Acquaint employee with literacy skills needed to perform his/her job." This statement reflected the attitude of many of the program descriptions, that the worker needs to be told what he/she needs to know about doing their own job. The principles of adult education on evaluation discussed in Chapter II are also being ignored.

**Learner and Teacher Role in Instruction**

The role of the teacher in participatory programs is:

1. to set up a learning environment that encourages the learner to explore a variety of forms of written language and to find the ones that are particularly effective.

2. to facilitate evaluation by providing multiple opportunities to test written language hypotheses in a low risk environment.

3. to provide a Meaningful context for learning.
Method in participatory programs should be a process that will:

1. set goals, explore options, develop strategies for meeting goals through active experimentation.

2. use methods which promote self-expression and dialogue.

In participatory programs, learners have some control in the planning of instructional activities. Programs with lesser amounts of learner participation may have learners choose from topics, materials, and activities. In participatory programs, learners develop the topics, materials, and activities. Learners can serve as teachers of fellow students who are at the same or a lower level. They also work in teams to give feedback and guidance to each other.

Collaborative teaching and learning help to develop a learners' strengths. To encourage collaboration, learners meet in groups where ideas can be shared and each group member, including the teacher, is a resource and support to every other person. The teaching must be challenging and nonthreatening to stimulate interaction within the group and assist learners in overcoming self-doubts about their ability to learn. Open-ended questioning, justifying, clarifying, and examining issues from personal and collaborative perspectives engage learners in problem-
solving. Learners' views of themselves gradually improve as the teacher and other learners demonstrate interest in them. In the collaborative process, the teacher must act as a facilitator, not an authority figure who knows and attempts to impart knowledge in the sequence he or she believes acceptable. Learners are encouraged to ask questions and agree or disagree with their peers and the facilitator.

The criteria for content and use of technology in participatory programs have been integrated into this category. Content and use of technology are part of planning instructional methods. Content and technology in participatory programs focus on:

1. the learners prior knowledge.
2. the learners personal work life.
3. using word processing.
4. using data bases.
5. using graphics.
6. using the computer to augment listening, writing, and speaking skills.
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NI=No Information Available
NA=Not Applicable
X=Meets criteria for participatory literacy
Blank=Does not meet criteria for participatory literacy
Program One

This program had two components: a volunteer literacy tutor component and a computer-assisted learning component. The tutors and their students were state employees. The role of tutor was open to any employee who had completed high school. Tutors and learners scheduled tutoring sessions at their own convenience. Tutors were trained by Literacy Volunteers of America (LVA). Based on the descriptions of the tutor program and the PALS Program, the conclusion is that this program did not promote self-expression and dialogue. Methods which lead to experimentation and open-ended questioning were also not part of the program.

The computer interactive training lab consisted of a videodisc designed by IBM to teach adults who read at or below the 6th grade level. The program, Principles of the Alphabet System (PALS), presented a comic book story about the invention of reading and writing in a mythical kingdom. After the story was finished, students were asked to type the words spoken by the system. One-half of each hour long session was spent working with the videodisc and half using work processing programs on computers or typewriters. This was a structured, pre-programmed approach to basic skills education.

The PALS system is a structured, developmental literacy skills program which utilizes IBM software
and interactive videodisc equipment in office-like laboratories.

PALS, presented in colorfully illustrated comic book fashion in Infowindow, tells a story about the invention of reading and writing in the mythical kingdom of King Alpha and Queen Bet. The fable shows how the two kingdoms almost get into armed conflict because of the inability to communicate in a written language.

...the PALS lab component presented a structured approach to the teaching of reading.

The tutor segment of the program was to meet for two hours weekly, at times arranged by the tutor and learner. The program description discussed problems with scheduling tutor sessions. There was often a problem finding a space to meet, if a learner had to miss a session, there would be a two-week gap between sessions. The PALS lab had regularly scheduled classes, at times chosen by the teachers and program planners, not the learners.

Teachers (both in the tutor program and in the PALS program) were described as empathetic, caring, and genuinely interested in the students. Even though tutors were trained using LVA techniques, there is no evidence the techniques were implemented. There is no evidence that teachers introduced and modeled learning strategies. Collaborative teaching was not part of the program.

This component of the pilot program was a "tutor-buddy" approach geared to employees who read below the eighth-grade level.

The PALS system is a structured, developmental literacy skills program, which utilizes IBM software
and interactive videodisc equipment in office-like laboratories.

There was no evidence that instruction was based on learner's prior knowledge or related to personal work lives.

Recommendation from evaluation team: The question of adequacy of instructional materials cannot be disassociated from that of instructional guidance. Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests, and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary.

Recommendation from evaluation team: Perhaps a more valid method for assessing literacy skills for adults could be based on a set of criterion referenced tests which are based on real life job experiences.

The computer-assisted instruction was structured, pre-programmed, and not individualized.

Students in PALS labs spend half of each one-hour class working with the videodisc course and half using word processing programs on PCjrs or working on typewriters.

...the PALS lab component presented a structured approach to the teaching of reading...

PALS, presented in colorfully illustrated comic book fashion in Infowindow, tells a story about the invention of reading and writing in the mythical kingdom of King Alpha and Queen Bet. The fable shows how the two kingdoms almost get into armed conflict, because of the inability to communicate in a written language.

Program Two

Program Two used only state certified teachers with experience working with diverse student bodies. A teacher's manual and student workbooks were developed by
the program planners using the literacy audit. There were 9 performance modules, 27 communication modules, and 13 computational modules. Instructional methods used were modeling, guided practice, application activities, and transfer of skills. There was no learner involvement in planning the instructional activities of this program.

...when asked about major shortcomings in the program, teachers identified identical pre- and post-tests, irrelevant material, student overload with content, program and format not working, slow pace, and poor on-site classrooms. In response to an item about modifications, responses were very mixed. Two teachers felt the program should aim at higher-level students; others suggested a total program revision to include creativity and active involvement.

There is no mention of the use of computers in this program.

Program Three

This program is described as having teachers who are more like coaches or tutors than teachers. Instruction is described as individualized. This program description does not contain detailed descriptions of instruction. The descriptions that are given portray a program which does not encourage learner involvement in instruction or learner-centered instructional methods. For example:

6. Analyze assessment results and interview records in order to develop a customized curriculum that moves students form current skill levels to those needed for effective job performance.
b. Provide for separate but concurrent language and computational skills classes organized around job-related thematic units.

Some conclusions (inferences) about instruction can be drawn based on information available:

Learners were not involved in program planning. The curriculum was customized for each individual by the instructor with the goal of achieving skill levels needed for effective job performance. A literacy skills profile was developed for each job, learners were tested to determine their deficiencies, these deficiencies became the basis of the curriculum for each individual. There is no evidence of peer teaching or problem solving methods. Also, the program description does not mention the use of computers.

Program Four

There is no information on instructional methods in this program description. The program goals and design are described but the only mention of teachers is that they are to be provided by the local school system. Due to the lack of learner involvement in other aspects of the program, the conclusion is that learner and teacher role in instruction do not meet the criteria for participatory literacy.

The program description does discuss relating instruction to work skills:
Before the class is started, the program teacher should spend time in the particular area of work of the employees. This will give the teacher an idea of the level of reading and/or math skills required and he/she will also be able to tailor the instructional program to be more relevant.

Workplace literacy programs are critical in solving the literacy problem because the greatest gains have been made in programs where literacy skills are developed with a relationship to the language and needs of the workplace.

There is mention of computers being used in training, but no information on the use of the computers is found in the document.

Program Five

As in the previous two program descriptions, the role of the teacher was not clearly described in Program Five. Again, some conclusions can be drawn using other parts of the program description.

The primary instructional method used in Program Five was tutorial software. Participants regularly listened, observed, and read. The curriculum was individualized to the extent that using packaged software allows—learners could start at their own level and progress individually. Learners were not involved in any aspect of planning or evaluation. There is no reason to conclude that the role of the teacher met the requirements of participatory literacy education.

This was a computer-assisted learning program with two levels of students: those in need of basic skills
education and those preparing for their GED. Both groups worked on pre-programmed computer tutorials.

Software selection was undertaken with an aim of integrating skills development in more than a single area. Participants regularly listened, observed, and read while problem-solving and reasoning skills were targeted. Likewise, they conversed with project instructors and applied reasoning skills while inferential reading comprehension was targeted.

Program Six

There is no mention of teaching methods used in this program. Based on the information in the program description on the role of the learner in planning and evaluating the program, the decision is that methods did not meet the criteria for participatory literacy programming. Curriculum was workplace specific, and therefore, related to learners work lives. There was no indication that learning built on learner’s prior knowledge. There was no mention of computer instruction, the conclusion was that there was none.

Program Seven

Workers had individually prescribed education programs based on competency-based mastery tests. There were no manuals for learners in the program: informal lesson materials were developed related to the worker’s job. Teachers received training on characteristics of the adult learner, informal testing methods, the language experience approach, and other teaching methods. Tutors
were trained to assist students with low-level skills who needed individual attention; however there was no space provided for the tutors to meet with students.

The program description does not detail the role of the teacher or tell of the teacher’s using knowledge gained from the workshops on teaching methods. Given lack of learner involvement in planning, again the conclusion is that the teacher’s role was not that expected in participatory literacy education.

Instruction was regularly scheduled. Computers were part of the instructional program. However, there was little information on the use of the computers.

Taped/print materials were provided for several ESL students and a computerized reading, language and spelling program was used for students who entered at the 1st to 3rd grade levels.

The plans for the mobile unit were developed with the assistance of an IBM consultant.

**Program Eight**

Teachers in this program were state certified and had experience in workplace programs as well as traditional adult education classroom experience. Learners were divided into skill groups and encouraged to proceed at their own rate. Teachers provided group instruction and individualized instruction. Teaching methods included lecture, demonstration, and one-on-one tutoring.
Instructional materials were programmed, commercial workbooks and reading kits, dictionaries, thesauruses, newspapers, and community and workplace materials.

The lead instructor selected the materials, planned and implemented the program, trained teachers, and served as a liaison between instructional staff and company representatives. Advanced students helped the students who worked at a lower level. There is no mention of computers being used in instruction in this program.

Program Nine

The teaching staff was experienced in workplace education. Curriculum materials were developed by workplace staff and adapted from other sources, including employers. Individual instructors also designed materials to meet the interests of their classes. There is no mention in this description of instructional methods, techniques, or philosophies. Neither was there any mention of learner involvement in instructional planning or instruction. Given the lack of learner involvement in other aspects of this program, the conclusion is that the program does not meet the criteria for learner and teacher role in instruction.
Program Ten

A literacy audit resulted in materials which were developed into the curriculum. The whole-language approach was the basis for the curriculum. The goal was to integrate oral communication (speaking and listening), reading, writing, and problem solving. Regularly scheduled instruction included whole group, small group, and individual activities integrating oral communication and problem solving, reading, and writing. Instruction also emphasized the participants self concepts as workers and learners. Learners were encouraged to express themselves on the job and to feel positive about their role as a learner. Role playing and pragmatic writing were also used. The instruction described in this article closely resembles the guidelines for teacher involvement in instructional methods in participatory literacy education.

After the literacy objectives were developed, integrated units of instruction were planned for each of the six sessions and lesson plans were developed for each class period.

Instruction included whole group, small group, and individual activities integrating oral communication and problem solving, reading and writing. Instruction also emphasized the participants self concepts as learners and workers. Each session included discussion an encouragement to express oneself on the job and to feel positively about oneself as a learner. The language experience approach, role playing job scenarios, and pragmatic writing were frequently used instructional techniques.
...program used actual workplace literacy materials and emphasized the skills needed on the job. These materials demand that the worker integrate oral communication (speaking and listening), reading, writing, and problem-solving. This integrated, whole language approach also was the basis for the curriculum developed for this project. The literacy curriculum utilized real materials from the hospital and provided instruction and practice in actual literacy skills needed on the job. Assessment instruments were also based on job texts and skills.

By using actual hospital texts, participants were familiar with the content from their jobs. Thus, they brought to the literacy task background knowledge about the subject and a contextual scheme which could be applied to comprehension of the oral and written texts.

Classes for workers were held twice per week for 1 1/2 hours each on job time at the hospital on days least affected by the hospitals' complex rotation off (RO) schedule, a factor of the 24-hour per day, 7-day per week operation of a hospital. Times were selected to be the least disruptive of work in the participating departments.

There is no information on the use of computers in this program. The assumption is that they were not used.

**Program Eleven**

Instructional methods included group discussion, conferences with instructors, student developed materials that were used for reading instruction, computer-assisted instruction used for writing language experience stories and for word study. Vocabulary building activities were also used including discussions and semantic mapping, daily journal writing, self-selection of reading materials, and word analysis techniques. There was no mention of collaborative teaching.
Instructional Methods
Group discussion and/or conferences with instructor
Use of the Language Experience Approach in which the student writes or dictates passages which she then learns to read
Use of the computer for writing language experience stories and for word study
Vocabulary building activities, discussion, semantic mapping, semantic features
Daily journal writing

Objectives
4. Increase sight words, including job-related or technical terms

Program Twelve

This program used a functional approach: integration of basic skills instruction with technical training. Technical content and reading found on the job were the basis of the curriculum. The course was divided into two parts: computerized programmed instruction and classroom work using pre-programmed material.

The course was very goal oriented, with no emphasis on topics other than passing the test. None of the instructional criteria for participatory literacy education were met in this program.

...is a basic skills course of interactive computer courseware and print instructional materials developed for the purpose of assisting truck drivers in the ..to develop reading skills necessary to pass the test.

The print-based materials were valuable because they provided structure for the lessons, and they were useful for class teaching and discussion, review, and homework.
Teaching by computers was a key factor in this program.

Discussion

The LVA catalog describes its tutor program as learner-centered and individualized, using the whole-language approach. It uses both individual tutoring and small group instruction. Instruction is based on the life of experiences of the learner. The focus is on materials tied to the learner's goals and interests—the emphasis is on real life curriculum (LVA, 1992). This describes a program which should meet at least some of the requirements of participatory literacy education. However, the program description in Program One does not describe a program which is based on participatory principles. The program evaluators recommended more hired staff to supervise volunteers. Supervision by a staff person who was also trained by LVA could result in a program that more closely resembles one that meets participatory literacy criteria.

Learner and teacher role in most of these of these workplace literacy programs did not meet the requirements of adult education or participatory literacy education. In some programs, there is little information on the role of the learner and teacher in the program. This lack is discussed in Chapter VI. In these cases, conclusions were made on the basis of inference.
Two programs (Programs Ten and Eleven) met most of the participatory literacy requirements. Both of these programs used the whole language approach to reading instruction. This approach to reading actively involves the learner in instruction. Nine of the twelve programs had instruction based on the employee's work. This is evidence of the influence of the functional literacy approach to planning workplace education programs and grant requirements which state that instruction must be based on job skills. While several programs used computer instruction, the most common instructional method was pre-programmed tutorials, these tutorials do not meet the criteria for participatory literacy.

_The Union Role In Program Planning_

Unions want to be involved in the development of workplace literacy programs so the needs of the worker will be emphasized rather than training needs defined by the employers (Fingeret, 1990). Sarmiento and Kay (1990) describe a worker-centered approach to workplace literacy. Workers, through their unions, determine program design and content. The following discussion examines the role of the union in job analysis, participation in worker-centered programs, assessment in worker-centered programs, and worker-centered classrooms. These programs may not be representative of union-sponsored programs, so no
generalizations should be made. The information on union-sponsored programs comes from Sarmiento and Kay (1990).

**Union Role in Job Analysis**

If the union decides that it is necessary to perform a job analysis, the following criteria will aid in worker-involvement in job analysis:

1. Union leadership determines the proposed job analysis process and describes it to its members.
2. Workers are involved in preparing the description of job duties for their positions.
3. No job observation is performed without the cooperation of the worker involved, with plenty of advance time for planning and union monitoring.
4. Job tasks are analyzed to show the range of occupational and functional skills that contribute to the performance of each job—not to link jobs to grade levels or to develop criteria to screen workers out of jobs.
5. Union representatives participate in setting the performance criteria to be used in reviewing how workers perform their current jobs.
6. Job analysis findings show an understanding of the growing training requirements in the workplace, rather than emphasizing only workers' skills deficiencies.
7. Workers receive assurance that job analysis will be used only for program planning—not as a basis for
firing, transferring, or limiting the future wages of those whose jobs are assessed.

8. Workers are offered the opportunity to learn new skills to meet identified needs if they choose.

9. Unions participate in establishing a worker-involved process for setting education and training goals.

10. Individual workers help set training goals for their own jobs, in cooperation with their supervisors, using job analysis findings.

Characteristics for Worker-Involved Job Analysis

1. Union determines job analysis process.

2. Workers prepare description of job duties.

3. Workers are involved in job observation.

4. Analysis shows range of skills for each job.

5. Unions help set performance criteria.

6. Job analysis only used for program planning.

7. Workers can learn new skills if they choose.

8. Unions help set education and training goals.

9. Workers help set training goals for their own jobs.
Table 5
Worker-Developed Job Analysis

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Program Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>I. Union determines process</td>
<td>X</td>
</tr>
<tr>
<td>II. Workers describe job duties</td>
<td>NA</td>
</tr>
<tr>
<td>III. Workers involved in job observation</td>
<td>NA</td>
</tr>
<tr>
<td>IV. Analysis shows range of skills for each job</td>
<td>X</td>
</tr>
<tr>
<td>V. Unions set performance criteria</td>
<td>NA</td>
</tr>
<tr>
<td>VI. Analysis used for program planning</td>
<td>X</td>
</tr>
<tr>
<td>VII. Unions assist in setting education and training goals</td>
<td></td>
</tr>
<tr>
<td>VIII. Workers assist in setting training goals for own jobs</td>
<td></td>
</tr>
<tr>
<td>IX. Workers can learn new skills</td>
<td></td>
</tr>
</tbody>
</table>

NI=No Information
NA=Not Applicable
X=Meets criteria for worker-centered literacy education
Blank=Does not meet criteria for worker-centered literacy education

Program One

The union and a state government department contracted with an outside agency to assess the basic literacy skills needs of state employees.

The ...Labor Education Action Program and the ...for Employee Relations commissioned...to assess the need for training programs in adult basic education skills.

...was a pilot literacy program administered by...and designed for employees represented by...union.

It was unclear from reading the program description how much input the union had in the needs assessment.
There was no mention of workers describing their job tasks or being observed performing their duties. In fact, the only criterion of worker involvement in job analysis that is clear in the program description is that the union was involved in choosing an outside agency to do a needs assessment.

This program used volunteer tutors to teach literacy skills to workers who volunteered to participate. The computer segment of the program used a pre-programmed approach to teaching literacy. Neither of these instructional approaches relied upon a job analysis. The needs assessment performed before the program start-up was to determine if there was a need for basic skills education, not to relate literacy training to specific job duties. The decision was that the program did not meet the criteria for worker-involved job analysis established by Sarmiento and Kay.

**Program Three**

Curriculum specialists from the advisory committee, of which the union was a part, performed a literacy audit of companies participating in this program. Besides selecting assessment instruments and procedures, the curriculum specialists collected samples of materials relevant to work performance, interviewed employees, supervisors, and personnel department staff. Employees
were also observed in their job settings. Curriculum specialists and directors of GED, ESL, and Literacy determined performance criteria and set education and training goals.

This program did have some learner involvement in needs assessment and job analysis. However, the involvement was marginal. The criteria for worker-involved job analysis states that the union will assist in setting education and training goals. According to the program description, the curriculum specialist and directors of GED, ESL, and Literacy performed that task without the involvement of the union. Also, there was no opportunity for workers to learn new skills.

1. Develop procedures and materials for literacy audit of companies, including:
   a. procedures for readability measurement of materials
   b. selection of assessment instruments
   c. development of instruments for structured workplace assessment and observation

Staff: Educational Services manager, Curriculum Specialist, Directors of GED, ESL, Literacy

Activity:
Analyze assessments and interview records in order to develop a customized curriculum
Staff: Curriculum Specialist, Directors of GED, ESL, and Literacy.

3. Develop Literacy Skill Profile for each job based on information collected through:
   a. conducting readability study on written materials utilizing the Degrees of Reading Power test.
   b. identifying, defining, and categorizing Literacy Tasks required for effective work performance.
   c. identifying reading, writing, computational and problem-solving proficiency levels.
The only type of assessment mentioned in the article was learner basic skills assessment, job analysis was not mentioned. Initially, the decision was to assign the ranking of NI to each of the criteria. However, after closer reading, the decision was to rank the program as not meeting the criteria of worker-involved job analysis.

According to Sarmiento and Kay, the union should assist in determining the process used for job-analysis. There was a union representative on the planning board of this program. There was no job analysis—or if there was, it was not mentioned. The conclusion is that the union representative was part of the decision to not have a job analysis.

One of the program evaluators commented:

Student assessments should be more closely related to their job requirements. The education counselor, the Instructor, and the employee, in collaboration with the employee’s supervisor, should determine whether a student needs to focus more on reading, writing, speaking, or math, on the basis of the requirements of their jobs, and then, incorporate that judgement into the student’s IEP.

This statement leads to the conclusion that there was no job analysis.

Also in the program description:

On the other hand, applications of English language skills in writing and speaking were not consistently tailored to specific job needs, such as the writing
of specific reports in specific formats, for example. Much of the curriculum is general and related to daily living. Employer supervisors felt that this was a shortcoming of the program. They observed a direct relationship between the job relatedness of the curriculum and the increased self confidence of the student/worker. They felt workers would benefit much more if there were more class work related specifically to job-related requirements. In some cases, however, program staff reported difficulty obtaining that information from employers.

In a program which met the guidelines of worker-involved job analysis, the workers would have been asked for information on the literacy requirements of their jobs, not employers or supervisors.

Program Twelve

There was no job analysis in this program, the classes were to help truck drivers pass a written test. Truck drivers who failed a written test were referred to the program. The program consisted of a basic skills course using interactive computer courseware and preprogrammed instructional materials. Most of the criteria of the union for worker-centered job analysis is inappropriate in analyzing this program.

Discussion

These programs did not meet the criteria for worker-involved job analysis. While there was sparse information in Program Nine, the conclusion is that there was no job-analysis. Program Twelve was intended to help workers pass a mandatory written job test so there was no job
analysis. Program One had union involvement in determining the process, but met none of the other criteria. Program Three met two of the requirements. There was a job analysis but it did not involve workers or the union representative. The conclusion is that program planners do not include learners until the teacher takes charge on the first day of class.

Worker-Centered Classroom

Unions know their members, therefore, the union should work closely with educators in structuring classroom activities and developing course materials. A worker-centered classroom is a place of learning rather than training. Learning implies an active role for the learners, training implies a passive role. Active worker participation should be central to the education program.

In a worker-centered education program:

1. The members participate in planning the program, through union representatives.

2. Individuals develop a learning plan jointly with instructors or counselors when they enter the program. This plan will briefly outline the worker's own learning goals and proposals for achieving them.

3. Teaching integrates basic educational skills with life skills. Unions should beware of programs that teach
The literacy skills constructed for specific jobs. The curriculum should build on what the learners know.

4. Instructors visit the worksite to meet with experienced workers and learn more about their jobs. Workers give instructors copies of actual written materials used in their jobs.

5. The curriculum plan and instructional materials are developed by combining information from employees about their jobs and information from the needs assessment and job analysis.

6. Computerized learning programs are used which support worker learning objectives.

Table 6

<table>
<thead>
<tr>
<th>Worker-Centered Classroom</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Characteristics</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>I. Union participates in planning</td>
</tr>
<tr>
<td>II. Individualized learning programs</td>
</tr>
<tr>
<td>III. Education integrated with life skills</td>
</tr>
<tr>
<td>IV. Instruction based on information from workers</td>
</tr>
<tr>
<td>V. Computer instruction supports worker learning objectives</td>
</tr>
</tbody>
</table>

NI=No Information
NA=Not Applicable
X=Meets criteria for worker-centered literacy education
Blank=Does not meet criteria for worker-centered literacy education
Program One

A union representative was part of the advisory-planning committee at this worksite.

Project...was a pilot literacy program administered by...and designed for employees represented by...union.

The program used tutors trained by LVA. The tutors, after their two-day training, were to offer individualized literacy instruction to learners. Due to the lack of learning materials, support personnel, and training if tutors had wanted to individualize instruction, the materials and personnel were not available to allow that to happen.

Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests, and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary.

Despite such heavily weighted needs for early independent word identification skill material, those at the headquarters library consisted mainly of supplementary paperbacks suitable for independent reading by fairly competent readers.

...while student interest and comprehension needs, were, fortunately, stressed, at least some of the tutors were not encouraged to try to offer structured phonics instruction of the kind that has been demonstrated to be effective with a considerable number of those with severe reading problems. Neither were materials for such instruction readily available.

The computer-assisted instruction (CAI) used interactive programs that emphasized learning words phonetically. The program description described the
computer-assisted instruction as, "a structured, developmental literacy skills program." This part of the program was clearly not individualized, integrated with life skills, or based on information from workers.

Suggestions for improvement from the program evaluators included individual conferences with learners, discussion of student goals, anything in the student's life that might affect program participation, and student interests. The conclusion is that the neither the tutor nor PALS segments of the program met the criteria for a worker-centered classroom.

Program Three

Union representatives were included on the advisory-planning board for this program. Curriculum was developed after sampling materials relevant to work performance, interviews of employees, supervisors, and personnel department staff and observations of employees performing their jobs. The goal of the curriculum was to design courses to bridge the gap between employers current skill levels and work-related performance levels. Instruction was individualized with the teacher serving as coach or tutor rather than lecturer.

Activity:
Analyze assessment results and interview records to develop a customized curriculum.
Staff: Curriculum Specialist, Director GED, ESL, Literacy
No computer instruction was mentioned. Also, there was no mention of education being integrated with life skills. Relating instruction to job skills was mentioned several times but there was no mention of instruction being related to life skills. Because this program emphasized job-related skills the conclusion is that life-skills was not a part of the curriculum.

Link basic skills improvement to job performance in order to motivate employee.

Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance.

Holistic scoring of writing which replicates writing activities performed on the job.

Plans also included final assessment at the end of the program by means of a customized assessment battery given to all employees, as well as follow-up observation of employees' application of skills in their job settings.

**Program Nine**

Union representatives participated in the planning of this program. Individualized education plans were developed for each student. Curriculum materials were produced by program staff with some input from employers. There did not appear to be any worker input into instruction. Computer assisted instruction was not part of the program.

One area that was difficult make a determination on was, "Education integrated with life skills." Initially,
the decision was that there was not enough information to make a decision. However, after careful reading of the program description, the decision was that there was some life skills instruction.

On the other hand, applications of English language skills in writing and speaking were not consistently tailored to specific job needs, such as the writing of specific reports in specific formats, for example. Much of the curriculum is general and related to daily living. Employer supervisors felt that this was a shortcoming of the program.

**Program Twelve**

Union representatives were involved in planning the program. This program did not offer individualized learning programs. Education was not integrated with life skills. The goal of the program was to assist truck drivers in passing a written driver’s license test.

The curriculum materials demonstrate three characteristics of functional literacy instruction which recent research has demonstrated to be most effective in workforce education programs: integration of basic skills instruction with technical training; using technical content and reading tasks that are used on the job; and highlighting the learner’s role as worker or employee during the instruction.

Computers were used to support the learning objectives of the program.

...is a basic skills course of interactive computer courseware and print instructional materials developed for the purpose of assisting truck drivers in the ... to develop reading skills necessary to the test.

Teaching by computers was a key factor in this program.
Discussion

The four programs partially met the criteria for the worker-centered classroom. All of the programs had union input in planning. Two of the programs had individualized learning programs. Program One alternately claimed to individualize instruction and offer structured, preprogrammed instruction. Based on the description of the program, the conclusion was that learning was not individualized. Program Twelve did not claim to individualize instruction; however, this program was unique in that it was intended to help truck drivers pass a written test.

Worker input in instruction was not part of any of the programs. The computer instruction in Program One used pre-packaged programming that was not individualized to any particular learner. The same was true for Program Twelve. Unions and employers apparently are more willing to include learner involvement in non-instructional activities than in instructional activities.

Assessment in Worker-Centered Programs

Evaluation procedures must be established to determine if the program is helping the learners. However, workers must be involved in testing and assessment should be part of the learning process.
1. A worker-centered program provides regular feedback sessions that involve the learners.

2. Pre-and post-program interviews are held with learners to assess satisfaction with the program and changes in the workplace (attendance, turnover, advancement, frequency of workplace problems) attributable to the program.

3. Standardized testing is kept to a minimum.

4. Grade-level performance tests are avoided.

5. Experienced students interview new learners in peer interviews.

6. On-going assessment takes place through out the program. Learners assess their own learning plus instructors assess learners.

8. Union constructed competency based tests are used.
### Table 7
Assessment in Worker-Centered Programs

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Program Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>I. Regular feedback to learners</td>
<td>X</td>
</tr>
<tr>
<td>II. Pre- and post-program interview</td>
<td>X</td>
</tr>
<tr>
<td>III. Minimal standardized testing</td>
<td></td>
</tr>
<tr>
<td>IV. Grade level tests avoided</td>
<td></td>
</tr>
<tr>
<td>V. Peer interviews</td>
<td></td>
</tr>
<tr>
<td>VI. Learner-centered program assessment</td>
<td></td>
</tr>
<tr>
<td>VII. Union constructed competency tests</td>
<td></td>
</tr>
</tbody>
</table>

NI=No Information
NA=Not Applicable
X=Meets criteria for worker-centered literacy education
Blank=Does not meet criteria for worker-centered literacy education

**Program One**

Program One lacked personnel to adequately perform some of the tasks considered important to assessment:

Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests, and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary.

At this time, although a required aspect of tutorial sessions, logs were not readily available nor, if they had been, was there anyone on staff competent to evaluate and give appropriate assistance for any of the instructional features of the logs.

Standardized tests, not union-constructed competency tests, were used for pre- and post-instruction evaluation. Learners were assigned a grade level of skill based on the
tests. There were no peer interviews at intake. In some cases, placement tests were not administered until after the tutoring began.

During the staff meeting discussion which followed, there was agreement upon the evaluator's data needs, in order to document an effective program, which would be met if the center agreed to supply the following information:

- TABE reading scores of participants at the beginning;
- SKILLS Profile to assess participants feelings about habits related to reading skills;
- Recommendation from the evaluation team: Individual conferences with prospective students should precede the start of any tutoring.

Again, lack of personnel was a problem:

- Knowledgeable personnel should conduct such conferences.

The pre-placement interviews were intended to individualize the learners' programs. There is no evidence that this actually happened. Learners were not involved in program assessment.

The One-on-One component was evaluated in terms of site visits by a reading specialist and evaluation team members, the collection of pre and post test data for tutees, the analysis of questionnaire data obtained from the tutors, and an analysis of the recruitment procedures used in attracting participants to the program.

The PALS program was evaluated in terms of direct observation of three PALS labs and the collection of pre-and post-data with respect to reading levels (TABE), and self report of reading and writing skills (SKILLS profile).
Program Three

This program featured constant, regular assessment of learners—education counselors were expected to meet weekly with learners.

Activity:
9. Assess employee progress in meeting class objectives, send Progress reports to counselor
   Staff: Instructors, Education Counselor
   Timetable: weekly
10. Discuss employee progress and recommend additional assistance as needed.
    Staff: Education counselor
    Timetable: monthly
11. Refer employees requiring additional assistance to tutors
    Staff: Instructors, Education counselor
    Timetable: as needed

Pre-placement interviews were held with each employee to assess skills and identify individual concerns and problems. Part of the initial interview was assessment of reading level using a standardized test which assigned students to a grade level. At the end of each session students completed evaluation questionnaires.

Activity:
14. Conduct exit interviews with employees and supervisors to determine change in perception of skills proficiency level.
    Staff: Curriculum specialist

Students were evaluated with standardized reading tests which assigned a grade-level score.

Administer Degrees of Reading Power test to determine employee reading levels.

(Evaluators) cited concerns about the appropriateness of standardized reading tests for workplace literacy programs. Since workplace literacy stresses material
immediately relevant to jobs, instruction may not address some of the kinds of knowledge measured by standardized tests.

The program description did not mention peer interviews. The conclusion is that there were none. There was no evidence that the union was involved in the construction of the competency tests. The tests used were standardized assessment tests that were not specifically designed for use in this program.

Plans also included final assessment at the end of the program by means of a customized assessment battery given to all employees, as well as follow-up observation of employees' application of skills in their job settings.

At the end of each session, students and instructors completed evaluation questionnaires.

Conduct exit interviews with employees and supervisors to determine change in perception of skills proficiency level.

Program Nine

There is no mention of regular feedback to learners. Pre-placement interviews were held between instructor and student. At this interview, placement tests were administered.

Student-worker assessments were designed or adapted for both ESL and ABE skills prior to the service delivery period.
* A Skills Check" developed by the ...teachers at ...evaluates math, reading, and writing skills;
* The Adult Informal Reading Test (Form A) with sex reading tests, developed by the University of Missouri;
*The Adult Informal Reading Test (Form B) with six reading tests, developed by the University of Missouri;
Several word recognition tests lists, developed by the University of Missouri.

Post-program interviews were held with a sampling of students:

The methodology used by...in gathering information for the evaluation consisted of:
*personal interviews with a sampling of staff, students, union and employer representatives;
*a comprehensive review of key documents;
*observation of meetings of the Advisory committee.

Record-keeping procedures included intake and assessment procedures, the Individual Educational Plan, the central files, the referral forms, child care information, attendance forms, termination forms, and monthly reports. There is no mention of peer interviews, learner-centered program assessment or union input into the construction of competency tests. Given the description of the program, the conclusion is that there was no regular feedback with learners or peer interviews. Since the assessment tests used were standardized, the union was not involved in their construction.
Program Twelve

There was a considerable amount of standardized testing in this program: QAT, TABE Locator Form, CDL, Pre- and Post-Test CRT and TABE Survey, plus a pre-post attitude survey. Pre-tests were used to assign a grade-level of reading to the students.

After a short interval of time, a quick assessment test (QAT), which was a sample of the CDL test, was administered to 397 of them (truck drivers). About 36% failed to achieve 80% of the answers correct which is the passing grade for the actual CDL test. Of the 142 who failed the QAT, 120 were given the Tests of Adult Basic Education (TABE) Locator Form. Those who scored below the advanced level on the vocabulary section, approximately 9th grade, were referred to the R.O.A.D program. Of the 120, 77 had scored below the advanced level; of that 77, 68 enrolled in the R.O.A.D. to Success program.

Personal interviews were conducted by the external evaluator with the partners, the recipient of services, teachers, student workers, county managers, and the curriculum development staff.

Tests were administered to the workers before and after the program to measure increase in reading skills and knowledge about content in the manual.

Increase in basic educational skills was measured in two ways: 1) by a Criterion Referenced Test (CRT), which measured growth in specific reading skills using content from the CDL study manual; and 2) by the TABE Survey Forms. Increase in knowledge from the CDL manual was measured by the Quick Assessment Test (QAT). Workers also took the CDL exam at the end of the classes.

Given the design of the program and its heavy reliance on standardized tests, the conclusion is that the criteria for regular feedback to learners, minimal standardized testing, grade level tests avoided, and peer
interviews were not met. Program assessment was not learner centered, standardized competency tests were used. The union was not involved in constructing the competency tests.

Discussion

In three of the programs, learners were involved in pre-and-post program interviews. It appeared that evaluators were interested in learner reaction to the programs. Program Three was the only program which involved the learner in regular feedback sessions between learners and teachers or used learner-centered program assessment. This may be due to the heavy reliance of all the programs on assessment using standardized testing. None of the programs had union involvement in constructing competency tests, again this may be due to reliance on standardized tests.

These four programs reflect the traditional approach to program development—assigning students a rank based on grade-level testing, using standardized testing to determine student placement, no involvement of peers in interviewing at intake. These program characteristics are also good examples of the lack of differences between union-sponsored programs and programs without union involvement. Not only do the programs not meet the criteria for participatory literacy, they do not meet the
criteria for union-sponsored programs. This is not surprising since the majority of the literature on program planning uses the functional approach which does not actively involve learners.

**Participation in Union Sponsored Programs**

In worker-centered literacy programs: workers have full and fair access to education programs, participation is voluntary, instruction is offered to all skill levels—beginning, intermediate, and advanced.

Classes should be held in locations convenient to all workers. Scheduling of classes is tailored to the worker’s schedule. Child care assistance is available on-site or arrangements are made with community organizations. Cost to participants is minimized, operating costs are not passed along to the workers. When attendance is mandatory, workers are paid for attending classes. Classroom records are kept confidential from management and union leaders. Confidential records include information about classroom performance and test scores. Union representatives publicize the educational program. Unions also assume responsibility for recruiting workers into the program.

**Participation in Union Sponsored Programs**

1. Programs are accessible to all workers.
2. Instruction is offered to all skill levels.
3. Participation is voluntary.
4. Location is convenient to all workers.
5. Scheduling is tailored to worker schedules.
6. Child care assistance is offered.
7. Cost is minimal.
8. Workers are paid for mandatory classes.
9. Records are confidential.
10. Unions are responsible for recruitment.

Table 8
Participation in Union-Sponsored Programs

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>1</th>
<th>3</th>
<th>9</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Program accessible to all workers</td>
<td>X</td>
<td>NI</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>II. Instruction at all skill levels</td>
<td></td>
<td>NI</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>III. Voluntary participation</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>IV. Convenient location</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>V. Convenient scheduling</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>VI. Child care assistance offered</td>
<td>NA</td>
<td>X</td>
<td>X</td>
<td>NI</td>
</tr>
<tr>
<td>VII. Minimal cost</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>NI</td>
</tr>
<tr>
<td>VIII. Pay for mandatory classes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>IX. Confidential records</td>
<td>X</td>
<td>X</td>
<td>NI</td>
<td>NI</td>
</tr>
<tr>
<td>X. Recruitment by unions</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

NI=No Information
NA=Not Applicable
X=Meets criteria for worker-centered literacy education
Blank=Does not meet criteria for worker-centered literacy education
Program One

Participation in this education program was voluntary and open to any employee who qualified. The focus of the tutor program was on workers with skills below the eighth grade level. The computer instruction segment of the program was for adults reading below the sixth grade level. Instruction was not available to all skill levels. One reason for this was a lack of materials. The other reason is that the program focused on low-skilled learners. Despite this focus, materials and instruction were not available for learners at low skill levels.

Despite such heavily weighted needs for early independent word identification skill material, those at the headquarters library consisted mainly of supplementary paperbacks suitable for independent reading by fairly competent readers. Moreover, while student interest and comprehension needs were, fortunately stressed, at least some of the tutors were not encouraged to try to offer structured phonics instruction of the kind that has been demonstrated to be effective with a considerable number of those with severe reading problems. Neither were materials for such instruction readily available.

Scheduling was arranged between the tutors and students at locations convenient to each. The computer instruction was also held at the workplace. Since sessions were scheduled during work-hours there was no need for child-care and transportation arrangements. Employees were paid for one-hour of leave time for each two-hour session. Records were to be kept confidential,
although there was a problem with tutors losing or not keeping adequate records. Recruitment was left up to the job supervisors.

It is not surprising that the initial recruitment efforts have resulted in a relatively small number of volunteer students.

On the student application forms (verified for those interviewed) the most frequent source of initial program awareness was a personal contact—generally a supervisor or a fellow worker. Given time, what works best in recruitment is the kind of instructional excellence that generates a seeding of gratified students, teachers, and workplace supervisors to provide such word-of-mouth publicity. This should be coupled with a steady infusion of graphic reminders like the posters, flyers, and film showings also mentioned by program participants when stating how they or their fellow workers first heard about the program.

Program Three

In this program classes were held at the worksite, participation was voluntary, child care and transportation assistance was offered for after work classes, records were kept confidential. Attendance was voluntary. It was unclear if instruction was accessible to all workers. There was no mention of skill levels in the program description. Recruitment was the responsibility of educators and focused on administrators. The planners thought administrative support and acceptance would lead to higher enrollment. Workers could have their work schedules changed so they could attend classes. Classes were scheduled a minimum of two hours a week by the
Curriculum specialists and Directors of GED, ESL, and Literacy. Workers were not involved in scheduling. Workers were reimbursed for half the time they were in classes. The company paid a 15 percent fee for administrative costs. The program description did not deal specifically with the issue of confidentiality. A recruitment flyer was part of the document, it mentioned confidentiality of student records.

Program Nine

Recruitment of workers was the responsibility of employers and union participants. There was screening of participants, not all who applied could be part of the program. The program description does not indicate the criteria for inclusion.

Program participants were recruited by employers and union representatives. Introduced by employer or union representatives, the Instructors presented the program to workers and conducted an initial assessment to determine who was eligible for the classes. 309 persons were evaluated for the program. 225 students enrolled in classes.

Instruction was available for a range of skills. Classes were offered in GED preparation, ESL, and ABE. For example, there were classes offered in Basic Education and Advanced Basic Education. However, the reader is not told the difference between Basic Education and Advanced Basic Education.
This aspect of the program led to criticism by the outside evaluation team: "Classes include students of varying ability, making it difficult to teach. In written reports and in interviews, Instructors stressed the difficulty of mixing students of differing abilities in one class."

Participation appeared to be voluntary, there was no information that indicated workers were forced to attend the program. Classes met twice per week for two hours for fifteen week cycles. Workers were given release time to attend classes which were held at the worksite. Since classes were held during work hours, there was no need for child care to be offered. There is no mention of cost to was grant funded, the conclusion is that workers did not have to pay for attending the educational program. There is also no mention that records were kept confidential. The decision was to mark this criteria NI because of the lack of information.

Program Twelve

This program was offered to workers who did not pass a written driver’s test, there was no reason for workers to enroll if they had already passed the mandatory test. Participation was voluntary, however, drivers were required to pass the mandatory test. Not passing the test could mean loss of the worker’s job. Classes were held
throughout the state for workers in both urban and rural areas. Workers were not involved in the process of scheduling classes. There was no mention of childcare, record-keeping, or cost. Recruitment was directed at those workers who did not pass the written pre-test.

Discussion

The union-sponsored programs met most of the criteria for participation. Again, the conclusion can be made that unions and employers are willing to have employees involved in non-educational functions. There were more missing information and not applicable categories in this chart. The large number of NI and NA rankings also reflect the differences in programs—program settings and goals differ. Not all programs need to meet the same characteristics.

For example, child care assistance offered was ranked both as Not Applicable and No Information. The NA ranking was because the education program was held during working hours, not after hours, therefore, child care assistance was not necessary. Program Three offered to pay child care for workers who had to attend classes after work hours. In Program Twelve, there was no mention of child care assistance.
The findings of the research are discussed in the next chapter. Included in the discussion are suggestions for further study.
Chapter VI

Discussion and Implications

The analysis of the program descriptions shows that with a few exceptions, these workplace literacy program descriptions do not describe programs based on the assumptions of adult education. Even programs which have union representatives on the planning board are not participatory, learner-centered programs according to the criteria established for this study. Some aspects of the programs warrant further discussion.

Theory versus Practice

The purpose of this research was to discover, through the content analysis of workplace literacy program descriptions, if workplace literacy programs are based on the principles of adult education. Chapter Two described learner-centered education, detailing the role of the teacher, learner, methods, and evaluation. The conclusion was that educational programs based on the assumptions of adult education are learner-centered. The learners are actively involved in the planning and implementation of their educational program. The analysis of the data shows that these workplace literacy programs, with a few
exceptions, do not meet the criteria of adult education established by this researcher. One possible explanation for this could be the gap between theory and practice.

Describing learner-centered education and implementing learner-centered education are not the same undertakings. However, as shown by Soifer, Young and Irwin (1989), it is possible to translate the criteria for a learner-centered education program to the environment of the workplace. Their description of the Academy and its workplace literacy program is an example of "putting philosophy into practice" (p.67). Some of the criteria for analyzing the workplace literacy program descriptions came from the description of the Academy.

Learner-centered education is not the norm. For an adult educator to plan a learner-centered program may mean overcoming resistance from company management, education administrators and other educators. Some funding agencies have requirements that do not match the criteria for learner-centered education. An educator who looks for information on workplace literacy and basic education will find an abundance of information on functional literacy and traditional literacy education, but very little on learner-centered literacy. Again, this reflects the gap between theory and practice.
Another question could be, "Should practice conform to theory?" What actually happens in a field and what theory says should happen may be different. The problem with this approach is that theory and research can give the practitioner guidance for program planning. One of the incentives for this research was to discover if adult education practice is based on the available knowledge of how to plan learner-centered programs. Too often practice is not based on theory and research. The result is programs based on readily available materials and conventional wisdom. These programs may not reflect educational principles on how to plan programs. This research shows that this was true in the workplace literacy programs analyzed.

**Availability of Information**

Another explanation for the failure of workplace literacy programs to meet the expectations of learner-centered education could be that a program planner looking for information on workplace literacy will find very little literature on learner-centered programs. Workplace literacy programs are planned using available information. Most literacy programs use generic materials that have been developed for use in any setting (Chisman & Campbell, 1990; Fingeret, 1990). These programs use traditional academic instructional methods, such as those
found in schools. Jurmo (1991) asserts that these programs don't work very well, "Such curricula are based on questionable assumptions about how people learn to read and write, and they place undue emphasis on rote mastery of fragmented pieces of written language which are irrelevant to adults' lives, rather than on helping learners to develop the strategies we all need to make meaning out of written language" (p.74).

An alternative to the generic materials is contextual or functional literacy. The best known advocate for this approach is Thomas Stitcht (Chisman and Campbell, 1990). Advocates of the functional approach believe that adults will learn more rapidly and will be more motivated to learn if the learning is directly related to their work. General skills instruction and traditional teaching of reading and writing do not transfer well to the workplace, therefore basic skills are selected for instruction only if they promote knowledge of job-related content and tasks (Stitcht, 1988; Mikulecky, 1987b). Materials, activities, and methods used should fit the specific needs of the workplace. Eight of the twelve program descriptions analyzed clearly were using the functional approach to literacy training.

The problem with functional approaches is that they are not learner-centered. The organization determines
what the goals of instruction should be, how to achieve the goals, when the goals have been met. In learner-centered education the learner is involved with planning the program—including setting goals for instruction, curriculum, methods, and evaluation.

The popularity of functional and generic approaches in the education literature and with publishers of educational materials creates a cycle that is difficult to break. A program planner looking for information and materials will find many resources on generic and functional approaches in the workplace, not so much on learner-centered approaches. Jurmo describes the planning of workplace programs, "In too many cases, planners of employee basic education programs have little prior experience putting together a literacy program, and they naturally assume that any old instructional method will do. They assume that teaching reading is basically the same process they went through back in grammar school" (Jurmo, 1991b, p.72). Unless advocates of learner-centered education take an active role in promoting education programs which are based on learner-centered principles, the cycle will continue and generic and functional approaches will continue to be those used most frequently.
Respect for Learners

Learner-centered education stresses respect for learners: adults are capable of participating in the planning and implementation of their educational programs. Being respectful of learners is especially important in workplace basic skills programs where the learner is attending under pressure from possible job loss or loss of promotional opportunities. Connelly and Light (1991) were quoted in Chapter II, "Authoritarian and paternalistic attitudes in education are incompatible with the principle of respect for learners" (p.236).

Also in Chapter II, Draper is quoted (1991), "Adult learners have a right to a voice in decisions regarding the content of their learning. Educationally disadvantaged adults, in particular, need this voice in order to become informed of their rights, their individual and group strengths, and avenues for their participation. The involvement of the learners is essential. All programs should recognize this principle of adult education" (p.99).

Jurmo (1989a) lists enhancing cognitive and social traits as one of the goals of participatory literacy education. This includes not only improved reading and writing but also improved self-esteem. Including learners
in the planning of their own educational program results in improved self-image and reduced anxiety levels.

Fingeret (1983) described adult basic educators as viewing their students in terms of "incompetence, inability and illiteracy, even though this kind of orientation has been labeled a deficit perspective and is under attack in a variety of social science disciplines." (p.133) This description is ten-years old, yet the workplace literacy program descriptions analyzed in this study show these views are still present.

For example, one lesson, (Housekeeping-Cleaning), included in a program description, has the teacher introduce cleaning items to class members. The class is made up of members of the Housekeeping staff, some of whom have worked in the department for several years. Telling these people the names of common household items that they use regularly in their jobs— in some cases, had used for years, recalls Fingeret's earlier comment, "Adult basic educators continue to define their student populations in terms of incompetence, inability, and illiteracy" (p.133).

Schultz (1992) also gives examples of workplace literacy program lessons which are, "essentially meaningless (not to mention infantilizing) to the learners themselves" (p.30). The programs relate the lessons to
the job context. The result is "trivial adaptations of standard adult education curricula" (p.30).

**The Role of Teachers**

The role of teachers in the workplace literacy programs analyzed needs to be examined. One program had only volunteer tutors as teachers, two of the programs did not describe the role of the teacher, and in four of the program descriptions there was no mention of teachers evaluating the programs on completion. Instructors were rarely mentioned in the programs reviewed by Schultz (1992):

For example, Workplace Literacy (1992), the report issued by the U.S. Department of Education on the first three funding cycles of workplace education programs, states, "How workplace literacy is provided is critical." (p.22) Following this statement is the argument that basic skills should be taught in a job-related context. There is no mention of pedagogy or ways to think about how to set up learning environments (p.26).

The conclusion is that literacy audits, curriculum planning, testing, and evaluating are more necessary and important than teaching.

The programs reflect what Fingeret (1984) describes as the prevailing attitude towards teachers in literacy programs. Teachers tend to be chosen for their characteristics as concerned, caring individuals rather than for specific instructional skills or training. The
belief appears to be that placing an enthusiastic, caring individual in the classroom will result in learning.

Chapter II established the role of the student-centered teacher. Students are encouraged to participate in planning and decision making in the educational process. The teacher does not use the "banking education" approach in the classroom. The instructor is responsible for managing and facilitating the learning process, not for imparting knowledge.

Rogers (1982) wrote, "My experience has been that I cannot teach another person how to teach" (p.223). This statement sums up one of the problems with the role of the teacher in adult education. Student-centered teaching methods are encouraged, teachers are told the methods should be participatory, discussion is encouraged as a method. Yet, there is little guidance for the teacher on how to accomplish this. If the literature is vague on the role of the adult education instructor and the belief continues that a "nice person" is adequate for teaching in adult basic education; it is not surprising that the role of the teacher in workplace literacy programs is secondary to other roles.

The teachers involved in these workplace literacy programs did not use methods based on the criteria of adult education. As mentioned above, one reason could be
the vagueness of the literature on how to meet these criteria. Another explanation is that teachers in adult basic education programs learn traditional student-centered teaching methods. In Chapter II, Bergevin (1967) is cited as criticizing traditional teaching procedures for being inadequate. The procedures are usually subject-oriented and mechanistic, better fitting administrators' needs than the learners' needs.

Ulmer (1974) also critiques traditional teacher-training. Public school teachers are recruited for adult remedial education, provided with training, then put in the classroom. These teachers learn the "code words" of adult education but the training does little to change their basic orientation to teaching from the practice of imparting knowledge.

The emphasis in workplace literacy programs is on determining job-related skills and efficient means of teaching these skills (Jurmo, 1991b). These decisions are made without input from the learner, and in most cases, without input from the teacher. This type of decision making and program management reflects Tayloristic principles (see discussion in Chapter III). Before workplace programs will allow learners and teachers to have a meaningful voice in planning and implementation
changes will need to be made not only in teacher education but also in management philosophies.

The Role of Funders

Educational programs are planned to meet the requirements of funding agencies. A program that is funded by an agency will meet the criteria set by the agency or face the loss of funding. The requirements set by funding agencies may not meet the criteria of participatory literacy education. Following is a list of the funding agencies for the programs reviewed:

1. State funding
2. National Workplace Literacy Program
3. National Workplace Literacy Program
4. Employer, city school system
5. National Workplace Literacy Program
6. National Workplace Literacy Program
7. National Workplace Literacy Program
8. Literacy foundation and city school system
9. National Workplace Literacy Program
10. National Workplace Literacy Program
11. State funding
12. National Workplace Literacy Program

The National Workplace Literacy Program was created in 1988 through the Hawkins and Stafford Elementary and Secondary School Improvement Amendments. The purpose was to fund projects to improve the productivity of the workforce through improvement in literacy skills. These projects are funded by the U.S. Department of Education. The National Workplace Literacy Program used functional context curriculum as one of the criteria for naming exemplary programs (Schultz, 1992). Eight of the twelve
programs analyzed in this research were funded through the National Workplace Literacy Program. None of these programs met the requirements for participatory education. Yet, they all met the requirements of the funding agency. Schultz reported that most workplace literacy programs are nearly identical with planners accepting a single way to set up projects without question.

Funding agencies have access to the same information on planning workplace programs that planners have. Since there is much more information available on generic and functional approaches than on participatory education, it is not surprising that funding agencies set requirements which do not meet the criteria for participatory education.

Jurmo (1989c) described the funders who are unreceptive to participatory literacy as pushing for inappropriate standards. Funders require standardized reading tests, enrollment figures, and other traditional means to measure program success. He also notes that some educators keep two sets of records—one for the funder, one for their own use. Until more funders become aware of the principles of participatory education and are willing to allow educators to step outside of mainstream programming, educators may have to use innovative means if they want to implement learner-centered ideas.
Testing in Workplace Literacy Programs

Claims of evaluators in the workplace literacy programs analyzed need to be viewed with some skepticism. Program Eight evaluators claimed an average of two grade levels of improvement in reading and 2.7 for mathematics after 80 hours of instruction. Program Six evaluators claimed an average gain of 1.8 grade level, with a high of 3.2 and a low of .2 after eight to fifteen weeks of instruction, with classes meeting twice a week for one hour and forty-five minutes. Program Seven evaluators claimed average gains per hour of instruction of .03 in reading, .06 in language, and .05 in mathematics.

Mikulecky (1987) cites the work of Stitcht who tested the belief that adults learn to read more rapidly than children. Stitcht investigated the effect of method and rate of presentation of materials on the reading achievement of adults averaging 5.5 grade level in tested reading ability and on reading achievement of average third to fifth grade students. He found no evidence that adults performed better or learned more quickly than children. Stitcht also summarized dozens of military studies and found that a grade level gain in reading takes enlisted men from 80 to 120 hours of instruction.

Mikulecky (1987) also cites W. Kent who evaluated 2,300 students from 200 classes in 90 programs located in
fifteen states. Reading gains over a five month period averaged 0.5 grade level with one third of the population showing no gain or a net loss. Kent also studied Manpower Development Training Act programs and found that after 54 hours of instruction, the average reading level increase was 0.4.

The work of these researchers causes some skepticism of the grade level increases cited in the program descriptions. For example, the claims by Program Seven evaluators extrapolate to grade level increases of one grade level per 33 1/3 hours of reading instruction, one grade level per 17 hours of instruction in language, and one grade level per 20 hours of instruction in mathematics. These figures do not match the expectations of grade level increases found in the research literature.

Another issue is the standardized testing used in the programs for initial placement, on-going measurement, and end of program evaluation. Many of the programs used tests which assigned grade levels to the worker's abilities. In Chapter III, Hull's (1991) work was cited as challenging grade level testing as a means of assessment. Workers carry out work practices beyond measured grade levels. BCEL (1987) and Mikulecky (1987b) also report that workers demonstrate more competence in
work-related materials than is indicated on grade levels tests. Collins, Balmuth, & Jean (1989) emphasize that grade level standards do not reflect the literacy needs for specific job functions. Interestingly, in Program One the authors write that workers reported being able to read materials from outside of work more easily than materials found on the job.

Short and Grognet (1988) find fault with grade level tests for the following reasons: (1) they do not contain job-related vocabulary or tasks; (2) they are not indicative of the actual demands placed on the workers; (3) they are of the paper and pencil type rather than performance-based; (4) they do not contain an oral component; and (5) they do not require the examinee to interpret and analyze. Despite the criticism, workplace literacy programmers continue to plan educational programs using grade-level tests.

One of the reasons for this is that many funders require grade-level assessment tests and end-of-program evaluations which measure progress in grade-levels. A review of the National Workplace Literacy Program recommended that researchers determine a standard number of hours of workplace literacy instruction required for participant literacy levels to increase. This recommendation is based on the assumption that learning is
the same for every individual. Program directors frequently make a correlation between number of hours in class and advances in learning. This practice makes it easy for companies to calculate the cost of increasing the reading levels of workers (Schultz, 1992).

Another testing issue is the tests chosen to measure proficiencies. The following standardized tests were among the many used in these programs: ABLE (Adult Basic Learning Exam), AIRT (Adult Informal Reading Test), BEST (Basic English Skills Test), CASAS (California Adult Student Assessment System), IRT (Industrial Reading Test), READ (Reading Evaluation-Adult Diagnosis), and TABE (Tests of Adult Basic Education). Short and Grognet (1988) review these tests and discuss which are appropriate for workplace settings. Their findings:

ABLE was not designed for literacy nor for a workplace assessment.

AIRT is not an accurate test for workplace literacy. The testing of oral reading is not a valid measurement since few jobs require an employee to read aloud at a specific rate and then check the comprehension of what has been read.

BEST uses pre-vocational language and tasks. These are too general to accurately measure workplace literacy.
CASAS is functionally based and contains items related to the workplace. The test does not assess literacy.

IRT is not designed for use below the ninth grade level. It is not suited for a workplace where physical manipulation is required. It is a test of reading skill, and a paper and pencil test.

READ has no workplace orientation. The words and paragraphs are not job-related and no job-like documents are included.

TABE is not designed to test workplace literacy. None of the language nor tasks are job-related, except exercises about tables of content and indexes.

The use of assessment tests not designed for the workplace in workplace programs is curious. Information on the intended use of the tests is readily available, yet they are frequently misused. Again, one of the reasons could be the requirement by funders that grade-level, standardized, statistical tests be used for assessment and evaluation. Schultz’s (1992) research found that,

while most programs assert that standardized tests do not accurately measure either the knowledge employees bring to programs and, what is perhaps more problematical, the knowledge they gain through participation in programs, nearly every program uses these measures and reports the test scores. (p.iv)

If evaluators know that standardized tests are not appropriate, yet they still use them, a reason in addition
to funding requirements could be that evaluators do not know how to use any means of evaluation other than those commonly used.

Implications for Further Research

This study should be seen as an exploratory study of workplace literacy. The purpose of exploratory research is, "exploring a topic to familiarize the researcher and his subsequent audiences with it" (Babbie, 1975, p.50). This is especially necessary when the topic is new. Babbie describes three reasons for exploratory studies: (1) simply to satisfy the researchers curiosity and desire for a better understanding, (2) to test the feasibility of undertaking a more careful study, and (3) to develop methods to be used in a more careful study. Exploratory studies are valuable because they may yield new insights into a topic for research. The chief problem with them is that they almost never provide answers to research questions. They can hint at answers, and provide insight into research methods that could provide answers.

This has been an exploratory study. It has satisfied the curiosity of this researcher on the planning and implementation of workplace literacy programs. It has provided information that could lead to more detailed study on workplace literacy programs. The findings of the research point out that there is a need to observe
programs and determine whether the program descriptions accurately reflect what is happening in the programs.

Also, the criteria for participatory literacy education can be used by practitioners who want to learn the degree to which their programs match the requirements for participatory literacy education. Other examples of further research suggested by the findings of this study:

The role of teachers appeared to be an afterthought of the program planners in some cases. How important is the teacher in workplace literacy settings? Is curriculum more important to a successful program than teaching? Can volunteer tutors substitute for paid teachers or should they be used to complement the instruction of the teachers? Program One used volunteer tutors exclusively in one part of the program. There were problems with this program—mainly lack of personnel and materials. Could a volunteer program with adequate personnel, materials and training replace paid teachers?

The union-sponsored programs were successful at including representatives of the union in planning and in getting benefits for the student-worker (such as child care, transportation, release time). Yet, these programs were not any more likely than non-union workplace programs to have instructional programs which met the requirements of participatory literacy and adult education. These
findings lead to at least two questions: Are these programs representative? If so, why are the criteria of worker-centered education not being implemented?

Another area of additional research should be academic achievement. There already has been some research cited in Chapter II on programs which had active learner involvement. This research should be extended to the workplace. This area of inquiry could also include the use of pre-programmed curricular material versus the use of learner-centered curricular material.

If the structure of the workplace changes, will the structure of workplace education change also? If American businesses start to change from the old notions of production to new, high-production ideas (see Chapter III), will there be accompanying changes in workplace education?

Also, an interesting study would be to visit the worksites of the programs described in this paper, observe the education programs and determine if the descriptions actually mirror reality. Content analysis is an accepted research method, yet, there is always the question of whether the written report reflects what actually happened.

Finally, adult educators should consider their role in workplace education. If adult education is learner-
centered, if adult educators believe in active involvement of the learner, do they also have a responsibility to potential learners to ensure that their education programs, whether in the workplace or not, are based on the principles of learner-centered education? This would mean adult educators would need to become active in distributing information about learner-centered education, in all settings, workplace and community. Otherwise, adult education will become a discipline that separates theory from practice, leaving educators who are not learner-centered to control adult education programs.

**Personal Reflections**

After spending the past year and a half reading and thinking about workplace literacy almost on a daily basis, I have some personal reflections on the subject.

The slow acceptance of participatory education is not puzzling. Even though it is solidly based in the education literature—not only in adult education, but in other education specialties as well, acceptance will likely continue to be slow. The reason is that making participatory education accepted will require more than making information available and changing funding requirements. Americans will need to change the way they think of education before participatory, learner-centered education will become accepted.
Imagine workers who have had unsuccessful experiences with education. They are told they have to go to school or face losing their jobs. They go to their basic skills class and are faced with a teacher who tells them they will set goals, their education will be based on what they know, not on what they don’t know. Evaluation will be a cooperative venture between learners and teachers. The learner is sitting in the classroom, wondering what has happened to education since his/her youth. The learner is wondering how much personal time has to be invested in an educational program that he/she may not want to be involved in the first place. This scenario should not be considered fantasy, it is the reality for many workers. Educators need to be prepared to deal with the resistance that comes from unfamiliarity. Schultz (1992) cautions that the relationship between teachers and learners should be reexamined. Adults enter education programs with expectations about the roles of the teacher and student and may react negatively if the role expectations are violated.

From our earliest exposure to education, Americans learn to see education from the perspective of banking education. Students receive information from teachers who receive instruction on what to teach from some administrative body. For most Americans, that is the
structure of education. The learners, teachers, and program planners in workplace education programs as currently operated see education from the perspective just described. Advocates of learner-centered education need to look at ways of helping change attitudes toward education at all levels—from that for young children through education for adults.

The issue of voluntariness also was not discussed in detail. Employees who face losing their jobs or opportunities for advancement because they lack basic skills are enrolling in workplace education programs. In some cases, workers are signing up voluntarily. While these workers may not be required by their employers to attend, the threat of losing their jobs serves as coercion. One of the principles of effective adult education, according to Brookfield (1986), is voluntariness. "First and foremost, the educator has no need to spend a great deal of time and energy dealing with outright defiance, veiled opposition, or studied indifference among learners." (p.10) Employees in workplace programs are not truly voluntary learners. The concern I have is how do educators deal with the resentment and fear of the workers. Making a program learner-centered does not mean the workers will have less resentment at being in basic skills classes. They may
have more involvement in their education programs but they are still in the classes involuntarily.

Another concern is the attitudes of the media, management, and education toward adults who need basic skills education. In Chapter 3, I provided quotes that attributed the economic problems of the country to workers with low-level skills. These attitudes are typical of those toward adults with low-level skills. Adults who are already resistant to learning and fearful of failure need not carry the burden of the survival of the United States economy on their shoulders.

Finally, I want to repeat something I said at the beginning of this paper. Adult educators know how to plan education programs for adults. Adult educators know that lack of education is not the cause of the nation’s economic problems. Educators need to take that knowledge and use it.
Appendix A

MEMBER CHECK
Five program descriptions were sent to ten people. Each description was evaluated by two people. Two questionnaires were not returned. Both of these questionnaires were for Program Four. Therefore, a total of four programs had outside reviewers. A copy of the information sent to the outside reviewers, the results of the outside evaluation, and a brief discussion of the findings are included in this Appendix. The information on the union role in program planning was sent only to the people who evaluated the programs with union involvement.

After the questionnaires were returned, the findings were put into charts and compared with the original findings of this researcher. In every instance where there was disagreement between the original research and the reviewers, the data were checked for verification of the original findings.

One major difference in the findings of the outside reviewers and the original research is that the outside reviewers were less likely to make inferences. In the original research, inferences were made based on the overall program description. The inferences were made after carefully reading the program description many times. Also, making inferences means the reviewer is
familiar enough with the criteria for evaluation that they can be abstractly applied. It would seem to be unreasonable to expect outside reviewers to invest this much time into reviewing the articles.

There was more agreement when the data for a criteria were easy to find. In cases where the data were obvious and there were many examples to support a conclusion, the reviewers were more likely to agree with the original researcher. When there was only one bit of data or when the data were difficult to find, there was more disagreement. Again, the outside reviewers were less likely to read each article many times to ensure that they had not missed a piece of data.

Finally, in qualitative research, there can be differences in interpretations because of differences in perspective. The background of the researcher can influence research decisions. The quality of the data should not be judged on agreement between reviewers and the original research.
Thank you for agreeing to review an article for my dissertation research. In addition to the article, the following are enclosed:

1. A brief description of the research.
2. A checklist of criteria to use in evaluating the article.
3. Three short chapters from the book, Participatory Literacy Education, which you can refer to if you want more information on the criteria for evaluation.

After you have finished reading and evaluating the article, please return it to me in the enclosed envelope.

If you have any questions, please contact me. My phone number is 262-0172.
This research was to determine whether workplace literacy programs are based on principles of adult education. This was done in three steps. First, the adult education literature was reviewed to determine the principles which guide practice in the field. The following practices were examined: the role of the learner in program planning, the role of the teacher and learner in evaluating educational programs and learner progress, the role of the learner and teacher in instructional methods, content in educational programs, and technology in educational programs.

Second, the educational principles of adult education were compared to participatory literacy education. Participatory literacy education is a model of literacy education which includes the learner in every aspect of the program—from planning to evaluation. The conclusion was that participatory literacy education uses principles which closely resemble those of adult education. Finally, workplace literacy programs descriptions were analyzed to determine if the programs were using the principles of adult education as contained in participatory literacy education.

Following are characteristics of a participatory workplace literacy program:
Program Planning in Participatory Programs

The learner is involved in:
- choosing materials
- delivering instruction
- recruiting new learners
- scheduling classes
- fund raising
- public relations
- setting program policy
- intake procedures
- initial interviews of new learners
- needs assessment
- mentoring new students
- participating on the board of directors either through appointment or election
- staff training

Program Evaluation in Participatory Programs
The learner is involved in:
- regular feedback sessions involving learners, instructors, and program supervisors

Instructional Evaluation in Participatory Programs
The learner is involved in:
- informal feedback to staff on activities as they occur
- formal measures of evaluation reviewed by learners and teachers

Personal Evaluation in Participatory Programs
The learner is involved in:
- assessing own learning needs and objectives
- correcting mistakes without depending on others
- monitoring his/her own progress
- personal evaluation of progress toward learning goals
- keeping a portfolio of measurement to be aware of progress

The teacher is involved in:
- evaluating authenticity, organization, mechanics of learner writings
- providing multiple opportunities to the learner to test written language in a low risk environment
- evaluating personal progress with the learner
- deciding with the learner whether he/she should continue, go to another class, or not continue

Instructional Methods in Participatory Programs
The learner is involved in:
- planning instructional activities
teaching peers
collaborative teaching
serving as a resource to other learners and teachers
feedback and guidance to each other
discussing, reading, writing about issues related to
their own lives
determining learning strategies
self-directed work groups
collecting information about work procedures by
reading manuals or by direct observation
interpreting and recording work related information
in graphs, charts, written form
problem solving

The teacher is involved in:
using methods which will promote self-expression and
dialogue
developing methods for meeting goals through active
experimentation
selecting content materials to provoke oral and
written language and to expand language
open-ended questioning
regularly scheduled instruction
introducing and modeling learning strategies

The teacher in participatory programs:
The teacher is involved in:
setting up a learning environment that encourages the
learner to explore a variety of forms of written
language and to find the ones which are meaningful
developing reading and writing instruction focused on
issues that have meaning for the learner
collaborative teaching and learning
incorporating prior knowledge and experience

Content in participatory programs:
The focus is on issues that have meaning for the learner:
emphasis on real speaking and writing
materials build on prior knowledge and are related to
personal work lives
materials are related to workplace issues

Technology in participatory programs:
Instruction about computers is relevant to the learners
instruction:
focus on word processing, data bases, graphics,
entering and editing texts
used to augment learners listening, writing, and
speaking skills
These criteria are very general and overlap so they were condensed for the actual analysis. The following categories resulted:

- Program Planning
- Learner and Teacher Role in Evaluation
- Learner and Teacher Role in Instruction
The Union Role in Program Planning

Unions want to be involved in the development of workplace literacy programs so the needs of the worker will be emphasized rather than training needs identified by the employer. A worker-centered approach to workplace literacy will have the following characteristics:

Union role in job analysis

Union leadership determines the proposed job analysis process and describes it to its members.

Workers are involved in preparing the description of job duties for their positions.

No job observation is performed without the cooperation of the worker involved, with plenty of time for planning and union monitoring.

Job tasks are analyzed to show the range of occupational and functional skills that contribute to the performance of each job—not to link jobs to grade levels or to develop criteria to screen workers out of jobs.

Union representatives participate in setting the performance criteria to be used in reviewing how workers perform their current jobs.

Job analysis findings show an understanding of the growing training requirements in the workplace, rather than emphasizing only workers' skills deficiencies.
Workers receive assurance that job analysis will be used for program planning—not as a basis for firing, transferring, or limiting the future wages of those whose jobs are assessed.

Workers are offered the opportunity to learn new skills to meet identified needs if they choose.

Unions participate in establishing a worker-involved process for setting education and training goals.

Individual workers help set training goals for their own jobs, in cooperation with their supervisors, using job analysis findings.

The worker-centered classroom

Unions should work closely with educators in structuring classroom activities and developing course materials. A worker-centered classroom is a place of learning rather than training. Learning implies an active role for the learners, training implies a passive role. Active worker participation should be central to the education program.

In a worker-centered education program:

The members participate in planning the program, through union representatives.

Individuals develop a learning plan jointly with instructors or counselors when they enter the program.
This plan will briefly outline the worker's own learning goals and proposals for achieving them.

Teaching integrates basic educational skills with life skills. The curriculum should build on what the learners know.

Instructors visit the worksite to meet with experienced workers and learn more about their jobs. Workers give instructors copies of actual written materials used in their jobs.

The curriculum plan and instructional materials are developed by combining information from employees about their jobs and information from the needs assessment and job analysis.

Computerized learning programs are used which support learning objectives.

Assessment in worker-centered programs

Evaluation procedures must be established to determine if the program is helping the learners. The workers must be involved in testing. Assessment should be part of the learning process.

In a worker-centered program:

There are regular feedback sessions that involve the learner.

Pre-and post-program interviews are held with learners to assess satisfaction with the program and
changes in the workplace (attendance, turnover, advancement, frequency of workplace problems) attributable to the program.

Standardized testing is kept to a minimum.

Grade-level performance tests are avoided.

Experienced students interview new learners in peer interviews.

On-going assessment takes place throughout the program. Learners assess their own learning plus instructors assess learners.

Union constructed competency based tests are used.

Participation in worker-centered programs

In worker-centered programs workers have full and fair access to education programs. The programs are accessible to all workers, participation is voluntary, no workers are forced to participate. Instruction is offered to all skill levels—beginning, intermediate, and advanced levels.

Classes should be held in locations convenient to all workers. Scheduling of classes is tailored to the worker’s schedule. Child care assistance is available on-site or arrangements are made with community organizations. Cost to participants is minimized, operating costs are not passed along to workers. If attendance is mandatory, the workers are paid for
attending the classes. Classroom records, which include information about classroom performance and test scores, are kept confidential from management and union leaders. Union representatives publicize the educational program and assume responsibility for recruiting workers into the program.

Characteristics for worker-developed job analysis
- Union determines job analysis process.
- Workers prepare description of job duties.
- Workers are involved in job observation.
- Analysis shows range of skills for each job.
- Unions help set performance criteria.
- Job analysis only used for program planning.
- Workers can learn new skills if they choose.
- Unions help set education and training goals.
- Workers help set training goals for their own jobs.

Characteristics of a worker-centered classroom
- Union participates in planning
- Individualized learning programs
- Education integrated with life skills
- Instruction based on information form workers
- Computer instruction supports worker' learning objectives

Characteristics of assessment in union-sponsored programs:
- Regular feedback to learners
- Pre-and post-program interviews
- Minimal standardized testing
- Grade level tests avoided
- Peer interviews
- Learner-centered program assessment
- Union constructed competency tests

Characteristics of a worker-centered program
- Programs are accessible to all workers.
- Instruction is offered to all skill levels.
- Participation is voluntary.
- Location is convenient to all workers.
- Scheduling is tailored to all worker schedules.
- Child care assistance is offered.
- Cost is minimal.
- Workers are paid for mandatory classes.
- Records are confidential.
Unions are responsible for recruitment.
Instructions
The purpose of this exercise is to determine whether the article describes a workplace literacy program which contains the criteria for literacy education which were established earlier. Read the article carefully, then mark the response you think is most appropriate for each category. If you are unable to make a decision for a particular category, please explain why on the back of the survey form.

Responses

NA=Not Appropriate--means the criteria are not appropriate for the program or does not apply.

NI=No Information--means there is not enough information in the article to determine if the criteria are appropriate.

X=means that the program met this criterion

Blank=the program does not meet this criterion
Learner Participation in Program Planning

Learners participate in:

- Choosing materials
- Recruitment
- Scheduling classes
- Fund raising
- Public relations
- Setting program policy
- Intake procedures for new students
- Needs assessment
- Mentoring
- Participation on board of directors
- Staff training
- Union representative on planning board

Learner and Teacher role in Evaluation

- Learners have regular feedback sessions with instructors and program supervisors
- Formal measures of evaluation are reviewed by learners and instructors
- Learners assess own learning needs and objectives
- Learner keeps own portfolio of measurement
- Learners evaluate program on completion
- Teachers evaluate program on completion
Learner and Teacher Role in Instruction

- Instruction promotes self-expression and dialogue
- Instructional methods used which lead to experimentation
- Open-ended questioning used in instruction
- Instruction is regularly scheduled
- Teachers introduce and model learning strategies
- Collaborative teaching **
- Instruction builds on learner’s prior knowledge
- Instruction relates to personal work lives
- Instruction uses word processing
- Databases are used
- Graphics programs are used
- Computer augments listening, writing, speaking skills

** teacher and learner teach and learn together
Worker-Developed Job Analysis

- Union determines analysis process
- Workers describe job duties
- Analysis shows range of skills for each job
- Unions set performance criteria for jobs
- Job analysis used for program planning
- Unions assist in setting education and training goals
- Workers assist in setting training goals for their own jobs
- Workers can learn new skills

Worker-Centered Classroom

- Unions participate in planning
- Individualized learning programs for each worker
- Education integrated with life skills
- Instruction based on information from workers
- Computer instruction supports worker learning objectives

Assessment in Union-Sponsored Programs

- Regular feedback to learners
- Pre-and post-program interviews
- Minimal standardized testing
- Grade level tests are avoided
- Peer interviews
- Learner-centered program assessment
Participation in Union-Sponsored Programs

- Union constructed competency tests
- Program accessible to all workers
- Instruction offered at all skill levels
- Participation is voluntary
- Convenient location
- Convenient scheduling
- Child care assistance offered
- Minimal cost to learners
- Pay for mandatory classes
- Confidential records
- Recruitment of learners by unions
### Table 9
Learner Participation in Program Planning

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>A</th>
<th>B</th>
<th>C</th>
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</thead>
<tbody>
<tr>
<td>Choosing Materials</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduling Classes</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fund Raising</td>
<td>NI</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Public Relations</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting Program Policy</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intake Procedures for New Students</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needs Assessment</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentoring</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation on Board of Directors</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Training</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union Representative on Planning Board</td>
<td>X</td>
<td>NI</td>
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</tbody>
</table>

C=Original research findings

### Table 10
Learner and Teacher Role in Evaluation

<table>
<thead>
<tr>
<th>Characteristics</th>
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<th>B</th>
<th>C</th>
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<tbody>
<tr>
<td>Learners have regular feedback sessions with instructors and program supervisors</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Formal measures of evaluating are reviewed by learners and instructors</td>
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<td></td>
<td>NI</td>
</tr>
<tr>
<td>Learners assess own learning needs and objectives</td>
<td></td>
<td></td>
<td>NI</td>
</tr>
<tr>
<td>Learners keep own portfolio of measurement</td>
<td></td>
<td></td>
<td>NI</td>
</tr>
<tr>
<td>Teachers evaluate program on completion</td>
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<td>NI</td>
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C=Original research findings
Table 11

Learner and Teacher Role in Instruction

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<tbody>
<tr>
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<td>A</td>
</tr>
<tr>
<td>Instruction promotes self-expression and dialogue</td>
<td>NI</td>
</tr>
<tr>
<td>Instructional methods used which lead to experimentation</td>
<td>NI</td>
</tr>
<tr>
<td>Open-ended questioning used in instruction</td>
<td>NI</td>
</tr>
<tr>
<td>Instruction is regularly scheduled</td>
<td>X</td>
</tr>
<tr>
<td>Teachers introduce and model learning strategies</td>
<td>NI</td>
</tr>
<tr>
<td>Collaborative teaching</td>
<td>NI</td>
</tr>
<tr>
<td>Instruction builds on learner’s prior knowledge</td>
<td>X</td>
</tr>
<tr>
<td>Instruction relates to personal work lives</td>
<td>X</td>
</tr>
<tr>
<td>Instruction uses word processing</td>
<td>NI</td>
</tr>
<tr>
<td>Databases are used</td>
<td>NI</td>
</tr>
<tr>
<td>Graphics programs are used</td>
<td>NI</td>
</tr>
<tr>
<td>Computer augments listening, writing, speaking skills</td>
<td>NI</td>
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C=Original research findings
### Table 12
#### Worker-Developed Job Analysis

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Program Number 3</th>
</tr>
</thead>
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<td></td>
<td>A</td>
</tr>
<tr>
<td>Union determines analysis' process</td>
<td>NI</td>
</tr>
<tr>
<td>Workers describe job duties</td>
<td>NI</td>
</tr>
<tr>
<td>Analysis shows range of skills for each job</td>
<td>NI</td>
</tr>
<tr>
<td>Unions set performance criteria for each job</td>
<td>NI</td>
</tr>
<tr>
<td>Job analysis used for program planning</td>
<td>X</td>
</tr>
<tr>
<td>Unions assist in setting education and training goals</td>
<td>X</td>
</tr>
<tr>
<td>Workers assist in setting training goals for their own jobs</td>
<td>NI</td>
</tr>
<tr>
<td>Workers can learn new skills</td>
<td>X</td>
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</tbody>
</table>

C=Original research findings

### Table 13
#### Worker-Centered Classroom

<table>
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<th>Characteristics</th>
<th>Program Number 3</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Unions participate in planning</td>
<td>X</td>
</tr>
<tr>
<td>Individualized learning programs for each worker</td>
<td>X</td>
</tr>
<tr>
<td>Education integrated with life skills</td>
<td>NA</td>
</tr>
<tr>
<td>Instruction based on information from workers</td>
<td>NI</td>
</tr>
<tr>
<td>Computer instruction supports worker learning objectives</td>
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</tr>
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C=Original research findings
### Table 14
Assessment in Union-Sponsored Programs

<table>
<thead>
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<th>Characteristics</th>
<th>Program Number 3</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Regular feedback to learners</td>
<td>X</td>
</tr>
<tr>
<td>Pre- and post-program interviews</td>
<td>X</td>
</tr>
<tr>
<td>Minimal standardized testing</td>
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</tr>
<tr>
<td>Grade level tests are avoided</td>
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<tr>
<td>Peer interviews</td>
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<td>Learner-centered program assessment</td>
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<td>Union constructed competency tests</td>
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C=Original research findings

### Table 15
Participation in Union-Sponsored Programs

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<tr>
<td>Program accessible to all workers</td>
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<tr>
<td>Instruction offered at all skill levels</td>
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<tr>
<td>Participation is voluntary</td>
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<td>Convenient location</td>
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<td>Convenient scheduling</td>
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<td>Child care assistance offered</td>
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<tr>
<td>Minimal cost to learners</td>
<td>NA</td>
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<td>Pay for mandatory classes</td>
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<td>Confidential records</td>
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<td>Recruitment of learners by unions</td>
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C=Original research findings
Table 16
Learner Participation in Program Planning

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<td>A</td>
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<tr>
<td>Choosing Materials</td>
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<td>Recruitment</td>
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<td>Mentoring</td>
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C=Original research findings

Table 17
Learner and Teacher Role in Evaluation

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<tr>
<td>Learners have regular feedback sessions with instructors and program supervisors</td>
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<tr>
<td>Formal measures of evaluating are reviewed by learners and instructors</td>
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</tr>
<tr>
<td>Learners assess own learning needs and objectives</td>
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<td>Learners keep own portfolio of measurement</td>
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<td>Learners evaluate program on completion</td>
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<td>Teachers evaluate program on completion</td>
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C=Original research findings
Table 18

Learner and Teacher Role in Instruction

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<td>A</td>
</tr>
<tr>
<td>Instruction promotes self-expression and dialogue</td>
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</tr>
<tr>
<td>Instructional methods used which lead to experimentation</td>
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<tr>
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<tr>
<td>Computer augments listening, writing, speaking skills</td>
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</table>

C=Original research findings
Table 19
Learner Participation in Program Planning

<table>
<thead>
<tr>
<th>Characteristics</th>
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<tbody>
<tr>
<td></td>
<td>A</td>
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<td>Intake Procedures for New Students</td>
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<td>Union Representative on Planning Board</td>
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C=Original research findings

Table 20
Learner and Teacher Role in Evaluation

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<tr>
<td></td>
<td>A</td>
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<tr>
<td>Learners have regular feedback sessions with</td>
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<td>instructors and program supervisors</td>
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<tr>
<td>Formal measures of evaluating are reviewed by learners</td>
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<tr>
<td>and instructors</td>
<td></td>
</tr>
<tr>
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<td>Learners keep own portfolio of measurement</td>
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<td>Learners evaluate program on completion</td>
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<td>Teachers evaluate program on completion</td>
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<td></td>
<td>A</td>
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<tr>
<td>Instruction promotes self-expression and dialogue</td>
<td>NI</td>
</tr>
<tr>
<td>Instructional methods used which lead to experimentation</td>
<td>NI</td>
</tr>
<tr>
<td>Open-ended questioning used in instruction</td>
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<td>Computer augments listening, writing, speaking skills</td>
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C=Original research findings
Table 22
Worker-Developed Job Analysis

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<td>A</td>
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<tr>
<td>Union determines analysis process</td>
<td>NA</td>
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<tr>
<td>Workers describe job duties</td>
<td>NA</td>
</tr>
<tr>
<td>Analysis shows range of skills for each job</td>
<td>NA</td>
</tr>
<tr>
<td>Unions set performance criteria for each job</td>
<td>NA</td>
</tr>
<tr>
<td>Job analysis used for program planning</td>
<td>NA</td>
</tr>
<tr>
<td>Unions assist in setting education and training goals</td>
<td>NA</td>
</tr>
<tr>
<td>Workers assist in setting training goals for their own jobs</td>
<td>NA</td>
</tr>
<tr>
<td>Workers can learn new skills</td>
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C=Original research findings

Table 23
Worker-Centered Classroom

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<thead>
<tr>
<th>Characteristics</th>
<th>Program Number 9</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Unions participate in planning</td>
<td>X</td>
</tr>
<tr>
<td>Individualized learning programs for each worker</td>
<td>X</td>
</tr>
<tr>
<td>Education integrated with life skills</td>
<td></td>
</tr>
<tr>
<td>Instruction based on information from workers</td>
<td>X</td>
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<tr>
<td>Computer instruction supports worker learning objectives</td>
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C=Original research findings
Table 24
Assessment in Union-Sponsored Programs

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<th>Program Number 9</th>
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<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Regular feedback to learners</td>
<td>NI</td>
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<tr>
<td>Pre- and post-program interviews</td>
<td>NI</td>
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<tr>
<td>Minimal standardized testing</td>
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<tr>
<td>Grade level tests are avoided</td>
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<tr>
<td>Peer interviews</td>
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<td>Learner-centered program assessment</td>
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<td>Union constructed competency tests</td>
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Table 25
Participation in Union-Sponsored Programs

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<tr>
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<td>A</td>
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<tr>
<td>Program accessible to all workers</td>
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<td>Instruction offered at all skill levels</td>
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<tr>
<td>Participation is voluntary</td>
<td>X</td>
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<tr>
<td>Convenient location</td>
<td>X</td>
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<tr>
<td>Convenient scheduling</td>
<td>X</td>
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<td>Child care assistance offered</td>
<td>NI</td>
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<tr>
<td>Minimal cost to learners</td>
<td>X</td>
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<tr>
<td>Pay for mandatory classes</td>
<td>NI</td>
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<tr>
<td>Confidential records</td>
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<td>Recruitment of learners by unions</td>
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### Table 26
Learner Participation in Program Planning

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<td>A</td>
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</tr>
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C=Original research findings

### Table 27
Learner and Teacher Role in Evaluation

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Table 28
Learner and Teacher Role in Instruction

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Appendix B

Description of Data
DESCRIPTION OF DATA

The data in the following appendixes were taken from the program descriptions and used as the basis for making decisions on whether a program met the criteria for participatory workplace literacy. In most cases, the words are those used in the articles. There are some exceptions;

Names of cities, schools, agencies, workplaces, and people were omitted.

When there were lists of information not necessary for making a decision, they were left out. For example, in Program Two, there were three pages of names and dates of dissemination activities. There was also a full page of names and affiliations of advisory board members. Neither of these were included.

At times, the information for answering several criteria could be found in one section of the program description or in one or more of the preceding citations. In those cases, criteria were listed together with no comments in between listings. For example, Program Three, D. Worker-Developed Job Analysis. The citations for:

II. Workers describe job duties, and
III. Workers involved in job observation, and
IV. Analysis shows range of skills for each job, are the same. The criteria were listed together and the citations for all three followed the final criteria.

I. Union determines process

[See A, VI (Setting program policy).]

II. Workers describe job duties, and
III. Workers involved in job observation, and
IV. Analysis shows range of skills for each job

[See A, I (Choosing materials), VII, (Intake procedures), and VIII, (Needs assessment).]

At times decisions on whether a program met a particular criterion were made based on the context of comments and inference from other parts of the program description. Context of the comments and inference were used only in those cases which did not have clear indications of agreement or disagreement with criteria. To designate these decisions, brackets [ ] will be used around the text. An example of context and inference used to make a decision is taken from Program Eleven.

XI. Staff training

[There was no mention of staff training, given the lack of learner involvement in other administrative aspects of the program (Setting program policy, Participation on board), the conclusion is that learners were not involved in staff training.]
Brackets were also used to designate instances when material was interpreted or rewritten because its original form could not be conveniently adapted to the format used in reporting data. For instance, in Program Five, there is a flow chart in the program description which describes intake procedures. The steps in the intake process are listed as data, but not in the same form as they appeared in the program description:

[There was a flow chart in the program description which traced the steps in intake: Personal information sheet, 13 minute JTPA Reading test administered, Applied learning pretest administered, Individualized prescription developed for each participant, modules to be worked on formed, Individualized Study record, work in modules began.]

In some cases decisions could not be made on whether a particular criterion was met because of lack of information in the article. In those cases, NI (No Information) was used as the designation:

Program Four

IX. Using word processing, and
X. Using databases, and
XI. Computer augments listening, writing, speaking skills

[There is no mention of how the computers were used in instruction, so these criteria are ranked NI.]
Following the Appendices with the presentation of data is an Appendix with a summary of each program. This summary contains information about funding, goals and objectives of the program, program planning and implementation, and evaluation. Also included is information such as dates the program began and ended, the structure of the classroom, plus any other information which will enable the reader to better understand the program described and how conclusions were made. The program description is a summary of the actual document, it does not contain interpretation by the researcher. The summary is written in the words of the researcher, it is not made up of quotes from the document.

There are few research studies on workplace literacy that look at program descriptions, however, the work of Katherine Schultz (1992) has some similarities to this study. Schultz examined assumptions contained in reports of workplace literacy programs. Schultz suggests that there are "Domains for Analyzing Workplace Education Programs." These domains are listed below with comments on whether they were used in this research. Because the goals of the two research projects are not the same, there are some differences.

1. Project name (including source of information)
This information was included for each of the programs analyzed.

2. Project partners

This information was included. However, proper names of organizations, schools, colleges, and employers were omitted.

3. Definitions of workplace literacy (or comparable terms)

This information was not included in this research.

4. Assumptions about literacy, learning, curriculum, instruction, assessment, learners, workers, and so on (both explicit and implicit assumptions—this might include the names of "experts" referred to in project descriptions)

This research includes information on learning, curriculum, instruction, assessment, learners, and workers—both implicit and explicit. Names of experts were not included.

5. Purpose(s) of the project

This information was included.

6. What parties were involved in establishing the classes? (e.g., community college, management, and unions, including type of industry and nature of involvement)

This information was included.

7. Who are the learners?

This information was included.
8. Nature of classes (e.g., schedule, location of classes, duration)

This information was included.

9. Type of classes (e.g., ESL or VESL, developmental reading, basic skills)

This information was included for most programs, but the sample of program types was limited due to the nature of the study.

10. Process for developing curriculum (e.g., Who was involved? How was it developed?)

This information was included.

11. Overview of the curriculum

Information on curriculum was included only if it dealt with the role of the learner in the program.

12. Instruction (including type of instruction, e.g., small groups, one-to-one tutoring)

This information was included.

13. Materials

Information on selection of materials was included.

14. Assessment procedures

Assessment information was included if it dealt with the role of the learner or instructor in evaluation of the program.
15. Evaluation of the success of the project (e.g.,
criteria for evaluating success, including lessons
learned, not necessarily grade level improvement)

This information was included if it was related to
the role of the learner in the program. This research did
not look at success/improvement/reading level of learners.

16. Interesting or unusual aspects of the project (e.g.,
the population it serves, the pedagogy, and so on)

Interesting or unusual aspects of the programs were
included if the information was relevant to the role of
the learner in the program.
Appendix C

Data-Program One

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Data-Program One

2. Learner Participation in Program Planning

I. Choosing Materials

"Despite such heavily weighted needs for early independent word identification skill material, those at the headquarters library consisted mainly of supplementary paperbacks suitable for independent reading by fairly competent readers. Moreover, while student interest and comprehension needs, were, fortunately, stressed, at least some of the tutors were not encouraged to try to offer structured phonics instruction of the kind that has been demonstrated to be effective with a considerable number of those with severe reading problems. Neither were materials for such instruction readily available."

"At the present time criteria for the materials and methods used in tutorial sessions are determined largely by tutors with rare consultations from a Literacy Volunteer consultant."

"The PALS system is a structured, developmental literacy skills program, which utilizes IBM software and interactive videodisc equipment in office-like laboratories."

II. Recruitment

"It is not surprising that the initial recruitment efforts have resulted in a relatively small number of volunteer students."

"An underlying recruitment problem here as elsewhere is the fact that adults with serious reading problems are haunted by a lifelong succession of literacy defeats, including failures in varieties of reading programs."

"On the student application forms (verified for those interviewed) the most frequent source of initial
program awareness was a personal contact—generally a supervisor or a fellow worker. Given time, what works best in recruitment is the kind of instructional excellence that generates a seeding of gratified students, teachers, and workplace supervisors to provide such word-of-mouth publicity. This should be coupled with a steady infusion of graphic reminders like the posters, flyers, and film showings also mentioned by program participants when stating how they or their fellow workers first heard about the program."

"Students at....were carefully selected from the group of applicants to match the description in the PALS manual."

"The teachers at ....worked under the assumption that no one who wanted to participate should be turned away."

III. Scheduling

"This component of the pilot program, based in Albany, was a "tutor-buddy" approach geared to union represented employees who read below the eighth grade level. Students and tutors from the workforce committed two hours a week over a twelve-month period to tutoring sessions. Half the tutoring sessions were held on state release time, based on contractual union agreement; the other half was the employees own time."

"Tutoring is a flexible approach since tutor and student mutually agree to the time and place for sessions, usually two or three per week."

"Student and tutor will enter a learning contract where they initially agree to meet for a minimum of two hours, twice a week, until the student attains the goal of an eighth grade reading level."

[These comments refer to the computer instruction segment of the description. "There are four "classes" in the program each meeting three times a week for 75 or 90 minutes at a time." "Sessions are one hour per day, five days a week."]

IV. Fund Raising
[Since this program was grant funded, there was no learner participation in fund raising.]

V. Public Relations

[Program description contains copies of newspaper articles and interviews with the Program Director.]

VI. Setting Program Policy

[An advisory board was formed with representatives of management, education, and the labor union. No learners were on this board, so the decision is that the criteria is not met, even though the labor union was involved. The presence of a labor union representative did not result in a learner-centered program.]

VII. Intake Procedures, and
VIII. Needs Assessment

"Recommendation from the evaluation team: Individual conferences with prospective students should precede the start of any tutoring. Such conferences should include, for example, discussion of a student's goals and expectations of the program, situational factors within the student's life that might affect program participation in any way, possible causal factors (including visual and hearing deficits that might require evaluation), student interests, and most important, ascertaining student's specific strengths and needs in instruction—to be relayed to the tutor so that instructional sessions can be designed for success. Knowledgeable personnel should conduct such intake conferences."

VIII. Mentoring

[There is no mention of mentoring in the article, but given the description of the program, the assumption is that there was no mentoring.]

IX. Participation on Board

"....was a pilot literacy program administered by the Governor's Office, and designed for employees represented by the ...union."

X. Staff Training
"Tutor training, provided by Literacy Volunteers of America (LVA) in two full workdays, was conducted entirely on state release time."

"The [computer lab] teachers were trained by IBM at a two-day seminar."

XI. Union Representative on Planning Board

"It followed the traditions set by union for decades by involving the union as program co-sponsor."

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

"Recommendation from evaluation team: The question of adequacy of instructional materials cannot be disassociated from that of the instructional guidance. Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests, and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary."

"At this time, although a required aspect of tutorial sessions, logs were not readily available nor, if they had been, was there anyone on staff competent to evaluate and give appropriate assistance for any of the instructional features of the logs."

"Due to a lack of personnel time, such necessary functions as visiting the tutorial sites are not currently being carried out to any adequate degree. Thus, not only are tutorial sessions never observed, (such observations should not be too frequent or be used as a supervisory tool-just for insight into any problems that can be administratively addressed) but there is no personal knowledge of the tutorial sites themselves and how tutors and students gain access to them."

II. Formal Measures of Evaluation Reviewed by Learners and Instructors

"PALS-evaluation team members, accompanied by a PALS specialist, made site visits to PALS labs. During the staff meeting discussion which followed, there was agreement upon the evaluator’s data needs,
in order to document an effective program, which would be met if the center agreed to supply the following information:
TABE reading scores of participants at the beginning;
SKILLS Profile to assess participants feelings about habits related to reading skills;
Checklist to obtain identifying data about participants if no application was used for program entry;
Vignettes related to human interest items."
"The PALS lab in the ...Center became operational before the others, members of the evaluation team made a site visit to become acquainted with the coordinator and his staff, and to develop a prototype for data collection at one or more other sites."

"The evaluation team was commissioned to begin its assessment function...the team made plans, developed assessment instruments, made several site visits to gather pre-test data, review reading materials, examine records, observe tutoring sessions, interview tutors/tutees."

III. Learners Assess own Learning Needs and Objectives

[Based on the information in I and II above, the conclusion is there was no learner involvement in assessing learning needs and objectives.]

IV. Learners Keep a Portfolio of measurement

"At this point, although a required aspect of the tutorial sessions, logs were not readily available nor, if they had been, was there anyone on staff competent to evaluate and give appropriate assistance for any of the instructional features of the logs."

V. Learners evaluate program on completion

"Recruitment evaluation-the evaluation team followed a schedule set up by ....personnel in order to provide for meetings with tutors, union representatives, and agency directors."

"The One-on-One component was evaluated in terms of site visits by a reading specialist and evaluation team members, the collection of pre and post test data for tutees, the analysis of questionnaire data obtained from the tutors, and an analysis of the
recruitment procedures used in attracting participants to the program."

"The PALS program was evaluated in terms of direct observation of three PALS labs and the collection of pre-and post-data with respect to reading levels (TABE), and self report of reading and writing skills (SKILLS profile)."

4. Learner and Teacher Role in Instruction

I. Promoting self expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

[Based on the description of the tutor program and the PALS system in parts 2 and 3, the conclusion is that self-expression and dialogue, methods which lead to experimentation, and open-ended questioning were not part of the program.]

"The PALS system is a structured, developmental literacy skills program which utilizes IBM software and interactive videodisc equipment in office-like laboratories."

"PALS, presented in colorfully illustrated comic book fashion in Infowindow, tells a story about the invention of reading and writing in the mythical kingdom of King Alpha and Queen Bet. The fable shows how the two kingdoms almost get into armed conflict, because of the inability to communicate in a written language."

"...the PALS lab component presented a structured approach to the teaching of reading..."

IV. Regularly scheduled instruction

[See 2,III (Scheduling).]

[The tutor part of the program was to meet for two hours weekly, at times arranged by the tutor and learner. The program description discussed problems with scheduling tutor sessions. There was often a problem finding a space to meet, plus, if a learner had to miss a session, there would be a two-week gap in instruction. The PALS lab part of the program had regularly scheduled classes, at times arranged by the teachers and program planners, not the learners. Because of the lack of learner representation in
planning the program, learner had no input into scheduling, therefore the conclusion is that this criteria is not met.]

V. Introducing and modeling learning strategies.

[See A, I (Scheduling); B, I (Regular feedback sessions with instructors and program supervisors); C, I (Promoting self expression and dialogue).]

VI. Collaborative teaching

"This component of the pilot program was a "tutor-buddy" approach geared to employees who read below the eighth-grade level."

"The PALS system is a structured, developmental literacy skills program, which utilizes IBM software and interactive videodisc equipment in office-like laboratories."

VII. Builds on learners' prior knowledge

[Recommendation from evaluation team]: "The question of adequacy of instructional materials cannot be disassociated from that of instructional guidance. Personnel is needed to ascertain the needs of students, communicate with tutors about student needs, interests and aptitudes, and keeping track of available materials, work out ways to get them to and from tutors as necessary."

VIII. Relates to personal work lives

[Recommendation from evaluation team]: "Perhaps a more valid method for assessing literacy skills for adults could be based on a set of criterion referenced tests which are based on real life job experiences."

[See II (Using methods which lead to experimentation) and III (Open-ended questioning).]

IX. Using word processing

"Students in PALS labs spend half of each one-hour class working with the videodisc course and half using work processing programs on PCjrs or working on typewriters."

X. Using databases, and

XI. Using graphics, and
XII. Computer augments listening, writing, and speaking skills

[See I (Promoting self expression and dialogue); II (Using methods which lead to experimentation); and III (Open-ended questioning).]

5. Worker-developed job analysis

I. Union determines process

"The ....Labor Education Action Program and the ...for Employee Relations commissioned ...to assess the need for training programs in adult education skills."

".....was a pilot literacy program administered by ... and designed for employees represented by ....union."

[NOTE--there was no job analysis in this program, however, the union was involved in choosing an organization to assess learning needs of employees. This does not meet the criteria for worker-developed job analysis.]

II. Workers describe job duties, and
III. Workers involved in job observation, and
IV. Analysis shows range of skills for each job, and
V. Unions set performance criteria, and
VI. Analysis used for program planning, and
VII. Unions assist in setting education and training goals, and
VIII. Workers assist in setting training goals for own jobs

[There was no job analysis in this program so none of these criteria apply. Not Applicable was not used as the designation because according to the standards for a worker-centered program, there should have been a job analysis.]

IX. Workers can learn new skills

[See 2,I (Choosing materials); 4,VII (Builds on learner's prior knowledge); and 4, VIII (Relates to personal work lives).]

6. Worker-centered classroom

I. Union participates in planning
"Project... was a pilot literacy program administered by... and designed for employees represented by... union."

II. Individualized learning program

"Specific and diverse interests were recognized at program entry, requiring individualization of curriculum and methodology."

[Even though the program description said there was individualization of curriculum and methodology, after reading the description of the program, the conclusion is that the instruction was not individualized.]

III. Education integrated with life skills

[See 2, I (Choosing materials); 4, VIII (Relates to personal work lives); and 4, IX (Using word processing).]

IV. Instruction based on information from workers

[See II (Individualized learning program) and (Worker-Developed Job Analysis)]

V. Computer instruction supports worker learning objectives

[See 4, VIII (Relates to personal work lives).]

7. Assessment in union-sponsored programs

I. Regular feedback to learners

[See 3, I (Regular feedback sessions with instructors and program supervisors); and II (Formal measures of evaluation reviewed by learners and instructors).]

II. Pre-and post-program interview

[See 2, VII (Intake procedures) and 3, V (Learners evaluate program on completion)]

III. Minimal standardized testing, and

IV. Grade level tests avoided

[See 3, II (Formal measures of evaluation reviewed by learners and instructors)]

V. Peer interviews
[See 2, VII (Intake procedures); there was no mention of peer interviews in the program description.]

VI. Learner-centered program assessment, and
VIII. Union constructed competency tests

[See 3, I (Regular feedback sessions with instructors and program supervisors), II (Formal measures of evaluation reviewed by learners and instructors), and V (Learners evaluate program on completion).]

8. Participation in Union Sponsored Programs

I. Program accessible to all workers, and
II. Instruction at all skill levels, and
III. Voluntary participation

[See 2, II (Recruitment), 2, III (Scheduling), and 5, VI (Collaborative teaching).]

IV. Convenient location, and
V. Convenient scheduling

[See 2, III (Scheduling) 4, IV (Regularly scheduled instruction).]

VI. Child care assistance offered, and
VII. Minimal cost, and
VIII. Pay for mandatory classes

[Since classes were held during work hours, child care was not an issue in this program. Workers were provided with one-hour of release time for each hour of class time. Classes were not mandatory, so this criteria does not apply.]

IX. Confidential records

[The records were to be kept confidential. There was a problem with records being lost and needing to be replaced, but the ideal was for the records to be kept confidential.]

X. Recruitment by unions

[See 2, II (Recruitment).]
Appendix D

Data-Program Two
Data-Program Two

2. Learner participation in program planning

I. Choosing materials

"Following the completion of the literacy task analysis, the staff designed and developed a specialized curriculum, which merged literacy instruction with job requirements of the customer service job classification. A teacher’s manual and student workbook were produced to include nine performance modules, 27 communication modules and 13 computational modules. Each module contained both pre-and-post tests that incorporated problem-solving skills, critical thinking strategies, work attitudes and safety skills."

II. Recruitment

"Relative to the delivery of the workplace curriculum were the recruitment of project participants by means of a company’s communication channels and through referrals from community adult schools; the retention of workers throughout the instructional program by means of paid release time, cash bonuses, formal recognition and promotion opportunities; and a tailored assessment system which paid close attention to a worker’s employment and educational history."

III. Scheduling

"...the staff undertook the following tasks: Arrangement of convenient class schedules for workers at various worksites and at community adult schools (4 to 10 hours per week for 5 to 12 week sessions). "The convenience of work-based learning makes it possible for many students to receive schooling who otherwise could not possibly do so. Yet, even this did not solve all of the scheduling problems. Often a central workplace was used and students had to commute by bus, sometimes twenty miles of more. Many classes were missed because students could not give up their car pools on inclement days. Or work and personal schedules intervened, or a ride never
materialized to the central workplace where the classes were held."

IV. Fund raising

[The program was grant funded so learners were not involved in fund raising.]

V. Public relations

"A logic segment of project time was spent on a public awareness campaign."

[Recommendations]: "Workplace literacy programs should allow start up time for an effective marketing program or public awareness campaign regarding the benefits of workplace literacy efforts."

"Dissemination will continue to be an integral part of the project. In addition to the presentations, workshops, in-services and meetings listed below, we continue to respond to numerous telephone calls, office visits and classroom/worksite visitations." [A one page list of activities follows.]

VI. Setting program policy

[A long list of names and titles of advisory board members is included. The list does not include any learners.]

VII. Intake procedures

[See II (Recruitment).]

VIII. Needs Assessment

[See I (Choosing materials).]

IX. Mentoring

[There is no mention of mentoring in the program description. Based on the lack of agreement with other aspects of participatory literacy, the decision is that there is no mentoring.]

X. Participation on board

[See VI (Setting program policy).]
XI. Staff training

"A final, but essential element, in the delivery of literacy instruction was the selection of state-certified teachers who were competent in handling a remarkably diverse student body."

"A Michigan based information management consulting firm specializes in managing information and customizing it for specific purposes, using advanced technology.
...has designed curriculum and provided training in basic employability skills (including literacy skills) for dislocated workers, community services groups, (includes list of other groups). The firm agreed to provide the following services:
An occupational and task analysis of customer service positions.
A literacy audit of the reading, writing, speaking, listening, reasoning and problem-solving skills associated with each occupational task.
Development of curriculum for a customer service-literacy skills course, including articulation of specific performance objectives.
Training of staff to conduct literacy audits."

XII. Union representative on planning board

[There was no union in this workplace.]

3. Learner and teacher role in evaluation

I. Regular feedback sessions with instructors and program supervisors

[This was not mentioned in the program description, the assumption is that there were no regular feedback sessions.]

II. Formal measures of evaluation reviewed by learners and instructors, and

III. Learners assess own learning needs and objectives

"A test was created to go with the curriculum and used for determining if the student read well enough to take the course and as an indication of progress. Because there was no way of knowing this test's reliability or validity a standardized test was sought to evaluate the program. Students took the
California Assessment test before and after the course to measure their improvement."

"Curriculum effectiveness was examined from a number of perspectives. One of these was quantitative in nature, using the CASAS assessment system test in which participating students were tested before and after instruction. Another was qualitative, using interview responses from participating students. A third was also qualitative, using questionnaire responses from teachers who implemented the curriculum."

"The proposal for ....calls for an independent evaluation of the program by an outside evaluator."

IV. Learner keeps a portfolio of measurement

[There was no mention of learner portfolios in the text. Given the structure of the program (see 2,1 Choosing materials) the conclusion is that the learners did not keep portfolios.]

V. Learners evaluate program on completion

[See 3, II, (Formal measures of evaluation reviewed by learners and instructors).]

VI. Teachers evaluate program on completion

"A total of 14 teachers participated in the project. Some delivered instruction at the worksite, while others delivered it in classroom settings. Seven of the 14 teachers returned questionnaires concerning the program. Of the seven, six completed all items and one simply wrote an extensive comment about the program."

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation

[See 2,1 (Choosing materials).]

"In addition, the seven responding teachers provided anecdotal information. These were so wide-ranging that trends were impossible to capture. For example, when asked about the major strengths of the program, three either wrote no response or wrote negative
comments. Among the strengths noted were the curriculum, teacher's knowledge, director's expertise, realistic subject matter, and student willingness. On the other hand, when asked about major shortcomings in the program, teachers identified identical pre- and post-tests, irrelevant material, student overload with content, program and format not working, slow pace, and poor on-site classrooms.

In response to an item about modifications, responses were very mixed. Two teachers felt the program should aim at higher-level students; others suggested a total program revision to include creativity and active involvement."

III. Open-ended questioning

[See 2, I (Choosing materials).]

IV. Regularly scheduled instruction

[See 2, III (Scheduling).]

V. Introducing and modeling learning strategies, and

VI. Collaborative teaching

"Employment of a number of teaching strategies (modeling, guided practice, application activities and transfer of skills)."

VII. Builds on learner's prior knowledge, and

VIII. Relates to personal work lives

[See 2, I (Choosing materials).]

IX. Using word processing, and

X. Using databases, and

XI. Using graphics, and

XII. Computer augments listening, writing, speaking skills

[There was no computer training in this program.]
Appendix E

Data-Program Three
2. Learner Participation in Program Planning

I. Choosing materials

"Activity: Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance. Staff: Curriculum specialists, Directors of GED, ESL, and Literacy"

II. Recruitment

"Activity: Assist in internal on-site marketing of program (i.e., fliers, posters, presence at employee meetings, open-house registration, etc). Staff: Industry and Educational Liaison Specialist (IELS), client"

"Activity: Recruit and select program participants Staff: IELS, Education Counselor, Instructor"

III. Scheduling

"Activity: Schedule intensive classes meeting a minimum of two hours twice a week Staff: Curriculum Specialists, Directors of GED, ESL, Literacy"

IV. Fund raising

[This program was grant funded, therefore, there was no learner involvement in fund raising.]

V. Public relations

[See II (Recruitment).]

"From the very beginning, promotion of ....was considered a crucial element in implementing the program. In addition to designing and distributing attractive and informative brochures in English and Spanish and providing news releases and interviews, coordinators of the program conducted presentations
to company representatives. Person-to-person contact with both the company sponsors for the program and with employee participants was viewed as crucial steps for the cooperation on which the educational partnership was based."

VI. Setting program policy

"The following set program policy: the Project Director, Industry and Educational liaison specialist, Educational Services Manager, Directors of GED, ESL, and Literacy programs, a curriculum specialist, company on-site Coordinators, Labor and Management representatives, Private Industry Council Representatives."

VII. Intake procedures, and
VIII. Needs Assessment

"Activity:
4. Assess and interpret employee skill levels.
   a. Distribute Employee Data Sheets in order to gather information on previous education, language background, and other relevant information.
   b. Administer Degree of Reading Power test to determine employee reading level
   c. Holistic scoring of writing which replicates writing activities performed on the job.
5. Discuss assessment results with each employee
   a. Acquaint employee with literacy skills needed to perform his/her job.
   b. Link basic skills improvement to job performance in order to motivate employee.
   c. Assist employee in overcoming obstacles which infringe on employee performance and success in the Project.
   d. Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance.
Staff: Curriculum Specialist, Directors GED, ESL, Literacy."

IX. Mentoring

[There is no mention of mentoring in this program description. Based on the program description, the decision is that there was no mentoring.]

X. Participation on board
XI. Staff Training

"Activity:
Hire and train instructors, Educational Services manager, Directors, GED, ESL, and Literacy Staff: Project Director"

XII. Union representative on planning board

[See VI (Setting program policy).]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

"Assess employee progress, coordinate class activities and make any adjustments-weekly."

II. Formal measures of evaluation reviewed by learners, and

III. Learners assess own learning needs and objectives

[See 2, A, VII (Intake procedures).]

IV. Learner keeps portfolio of measurement

[There is no mention of learners keeping a portfolio of measurement. Based on the program description, the decision is that learners did not keep portfolios.]

V. Learners evaluate program on completion, and

VI. Teachers evaluate program on completion

"Activity:
14. Conduct exit interviews with employees and supervisors to determine change in perception of skills proficiency level.
Staff: Curriculum specialist"

"Plans also included final assessment at the end of the program by means of a customized assessment battery given to all employees, as well as follow-up observation of employees’ application of skills in their job settings."

"At the end of each session, students and instructors completed evaluation questionnaires."
4. Learner and Teacher Role in Instruction

I. Promoting self expression and dialogue

"6. Analyze assessment results and interview records in order to develop a customized curriculum that moves students from current skill levels to those needed for effective job performance."

"b. Provide for separate but concurrent language and computational skills classes organized around job-related thematic units."

II. Using methods which lead to experimentation, and

III. Open-ended questioning

[Based on 2, I (Choosing materials), 3, III (Learners assess own learning needs and objectives), and 4, I (Promoting self expression and dialogue), the decision is that instructors did not use methods which led to experimentation or open-ended questioning.]

IV. Regularly scheduled instruction

[See 2, III (Scheduling).]

V. Introducing and modeling learning strategies

[There is no mention of instructors modeling learning strategies. Based on the description of the program, the decision is that instructors did not introduce and model learning strategies.]

VI. Collaborative teaching

[There is no mention of collaborative teaching. Based on the program description, the decision is that there was no collaborative teaching.]

VII. Builds on learners’ prior knowledge, and

VIII. Relates to personal work lives

[See 2, III (Intake procedures); 2, VIII (Needs assessment); and 4, I (Promoting self expression and dialogue).]

IX. Using word processing, and

X. Using databases, and

XI. Using graphs, and
XII. Computer augments listening, writing, speaking skills

[There is no mention of computer skills instruction in this program description.]

5. Worker-developed job analysis

I. Union determines process

[See 2, VI (Setting program policy).]

II. Workers describe job duties, and
III. Workers involved in job observation, and
IV. Analysis shows range of skills for each job

[See 2, I (Choosing materials), 2, VII (Intake procedures), and 2, VIII (Needs assessment).]

V. Unions set performance criteria

"1. develop procedures and materials for literacy audit of companies, including:
a. procedures for readability measurement of materials
b. selection of assessment instruments
c. development of instruments for structured workplace assessment and observation
Staff: Educational Services manager, Curriculum Specialist, Directors of GED, ESL, Literacy"

VI. Analysis used for program planning

[See 2, I (Choosing materials), 2, VII (Intake procedures), 2, VIII (Needs assessment).]

VII. Unions assist in setting education and training goals

"Activity:
Analyze assessments and interview records in order to develop a customized curriculum
Staff: Curriculum Specialist, Directors of GED, ESL, Literacy"

VIII. Workers assist in setting training goals for own jobs

"3. Develop Literacy Skill Profile for each job based on information collected through:
a. conducting readability study on written materials utilizing the Degrees of Reading Power test.
b. identifying, defining, and categorizing Literacy Tasks required for effective work performance.
c. identifying reading, writing, computational and problem-solving proficiency levels.
Staff: Curriculum specialists

IX. Workers can learn new skills

[There is no mention of workers being given the opportunity to learn new skills.]

6. Worker-Centered Classroom

"I. Union participates in planning

[See 2, XII (Union representative on planning board).]

II. Individualized learning programs

"Activity:
Analyze assessment results and interview records to develop a customized curriculum.
Staff: Curriculum specialist, Director GED, ESL, Literacy"

III. Education integrated with life skills

[There is no mention of education being integrated with life skills in the program description.]

IV. Instruction based on information from workers

[See 2, I (Choosing materials); VII (Intake procedures), and VIII (Needs Assessment).]

V. Computer instruction supports learning objectives

[There was no mention of computer instruction in this program description.]

7. Assessment in Union-Sponsored Programs

I. Regular feedback to learners

"Activity:
9. Assess employee progress in meeting class objectives, send Progress reports to counselor
Staff: Instructors, Education counselor
Timetable: weekly
10. Discuss employee progress and recommend additional assistance as needed.
Staff: Education counselor
Timetable: monthly
11. Refer employees requiring additional assistance to tutors
Staff: Instructors, Education counselor
Timetable: as needed"

II. Pre- and post-program interview

"Activity:
14. Conduct exit interviews with employees and supervisors to determine change in perception of skills proficiency level.
Staff: Curriculum specialist"

III. Minimal standardized testing, and
IV. Grade level tests avoided

"Administer Degrees of Reading Power test to determine employee reading levels."

"...cited concerns about the appropriateness of standardized reading test for workplace literacy programs. Since workplace literacy stresses material immediately relevant to jobs, instruction may not address some of the kinds of knowledge measured by standardized tests."

"...objective was to increase work-related performance of employees to 80 percent of performance levels established by the Literacy Skills Profile."

V. Peer interviews

[No mention of peer interviews in this program description. Based on the program description, the decision is that peer interviews were not part of the program.]

VI. Learner-centered program assessment

[See 3, V (Learners evaluate program on completion).]

VII. Union constructed competency tests

[See 7, III (Minimal standardized testing).]
8. Participation in Union Sponsored Programs

I. Program accessible to all workers

[See 2, II (Recruitment).]

II. Instruction at all skill levels

[There is no mention of skill levels in the program description.]

III. Voluntary participation, and
IV. Convenient location, and
V. Convenient scheduling

[See 2, III (Scheduling) and 2, II (Recruitment).]

VI. Child care assistance offered

"The project can provide day care and transportation allowances if students need such assistance to attend classes."

VII. Minimal cost, and
VIII. Pay for mandatory classes

[There was no charge to participants.]

"A major factor that served as both a plus and a minus - in the partnership concept underlying .... is the requirement for management support. .....sought to ensure management commitment through half-time payment for worker’s time in the program and the 15 percent fee for instructional costs."

IX. Confidential records

[Recruitment flier stated]: "Confidential assessment results."

X. Recruitment by unions

[See 2, II (Recruitment).]
Appendix F

Data-Program Four
Data-Program Four

2. Learner Participation in Program Planning

I. Choosing materials

"Each...should create an internal literacy committee whose sole purpose would be internal literacy programs. This committee should include directors and upper level managers from: Building Services Circulation Personnel Production Newsroom NIE

The committee should oversee and approve each step in the development of a literacy plan. The committee should develop a program that is best suited to the individual company, meets the needs of the employees and is backed by the management."

II. Recruitment

"Employees may sign-up through their supervisors or through the class coordinators."

[Three pages of fliers used to advertise the program in the workplace follow.]

III. Scheduling

"Employees will be paid to attend classes for four hours per week. Every effort will be made to schedule these classes during the employees' normal working hours; however, this may not always be possible. Due to scheduling difficulties, employees may have to attend on their own time. In such classes, employees will receive their hourly wage as other pay."

IV. Fund raising

[There is no mention of fund raising, the program was funded by the company.]
V. Public relations, and
VI. Setting policy

[See 2, I (Choosing materials).]

VII. Intake procedures, and
VIII. Needs Assessment

"All the employees will take an assessment test to
determine reading levels at the beginning."

"Talk to managers and supervisors of different
departments to assess the needs of the employers."

"...level of skills and progress are confidential
between the employees and their teacher."

IX. Mentoring

[There is no mention of mentoring, based on the
description of the program, the conclusion is that there
is no mentoring.]

X. Participation on board

[See 2, I (Choosing materials).]

X. Staff training

[There is no mention of staff training, based on the
description of the program, the conclusion is that there
is no learner involvement in staff training.]

XII. Union representative on planning board

[There was no union involvement in this workplace.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and
program supervisors, and
II. Formal measures of evaluation reviewed by
learners and instructors, and
III. Learners assess own learning needs and
objectives, and
IV. Learners keep a portfolio of measurement

[There is no mention of regular feedback sessions,
review of formal measures of evaluation, or learner
assessing own learning needs and objectives, or learner]
portfolios in this program description. Based on the
description, the conclusion is that these criteria were
not met.)

VI. Teachers evaluate program on completion, and
V. Learners evaluate program on completion

"All of the employees will take an assessment test to
determine reading levels at the beginning. The
results of another test at the end of six months will
show if the program is working."

"Progress through grade levels will be determined
through tests administered by the teachers."

"After sign-up, students are individually assessed to
determine skills level."

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

[There is no evidence that instruction promoted self-
expression and dialogue, that methods were used which led
to experimentation, or that open-ended questioning was
used. The conclusion is that these criteria do not apply
in this program.]

IV. Regularly scheduled instruction

"Classes meet two times a week for two hours."

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching, and
VII. Builds on learner’s prior knowledge

[There is no mention of instructors introducing and
modeling learning strategies, collaborative teaching, or
instruction that builds on learner’s prior knowledge.
There is no evidence that these criteria were met. The
conclusion is that they were not.]

VIII. Relates to personal work lives

"Before the class is started, the program teacher
should spend time in the particular area of work of
the employees. This will give the teacher an idea of
the level of reading and/or math skills required and
he/she will also be able to tailor the instructional program to be more relevant."

"Workplace literacy programs are critical in solving the literacy problem because the greatest gains have been made in programs where literacy skills are developed with a relationship to the language and needs of the workplace."

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

[There is no mention of how the computers were used in instruction.]
Appendix G

Data-Program Five
Data-Program Five

2. Learner Participation in Program Planning

I. Choosing materials

"The program will serve as a educational resource to project partnerships in materials selection for upgrading skills, processes, and/or new product lines."

"Only one partner entered into a formal materials selection process."

"The selection of curricular materials for use at ....served to establish a wide range of instruction, from beginning reading and math to relatively advanced applications."

"Software selection was taken with the aim of integrating skills development in more than a single area."

"A self-contained, modularized curriculum was selected jointly by ....and project staff."

II. Recruitment

"The company aggressively solicited participants by internally publicizing the nature of the program and establishing a policy of compensating employees for a successful completion of instructional modules at a rate of five to six dollars per hour."

III. Scheduling

"...the timeframe was much less structured since employees worked at their own rate, after hours."

[There were no learners involved in planning this program. The structure of this program was one which had workers drop in the computer lab after work hours. Based on this practice, workers could schedule their own learning. However, the decision is that scheduling does not meet the criteria because they did not have a role in deciding the structure of the program.]
IV. Fund raising

[There was no learner involvement in fund raising because the program was grant funded.]

V. Public relations

"Area businesses that were regarded as potential partners were contacted by mail, by telephone, and by personal contact in an effort to establish new partnerships. This effort involved disseminating news of the project's success. Prospective partners were invited to tour the facilities in order to observe project activities firsthand. Dissemination also included presentations to groups of businesspersons."

VI. Setting program policy

[Learners were not involved with setting policy; there were no learners on the planning board for this program.]

VII. Intake procedures, and

VIII. Needs assessment

[There was a flow chart in the program description which traced the steps in intake: Personal information sheet, 13 minute JTPA Reading test administered, Applied learning pretest administered, Individualized prescription developed for each participant, modules to be worked on formed, Individualized Study record, work in modules began.]

IX. Mentoring

[There is no mention of mentoring, based on the description of the program, the conclusion is that there was no mentoring.]

X. Participation on board

[There were no learner representatives on the planning board.]

XI. Staff training

[There is no mention of staff training, given the lack of learner involvement in other aspects of the
program, the conclusion is that if there was staff training, the learners were not involved.]

XII. Union representative on planning board

[There was no union involvement at this workplace.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors, and
II. Formal measures of evaluation reviewed by learners and instructors

"Formative evaluation comprised numerous ongoing activities to monitor the success of the project. These included (1) maintenance of monthly instructor logs; (2) establishment of a computer database containing the records of achievement and prescriptions for all project participants; (3) regular review of software to determine its effectiveness and any need for modification or replacement; and (4) continued contact with the coordinator."

III. Learners assess own learning needs and objectives

[This is a continuation of the flow chart mentioned in 2, VII above: Staff administers post-tests; makes copies of the tests, then posts it in the data base; Applied Learning Pre-test readministered; progress measured by module completion and employee compensation computed on this basis.]

IV. Learner keeps a portfolio of measurement, and
V. Learners evaluate program on completion, and
VI. Teachers evaluate program on completion

[See II and III above.]

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

[Based on the data in 2, VII (Intake procedures) and 3, III (Learners assess own learning needs and objectives), the conclusion is that there was no promotion
of self-expression and dialogue, methods which lead to experimentation, or open-ended questioning.]

IV. Regularly scheduled instruction

[See 2, III (Scheduling)]

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching, and
VII. Builds on learner’s prior knowledge, and
VIII. Related to personal work lives

[See 2, I (Choosing materials).]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

"Software selection was undertaken with an aim of integrating skills development in more than a single area. Participants regularly listened, observed, and read while problem-solving and reasoning skills were targeted. Likewise, they conversed with project instructors and applied reasoning skills while inferential reading comprehension was targeted."
Appendix H

Data-Program Six
2. Learner participation in Program Planning

I. Choosing materials

[There was no specific mention of choosing materials in this program description. In the timeline developed by the planners, there is mention that developing curriculum was the responsibility of the Project Director and Curriculum Coordinator. With no other information to rely on, the assumption is that developing materials was part of curriculum development and learners were not involved.]

"...a great deal of attention was placed on how to make the lessons as workplace specific as possible, i.e., using the forms of the workplace as lessons and using a functionally-based curriculum."

II. Recruitment

"Objective 4: ...a minimum of 20 ....employees needing basic skills improvements will have been recruited and trained in a 10-week session offering at least one or more of the following classes: job-related literacy skills; workplace literacy skills for adults with limited English proficiency; GED test and preparation; speaking and listening skills; reasoning and problem-solving skills."

III. Scheduling

[This program was held at several different job sites.]

"Classes were offered twice a week for an hour and 45 minutes each class session. There was no release time nor compensation in terms of pay."

"Classes were offered once a week for 3 hours each class session on employees' days off. There was no release time nor pay compensation."

"...classes were offered on employees' days off."
IV. Fund raising

[The program was grant funded.]

V. Public relations

"Coordinator has shared information with people who are working in or interested in workplace literacy on a formal and informal basis. She has sent materials to those that have requested them. In addition, the coordinator has presented at a number of conferences."

VI. Setting program policy

"The composition of the advisory boards included a representative from the company, an employee in the workplace literacy class, the instructor, and the coordinator."

"Discussion revolved around recruitment, hours, days of classes, and length of cycle. Outcomes included suggestions for recruitment, change of class time, longer cycles, and topics to be discussed."

[There was an employee on the advisory board in this program. This committee dealt with issues such as program scheduling, recruitment, length of class cycles, and topics for the classes. The decision of the researcher was that Recruitment, Scheduling, and Choosing materials did not meet the criteria for participatory literacy education even with an employee on the board. This decision was based on the inconvenient class scheduling, lack of mention of learner involvement in Recruitment, and that Choosing materials was described as the responsibility of the project director and curriculum coordinator.]

VII. Intake procedures, and
VIII. Needs assessment

"...the Director and Lead Teacher/Curriculum Director will have completed a literacy audit (needs analysis)...and developed a curriculum based on the needs identified in the literacy audit."

IX. Mentoring
[There is no mention of mentoring in this program description. Based on the information available, the conclusion is that there was no mentoring.]

X. Participation on board

[See 2, VI (Setting program policy).]

XI. Staff training

"The coordinator worked very closely with staff and hired in terms of training. The instructors all had experience in adult education, however, only one of them had taught in a workplace situation prior to this project. Staff meetings and training were focused around workplace literacy issues. Topics included curriculum writing, lesson planning, pre-and post-testing, evaluation, and student support services."

XII. Union representative on planning board

[There was no union involved with this company.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

[There was no mention of regular feedback sessions with instructors and program supervisors. The conclusion is that there were none, based on the description of the role of the learner in other aspects of the program.]

II. Formal measures of evaluation reviewed by learners

"In ABE/GED, ...used the Tests of Adult Basic Education (TABE) Forms 5 and 6."

"The Workplace Literacy Coordinator and the instructor at each workplace developed pre-and post-tests geared to the specific curriculum of the workplace."

III. Learners assess own needs and objectives, and IV. Learner keeps a portfolio of measurement

[There is no mention of learners keeping their own portfolios or assessing their own learning needs and
objectives. Based on the structure of assessment in the program, the conclusion is that the learner did not assess own needs and objectives or keep a portfolio of measurement.]

V. Learners evaluate program on completion, and
VI. Teachers evaluate program on completion

"Levels of evaluation
What/who is to be evaluated Evaluator
Student Instructor, supervisor, co-worker, self
Instructor Students, self, Program Director
Course Students, instructor, supervisors, Program Director, outside evaluator
Program Students, instructors, supervisors, Program Director, advisory board, outside evaluator"

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

[There is no mention of the methods used in the program. Based on the information in 2, I (Choosing materials), 2, VI (Setting program policy), and 3, II (Formal measures of evaluation reviewed by learners and instructors), the conclusion is that learner-centered teaching methods were not used.]

IV. Regularly scheduled instruction

[See 2, III (Scheduling).]
V. Introducing and modeling learning strategies, and
VI. Collaborative teaching

[See I-III above.]

VII. Builds on learner's prior knowledge, and
VIII. Relates to personal work lives

[See 2, I (Choosing materials).]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

[There was no information on use of computers, the assumption is that there was no computer instruction.]
Appendix I

Data-Program Seven
Data-Program Seven

2. Learner Participation in Program Planning

I. Choosing materials

"...industry representatives indicated that there were no manuals for workers who were involved in the project, however, informal lesson materials were devised related to the ...worker's job, safety and health information using printed materials from the plants such as signs, bulletin boards, newsletters, etc."

"Other students were directed to bring in works or point out words they were unable to read in newsletters or other plant materials. These were developed into a variation of the "language experience" method of teaching reading. In addition to the development of instructional materials, core and supplementary materials provided in the program were used when they included lessons in reading and mathematics and content in health, safety and other information."

"The program moved along as planned with very few significant problems except for students with low achievement levels. In time, new materials were reviewed and integrated into the ... system to meet the needs of these workers."

II. Recruitment

"Objective One: Assess adult workers in the ... industry identified by their employers as needing an improved level of literacy and other basic skills."

"The committee met monthly and assisted in developing the mobile units day and time schedule to different sites. Among the topics discussed at the meetings were methods of recruiting participants, the proposed testing program, management system, and the acquisition of instructional materials and equipment."

III. Scheduling
"A project advisory board consisting of staff and ...industry representatives met monthly to assist in developing the instructional schedule and to maintain cooperation and coordination between the project and the industry."

"The unit traveled to seven sites in the morning and afternoon/evening shifts, Monday through Thursday, for two 2- or-3 hour classes."

"The industry provided release time for one hour of instruction and the worker contributed one hour of personal or work time."

IV. Fund raising

[The program was grant funded so there was no fund raising by learners.]

V. Public relations

"The project director responded to numerous inquiries and interviews from all over the country and Canada regarding a description of the project and in some cases possible duplication of the mobile learning center."

"The program has been described in newspaper articles, newsletters, and bulletins. Programs have been presented on various aspects of the projects to a number of different professional groups and several are scheduled for the remainder of 1990."

VI. Setting program policy

"An advisory committee was formed which consisted of representatives from the project staff at ...(the director, curriculum developer and staff development and materials evaluator)." [Also includes representative from a college, and three business associations.]

"The committee met monthly and assisted in developing the mobile unit’s day and time schedule to different sites. Among the topics discussed at the meetings were methods of recruiting participants, the proposed testing program, management system and the acquisition of materials and equipment."
VII. Intake procedures, and
VIII. Needs Assessment

"Following initial interviews and assessments, the workers were diagnosed with competency-based mastery tests and provided with an individually prescribed education program."

"Initial assessment consisted of an interview to obtain demographic information and to identify goals for enrolling. Participants were assessed with the Test of Adult Basic Education (TABE) and the Beder Reading Inventory word list which appeared to be a more accurate reflection of their reading level for workers scoring in the lower ranges of the TABE. Following an analysis of the TABE, the Comprehensive Competencies Program (CCP) subject area mastery pre-tests were administered in areas where the participants showed a need or interest in studying. In a number of cases, the three mastery pre-tests in reading, language and mathematics were administered."

"The CCP competency-based curriculum and computerized management system provided the vehicle through which each students' initial interview and testing information was developed into an individually prescribed instructional program."

IX. Mentoring

[There is no mention of mentoring, based on the description of the program, the conclusion is that there was no mentoring.]

X. Participation on board

[See 2, VI (Setting program policy) above.]

XI. Staff training

"...the project staff received an in-depth orientation and staff development program. The two teachers, two drivers/aides and the project's staff-development person attended the orientation meetings presented by the project director."

"A five-day 40-hour workshop was conducted by a ...staff-development consultant who provided training in how to operate and manage the ... program. This includes:
a) The structure of the competency program.
b) How to test, plan, monitor and manage
   individualized lessons.
c) Record keeping and reporting procedures for
   maintaining students' lesson records, scoring tests
   and using the management system.
   The project staff was required to read ... training
   manuals prior to the workshop and to pass a
   competency test on using the system."

XII. Union representative on planning board

[There was no union involved with workers in this
workplace.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and
   supervisors

"Throughout the program the participants were
continuously monitored with mastery tests, GED pre-
test and after 100-hours, the TABE test."

"All demographic and test information were recorded
in the management system. Data on student progress
was analyzed monthly and reported to the advisory
committee."

II. Formal measures of evaluation reviewed by
   learners and instructors

[See 2, VII (Intake procedures) and 2, XI (Staff
   training) above.]

"Objective Five: Document adult worker's progress in
their individualized program of study and determine
its impact upon their career enhancement."

III. Learners assess own learning needs and
    objectives

[See 2, VII (Intake procedures) above.]

IV. Learner keeps a portfolio of measurement

[There is no mention of learner portfolios. Based on
the other information about assessment and evaluation in
this program description, the conclusion is that learners
did not keep their own portfolios of measurement.]
V. Learners evaluate program on completion, and
VI. Teachers evaluate course on completion

"A survey questionnaire was administered to the project staff, industry administrative and supervisory staff and the workers to determine the value of using a mobile learning center for literacy involvement. In addition to the survey instrument, interviews were conducted with all those involved in the project and observation visits were made to the mobile unit. Surveys with a rating scale ranging from 1.0 strong agreement to 4.0 disagreement and 5.0 unknown were administered to the workers. The results of surveys to industry personnel, workers, teachers and advisory board members showed a high level of satisfaction with the over-all program."

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

"...industry representatives indicated that there were no manuals for workers who were involved in the project, however, informal lesson materials were devised related to the ...workers' job, safety and health information using printed materials from the plants such as signs, bulletin boards, newsletters, etc.

Other students were directed to bring in words or point out words they were unable to read in newsletters or other plant materials. These were developed into a variation of the "language experience" method of teaching reading. In addition to the development of informal instructional materials, core and supplementary materials provided in the program were used when they included lessons in reading and mathematics and content in health, safety and other information."

"The program moved along as planned with very few significant problems except for students with low achievement levels."

[Both of these quotes mention teaching, but no information is given on what type of teaching methods were
used. Based on the program description, the conclusion is that teaching methods did not promote self expression and dialogue, methods were not used which lead to experimentation, or open-ended questioning.

IV. Regularly scheduled instruction

[See 2, III (Scheduling) above.]

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching

[See III above.]

VII. Builds on learner’s prior knowledge, and
VIII. Relates to personal work lives

[See 2, VII (Intake procedures) above.]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

"Taped/print materials were provided for several ESL students and a computerized reading, language and spelling program was used for students who entered at the 1st to 3rd grade levels."

"The plans for the mobile unit were developed with the assistance of an IBM consultant."

[There is no other information on the use of the computers.]
Appendix J

Data-Program Eight
Data-Program Eight

2. Learner Participation in Program Planning

I. Choosing materials

"The lead instructor was responsible for materials selection, program planning and implementation, teacher orientation and planning sessions, monitoring and assisting with the instruction during the program and served as liaison between the instructional staff and company representatives."

"Consumable basic skills workbooks, specially designed worksheets, commercial reading kits, dictionaries, Thesaurus, newspaper, and community and workplace materials comprised the general curriculum materials base."

II. Recruitment

[There is no information on recruiting in this program description. Given the lack of learner involvement in other aspects of planning, the decision is that learners were not involved in recruitment.]

III. Scheduling

"Instruction was delivered 7:00 a.m. to 3:30 p.m. with two breaks and 30 minutes for lunch. The length of scheduled time consisted of eight hours per day for two weeks."

IV. Fund raising

[There was no fund raising by learners as the program was grant funded.]

V. Public relations

[There was no mention of public relations in this program description. Based on the content of the description, if there was any public relations, learners were not involved.]
VI. Setting program policy

[See 2, I (Choosing materials) above.]

"The instructional staff, employees of ... City Schools, Adult Education Program, for the Skills Enhancement program included a lead instructor who served as the instructional coordinator and two instructors."

VII. Intake procedures, and
VIII. Needs assessment

"... employees were administered the following reading and math diagnostic tests: the San Diego Quick Assessment, an Oral Word recognition test given in one-on-one settings; the Reading for Understanding Test, an individual silent reading comprehension test, and Form "A" Math Skills Test."

"Preliminary to grouping, the participants were administered assessment instruments in reading and mathematics for determining beginning instructional levels and for selection and development of materials."

IX. Mentoring

"The two instructors provided both group and individualized instructional assistance."

X. Participation on board

[There was no mention of an advisory board. The instructional staff and responsibilities were described (see 2, I, and V, IO). Given lack of learner participation in other aspects of the planning and implementation, the decision is that there was no learner participation on the advisory board.]

XI. Staff training

[See A, I (Choosing materials) above.]

"Selection of instructional staff was based on two factors: experience and qualification (certification). All had previous experience in similar workplace programs as well as experience in traditional adult education classroom instruction."
XII. Union representative on planning board

[There was no union involvement in this workplace.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

[This program differed from the others. It was a two-week, immersion program held on-site for workers. Regular feedback sessions with instructors and program supervisors is not applicable in this program because of the short period of time the classes met.]

II. Formal measures of evaluation reviewed by learners and instructors, and
   III. Learners assess own learning needs and objectives

[See A, VII (Intake procedures).]

IV. Learner keeps a portfolio of measurement

[There is no mention of learner’s keeping a portfolio of measurement. Based on the program description, the decision is that workers did not keep portfolios.]

V. Learners evaluate program on completion, and
   VI. Teachers evaluate program on completion

[Teachers and learners completed survey forms evaluating the program. Learners also evaluated teachers and teachers evaluated learners.]

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
   II. Using methods which lead to experimentation, and
   III. Open-ended questioning

[There is no mention of any of these instructional techniques in the program description. Given the description of the program, the decision is that there was no promotion of self-expression and dialogue, no methods which lead to experimentation, and no open-ended questioning.]

IV. Regularly scheduled instruction
V. Introducing and modeling learning strategies, and
VI. Collaborative teaching

"Teaching methods/techniques included lecture, demonstration, and one-on-one tutoring."

"The two instructors provided both group and individualized instructional assistance. Some of the participants helped one another."

[There is no other mention of instructional methods.]

VII. Builds on learners prior knowledge, and
VIII. Relates to personal work lives

[See 2, I (Choosing materials) above.]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

[There is no mention in the program description of computers being a part of this instructional program.]
Appendix K

Data-Program Nine
Data-Program Nine

2. Learner participation in program planning

I. Choosing materials

"Curriculum materials were both developed by staff and adapted from other sources, including employers. Instructors share certain curriculum items such as the Oxford Picture Dictionary. In addition, individual Instructors designed materials of specific interest to their classes. This process allowed each Instructor the flexibility to be creative and to respond to the needs of their students."

"Curriculum materials were developed with job-related literacy in mind."

II. Recruitment

"Program participants were recruited by employers and union representatives. Introduced by employer or union representatives, the Instructors presented the program to workers and conducted an initial assessment to determine who was eligible for the classes."

III. Scheduling

"...delivers services to students in 12 classes at eight sites. The policy of ...is to limit class enrollments to 20 students. Each class is held twice a week for two to three hours each day."

IV. Fund raising

[The program was grant funded so there was no fund raising.]

V. Public relations

"The Committee is also involved in planning and carrying out public relations activities with other employers, in networking, and in raising funds for the continuation of the partnership."
"The ...Advisory Committee was designed to give the partners the opportunity to advise on a wide range of issues, including policy formulation, through participation in the ...Advisory Committee. The Committee also includes representatives from participating unions and employers."

"The Steering Committee, known as the Advisory Committee, has met on a regular basis. Its primary purpose during the grant year has been public relations, rather than policy making."

VI. Setting program policy

"Objective: To effectively and efficiently complete the start-up activities required to operate the demonstration program, including:
- a) hiring and training staff;
- b) designing worker assessment;
- c) designing record keeping procedures;
- d) gathering and developing curriculum materials;
- e) developing detailed working agreements and schedules with union locals and employers;
- f) recruiting program participants."

VII. Intake procedures, and
VIII. Needs assessment

"Student-worker assessments were designed or adapted for both ESL and ABE skills prior to the service delivery period.

* "A Skills Check" developed by the ...teachers at ..., evaluates math, reading and writing skills;
* The Adult Informal Reading Test (Form A) with six reading tests, developed by the University of Missouri;
* The Adult Informal Reading Test (Form B) with six reading tests, developed by the University of Missouri;
* Several word recognition tests lists, developed by the University of Missouri."

"Record-keeping procedures were developed for the intake and assessment processes; the Individual Educational Plan; and the central files, including: the master list of statistical information, the referral forms for termination, child care, etc., attendance forms, termination forms, and monthly reports."
IX. Mentoring

[There is no mention of mentoring. Based on the description of the program, the conclusion is that there was no mentoring.]

X. Participation on board

[See VI above (Setting program policy).]

XI. Staff training

[See VI above (Setting program policy).]

"The staff is very well qualified in terms of workplace education experience and academic background, emphasizes the quality of its teaching, and is culturally diverse, reflecting the makeup of the student population."

"All staff attended a one-day orientation. Topics and activities included the history, structure, and mission of..., workplace education as a concept in this specific situation, small group work sessions on curriculum development; and an overview of materials and instructional collaboration. Information and record-keeping requirements were presented to all staff at the orientation."

"Staff also attended several workshops on curriculum development."

XII. Union representative on planning board

[See V (Public relations) and VI (Setting program policy) above.]

"Working agreements and schedules were developed with seven union locals or employers": [names follow].

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors, and

II. Formal measures of evaluation reviewed by learners and instructors, and

III. Learners assess own learning needs and objectives

[See 2, VII (Intake procedures) above.]
IV. Learner keeps a portfolio of measurement

[There is no mention of learner portfolios. Based on the information in the program description, the conclusion is that learners did not keep portfolios.]

V. Learners evaluate program on completion, and
VI. Teachers evaluate program on completion

"The methodology used by ... in gathering information for the evaluation consisted of:
* personal interviews with a sampling of staff, students, union and employer representatives;
* a comprehensive review of key documents
* observation of meetings of the Advisory Committee."

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

[There is little information on instruction in this program description. Based on the program's reliance on standardized testing and lack of learner participation in other aspects of the program, the conclusion is that these instructional methods were not used.]

IV. Regularly scheduled instruction

[See 2, III (Scheduling) above.]

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching

[See I, II, and III above.]

VII. Builds on learner's prior knowledge, and
VIII. Relates to personal work lives

[See 2, I (Choosing materials), 2, VI (Setting program policy), and 2, VII (Intake procedures).]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills
5. Worker-developed Job Analysis

[There is no information on job-analysis in this program description. Therefore, no conclusions can be made.]

6. Worker-centered classroom

I. Union participates in planning

[See 2, V (Public Relations) and 2, VI (Setting program policy).]

II. Individualized learning programs

[See 2, VII (Intake procedures).]

III. Education integrated with life skills

"On the other hand, applications of English language skills in writing and speaking were not consistently tailored to specific job needs, such as the writing of specific reports in specific formats, for example. Much of the curriculum is general and related to daily living. Employer supervisors felt that this was a shortcoming of the program.

IV. Instruction based on information from workers

[See 2, VII (Intake procedures).]

V. Computer instruction supports worker learning objectives

[There is no mention of computer instruction in this program description.]

7. Assessment in Union-sponsored Programs

I. Regular feedback to learners, and

II. Pre-and post-program interview

[See 2, VII (Intake procedures).]
"The methodology used in gathering information for the evaluation consisted of:
- personal interviews with a sampling of staff, students, union and employer representatives;
- a comprehensive review of key documents;
- observation of meetings of the Advisory committee."

III. Minimal standardized testing, and
IV. Grade level tests avoided, and
V. Peer interviews

[See 2, VII (Intake procedures).]

V. Learner-centered program assessment, and
VI. Union constructed competency tests

[See 3. Learner and Teacher Role in Evaluation.]

8. Participation in Union Sponsored Programs

I. Program accessible to all workers

[There was screening of participants, not all who applied were selected for the program. The program description does not indicate the criteria for selection.]

"Program participants were recruited by employers and union representatives. Introduced by employer or union representatives, the Instructors presented the program to workers and conducted an initial assessment to determine who was eligible for the program. 225 students enrolled in classes."

II. Instruction at all skill levels

[Instruction was available for a range of skills. Classes were offered in GED preparation, ESL, and ABE. There were classes offered in Basic Education and Advanced Basic Education. The reader is not told the difference between Basic Education and Advanced Basic Education. This aspect of the program led to criticism by the outside evaluation team]:

"Classes include students of varying ability, making it difficult to teach. In written reports and in interviews, Instructors stressed the difficulty of mixing students of differing abilities in one class."

III. Voluntary participation
[There was no information to indicate that participation was not voluntary.]

IV. Convenient location

"...delivers services to students in 12 classes at eight sites."

"This objective has been largely accomplished. Agreements were developed among the partners to continue to provide services and ...classes will be continuing at 5 sites."

V. Convenient scheduling

[See 2, III (Scheduling.)]

VI. Child care assistance offered

[Since classes were held during work hours, there was no need for child care. Therefore, this criteria was ranked NA.]

VII. Minimal cost

[This program was grant funded, there was no cost to workers.]

VIII. Pay for mandatory classes

[There were no mandatory classes mentioned in this program description. Therefore, this criteria was marked NA.]

IX. Confidential records

[There was mention of confidential record-keeping. Therefore, this criteria was marked NI.]

X. Recruitment by unions

[See 2, II (Recruitment).]
Appendix L
Program Ten
2. Learner Participation in Program Planning

I. Choosing materials

"...reading, writing, oral communication, and problem solving were taught pragmatically through actual job materials and simulations. Generic materials applicable to all hospital employees (e.g., the personnel manual, paycheck stubs, insurance forms) were also used."

II. Recruitment

"Recruiting for the program was done within the departments targeted by the hospital's Director of Personnel. Workers volunteered to attend but actual selection of who could be "spared from the job" at each class time was made by workers' immediate supervisors. This resulted in some participants who wanted to attend being excluded and others (57%) being recruited by their supervisors."

"Recruitment of participants was a collaborative effort. Information about the program was presented to workers by the hospital staff through the supervisors in the three departments, the workers' front-line supervisors, and the training staff. Fliers were prepared, notices put up in the hospital newsletter, and presentations made at departmental meetings by the instructors. The instructor also made many personal contacts talking with workers about the program and encouraged their participation. The fact that the program was on job time and at the work site was an incentive to participate in the program, but their immediate supervisors made the final selection of who was to attend. Supervisors also selected employees whose performance they wanted to reward by time off to participate in this program."

III. Scheduling

"Classes for workers were held twice per week for 36 weeks at the hospital on job time."
"The classes were held on job time which was both a positive and a negative. By holding classes on job time, literacy classes were perceived in the same category as job training classes (e.g., typing, medical terminology) also held on job time."

IV. Fund raising
[The program was grant funded so there was no learner involvement in fund raising.]

V. Public relations

"The goals of the project were:
4. to prepare dissemination materials describing the process of job analysis and preparation of job-related literacy instructional and assessment materials needed for workplace literacy projects."

VI. Setting program policy
[This program was the result of a partnership between a center for the study of literacy affiliated with a college and a hospital. There were no learners or representatives of learners involved in any aspect of planning the program or setting program policy.]

VII. Intake procedures, and
VIII. Needs assessment

"Students were assessed before and after instruction by a Cloze reading test using passages from job materials, a writing sample yielding a writing process score, and role playing a job situation scored for oral communication."

IX. Mentoring
[There was no mention of mentoring in the program description.]

X. Participation on board
[See VI (Setting program policy).]

XI. Staff training

"During the first on-site visit, the [workplace literacy] consultant provided training for the project staff in conducting literacy task analyses in
the workplace and the development of workplace literacy instructional programs from the results of the task analyses.

The training was attended by the project director and assistant director, the classroom instructor and other consultants and staff involved with project curriculum development. Training consisted of an overview of functional context research and rationale, hands-on instruction in conducting and documenting a literacy task analysis, and review/discussion of sample workplace literacy instructional materials resulting from literacy task analyses."

XII. Union representative on planning board

[There was no union involvement in this program.]

3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

[There is no mention of regular feedback sessions of learners with instructors and program supervisors. Based on the program description, the conclusion is that there were no regular feedback sessions.]

II. Formal measures of evaluation reviewed by learners and instructors

"Following the literacy audit, a curriculum was developed and taught to classes for workers and supervisors during a nine-month instructional process. Students were assessed on reading, writing, and oral communication skills before and after instruction. Assessment instruments were also developed from workplace materials."

"Each of the objectives for the project was assessed by appropriate quantitative and/or qualitative data analysis. Participants were assessed by reading, writing, and oral communication pre- and post-tests developed from workplace texts and situations."

III. Learners assess own learning needs and objectives

[See 2, VII (Intake procedures).]
IV. Learner keeps a portfolio of measurement

[There is no mention of learners keeping a portfolio of measurement.]

V. Learners evaluate program on completion

"Participants and supervisors were interviewed at the end of the program and anecdotal notes kept throughout the program. These data were analyzed to determine the participants' assessment of the program and its effects on their personal and job attitudes and their job performance."

VI. Teachers evaluate program on completion

[There is no mention of teachers evaluating the program.]

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and 
II. Using methods which lead to experimentation, and 
III. Open-ended questioning

"After the literacy objectives were developed, integrated units of instruction were planned for each of the six sessions and lesson plans were developed for each class period. Instruction included whole group, small group, and individual activities integrating oral communication and problem solving, reading and writing. Instruction also emphasized the participants' self-concepts as learners and workers. Each session included discussion about and encouragement to express oneself on the job and to feel positively about oneself as a learner. The language experience approach, role playing job scenarios, and pragmatic writing were frequently used instructional techniques."

IV. Regularly scheduled instruction

[See 2, III (Scheduling).]

"Classes for workers were held twice per week for 1 1/2 hours each on job time at the hospital on days least affected by the hospital’s complex rotation off (RO) schedule, a factor of the 24-hour per day, 7-day per week operation of a hospital. Times were
selected to be the least disruptive of work in the participating departments. Workers volunteered to attend but actual selection of who could be "spared from the job" at each class time was made by worker's immediate supervisors. Supervisors also selected employees whose performance they wanted to reward by time off to participate in this program."

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching, and
VII. Builds on learner's prior knowledge, and
VIII. Relates to personal work lives

"...program used actual workplace literacy materials and emphasized the skills needed on the job. These materials demand that the worker integrate oral communication (speaking and listening), reading, writing, and problem-solving. This integrated, whole language approach also was the basis for the curriculum developed for this project. The literacy curriculum utilized real materials from the hospital and provided instruction and practice in actual literacy skills needed on the job. Assessment instruments were also based on job texts and skills. By using actual hospital texts, participants were familiar with the content from their jobs. Thus, they brought to the literacy task background knowledge about the subject and a contextual schema which could be applied to comprehension of the oral and written texts."

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

[There is no mention of computers in this program description. The assumption is that computers were not used.]
Appendix M

Data-Program 11
Data-Program Eleven

2. Learner Participation in Program Planning

I. Choosing materials

"Days 2-5
Self-selection of reading materials, magazines, newspapers or other materials, such as paperback books.
Continue Word Study routines established the first day."

II. Recruitment

"...identify a pool of candidates for reading improvement instruction, especially production personnel whose inability to read certain work-related terms might pose a safety hazard to themselves or others."

III. Scheduling

[There is no information on scheduling, the program description does include a schedule of activities for a five day cycle of classes, but other than that, there is no information on scheduling. Since there was no learner involvement in planning the program, the assumption is that there was also no learner involvement in scheduling.]

IV. Fund raising

[There was no learner involvement in fund raising. The program was grant funded.]

V. Public relations

[There is no mention of public relations in this program description.]

VI. Setting program policy

"The personnel director of a local industry contacted the University requesting reading help for several employees. Many meetings later, and with the aid of
a state funded grant, the following curriculum evolved."

VII. Intake procedures, and
VIII. Needs assessment

"Development of Screening Instruments
A. The objectives
1. develop industry-specific screening tests that can be administered and scored quickly.
2. identify a pool of candidates for reading improvement instruction, especially production personnel whose inability to read certain work-related terms might pose a safety hazard to themselves or others.
B. Procedures
Two types of test were written. One the Vocabulary Test, requires the participant to identify, instantly and out of context, 40 industry-related safety terms.
The other type of test is a modified CLOZE Procedure. CLOZE tests are constructed by deleting every fifth word from a passage of approximately 250 words of running text, and asking the examinee to fill in the blanks with the exact word or a synonym."

"...4. identify levels of literacy and specific strengths and needs for individual participants."

IX. Mentoring

[There is no mention of mentoring. The assumption is that there was no mentoring in this program.]

X. Participation on board

[See VI (Setting program policy).]

XI. Staff training

[There was no mention of staff training, given the lack of learner involvement in other administrative aspects of the program (Setting program policy, Participation on board), the conclusion is that learners were not involved in staff training.]

XII. Union representative on planning board

[There was no union involved with this workplace.]
3. Learner and Teacher Role in Evaluation

I. Regular feedback sessions with instructors and program supervisors

"Ongoing Procedures for Daily Instruction

Objectives
2. Build confidence and motivation through evidence of progress, e.g. writing portfolios"

II. Formal measures of evaluation reviewed by learners and instructors

[There is no evidence that the learners were involved in reviewing formal measures of evaluation. Given the lack of involvement of learners in other aspects of planning, the conclusion is that learners were not involved with reviewing formal measures of evaluation with instructors.]

III. Learners assess own learning needs and objectives

"B. Procedures for Initial Classes

Individual conferences with instructor for Reading interview and goals setting
Ongoing Procedures for Daily Instruction

Objectives
1. Continue progress toward meeting personal goals in reading"

IV. Learner keeps a portfolio of measurement

[See 3,I (Regular feedback sessions with instructors and program supervisors).]

V. Learners evaluate program on completion, and
VI. Teachers evaluate program on completion

[There is no mention of end-of-program evaluation, by learner or instructors.]

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

"Instructional Methods
Group discussion and/or conferences with instructor
Use of the Language Experience Approach in which the
student writes or dictates passages which she then
learns to read
Vocabulary building activities, discussion, semantic
mapping, semantic features
Daily journal writing"

IV. Regularly scheduled instruction

[The program description includes a five-day schedule
of classroom activities.]

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching, and
VII. Builds on learner's prior knowledge, and
VIII. Relates to personal work lives

[See I, II, and III above.]

"Objectives
4. Increase sight words, including job-related or
technical terms"
IX. Using word processing

"Instructional methods
Use of the computer for writing language experience
stories and for word study"

X. Using databases, and
XI. Using graphics

[There is no evidence that these were used. The
conclusion is that they were not.]

XII. Computer augments listening, writing, speaking
skills

[See IX (Using word processing).]
Appendix N

Data-Program Twelve
Data-Program Twelve

2. Learner Participation in Program Planning

I. Choosing materials

"...is a basic skills course of interactive computer courseware and print instructional materials developed for the purpose of assisting truck drivers in the ...to develop reading skills necessary to the test. The curriculum materials demonstrate three characteristics of functional literacy instruction which recent research has demonstrated to be most effective in workforce education programs: integration of basic skills instruction with technical training; using technical content and reading tasks that are used on the job; and highlighting the learner’s role as worker or employee during instruction."
"Courseware and print-based materials were developed at the ... and tested at five sites throughout the state, including rural and urban areas."

II. Recruitment

"...Of the 142 who failed the QAT, 130 were given the Tests of Adult Basic Education (TABE) Locator Form. Those who scored below the advanced level on the vocabulary section, approximately 9th grade, were referred to the ...program."

III. Scheduling

"Classes were held on Friday mornings for four hours, ... until the end of ..."

IV. Fund raising

[The program was grant funded so there was no learner involvement in fund raising.]

V. Public relations

"The following recommendations were derived from the evaluation study:
All participants recommended that the program be disseminated to other potential users. The partnership, based on the success in the pilot sites, reapplied for funding in the second round of competition for the Workplace Literacy Grants; they were awarded another grant to complete the curriculum, develop a workbook and tutor's manual for those functioning at a beginning reading level, offer training workshops to other states, and deliver services on a statewide basis.

VI. Setting program policy

"The program, funded by a U.S. Department of Education Workplace Literacy grant, was developed through a partnership of the ... Department of Education, ..... [labor union], and ..... Institute for the Study of Adult Literacy. The ... was the recipient of services. Planning and policy decisions were made by the partners."

VII. Intake procedures, and VIII. Needs assessment

[See II (Recruitment).]

IX. Mentoring

[There was no mention of mentoring; based on the program description the conclusion is that there was no mentoring.]

X. Participation on board

[See VI (Setting program policy).]

XI. Staff training

[There is no mention of staff training. In the recommendations section, it is recommended that teachers be hired with workplace literacy experience. The conclusion is that there was no learner involvement in staff training, and perhaps, no staff training.]

XII. Union representative on planning board

[See VI (Setting program policy).]

3. Learner and Teacher Role in Evaluation
I. Regular feedback sessions with instructors and
program supervisors, and
II. Formal measures of evaluation reviewed by
learners and instructors, and
III. Learners assess own learning needs, and
IV. Learner keeps a portfolio of measurement

"The partners provided advice on the development of
the evaluation plans and monitored the implementation
process. They also helped in collecting data at
various stages. The evaluation focused on the
objectives of the project which related to developing
the curriculum materials and implementing them in
four counties at five sites. The evaluation was both
formative and summative."
"Data were continuously gathered to help make
decisions about developing and carrying out
implementation."

"The major thrust of the evaluation was on measuring
the changes among the workers in gaining basic
educational skills; but attention was also given to
the curriculum materials and the process by which
they were developed and used."

"Tests were administered to the workers before and
after the program to measure increase in reading
skills and knowledge about content in the manual.
Increase in basic educational skills was measured two
ways: 1) by a Criterion Referenced Test (CRT) which
measured growth in specific reading skills using
content from the CDL study manual; and 2) by the TABE
Survey Forms."

V. Learners evaluate program on completion, and
VI. Teachers evaluate program on completion

"Personal interviews were conducted by the external
evaluator with the partners, the recipient of
services, teachers, student workers, county managers,
and the curriculum development staff."

4. Learner and Teacher Role in Instruction

I. Promoting self-expression and dialogue, and
II. Using methods which lead to experimentation, and
III. Open-ended questioning

"...is a basic skills course of interactive computer
courseware and print instructional materials
developed for the purpose of assisting truck drivers in the ....to develop reading skills necessary to pass the test."

[See 2, I (Choosing materials).]

IV. Regularly scheduled instruction

[See 2, III (Scheduling).]

V. Introducing and modeling learning strategies, and
VI. Collaborative teaching, and
VII. Builds on learner’s prior knowledge

"The print-based materials were valuable because they provided structure for the lessons, and they were useful for class teaching and discussion, review, and homework."

[There was no evidence that instructional methods met any of the criteria for participatory literacy.]

VIII. Relates to personal work lives

[See 2, I (Choosing materials).]

IX. Using word processing, and
X. Using databases, and
XI. Using graphics, and
XII. Computer augments listening, writing, speaking skills

"Teaching by computers was a key factor in this program."

"...is a basic skills course of interactive computer courseware and print instructional materials developed for the purpose of ...to develop reading skills necessary to pass the test."

[There is no other information on the type of computer instruction. The conclusion is that this program used pre-programmed computer software which did not meet the criteria for participatory workplace literacy.]

5. Worker-Developed Job Analysis

I. Union determines process, and
II. Workers describe job duties, and
III. Workers involved in job observation, and
IV. Analysis shows range of skills for each job, and
V. Unions set performance criteria, and
VI. Analysis used for program planning

[This program did not involve job analysis. It was intended to assist truck drivers pass a written test required by the federal government.]

VII. Unions assist in setting education and training goals, and
VIII. Workers assist in setting training goals for own jobs, and
IX. Workers can learn new skills

[See 3. (Learner and Teacher Role in Instruction) I-IV.]

6. Worker-Centered Classroom

I. Union participates in planning
[See 2, VI (Setting program policy).]

II. Individualized learning programs
[There is no evidence the learning programs were individualized.]

III. Education integrated with life skills
[See 4, I-VIII.]

IV. Instruction based on information from workers
[See 2, VI (Setting program policy).]

V. Computer instruction supports worker learning objectives
[See 2, I (Choosing materials).]

7. Assessment in Union-Sponsored Programs

I. Regular feedback to learners
[See 3, Learner and Teacher Role in Evaluation, I-IV.]

II. Pre-and post-program interview
"Personal interviews were conducted by the external evaluator with the partners, the recipient of services, teachers, student workers, county managers, and the curriculum development staff."

III. Minimal standardized testing, and
IV. Grade level tests avoided, and
V. Peer interviews, and
VI. Learner-centered program assessment, and
VII. Union constructed competency tests

"...a quick assessment test (QAT), which was a sample of the CDL test..."

"Of those who failed the QAT, 120 were given the Tests of Adult Basic Education (TABE) Locator Form. Those who scored below the advanced level on the vocabulary section, approximately 9th grade, were referred to the ...program."

"Increase in basic educational skills was measured in two ways: 1) by a Criterion Referenced Test (CRT)... and 2) by the TABE Survey Forms. Increase in knowledge from the CDL manual was measured by the QAT. Workers also took the CDL exam at the end of the classes."

8. Participation in Union Sponsored Programs

I. Program accessible to all workers

(See 2 (Recruitment).)

II. Instruction at all skill levels

"Recommendations
Low level readers should receive supplemental help with reading in a job-related context to receive maximum benefit."

"As measured by the TABE Survey Form, the average reading level was 3.0 with a range of 1.1 grade level to 6.3 grade level."

III. Voluntary participation

[See 2, II (Recruitment).]

IV. Convenient location
"...manual and workbook were distributed to drivers in four target counties."

V. Convenient scheduling

[See 2, III (Scheduling).]

VI. Child care assistance offered, and

VII. Minimal cost

[There is no mention of child care assistance or cost.]

VIII. Pay for mandatory classes

[Classes were not mandatory so this criteria is Not Applicable.]

IX. Confidential records

[There is no mention of confidential records, therefore, this criteria was marked No Information.]

X. Recruitment by unions

[See 2, II (Recruitment).]
APPLICATION OF ADULT EDUCATION PRINCIPLES TO
WORKPLACE LITERACY PROGRAM DESCRIPTIONS

Volume II

DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy
in the Graduate School of The Ohio State University

BY

Brenda McKim Chaney, B.A., M.A.

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1994

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Appendix O

Summary-Program One
Program One

Type of program description: Final Evaluation Report
Funded by: New York Governor’s Office for Employee Relations, Civil Service Employees’ Association
Date published: June, 1988
Pages: 96
Dates of program: February, 1987 to June, 1988
Institution: City University of New York, N.Y., Center for Advanced Study in Education
Related report: CE 053 941

The pages in Program One were divided into the following sections, based on the table of contents in the document:

Executive Summary.........................1 page
Introduction.................................7 pages
Overview......................................3 pages
Volunteer Tutor Program
description and evaluation ...... 29 pages
PALs Program
description and evaluation..... 16 pages
Positive Aspects of the Program...... 2 pages
Recommendations.......................... 2 pages
Appendices.................................13 pages

Program One was a pilot workplace literacy program began in 1987 as a joint effort by the New York Governor’s Office for Employee Relations (GOER) and the Civil Service Employee’s Association. This final evaluation report, the result of a contract with an outside agency, covers the program from inception in February, 1987 through conclusion in June, 1988.

The program resulted from a 1986 assessment of the need for training programs in workplaces for employees of
the state. The assessment found that 39 percent of the employees sampled were reading below the eighth grade level and 21 percent below the sixth grade level. The assessment agency also found interest on the part of the employees in upgrading their skills. An advisory board was formed with representatives of management, education, and the labor union.

This program used three methods of instruction: one-on-one tutoring, computer assisted learning in small groups, and videodiscs. The videodisc component of the program was not fully operational and is not included in this analysis. Literacy instruction was provided for employees with reading levels under eighth grade by volunteer employee tutors trained by Literacy Volunteers of America in a two-day workshop. Teachers in the computer-assisted literacy classes were trained by IBM to use the interactive computer software.

The tutor segment of the program was geared toward union-represented workers who read below the eighth grade level. All of the employees who were tutored completed application and intake forms which provided basic biographical data. The twenty-three active tutor-student pairs arranged their own schedules, meeting for one two-hour session each week during worktime for twelve months. The tutoring sessions were held in a variety of workplace
locations, entirely on state release time. Students were paid for one hour of the time and donated the other hour.

Learners were given pre-and-post assessment tests chosen by the educational administrator. The pre-test data was obtained either prior to the start of the tutoring sessions or shortly after they started. Students in the tutor program were given the READ test (word reasoning, reading comprehension, listening), the Skills Profile (self-report questionnaire measuring student perceptions of reading and writing skills).

The students who were tutored were free of hearing, visual and speech problems. English was the primary language for 79 percent of the students in the tutor program. One-third had educational levels at or below the seventh grade level. None had post-secondary education. The students reported that they were able to read casual, non-job related material such as magazines, labels, novels, short stories, newspapers, menus, street signs, and the Bible. Their difficulty was when reading job-related or performance oriented material such as election ballots, maps, application forms, and checks or money orders. They also reported difficulty with spelling. The students reported spending little time reading or writing. They averaged 5.5 hours per week reading, 3.6 hours per
week writing, 15.3 hours watching television, and 3.8 hours in their education program.

After nine months, the final evaluation team looked at documents related to participants, assessed relevance of the reading materials, interviewed staff and observed tutors and tutees in tutoring sessions. Structured interviews were held with selected tutors and tutees. Union representatives and agency staff were also interviewed. Quasi-focus groups were formed to obtain information on recruitment of learners. The evaluation team also observed tutor training sessions.

The recruitment of students was a problem for the tutor program. More tutors were recruited than students. This is a common occurrence with adults with serious reading problems, they have a lifetime of literacy defeats in reading programs. They are, therefore, reluctant to volunteer for another potentially defeating experience. The evaluators commented that word-of-mouth recruiting is the most successful type of recruiting in volunteer programs. The workplace is well-suited for this type of contact. Volunteer students reported that their most frequent source of contact was their supervisor or co-worker. Evaluators also recommended graphic reminders such as posters, flyers and films.
The evaluators found that the tutor program offered students and tutors opportunities for personal growth and gratification. They reported that two students were given new job responsibilities requiring more advanced literacy skills. One tutor reported that there was a "warmer" feeling at the employee Christmas party, that everyone had a feeling of togetherness. The evaluators concluded that the tutor program administrator was open to new ideas, flexible in making changes, genuinely caring, and willing to listen to thoughts and problems. There was concern that all participants be treated with dignity.

For post-test data, a reading specialist readministered the READ test and Skills Profile. The data were difficult to interpret because of missing information in student files. However, if the analysis is restricted to the students for whom both pre-and-post data are available, the results are positive.

Recommendations by the evaluation team concerning the tutor program dealt with the staff development aspect of the program. The team concluded that the reading instruction aspect of on-going staff development was unsatisfactory. Instructional questions were directed to the administrator, who contacted LVA. The administrator would then give second-hand information to the tutor who originally had questions. The evaluation team recommended
that trained and knowledgeable personnel be hired to carry out the program.

The evaluation team commented that when inexperienced volunteers are doing the teaching, generous staff development should be the administrative focus. The reading instruction aspect of on-going staff development was unsatisfactory. The evaluators recommended hiring reading and adult-literacy knowledgeable staff personnel who could provide sensitive pre-tutoring orientation and who are available for individual conferences. The team also recommended regularly scheduled group meetings of tutors to exchange ideas and information.

Another problem found by the evaluators was missing paperwork. The records for recruitment data, attendance records, student literacy functioning on entry to the program as a yardstick to measure progress, detailed records of student-progress—including tutor logs and formal test results were either missing or poorly kept in many cases. Tutor logs were required for each tutoring session but were not available, and if they had been, there was no one on staff competent to evaluate and give assistance to the tutors on instructional problems.

The evaluators suggested that individual conferences with prospective students precede the start of tutoring. The intake should include discussion of student goals,
expectations for the program, situational factors in the student’s life that might affect program participation, visual and hearing factors that might require evaluation, student interests, and students strengths and needs in instruction.

The volunteers for the tutor program were screened by staff members and then trained in a two-day workshop by Literacy Volunteers of America consultants. All tutors had to have a high school diploma, some had two-years of college. The evaluators recommended personnel to interact with and screen tutor applicants. They also recommended ongoing tutor monitoring time as well as time to counsel tutors when there were problems.

Due to the lack of personnel, important functions such as visiting the tutor sites were not carried out. Tutoring sessions were not observed. There was no personal knowledge of tutorial sites themselves and how tutors and students gained access to them. Problems existed with tutors needing to scrounge each session to find a meeting place.

Evaluators noted that the program needed to have early independent word identification skill materials. The materials at the headquarters consisted mainly of paperbacks suitable for independent reading by experienced
readers. The grade-level make-up of the students in the tutor program was:

9 tested at first or second grade level;
4 tested at the third or fourth grade level;
4 tested at the fifth grade level or higher.

Tutors were not encouraged to offer structured phonics instruction to students with low-level reading abilities. And, if they had wanted to offer such instruction, there were no materials available. The evaluators recommended personnel be hired to determine the needs of students, communicate with tutors about student needs, interests, and aptitudes, keep track of materials, and work out ways to get them to and from tutors.

A final recommendation regarded the scheduling of tutor sessions. Evaluators suggested the tutors experiment with schedules other than once a week for two hours. Evaluators were concerned that with the once a week schedule, if a session had to be missed, there would be two weeks between sessions. A proposed alternative was two, 1-hour sessions per week.

Principles of Alphabet Literacy System (PALs) is a research-based interactive instructional system using IBM word processors and typewriters for touch typing, word and sentence composition, and teaching of reading through phonics. IBM introduced the PALs interactive video system in September, 1986 to teach adults reading at or below the
sixth grade level. There were PALs labs located at eight sites. Each was managed by a coordinator. The evaluation team visited the three sites that were first operational. The first site to become operational in December, 1987, was visited and used to develop a pre-test to be used at the other sites.

The PALs lab was a structured approach to teaching basic skills to students through the use of an interactive video disc program. The lab used IBM software and interactive videodisc equipment in office-like laboratories. Training sessions were one-hour per day, five days a week, for twenty weeks. Students spent half of the class period working with the video-disc course and half using work processing programs on IBM PCjrs or typewriters. The labs could accommodate 16 students per hour. There was space for 150 students during the twenty-week duration of the program.

The program included learning words phonetically, sounding them out before using them in sentences. The lessons in PALs were based on a story about the invention of reading and writing in the mythical kingdom of King Alpha and Queen Bet. The two kingdoms almost went to war because of their inability to communicate with written language. The program illustrates the need for precise communication and demonstrates relationships among images,
sounds, and ideas. After the fable illustrates the relationships between words and letters, students are asked to type the words spoken by the system.

When post-test data were compared with pre-test data the evaluators found a gain in reading of nearly one grade level on the TABE test and meaningful gains on the Skills profile. However, like in the tutor program, there were large amounts of missing data. Forty-four students initially were given the TABE reading test and the Skills Profile. Pre and post-test data were available for only thirteen of these students.

Issues raised by the evaluation team included:

Whether videodisc courses were appropriate for adult students.

The difficulty in synchronizing the voice and video aspects of the disc.

The missing data--including attendance records and testing materials.

The need for follow-up materials and continuity.
Program Two

Type of program description: Final evaluation report
Funded by: National Workplace Literacy Program of the
U.S. Department of Education
Date published: June, 1990
Pages: 119
Dates of program: October, 1988 to March, 1990
Institution: Los Angeles Unified School District,
Division of Adult and Occupational Education
Related Reports: CE 055 451-452

The pages in Program Two were divided into the following sections based on the table of contents in the document:

- Cover letter........................1 page
- Abstract..........................1 page
- Objectives........................11 pages
- Challenges........................1 page
- Financial status Report..........1 page
- Evaluation.........................1 page
- Recommendations..................1 page
- Dissemination......................1 page
- Appendices
  - Letters of Support
  - Advisory Committee
  - Publications
  - Project Forms
  - Profile of Workplace Literacy
  - Participants....................31 pages
- Addendum........................44 pages

In October of 1988 the U.S. Department of Education awarded $428,528 to a partnership to operate a workplace literacy program. The partnership consisted of a public school district and several profit and nonprofit companies in the Los Angeles area. The learners were hotel and food
industry customer service employees. Literacy instruction was merged with the job requirements of the customer service job classifications.

Learners were referred through community agencies and through company communication channels. Many had limited English skills. They were given paid release time to attend classes, cash bonuses, formal recognition of achievement, and promotional opportunities. Classes met from 4-10 hours per week for five to twelve weeks.

Classroom materials were based on a literacy audit that merged literacy instruction with job requirements. There were 9 performance modules, 27 communication modules, and 13 computational modules. Types of instructional methodology included: modeling, guided practice, transfer of skills, and traditional classroom instruction using material developed especially for this worksite and interactive video disc. Evaluation had three components: learner reaction, employer/organization reaction, and customer satisfaction.

There were five major objectives in this program:

1. Establish partnerships between education and private and non-profit sectors to address the functional literacy problems of workers at hotel and food service industries in the Los Angeles area.
2. Establish a workplace literacy program that focuses on customer service occupations within the hotel and food service industries.

3. Develop and implement interactive videodisc courseware to improve the efficiency of and access to workplace literacy skills training.

4. Improve workplace literacy skills of at least 550 workers and job seekers within the hotel and food service industries.

5. (Objective five was missing from the document.)

Major problems encountered by the partners were:

1. Time constraints—The partners had not planned on the amount of time a public awareness campaign would take.

2. Recruitment of staff—Teaching staff were recruited in the middle of the school year. The project began in October, 1988, while the school year began in September of that year.

3. Loss of partners—Two major business partners pulled out of the partnership.

4. Teacher work stoppage—Teachers in the school district staged a work stoppage in May of 1989, forcing the classes to shut down.

5. Management uncooperativeness—The planners wanted the management of the companies in the hotel and food service industry to upgrade the status of workplace
literacy training to an level equivalent with other company training programs.

6. Physical distance between partners--Project partners had home offices in states as distant as Michigan and Virginia. This led to problems in communication and decision-making.

7. Personnel changes--The external evaluator and interactive video disc programmer left and had to be replaced.

The external evaluators used three components to measure success: learner reaction, employer/organization reaction, and customer/guest satisfaction. Ninety-two students were surveyed. Of these students, 65 percent were very satisfied and 35 percent were satisfied. This satisfaction level was achieved even though students attended two hours of class after an eight hour work day. Students even attended on their days off. Some students continued in the program after their session ended, others were referred to adult education programs in the community.

The recommendations from the evaluation team included:

1. The project should document all activities from inception to completion--dates, times, location, participants, activities.
2. The project should develop partnerships that are geographically close.

3. The project should allow start-up time for marketing and public awareness campaigns.

4. Partnerships should enable the public service sector and its work force to become more involved.

5. The project should include the positions of assistant project director and project secretary.

6. The project should set aside funds for staff development sessions.

7. The project should include incentives to improve the literacy skills of workers beyond a job-specific level of competency.

8. The project should assume a multi-strategy/eclectic approach.

The addendum contains reports by the project partners and the final evaluation report. Report One described the project history. In June, 1988, the public school system submitted a proposal to the U.S. Department of Education for $510,000 to finance a workplace literacy program. The Department of Education issued a grant for $428,528 and the school system contributed $183,655. Work on the project began in the last quarter of 1988.

In the first calendar quarter of operation, 17 students began an eight-week, 80-hour course to improve
critical thinking, and problem-solving. At this time, a literacy audit had been completed at only one site. Fourteen of the 17 students had been employed from one to five years.

The end of second quarter report (June 30, 1989) contained information on the completion of literacy audits at the remaining partners. By this time, corporate interest was waning and one company had moved to New York. The partners found two other companies to take up the slack. The interactive video production was behind schedule at this point.

The third quarter report (September, 1989) found the second class graduating. Several students had been promoted at this time. Supervisors reported increased productivity and guest satisfaction. The interactive video production was still behind schedule.

The fourth quarterly report (December, 1989) found that the partnership had expanded into community adult schools. The third graduation ceremony was held. Several success stories appeared in the local media. Another new business partner was added during this quarter. The interactive video was finished during this period. The contract was extended through March, 1990 so staff could complete the computer program for the interactive video.
The original plan was for the curriculum to teach workplace literacy in the context of the customer service job. Curricular activities included preparing the customer-service work station, performing the function of a cashier, and processing customer's orders. Problems occurred with the curriculum because it needed to be adapted to non-native speakers and corporate commitment was difficult to maintain.

There were logistical problems. Often a central worksite was used for classes. This meant that students had to commute—often as much as twenty miles by bus. Students often had to choose between classes and car pool rides.

Another problem was that useful and accepted test instruments were not available. The project developed its own test instruments, however, reliability and validity of the tests was unknown. The project then used the CASAS test before and after instruction to measure improvement in academic abilities. Scores of learners improved only 2 percent, some students scored lower on the post-test.

A final problem was the amount of time, money, commitment, and resources needed to create the interactive video disc. There was no ESL instruction on the videodisc and only about forty percent of the curriculum was actually put on the disc.
Success of the project included:

1. Benefits to the students—of the 581 students who took the course, one-half (49 percent) were working full-time.

2. Enduring relationships with employers were established. Employers interviewed by phone were positive about the program and wanted it to continue.

3. Staff developed technological knowledge. They have the knowledge to be sophisticated clients of firms who create interactive video materials.

The external evaluation was also included in the addendum. The external evaluation met requirements in the grant proposal—evaluate the effectiveness of the curriculum and evaluate the effectiveness of the interactive video equipment.

The curriculum was evaluated from several perspectives. A quantitative evaluation was performed using CASAS, testing students before and after instruction. A qualitative evaluation was performed using interview responses from students, teachers, and employers of participating students.

The quantitative evaluation found that the curriculum had only minor impact on student learning. A sample of 92 students were tested after 5-12 weeks of instruction. The average increase in scores 4.37 points. Almost half
improved from pre-instruction to post-instruction. Forty percent showed no change in scores and 9.7 percent decreased in scores.

The student interviews were used to examine student reactions to the program. Most of the sample of twenty were interviewed after completing instruction. Students reported being satisfied with the ESL instruction and would recommend it to others interested in improving their English-language skills. The students did not believe that the instruction was useful in obtaining a job or getting a promotion.

Seven of fourteen teachers returned their questionnaires. Six completed all the items. One wrote extensive comments about the program. The teachers had mixed reactions to the program. One-half thought it was successful. Four of six felt it contributed to customer service skills, while one teacher saw it as a program that should continue intact.

The seven teachers provided wideranging anecdotal information. When asked the major strengths of the program, 3 teachers responded either negatively (no strengths) or not at all. Four of the teachers listed strengths as curriculum, teachers' knowledge, director expertise, realistic subject matter, and student willingness. Shortcomings included identical pre-and-post
tests, irrelevant material, student overload with course content, a nonworkable program format, slow pace of the classes, and poor on-site classrooms.

Only two employers responded to the employer questionnaire. Both responses were positive. Strengths were the understanding nature of the instructors and improvement in the student's English skills and self-confidence.

It was difficult to evaluate the interactive video disc because of the time delays in completing the video and computer program. Of the 92 students, only 30 received instruction in on the interactive video disc. Of two weeks instruction, half was spent familiarizing the students with the computers. Students showed no improvement in skills after the instruction, this was not surprising since there was so little instruction. The evaluators commented that no conclusions could be drawn about the effectiveness of the instruction. Students did not see the instruction as worthwhile.

Evaluators concluded that as a program of instruction, the learning did little to improve participants skills as measured by the CASAS test. Assuming that CASAS is an adequate measure of achievement, there is little evidence that students improved their basic literacy skills. There is no quantitative evidence
that programs improved workplace skills. The only supporting evidence is anecdotal. The students were positive about the program and would recommend it, the employers were positive, the teachers had mixed reactions.
Appendix Q

Summary—Program Three
Program Three

Type of program description: Descriptive report
Funded by: Office of Vocational and Adult Education, Division of Adult Education and Literacy
Date published: 1990
Pages: 43
Date of program: October, 1988 to March, 1990
Institution: Triton College

There was no table of contents in this description, the following divisions were made by the researcher:

Planning and Implementation..........10 pages
Endnotes................................1 pages
Appendices
  Objectives
  Description of participants
  Public relations.................28 pages

This program was the result of a partnership between a college and the labor-management center of an economic development group for employees of local companies interested in improving skills in English, reading, mathematics, and writing, as well as prepare for the GED exam. The cooperating organizations were described in the program description. The college offered programs including regular college courses, courses to strengthen basic skills in reading, writing, and mathematics. The college also offers Adult Basic Education, English as a Second Language, and GED preparation.
In 1972, the college expanded its services in response to the needs of local businesses and included literacy education and employee training. The college has offered training to more than 20,000 persons in 1,200 programs. To meet increasing needs, the college formed a partnership which could share expertise, resources, increase impact, and improve productivity and cost-effective management. In 1987, this partnership of 25 businesses, labor organizations, and government representatives became the co-sponsor of a demonstration workplace literacy project to teach literacy skills in the workplace.

The program was partially funded by the U.S. Department of Education. Additional funding came from cooperation between the college partner, the business community, and labor and government agencies. There were representatives of the workers' union on the program planning committee. The committee consisted of a program director, an industry education liaison, the education services manager, directors of GED and ESL programs from the community, a representative from a local literacy program, an education counselor, a curriculum specialist, on-site company coordinators, labor and management representatives plus a Private Industry Council representative.
The partnership developed a four-phase plan. Part one involved information and data gathering. Phase two was communication seminars between labor and management. Phase three was a public relations campaign and phase four intervention on behalf of employees and employers who seek training and retraining.

Objectives of the program included:

1. increase existing coordination between education, business, and labor.

2. increase the number of companies and subsequently, the number of employees who participate in the workplace literacy programs.

3. increase work-related literacy skills of employees to officially established performance levels needed for the jobs.

Classes began in October, 1988 and ended March of 1990. Seven hundred and forty-four students enrolled in the program, 665 completed. By the end of 1989, 1,149 employees had gone through the assessment process. Workers averaged four hours a week in the program, they were paid for two of the hours and donated two hours. Each company partner paid a fee of 15 percent of the cost of the instruction.

Classes were planned cooperatively by the college partners. They were held at the worksite, twice per week
for two hours, for ten to fifteen weeks. Employees attended class for no charge and were given work-release time. Child care and travel assistance were also provided. Workers were encouraged to attend the program through the use of company incentives, attendance bonuses, skill based pay, promotional opportunities, work schedule modification, and in-person registration with education counselors. At the end of each set of classes, students and instructors completed evaluation questionnaires and attempts were made to get evaluations from employee supervisors. Academic and personal counseling were also provided, along with tutors if necessary. All assessment results were kept confidential.

Benefits to participants included improved communication on and off the job, better job options and opportunities, increased promotability, preparation for technological advances at work, and improved confidence.

Needs assessment was one of the first tasks of the partnership. It established criteria on which companies were eligible to participate in the workplace literacy program. The criteria included: a minimum number of potential employee participants, the need to upgrade skills, commitment of the company to cooperate in promoting the program and to encourage voluntary attendance. Also, the companies had to provide at least
one-hour of paid leave allowing a worker to attend programs, accommodation with convenient scheduling, opportunity for rewarding participants with job promotions, further training, salary increases and in-company program administration.

In October and November of 1988, curriculum specialists started designing procedures and materials for a "literacy audit" of companies interested in participating in the program. The specialists selected assessment instruments and procedures, collected a comprehensive sampling of materials relevant to work performance, interviewed employees, supervisors, and personnel department staff, and observed employees in their job settings.

Goals of the program reflected provision 317 of the Adult Education Act which included establishment of a partnership with representatives from commerce, industry, labor, education, and the Private Industry Council. The partners had to show evidence of ability to provide literacy services and assurances that funds would supplement existing programs.

The project director and principal staff developed a timeline which detailed planned activities. Included were procedures to be followed for literacy audits of participating companies, profiles for individual jobs, and
assessment of the skills of individual employees. The timeline also listed specific activities for participating staff, evaluation procedures, and targeted completion dates.

The project director was responsible for Objective One--increasing existing coordination between education, business, and labor. As the program moved toward Objective Two--increasing the number of companies and the number of employees who participate in workplace literacy programs, additional project members became involved. The Industry Education Liaison Specialist (IELS) assisted in promoting programs on-site. The IELS, Education Counselor, and Instructors were expected to help recruit and register program participants. The IELS and representatives from the client company were expected to monitor program arrangements and make modifications when necessary. Guidelines were carefully set to consider the limitations of each situation such as scheduling constraints, location and features of teaching facilities, availability of an on-site coordinator provided by the company, the ability of a company to commit to an average of 45 hours of training, and the extent of management commitment to the project. The partnership encouraged co-sponsorship when one company alone might not be able to support a program.
Special attention was given to planning promotional steps for recruitment. Client companies were encouraged to offer incentives for participation including referral bonuses, attendance bonuses, skill-based pay or promotional opportunities, work-schedule modification, and in-person registration with the program's Education Counselor and Instructor available to answer questions and counsel employees.

The third objective was to increase work-related literacy skills of employees to officially established performance levels needed for the job. The goal was to have a minimum of 80 percent of the participating employees achieve performance levels established by the Literacy Skills Profile. The Educational Services Manager (ESM) was responsible for managing and coordinating the actual educational activities. Along with curriculum specialists, the ESM would investigate levels of reading, writing, and computational skills for each job and encourage individual employees to take advantage of the program. The Curriculum Specialists, with the Directors of GED, ESL, and Literacy programs would then design classes to bridge the gap between employees' current skill levels and work-related performance levels determined by the Literacy Skills Profile.
Another timeline was issued indicating the steps to be followed in actual contact and communication with interested companies:

1 to 3 weeks initial meetings, follow-up discussions, tours, preliminary planning sessions, promotion, employee recruitment, and gathering of work samples.

1 to 3 days registration and assessment of employee participants.

2 to 3 weeks development of curriculum, scheduling of classes, introduction of instructors.

12 to 15 weeks allotted to classes with evaluations planned midway and at the end of the scheduled sessions.

Promotion of the program involved designing and distributing brochures in English and Spanish. News releases and interviews with the media also served to promote the program. Coordinators of the programs conducted presentations to company representatives and at conferences.

Assessment of employee progress was on-going. The Evaluation Counselor was expected to meet with employees on a weekly basis and when appropriate, recommend tutoring or other educational assistance. Assessment plans also included an evaluation at the end of the program by a customized assessment battery of tests given to all
employees as well as follow-up observation of the employees' application of skills in the job setting.

Evaluation forms were provided for students in both English and Spanish. Almost all of the students rated all aspects of the courses good, very good, or excellent. Most of the ratings were in the two highest categories. The evaluations completed by the instructors were slightly less positive than those of the students. The instructors rated student progress in the good to very good categories.

Few of the questionnaires sent out to employers were returned. Those that were returned had variable ratings. The evaluators concluded that there was not enough information from supervisors to draw conclusions. After interviews with two employer representatives, the evaluators concluded that the workplace literacy program had led to a more positive attitude toward the employers on the part of the employees.

The evaluator questioned the use of standardized reading tests of workplace literacy programs. Workplace literacy stresses material relevant to the job, the instruction may not address some of the knowledge measured by standardized tests. The evaluator speculated that if assessment tests were based on the actual material taught in the classes, gains would be much higher.
The evaluator concluded that the program planners had followed accepted practices in the design and conduct of the program. Varying degrees of success were found in meeting the three objectives, but overall, the program was a success.

The first objective was to increase coordination efforts and encourage greater participation. The conclusion was that the partnership served a few firms well, but many more could benefit.

The second objective was to increase the number of worksites and subsequently, the number of employees served. The original goal was to offer sixty course per year. The evaluators anticipated that 68 courses would be completed, therefore, the partnership exceed this objective. There was no determination of cost-efficiency because of lack of information.

The third objective was to increase work-related literacy skills of employees to officially established performance levels. Employees were to increase their work-related performance to eighty percent of the level established by the Literacy Skills Profile. However, quantitative criteria were not developed and the measurement of students had to rely on available test results which did not accurately measure work related
gains. The evaluator estimated that 76 percent of the students had improved scores.

The main recommendation by the evaluator was to eliminate the specification of the literacy skills profiles originally listed in the project and replace the profiles with other criteria which are more measurable. The evaluators also recommended increasing efforts to recruit a larger number of employers.
Appendix R

Summary-Program Four
Program Four

Type of program: Descriptive report-conference presentation
Presented to: ANPA Foundation Literacy Conference
Funded by: Palm Beach Post (newspaper),
Date published: July, 1990
Pages: 16
Dates of program: Information not available in the document

The pages in Program Four were divided into the following sections based on the table of contents in the document:

- Introduction............2 pages
- Program Design............4 pages
- Recommendations..........3 pages
- Budget..................1 page
- Sample Flyers............3 pages

This program was offered to employees of a newspaper. Classes were offered in three areas: adult basic education, English for speakers of other languages, and preparatory classes for the General Educational Development diploma. Employees received work-release time or were paid to attend class. Learners were given incentives to attend the education programs. A student who attended ABE classes and whose skills improved four grades would receive a $100 bonus. An employee who moved up four levels in ESL would also receive $100. Employees who moved from ESL into GED would receive $100. Any employee who successfully completed the GED would receive
$250. All employees received a certificate for each level completed. These bonuses were considered to be comparable to tuition assistance for college classes.

The program started one year after the creation of an in-house literacy committee. The original plan was for the committee to establish a family reading program for employees. The goals of the company in providing the literacy program were:

1. increased productivity;
2. improved safety, communication, and precision;
3. reduced turnover and continued employment and advancement for people whose jobs might otherwise be in jeopardy.

Classes met two times each week for two hours. Efforts were made to schedule classes during work hours. If that was not possible and employees had to attend on their own time, they received their hourly wages. Employees had to document their attendance and submit the information to the personnel office in order to receive their pay. Class size was limited to 10 to 15 students to allow for individualized attention and computer access for supplemental work. Six literacy classes were offered in three programs: adult basic education classes, English for Speakers of Other Languages, and high school equivalency classes in preparation for the GED exam. This program had
open enrollment—students could sign up for classes at any time. Recruitment focused on involving the company supervisors and upper-level managers in the program so they would be flexible and allow employees time off for classes. Employees could sign up for the program through their supervisor or through the class-coordinator.

After signing up for the program, students were assessed to determine their skills level. Student progress was measured through formal tests given by the teachers. Teachers were provided at no cost by the city school system.

A long list of recommendations is included in the program description. These include:

1. For increased credibility, business should promote literacy programs within their own company as they promote it in the community.

2. Workplace literacy programs should be encouraged because of the benefits to the company (increased productivity, improved morale) and to the employees (job security, opportunity for advancement).

3. Each business should create an internal literacy committee whose sole purpose would be internal literacy programs. This committee should include directors and upper-level managers.
4. Designate one person who will convene the meetings, research other programs, provide information to other committee members and generally direct the program.

5. Find out what programs and resources are available in the community by meeting with the directors of literacy provider programs. In some areas the school board will provide teachers if enough employees sign up for a class.

6. Talk to managers and supervisors of different departments to assess the needs of the employees. In talking to supervisors, there may be one who seems to be more sensitive to the needs of employees and is receptive to the idea of a literacy program for employees. This is the kind of supervisor whose employees should be in the pilot class.

7. Develop a program that is best suited to the individual company, meets the needs of the employees, and is backed by the management.

8. Decide on a budget and establish a time frame for sign-up, start-up, and evaluation. Work release time and incentives for progress should also be established. This will be the most difficult stage. Many unexpected problems will arise. This is also the time to decide on desired achievement levels and whether the program will be
designed to take employees to a specific level required for their job or toward the GED.

9. If an on-site program is to be established, a pilot program of 10-15 people is a good way to start because a particular supervisor and department can be targeted.

10. Before the class starts, the teacher should visit the workplace of the employees in the pilot class. This will give the teacher a better idea of the level of reading and math skills required and will be able to make the program more relevant to the employees.

11. The committee should meet with the teacher about six weeks into the program to find if any adjustments are needed.

12. A date should be set (after six months) for an evaluation. All of the employees should take an assessment test to determine reading levels at the beginning of the classes. The results of another test at the end of six months will show if the program is working. The level of skills and program should be kept confidential, between employees and teacher, and not disclosed to supervisors or managers.

13. If the pilot program is successful, it should be expanded to employees company wide.
14. If an on-site program is not possible, the committee can research available literacy programs in the community.
Appendix S

Summary-Program Five
Program Five

Type of program description: Descriptive Report
Funded by: Office of Vocational and Adult Education, Division of Adult Education and Literacy
Date published: June, 1990
Pages: 56
Dates of program: October, 1988 to March, 1990
Institution: Georgia Southern College

Program Five was divided into the following sections:

Comparison of actual accomplishments with objectives........9 pages
Appendices
   End-of-project database records
   for participants.................30 pages
   Inventory of hardware and software.........................12 pages

These divisions were made by the researcher, there was no table of contents in the document.

This program was the result of a partnership between a college and employer. The program dates were 10-1-88 to 3-31-90. Initial projections for enrollment were not reached. The program staff screened 516 potential students, of the 516, 150 completed instruction and another 112 started but failed to complete the program. Job Training Partnership Act classes also participated in the program.
The objectives of the program were:

1. The college will provide assistance to the company to establish a workplace literacy program.

The company provided four interactive video stations at a cost of $50,000. These video stations were located in a 19 x 40 feet room provided for use by the program participants. The facility consisted of study carrels, some with computers to use for the computerized modules, others with desks for work in manuals and test-taking. Initial preparation cost was $30,000. The company estimated a value of $615,000 for use and upkeep of the room—based on fair market value of $45 per square foot.

The company actively solicited participants by publicizing the program and compensating employees for successful completion of instructional modules. The self-contained modularized curriculum was selected jointly by the college and company representatives. Students were compensated at the rate of five to six dollars per hour for completion of the instructional modules. The computer-assisted learning program was designed for two levels of students: those in need of basic skills education and those preparing for their GED. Teachers kept records of achievement for learners. They also regularly reviewed the software to determine its effectiveness.
The company hired an on-site person to coordinate the program. This coordinator provided on-site management of records, supplied the project with data related to improved productivity and professional advancement of participants.

2. Expand the partnership between education and other businesses through new agreements assuring supportive services to participants from employers to diminish barriers to education such as transportation and child care costs.

Attempts to bring other businesses into the partnership were unsuccessful. Several found the costs of involvement prohibitive. Costs included items such as salary incentives, on-site facility development, and employee support services.

3. Implement an effective participant assessment plan.

The program offered an individualized instruction plan for each student, an educational counseling program, on-going evaluation of participants, and an efficient management and record-keeping plan. Two separate diagnostic/prescriptive plans were developed to monitor and instruct the categories of clients--employees of the participating companies and JTPA participants.
The system developed for employees of participating companies included the use of applied learning modules. It was part of a more comprehensive system of materials with higher-level modules in areas such as electronics.

One of the strengths of the project was the thoroughness and detail of the computerized database system used to monitor participant progress. The steps in the diagnostic/prescriptive plan used to monitor company employees follows:

A. A personal information was sheet completed.

B. A fifteen-minute JTPA reading test was administered. This gave a quick, rough estimate of ability and identified non-readers rapidly.

C. The Applied Learning pre-test was administered. This test was a paper and pencil test in reading and math that corresponded to the modules.

D. An individualized prescription was developed for each participant. This plan included the modules to be worked on and formed the Individual Study record.

E. After the Individual Study record was set, work on the modules began. Staff then administered post-test and copied the test so it could be entered into the database.
F. The Applied Learning pre-test was readministered, progress was measured by module completion and employee compensation was computed on this basis.

4. Execute a successful and realistic literacy education program for approximately 650 participants.

There were two components of this objective: success of the instruction and number of participants served. The conclusion was that the instruction was successful. All comparisons were statistically significant with a mean gain of more than one standard deviation.

The second goal, involve 650 participants, was not reached.

4a. The program will provide basic literacy training to participants within a reasonable and just time for intensive services.

The two groups of clients had different time frames. The one hundred and four JTPA clients were on a fourteen cycle mandated by the JTPA training schedule. The timeframe for the company participants was less structured. Employees worked on their own time, after work hours. Of the 36 employees who completed all the modules of their prescribed program, the mean length of time to complete 3 modules, two in reading and one in math, was 2.18 months. The less structured timeframe may
have reduced achievement. One hundred and twelve employees failed to complete their programs.

4b. The program will provide secondary basic skills to participants with the pre-tested ability level to satisfactorily meet the requirements for a general high school equivalency examination.

The curricular materials served a wide range of abilities, ranging from beginning reading and math to advanced applications such as electronics. The chief involvement of the project instructors was with low functioning students, however, they were available to assist with upper-level coursework. The assistance was not often needed due to the tutorial nature of the software and the literacy levels of the participants using the software.

4c. The program will serve as an educational resource to project partnerships in material selection for upgrading or updating skills necessary for specific technological skills.

Only one company entered into a formal materials selection process.

4d. The program will address the areas of identified need to improve competencies in speaking, listening, reasoning, problem-solving, and work adaptability.
Software was selected with the aim of integrating skills development in more than a single area. Participants regularly listened, observed, and read while problem-solving and reasoning skills were targeted.

4e. The program will provide for accessibility in the individual prescription.

There were no limited English speakers due to the demographics of the area. Barrier free construction was available although there were no physically handicapped individuals as participants.

5. Equip and upgrade a central literacy training and learning lab with appropriate software and materials necessary to serve the designated population.

An inventory of hardware and software was provided in Appendix B.

6. Upgrade the learning center in the company to more adequately serve the anticipated 565 workers.

The actual number of employees involved did not reach 565. There were 157 company participants and 104 JTPA participants. The laboratory was equipped with four interactive video systems and an inventory of Applied Learning software. The facility was divided into study carrels, some with microcomputers and some with space for work in manuals and test-taking.
7. Provide for partial salary compensation for employees managing the learning center, partial pay for participants, and for the record-keeping required by the project. New partnerships will be negotiated based on grant funding.

The program coordinator was described earlier. No new partners entered into the partnership.

8. Provide ongoing program and financial monitoring in compliance with federal reporting requirements and timelines.

All reports were prepared as required.

Dissemination activities included contacting potential partners by mail, by telephone, and by personal contact. The Coordinator disseminated news of the program success and gave presentations to groups of business persons.

There were two kinds of evaluation: summative which was carried out by an outside evaluator, and formative. The formative evaluation involved ongoing activities to monitor the success of the program. This evaluation looked at maintenance of monthly instructor logs, establishment of a database containing records of achievement and prescriptions for all project participants, regular review of software to determine its
effectiveness and if there was a need for modification or replacement, and continued contact with the coordinator.
Appendix T

Summary-Program Six
Program Six

Type of program description: Evaluative report
Funded by: Office of Vocational and Adult Education, Division of Adult Education and Literacy
Date published: March 3, 1990
Pages: 80
Dates of program: November, 1988 to March, 1990
Institution: Pima County Schools

Program Six was divided into the following sections, based on the table of contents in the document:

1. Cover page
2. Profile of participants
3. Number of personnel by organizational placement of job performed
4. Qualitative improvement data
5. Workplace literacy participants by worksite and type of training
6. Final report narrative
7. Comparison of accomplishments to objectives
8. Dissemination
9. Evaluation activities
10. Change of personnel, and staff development, and advisory board, and additional information
11. Outcomes
12. Profiles of workplace literacy completers
13. Profiles of workplace literacy non-completers
14. Timeline
15. Appendices
   - Sample specific company curriculum
   - Sample specific company lessons
   - Sample pre-and-post assessments and score sheets
   - Sample student progress report
Funding for this program was provided by the Department of Education, National Workplace Literacy Project. The program was funded from November 1, 1988 to March 31, 1990. There were eleven weeks in each training cycle. The average number of class hours per week per learner was three hours. Types of training offered included: ESL, ABE/GED, math, and test-taking skills. The project provided workplace literacy training at eight worksites and three off-site locations. The worksite programs included employees of industrial and service industries.

After the grant period started, one company went out of business, another dropped from 300 employees to 25 employees. At a third site, the program served twenty employees—5 in the ESL classes and 15 in the GED/ABE classes. A fourth site had a total enrollment of 22—this included employees and their family members. Another site had an enrollment of seven employees, 1 in ESL and 6 in ABE/GED programs. During the grant extension period, an additional site was added and another 43 employees enrolled. The total number of employees served during the
grant period (including the extension) was 161. Of the 161, 124 completed the program.

There were ten objectives in this program:

1. By 10-15-88, the work schedules of the project director, lead teacher, and curriculum coordinator will be adjusted so they can take over responsibility for the program.

   Evidence this objective was met is contracts in files.

2. By 11-30-88, the Director, lead teacher, and curriculum coordinator will have completed a literacy audit (needs analysis) and have developed a curriculum based on the needs identified in the literacy audit. Proof this objective is met will be the inclusion of the results of the audits and curriculum samples in the project reports.

   Project reports included evidence that this objective was met.

3. By 3-31-89, two or more teachers experienced and qualified in ESL and/or literacy or GED will be hired or reassigned.

   Evidence is contracts in employee files indicating that four teachers were hired.

4. By 2-29-89, a minimum of twenty employees will be recruited and trained in a 10-week class session offering
at least one or more of the following classes: job-related literacy skills; workplace literacy education for adults with limited English proficiency; GED test preparation; speaking and listening skills; reasoning and problem-solving skills.

By 2-29-89 twelve students had attended eight of instruction in ESL and ABE/GED. Eight of the students were enrolled in ESL and 4 in ABE/GED. They attended class for one hour and forty-five minutes twice a week. The students received no release time nor pay for attending on their own time. One company went through a major lay-off after classes began, a second lay-off soon followed, the company went out of business after the session ended.

5. By 3-31-89, the lead teacher and curriculum coordinator will have completed a literacy audit of a second company and have developed a curriculum based on the audit.

Classes at the second company began March 7. There were five students in ESL classes and 15 in ABE/GED classes. The classes met for one time each week for three hours on the employees day off. There was no release time and no compensation.
6. By 12-31-89, a minimum of 200 additional employees will have been recruited and trained in additional 10-week class sessions.

By 12-31-89, 118 students had been recruited and trained. The project had to include a third company because one of the original partners went out of business and a second company went from 300 employees to 25 employees. The classes included workplace literacy skills for limited English speaking employees, speaking and listening skills, ABE/GED, reasoning and problem solving skills, and test-taking skills.

7. The lead teacher and curriculum coordinator will have completed a literacy audit in medical and clerical worksites where dislocated (JTPA) workers have been placed in on-the-job training.

By 4-30-89, a literacy audit had been completed at a nursing home where dislocated workers were trained. One student was in an ESL class and six in an ABE/GED class. These workers received no release time and no compensation for attending class.

8. By 12-31-89, a minimum of 40 dislocated workers who have been placed in new jobs in on-the-job training and who have inadequate basic skills for their new employment, will have been recruited and provided with basic skills classes.
By 12-31-89, 55 workers had been trained at five different locations in ESL and ABE/GED classes.

9. By 12-31-89, information on the outcomes of the 160 employees will be gathered through comparisons of individual productivity records for the pre-and-post literacy class training as well as comparison of work-related tests given pre-and-post literacy training, and individual interviews.

By 12-31-89, information on the outcomes was gathered from 118 employees.

10. By 12-31-89, all 160 employees will have had opportunity to take advantage of the support services offered in conjunction with the program, including child care, educational counseling, one-on-one tutoring, and transportation.

Transportation was added to the list of services because classes at one site were held on days off since the plant had twelve hour shifts. Only one employee took advantage of the transportation reimbursement and one employee took advantage of the child care reimbursement. Educational counseling was used by most employees. One-on-one tutoring was utilized by two employees at off-site locations.

The workplace literacy coordinator shared information with people who are working in or are interested in the
area of workplace literacy. The coordinator attended meetings and presented at conferences. Also, the coordinator was to send the final evaluation report to two national clearinghouses for publication.

The outside evaluator of this project came from a community college. Ongoing evaluation and needs assessment were part of the process of curriculum and materials development. Major sections of the evaluation were completed by summer of 1989 so the planning team could take advantage of the results to plan, revise, and strengthen project objectives.

There were four levels of evaluation in this project:

Each student was evaluated by instructors, supervisors, co-workers and self.

Each instructor was evaluated by students, program director, and self.

Each course was evaluated by students, instructors, supervisors, program director, and the outside evaluator.

The program was evaluated by students, instructors, supervisors, program director, advisory board, and outside evaluator.

The coordinator worked closely with the staff to provide needed training. All the instructors hired had experience in adult education, either ESL or ABE/GED, however, only one had worked in a workplace situation.
Therefore, staff meetings and training focused on workplace literacy issues. Topics covered included curriculum writing, lesson planning, pre-and-post testing, evaluation, student support services, how to make the lessons as workplace specific as possible, and incorporating forms from the workplace as lessons and using a functionally-based curriculum.

Advisory boards were set up at each site and met once each cycle. The board included representatives of the company, an employee in the workplace literacy program, an instructor, and coordinator. Questions discussed included: Are the classes meeting everyone's needs? Is attrition a problem? Is the curriculum geared toward the workplace? Are there any suggestions for change? The advisory board also discussed topics such as recruitment, days of classes, length of the class cycle and hours of classes.

Outcomes included statistics on both completers and noncompleters of the program. A student who completed two-thirds of the program was considered a completer. The evaluator concluded that there were measurable academic outcomes. Of the 161 employees who enrolled in classes, 124 completed the program. Many of the noncompleters were laid while enrolled in the classes.
Every participant was pretested when entering the program. Students were post-tested at the end of each 8 to 15 week cycle. Of the 124 completers, 104 were post-tested on the last day of their class cycle. Thirty-six of the completers tested higher on post-tests than they did on pre-tests. Instructors used TABE Forms 5 and 6 to determine improvement. The highest gain in reading was 3.2 grade levels, the lowest was .2. The average was a 1.8 grade level increase. In math, the highest increase was 4.5 grade levels, the lowest was .6. The average was an increase of 2.2 grade levels.

Supervisor feedback at one site indicated that there was improvement in the employees' initiative, product quality, and productivity. However, most of the supervisors interviewed said their employees were always efficient and productive so it was difficult to say if the program made a change in productivity or efficiency. Supervisors did note gains in confidence and higher morale.
Appendix U

Summary-Program Seven
Program Seven

Type of program description: Descriptive report
Funded by: Office of Vocational and Adult Education,
Division of Adult Education and Literacy
Date published: June, 1990
Pages: 27
Dates of program: October, 1988 to March, 1990
Institution: James Madison University

Program Seven was divided into the following sections,

based on the table of contents in the document:

Abstract.........................2 pages
Extent to which objectives were met..5 pages
Schedule of accomplishments.........3 pages
Demographic information on students,
and
Dissemination activities...........3 pages
Evaluation activities..............2 pages
Recommendations and Conclusions....1 page
Appendices
  Survey forms
  Calendar of activities........11 pages

This program was the result of a partnership between
employers, a trade organization, a college, and a
technical school. The program was intended to assist
workers in remaining employed or to advance in their
careers. A project advisory board was made up of industry
representatives. The board met monthly to assist in
developing the instructional schedule and to maintain
cooperation and coordination between the project and
industry.
A mobile learning center traveled between eight work sites in the mornings and afternoons, giving literacy instruction to workers in the poultry processing industry. The mobile unit was furnished with computers, a management system, other instructional equipment, print and computer software, and audio-video taped material. The mobile program was started for companies unable to provide classroom space and equipment or to develop and maintain a workplace education program. The mobile classroom allowed companies to overcome some of the problems associated with literacy programs such as absenteeism, child care, and lack of transportation in rural areas.

This was an open-entry-open-exit program. The classes met twice a week, for 2 to 34 hours. For every two hours in class, the company gave one-hour of paid release time, and the employee contributed one hour of time.

There were 164 employees in the program, of the 138 who participated a minimum of 2 months, 103 progressed. Of the 25 who took the GED test, 20 passed. Four of the employees who received a GED also were promoted after receiving the GED. The drop-out rate for the program was 29 percent. Survey results to industry personnel, workers, teachers, and advisory board members revealed a high degree of satisfaction. Industry partners were so
impressed with the program that they continued to fund it on an interim basis after the initial grant ran out until new funding could become available.

Objectives:

1. Assess adult workers identified by their employers as needing an improved level of literacy and other basic skills.

Assessment began in January, 1989, following a three-month start-up period. Because there was a delay in obtaining and equipping a recreational vehicle to serve as the mobile learning center, the program was implemented in January on a limited basis, using a borrowed recreational vehicle.

At each plant, supervisors and the personnel director recruited individuals interested in the program. There were waiting lists at some plants because there was a limit to how many employees could fit into the classroom and how many could be released from the work-line to enroll in class.

The initial assessment consisted of an interview to obtain demographic information and to identify goals for enrolling. Each student was given the TABE and Bader Reading Inventory Word List. Following analysis of the TABE, the Comprehensive Competencies Program (CCP) subject area mastery pre-tests were administered in subject areas
where the participants showed an interest or need in studying. In some cases, the three mastery pre-tests in reading, language, and mathematics were administered.

2. Plan, implement, and monitor an individualized instructional program for both native and foreign-born adults based on the results of the assessment.

The CCP competency-based curriculum and computerized management system provided the means through which each student's initial interview and testing information was developed into an individually prescribed instructional program. The CCP program is organized through a series of academic and functional competencies in reading, language and mathematics. Different levels are: Basic (grades 0-4), Intermediate (grades 5-8), Advanced (grades 9-12), GED test preparation, and pre-college levels. Functional competency materials are included at the various levels. After initial assessment, an individualized education program was developed based on previously diagnosed competency strengths and weaknesses. Computerized reading, language, and spelling programs were used for students who entered at the first to third grade levels. Participants were continuously monitored with CCP mastery tests, GED pre-tests, and after 100 hours, the TABE test.

3. Develop individualized instructional materials
based upon the workplace literacy requirements specific to the occupation of the workers.

There were no manuals for workers who were involved in the project, therefore, lesson materials were developed related to the workers' jobs, safety and health information, and printed materials from the plants—signs, bulletins, newsletters. These developed into a variation of the language experience method of teaching reading.

4. Provide staff orientation, staff development, and evaluation of project personnel.

During January of 1989, the project staff received an in-depth orientation and staff development program. Topics included: overview of the project objectives and procedures; the interviewing process and TABE and Bader testing materials; informal inventories and other informal tests; overview of CCP print materials and software packages; and planning travel to sites and assessment/testing time.

A five-day, 40 hour workshop was conducted by the CCP staff development consultant who provided training on how to operate and manage the CCP program. Included in the workshop was: the structure of the competency program; how to test, plan, monitor, and manage individualized lessons; record keeping and reporting procedures for maintaining
student's lesson records, scoring tests, and using the management system. Staff was required to read the CCP training manual prior to the workshop and to pass a competency test on using the CCP system. Throughout the remaining project period, staff development was provided periodically by the project's staff development person. Also provided was training to tutors as needed. Teachers were evaluated during the project period and found to be performing satisfactorily.

The CCP trainer conducted additional workshops on specific areas of the competency-based programs. Topics included: characteristics of adult learners, review of informal testing methods, language experience approach and other teaching methods, effective use of course materials, review of computer courseware, and working with ESL students.

5. Document adult worker's progress in their individualized program of study and determine its impact on their career enhancement.

This was an open-entry, open-exit competency-based program with no specific time limits or cycles for students to complete. The major goal was to increase the worker's literacy skills so they could function more efficiently in their jobs. Since this was an
individualized program, students concentrated their studies on weak skill areas.

Of the 164 students enrolled in the program, 138 were active a minimum of 2 months. At least one year’s progress was recorded for 103 (75 percent) of the 138 active students. Overall, a minimum of one year’s progress was noted as follows:

- 45 of 83 workers in reading
- 41 of 85 in language
- 80 of 112 in mathematics

Out of the 25 students who were scheduled to take the GED, a total of 20 passed. In cases where a student’s entry performance was very low, progress on survival words, reading experience stories, and the ability to write sentences as part of a particular job were assessed by actual performance in those tasks.

Twenty students left the program when they passed the GED exam. Another 20 students left because they changed jobs. These were interpreted as positive exits. In some cases, improved skill levels assisted workers in finding other employment. Forty-eight (29 percent) workers dropped the program because of illness, transportation problems, difficulty in leaving the work-line, or apathy.

Surveys to industry representatives and supervisory staff to determine the program’s impact on the worker’s career resulted in highly favorable data. Supervisors
reported that students enrolled in the program were showing improvement.

6. Evaluate the use of a mobile instructional unit as a means of delivering an effective adult literacy training program at multiple work sites.

The van was built with counters to be used a work area. There were closets over and under the counters for storage of texts and instructional materials. The van could hold up to twelve students, a teacher, and a teacher-aide/driver at one time. The program offered one-on-one tutoring but there was no room in the van for the tutor. Two teachers and two teacher-aide/drivers were employed. One team worked the morning shift, the other the afternoon/evening shift. The van traveled to seven plant sites four days a week. The fifth day, Friday, the van was parked at the college so employees who had missed a session could make it up.

The staff—both project and instructional—were surveyed to determine the value of using a mobile learning center. The evaluators also interviewed the staff and observed instruction. Attitudes toward the use of the van were highly favorable to favorable.

This project was originally intended to last for one year, following a three-month start-up period. Because of delays in the start-up period, the project received a 90
day no-cost extension. During the start-up period an advisory committee was formed with representatives from the project staff at the university (director, curriculum developer, staff development, and materials evaluator), representatives from the technical center, professional association, and the three companies. The advisory committee met monthly and assisted in developing the mobile units day and time schedule. Topics of discussion also included recruiting, testing, the management system, and acquisition of instructional materials and equipment. The plans for the mobile unit were developed with the assistance of an IBM consultant.

The tests, equipment, management system, and instructional materials were not delivered during the start-up phase. There were also delays in acquisition of the mobile unit because cost estimates were higher than expected. The project borrowed a mobile unit at no charge until delivery could be made of the purchased van.

After delivery of the van, an open house was held at the college. This open house received extensive media coverage. The companies held a recognition ceremony for the workers who passed the GED exam. This also received media coverage. The program description contains numerous newspaper articles, newsletter coverage, presentations to professional groups, and t.v. interviews.
There was an advisory board made up of project staff and industry representatives. The board assisted with the development of the schedule, recruitment, testing, program management, and acquisition of instructional materials and equipment.

The competency-based curriculum ranged from beginning to pre-GED and pre-college levels in reading, language, and mathematics. Following initial interviews and assessments, the workers were diagnosed with competency-based mastery tests and provided with an individually prescribed education program. There were no manuals for learners, informal lesson materials were developed related to the worker’s job. Teachers received training on: characteristics of the adult learner, informal testing methods, the language experience, and other teaching methods. Tutors were trained to assist students with low level skills who needed individual attention, however, there was no space provided for the tutors to meet with the students.

End of program evaluation included instructional staff, supervisory staff, and workers. They were interviewed and also completed a questionnaire about the value of the program. Assessment of the program began in January, 1989, after a two-month start-up period.
Appendix V

Summary-Program Eight
Program Eight

Type of program description: Descriptive report
Funded by: Literacy Foundation Memphis, Memphis City Schools Adult Education, Kimberly Clark
Date published: December, 1989
Pages: 56
Dates of program: Not Available
Institution: Literacy Foundation Memphis, Memphis City School System

Program Eight was divided into the following sections, based on the table of contents in the document:

Acknowledgements......................1 page
Introduction................................1 page
Skills Enhancement Program
Description..............................1 page
Screening................................1 page
Training Delivery.........................1 page
Instructional Staff.......................1 page
Instructional Methodology and Materials
  Table 1-Individual Pre and Post Test Scores.......................4 pages
  Counseling Activities and Results.....5 pages
Evaluation-Organizational and Supervisors
Teachers
  Participants............................27 pages
  Findings and Recommendations.........1 page
Appendix...............................11 pages

This program was the result of a partnership between a literacy foundation, a city school system, and an employer. This program differed from the others analyzed because instruction was provided on-site in a well lighted, comfortable room with a chalkboard, easel with newsprint, and audio-visual equipment. The classroom was convenient to restrooms and the cafeteria. The company
provided juice, coffee and snacks for the students. Classes met for 80 hours of instruction delivered for 8-hours-a-day for two weeks on work release time. The school day began at 7:00 a.m. and lasted until 3:30 p.m. There were two breaks plus a 30-minute lunch break.

Workers interested in the program were administered the following assessment tests: San Diego Quick Assessment test, Reading for Understanding test, Form A Math Skills test, and Memphis City Schools placement test. Instructional groups were formed on the basis of skill levels in reading and mathematics. The learners were divided into two groups of five. One group was made up of five male workers with skill levels from 2.5 through 6.5. Group Two, also made up of five men, had learners with skill levels from 7.6 through 9.6. An individualized program using work-related and community materials (life coping skills) was developed using the results of the assessment tests. An interest survey at initial screening provided education staff with a guide to areas of interest to the learners. Learners were encouraged to proceed at their own rate. Students completed several program evaluation surveys on instructors, program arrangement, and counselors.

Instructors were provided by the city school system’s adult education program. The lead instructor chose
curriculum materials and was responsible for program planning, teacher orientation, scheduling classes, assisting instructors, and also served as a liaison between the instructional staff and company representatives. Counseling for students was provided by the city school system's Adult Education Counseling Coordinator.

Teaching staff was selected on the basis of two factors: experience and qualifications. They were certified in adult basic education and had previous workplace experience. Teaching methods included lecture, demonstration, and tutoring. Curriculum materials included workbooks, commercial reading kits, newspapers, and community and workplace materials.

The instructors used a diagnostic-prescriptive approach for reading and math instruction. Math instruction was based on skills needed rather than the functional grade level of individual; therefore, the math and reading group varied in make-up. Within both groups, students were encouraged to work at their own rate and to help each other whenever possible. General sessions of both groups were held in communication skills improvement (basic grammar review and writing), workplace vocabulary study, and for other work related, consumer, and community materials (life-coping skills) study.
Participants were surveyed to determine levels of interest in counseling activities. A survey instrument was designed especially for this group. The survey provided the counselor with a guide to designing activities and gave the participants a degree of ownership in the program. All of the participants appeared to have an interest in the group sessions and readily participated.

The industry goals were to enhance job functions of participating employees and to assess the use of the Industry Immersion concept. Objectives of the program included:

1. Improve reading, writing, vocabulary and communication in job-related tasks.
2. Improve math skills.
5. Encourage motivation for continued learning.

The results of the two-week program showed overall grade level improvement. Some individuals gained more than four grade levels.

Reading gain--average 2.0
pre-test range --2.5 to 9.4
post-test range--4.7 to 11.6

Math gain--average 2.7
pre-test range--2.3 to 8.2
post-test range--3.4 to 9.6
Appendix W

Summary-Program Nine
Program Nine

Type of program description: Evaluative report
Funded by: Office of Vocational and Adult Education, Division of Adult Education and Literacy
Date published: January, 1990
Pages: 25
Dates of program: October, 1988 to March, 1990
Institution: Roxbury Community College

The pages in Program Nine were divided into the following sections, based on the Table of Contents in the document:

Title page.........................1 page
Introduction, and...................
Evaluation methodology, and........
Background..........................1 page
Schedule of classes................1 page
Goals and objectives--overview.....5 pages
Goal 1..............................7 pages
Goal 2..............................9 pages

This program was the result of a partnership created in 1988 between a community college, a Private Industry Council, and the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO). The grant period was for fiscal year 1988. The evaluation occurred in 1989. The advisory board for the program was made up of college representatives, and representatives of the union and employers. The board was responsible for finding future funding, public relations, communication, networking, hiring and training staff, designing worker assessment,
designing record keeping procedures, gathering and developing curriculum materials, developing working agreements and schedules with unions and employers, and recruiting program participants.

The Private Industry Council identified companies interested in participating in the workplace education project. Union representatives identified union members in need of workplace education. The college provided instructional and fiscal services. Start up activities began in October, 1988. Some of the planned twelve classes started in January, 1989; nine of twelve were operating by mid-February.

The twelve classes were held at eight sites. Classes were held twice a week for 2-3 hours a day. A total of 314 workers were assessed or counseled, 225 actually enrolled in the program. Twenty workers were referred to other programs. Workers were given release time to attend class.

Staff was hired on the basis of their past experience in workplace education, academic background, and experience in culturally diverse classrooms. All of the teachers attended a one-day orientation, led by a consultant in workplace education curriculum, where they learned the history of the workplace education partnership and received an overview of goals of workplace education.
and materials. Staff also received training on instructional collaboration, small group work, curriculum development, and record keeping requirements. Individual instructors designed materials to meet the needs and interests of their students.

Students were given an assortment of intake and initial assessment tests. An individualized educational plan was developed for each student using the results of the assessment tests. Educational progress was monitored by the education counselor and the student. Student, staff, employers, and union representatives completed an end of program evaluation.
Appendix X

Summary-Program Ten
Program Ten

Type of program description: Evaluation report
Funded by: Office of Vocational and Adult Education, Division of Adult Education and Literacy
Date published: March, 1990
Pages: 103
Dates of program: 1988 to 1990
Institution: Georgia State University, Center for the Study of Adult Literacy, Grady Memorial Hospital
Related report: CE 055 256

Program Ten was divided into the following sections, based on the Table of Contents in the document:

Title page..................................1 page
List of tables................................1 page
Project staff................................1 page
Other project reports.......................1 page
Executive summary..........................4 pages
Introduction and rationale..................5 pages
Purpose and objectives.....................2 pages
Description of program......................4 pages
Literacy audit and curriculum development........................................8 pages
Outcomes...................................41 pages
Evaluation..................................4 pages
Conclusions................................2 pages
References................................3 pages
Appendices..................................25 pages

This workplace literacy program was intended to improve the literacy skills of entry-level workers in the housekeeping, food service, and laundry departments at a hospital. Funding was provided by the U.S. Department of Education. Curriculum was based on the results of a job literacy audit. Workers were observed and interviewed at
their jobs to determine the literacy demands of each job. Also, supervisors were interviewed for their input on job literacy demands. The data from the literacy audit, the observations, and the interviews was analyzed to determine instructional objectives.

The whole language approach to reading instruction was used in this program. Literacy was defined as reading, writing, oral communication, and problem solving. Instruction included whole group, small group, and individual activities integrating oral communication and problem solving, reading, and writing. Instruction also emphasized the participants self concepts as workers and learners. Role playing and pragmatic writing were also used as instructional methods.

Classes were held twice a week for 36 weeks at the hospital on job time. Information about the program was presented to the workers by the staff through supervisors and training staff. Fliers were distributed, notices put in an employee newsletter, and presentations made at departmental meetings. Employees volunteered to participate in the classes, but their supervisors made the decision on which employees could be released from work to attend. There were 66 participants, primarily black women. The participants averaged 10.5 years of employment.
Learners were not involved in assessing their own learning needs and objectives or in reviewing formal evaluation measures. They were involved in an end of program evaluation, however, there is no mention of teachers being asked to evaluate the program after its completion. There were statistically significant gains in reading, writing, and oral communication.
Appendix Y

Summary-Program Eleven
Program Eleven

Type of program description: Descriptive report
Funded by: State grant
Date published: 1990
Pages: 40
Dates of program: Information not available in the document
Institution: Central Missouri State University plus an unnamed industry

There was no table of contents in this program description. The following divisions were made by the researcher:

Rationale for the curriculum........7 pages
Instructional program...............3 pages
References..........................2 pages
Appendix A
  Vocabulary development............2 pages
Appendix B
  Word study procedures.............3 pages
Appendix C
  Screening instruments.............11 pages
Appendix D
  First session lesson plan........3 pages
Appendix E
  Naturalistic assessment of reading...............6 pages
Appendix F
  Catalog of materials.............3 pages

This program was developed after the personnel director of a company asked a college for reading help for employees. Instruction was based on the whole language approach, supplemented by word recognition skills. Participants were to meet personal reading goals, build confidence and motivation, increase speaking and writing
skills, and increase volume of reading and reading for pleasure.

Students were screened with two types of assessment tests; a word recognition vocabulary test and the Cloze test. Learners had weekly assessment sessions with the instructor. They kept a journal of progress and were involved in setting goals for their educational program. The formal measures of evaluation were developed by the program planners with the assistance of the instructors. End of program evaluation emphasized reading progress measured through testing.

Instructional methods included: group discussion, conferences between instructors and students, students wrote or dictated passages which they learned to read, computers were used for writing stories and work study. Methods also included discussion, semantic mapping, daily journal writing, self-selection of reading materials, and word analysis techniques.
Appendix Z

Summary-Program Twelve
Program Twelve

Type of program description: Conference paper
Presented to: American Reading Forum
Funded by: U. S. Department of Education Workplace Literacy grant
Data published: December, 1990
Pages: 11
Dates of program: June, 1989 to January, 1990

This document did not have a table of contents.

These divisions were made by the researcher:

Program description..................3 pages
Instructional flowchart...............1 page
Evaluation design....................1 page
Findings...............................5 pages

This project was intended to improve the reading skills of commercial truck drivers and help them pass a federally required reading test. The curriculum consisted of a basic skills course of interactive computer courseware and print instructional materials developed especially for the drivers. Technical content and reading found on the job were the basis of the curriculum. The course was divided into two parts: computerized programmed instruction and classroom work using pre-programmed material. Participants were drivers who failed a preliminary test. Failure of the test could have resulted in the drivers losing their jobs.

The program was planned by a partnership consisting of the state department of education, an adult literacy
agency, and the workers' union. The planning committee provided advice on the development of evaluation plans and monitored the implementation process. Because of the special purpose of this program—assisting drivers in passing a written test—there was no job analysis. The program was very structured, with little learner involvement in the program outside of classroom activities.
References


