

AN ABSTRACT OF THE THESIS OF

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Abstract approved:

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National statistics indicate that as many as 23 million adults in the United States are illiterate and another 40 million lack literacy skills necessary to function effectively or on more than a narrow basis in this society. People without literacy skills or who have only marginal reading ability find themselves politically disenfranchized, unable to effectively take control of their lives or challenge injustice, at times are physically endangered, and they represent a drain on the economy.

This research was designed to provide adult literacy programs with a process which would make it possible to evaluate three critical elements of literacy programs: learner goals, reading comprehension, and the impact of literacy programs on learners as perceived by the students themselves.

The study resulted in the following: 1) the development of an instrument to gather learner goals, 2)

the identification of the Degrees of Reading Power (DRP) as the appropriate measure of reading comprehension, 3) the development of adult normative information using the DRP in statewide testing of Oregon adult literacy students, and 4) the identification and description of the Adult Education Follow-Up Survey developed at Rutgers University as the instrument for the determination of literacy program impact on participants.

Implementation of the recommended process suggests a need for the following: 1) the use of a common form by all literacy programs for gathering demographic information and a second common form for determining learner goals, 3) continued statewide testing with the DRP including a pre- and posttest program, 4) performance of DRP readabilities on commonly used literacy materials and on "real life" materials, 5) the implementation of a regular statewide study of program impact on adult literacy students, 5) a study of the question of whether or not those most in need are attracted and served by adult literacy programs, and the development and maintenance of a statewide data base containing information on learner goals, reading comprehension, and program impact.

A PROCESS FOR THE EVALUATION OF LEARNER GOALS, READING  
COMPREHENSION, AND PROGRAM IMPACT AS ELEMENTS OF ADULT  
LITERACY PROGRAMS

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## TABLE OF CONTENTS

CHAPTER	PAGE
I INTRODUCTION	1
Background of the Problem	1
Statement of the Problem	4
Rationale	5
Conclusion	7
Limitations of the Study	11
Definition of Terms	11
II REVIEW OF LITERATURE	14
Reading Comprehension	14
Learner Goals	22
Impact Research	27
Research on Current Adult Literacy Programs	31
Delphi Process	37
Summary	38
III DESIGN OF THE STUDY	40
Procedures	41
Development of the Intake Form	41
Standardized Test of Reading Comprehension	42
Development of Norms	46
Population	48
Null Hypothesis	48
Impact Survey Instrument	50
Summary	54
IV RESULTS OF THE RESEARCH	56
Intake Form	57
Identification of the Test of Reading Comprehension and Development of Normative Information	59
Null Hypothesis	61
Normative Information	63
Program Impact Survey Instrument	68
Summary	70
V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	72
Supporting Literature	72
Steps in the Research	72
Related Findings	75

TABLE OF CONTENTS (Continued)

Suggestions for Implementation of the Identified Evaluation Measures	78
Recommendations for Further Research	81
Observations and Implications	83
Summary	84
BIBLIOGRAPHY	87
APPENDICES	100
A Intake Form	101
B Sample DRP Passage	107
C Adult Education Follow-Up Survey Instrument	109
D Percentile Ranks	122
E Stanines	125
F Delphi Panel for the Development of the Intake Form	128
G Test Review Panel	131
H Reading Tests Reviewed	133
I Adult Literacy Program Impact Survey Instruments Reviewed	135

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Interrelationship of the Three Elements of the Process for the Evaluation of Adult Literacy Programs	9
2. Frequency Distribution From the Random Sample of Scores Obtained by Adults Tested With the Degrees of Reading Power	66

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Goodness of Fit Test Applied to a Random Sample of Scores From Adults Tested With the Degrees of Reading Power	62
2. Percentile Ranks Developed From a Random Sample of Scores Obtained by Adults Tested with the Degrees of Reading Power	64
3. Stanines Developed From a Random Sample of Scores Obtained by Adults Tested with the Degrees of Reading Power	67

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Chapter I

Introduction

The refusal to acknowledge those who are our sons or daughters, brothers, sisters, neighbors, fellow citizens, or former students, but whom we have relegated to statistical oblivion, holds some dangers that a sane society would not ignore. Societal denial of the crime by which it lives [permitting illiteracy to continue] demonstrates political ineptitude and ethical betrayal; but it also tells us of the civic pride that goes before a fall. (97)

Jonathan Kozol's words communicate a depth of feeling concerning illiteracy in the United States today. The problem is a critical one for the country for the following reasons:

1. the high cost to taxpayers who both support adult literacy programs and bear the burden of other costs of illiteracy,
2. the enormous number of illiterate Americans, and
3. the economic, human, and political implications of illiteracy.

Background of the Problem

Estimates of the number of illiterate or functionally illiterate in America and the cost of

illiteracy to the public vary, but by any account, they are extremely high. Recent research indicates that 18-28 million adult Americans are nonreaders and that at least another 40 million have inadequate reading skills to function effectively in today's complex society (83; 95; 102).

For the American public and especially the taxpayer, the costs are high. The federal government currently allocates \$100 million dollars annually to the Adult Basic Education (ABE) program which serves the largest number of illiterate and functionally illiterate adults (83; 95; 115). Additional state and local tax funds may be made available to provide greater support for Adult Basic Education depending on the policy and philosophy of the community. In addition, it is estimated that at least \$225 billion dollars are lost in welfare, unemployment compensation, poor job performance, and crime, and another \$237 billion in lost income (83; 95; 97). However, it should be pointed out, as Michael Harrington has said,

the reader [should] forget the numbers game. Whatever the precise calibrations, it is obvious that these statistics represent an enormous, an unconscionable amount of human suffering...They should be read with a sense of outrage (97).

In spite of the expenditure of \$100 million in federal funds for Adult Basic Education and the addition of state and local money, current efforts of ABE programs to respond

to the literacy problem reach only 2-4 percent of those in need (83;95;102;115;). In addition, of those who actually enroll in ABE programs, over one third drop out before reaching their goals (16;83).

In 1976, 1.6 million adults entered Adult Basic Education programs, but six hundred thousand dropped out (97; 115). In Oregon, 21,634 adults participated in ABE classes in 1984-85, and approximately 8,000 withdrew (110).

Illiteracy is directly related to problems which cause human suffering. Among them are poverty, race, good quality education, and access to decision-making processes (43; 83). In addition, illiterate people daily live in a world of

terror of that moment when, much like an animal surrounded, the man or woman finds himself or herself exposed to general humiliation--this terror often leads adult illiterates to a complicated series of deceptions, obviations and evasions. An entire style of 'lying low' and 'watching out for traps' comes to be a way of life (96).

Finally, illiteracy has profound political implications for the non-reader and the low-level reader. Politically, people with little or no reading skill find themselves excluded from the political process unable to take positive action to correct injustices which may affect them or their community (8; 54; 97; 104; 137).

### Statement of the Problem

The foregoing emphasizes the importance of literacy skills for full personal, social, and political participation. Thus a strong need for adult literacy programs exists in the United States. However, in light of the fact that only a small percentage of those in need enter literacy programs and of that number over one third drop out before completion of their educational goals, it appears that current programs are not serving current or potential student and/or societal goals. A process which evaluates literacy programs could help to focus attention on student needs, problem areas, assist in the identification of strategies for program improvement, and provide greater assurance that tax dollars are being well spent. To accomplish these things, an evaluation process should focus on the following:

- 1) identification of learner goals for entering literacy programs,
- 2) determination of learner reading comprehension, and
- 3) the measurement of program impact on the learner.

Such a process would provide comprehensive information about the learner, assist in program improvement, and supply information for use as a basis for decisions concerning the expenditure of public funds.

### Rationale

A process for program evaluation which provides the tools for the examination of three critical issues of adult literacy programs would make it possible to study local or statewide literacy efforts. The critical issues are:

1. learner goals,
2. reading ability, and
3. program impact.

### Learner Goals

The process would enable administrators and instructors to identify learner goals when they enter literacy programs. This information could be used to tailor learning activities to individual needs making learning more motivating. While other factors in addition to motivation affect retention, programs which motivate students would be more likely to retain them (71; 92). In addition, a knowledge of goals will help educators to measure progress toward the learners' objectives.

### Reading Ability

Research on the effectiveness of adult literacy programs typically focuses on the reading ability of students and progress made as a result of participation in

those programs. Indeed, the ability to read is central to the acquisition of all other basic skills (74; 114; 133; 136 ; 139). Therefore, a test which measures reading ability is a second important area for literacy program evaluation. A test of reading ability should measure people's ability to comprehend written material. Reading comprehension is a holistic process in which it is understood that effective reading requires the use of the learner's knowledge of language and conceptualizations to get meaning from print by sampling, predicting, confirming and correcting strategies parallel to those used in listening (60; 80; 116; 127), not by breaking language into meaningless bits (60; 126; 129). The value of a measure of reading comprehension is that it can be used to place students with materials and/or classes and to help determine their progress over time.

#### Program Impact

Finally, impact research can provide literacy programs with "more comprehensive program evaluation" which compliments "that obtained by objective measures" (50). It aids educators in the development of curricula, the identification of reasons why students drop out before completing their programs, and the evaluation of "knowledge acquisition of ABE in relation to utilization of that

knowledge in the 'real world'" (50). Impact research offers an indication of "what is needed to attract, retain, and teach the disadvantaged adult..." (103).

Ultimately, a complete process for the examination of adult literacy programs will provide educators, legislators, and tax payers with "bottom-line" evidence of program need and impact in order to meet pressing demands for accountability. This addresses the critical issue of whether or not "public funds invested in adult education are yielding important benefits to the public" (31) not to mention other costs to society.

### Conclusion

The importance of studying adult literacy programs to provide more information for use in responding to the needs of a very large disenfranchized population has been described. Illiteracy is a drain on our economy. It endangers individuals, and it effectively prevents people from taking control of their own lives or challenging injustice.

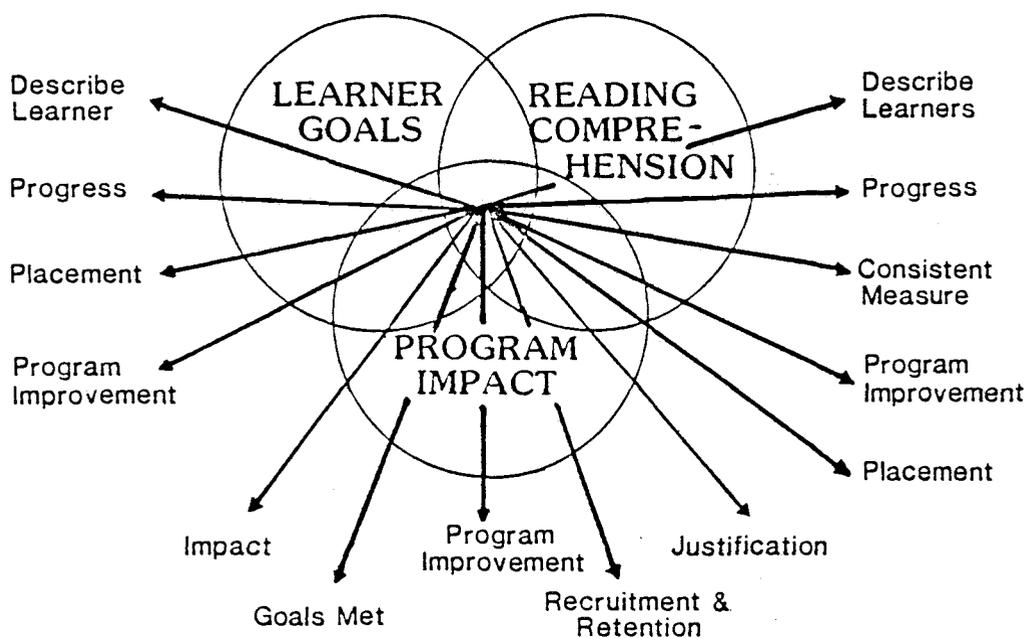
It has been pointed out that current literacy programs only "scratch the surface" of the problem of adult illiteracy. Additional knowledge is needed which will enable educators to:

- 1) broaden their understanding of the goals adults have for entering literacy programs in order to:
  - a) individualize learning programs,
  - b) provide information to improve the quality of the delivery system of adult literacy projects, and
  - c) determine progress toward objectives;
- 2) determine learner reading comprehension in order to:
  - a) make it possible for programs to more effectively place students with appropriate materials and/or classes, and
  - b) provide programs with data on student progress in reading;
- 3) determine the impact of literacy programs on learners in order to:
  - a) understand whether or not they feel they have met their personal goals,
  - b) know how the learners feel literacy programs have affected them,
  - c) provide information which can be used to improve recruitment and retention of students, and
  - d) provide information to help make program changes.

With this in mind, a means which can be used to consistently determine three significant aspects of adult literacy programs, reading comprehension, learner goals, and program impact, should be developed. Figure 1 describes the interaction of the elements of the recommended process.

Figure 1

Interrelationship of the Three Elements of the Process  
for Evaluation of Adult Literacy Programs



Therefore, the focus of this study is: To develop a process for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs.

The objectives of the research are the following:

1. To develop an effective process for the determination of learner goals, reading comprehension, and the assessment of program impact in adult literacy programs.
2. To develop and field test an instrument for the collection of the goals learners have when they enter an adult literacy program.
3. To identify a test which measures reading comprehension.
4. Based on a test of reading comprehension, to develop a set of adult norms for Oregon literacy programs against which literacy students can be compared.
5. To identify an instrument for use in obtaining information on the impact of adult literacy programs.

### Limitations of the Study

The following are limitations of this study:

1. It is limited to adult students in Adult Basic Education literacy programs in Oregon community colleges.
2. The population used for the development of norms is limited to native speakers of English.
3. The developed norms are based on those students assessed with the test of reading comprehension.

### Definition of Terms

1. Adult: A person who is sixteen years old or older who has assumed responsibility for him/herself and often for others.
2. Adult Basic Education: An instructional program emphasizing the development of basic reading, writing, and computational skills for the undereducated adult.
3. Functional literacy: The ability to continually acquire improved or additional reading skills which enables individuals to interpret written language in response to personal goals or those of the community and, when necessary, to question authority.

4. Illiteracy: The inability to use specific reading, writing, and computational skills which enable individuals to comprehend and use written language at a level which conforms to their personal needs and those of the community.
5. Impact Research: A study which examines the effect of a program on its participants as seen from the evaluation of the participants.
6. Literacy: Specific reading, writing, and computational skills which enable individuals to comprehend and use written language at a level which conforms to their personal needs or those of the community.
7. Norm: "A value or set of values reflecting performances of a defined group on a test or inventory" for purposes of interpretation of scores on standardized tests (81)
8. Percentile Rank: The percentage of all the scores in a distribution that fall below a given raw score (81).
9. Reading Comprehension: An approach to reading which is viewed as a transaction between the reader and the text in which there is a continual integration of the various psychological and linguistic subskills within the brain enabling the reader to make meaning from written language

without a conscious awareness of the grammar,  
words or sounds that make up the text.

10. Stanine: Nine equal divisions of a normalized distribution which range from a low of 1 to a high of 9.

## Chapter II Review of Literature

The review of literature includes a discussion of the following areas: 1) reading comprehension, 2) learner goals, 3) impact or follow-up research, 4) recent research on adult literacy programs, and 5) description of the Delphi technique.

### Reading Comprehension

Reading and literacy have as their primary purpose the function of enabling one to obtain meaningful information from written material. That is, to enable the reader to comprehend written language (11). This "meaningful communication" with the written word is the most important goal of any literacy program (132). While other areas such as mathematics, reasoning skills, and oral communication skills may be important areas for the undereducated adult to develop, literacy programs focus primarily on reading because the ability to read has been the major factor for determining people's need for adult literacy education (23; 74; 113; 132 136). Because of the central nature of reading to literacy, it is important for educators to better understand the reading process in order to know how to appropriately determine the ability of the low-level reader. The survey of literature primarily looks at

reading as a language/thinking process. Other definitions are not discussed.

Reading is a complex process "requiring the coordination of a number of interrelated sources of information" (6). As such, this research views it as a comprehension process which integrates the various skills and activities occurring in the reader's brain as opposed to a subskills approach which breaks reading into individual components or activities.

The following areas will be discussed:

1. Subskills approach to reading and
2. Comprehension approach to reading which includes the following areas:
  - a. the role of prior experience in learning to read and
  - b. reading as a natural language process.

#### Subskills approach to reading

A subskills approach views reading technologically as if it were a series of hierarchical steps in which one skill must logically be learned before another and build upon the preceding skill. This perspective holds that reading is "an audio-visual verbal-processing skill" (44) learned through the teaching of blocks of knowledge in an ordered sequence. Control of the reading process is

believed to be achieved through a prior understanding of subskill structures such as phonics, grammar, and word lists. According to Downing and Leong (44), this preoccupation with skill teaching is traced to the behavioral objectives movement which, in the management world, effectively breaks activities into manageable parts for purposes of planning.

However, a number of writers and practitioners believe that focusing on the technology of reading instruction isolates it from natural language processes and its functional uses (9; 20; 44; 61; 64; 66; 80; 115; 126; 127). The "truth is that the [reading] task is so complex that a validated reading hierarchy does not exist" (44). So many fine variations of response to subtle changes in reading cues occur in most instances of reading performance that "the conception of [reading] skill as a chain of subskills seems oversimplified" (44). Viewing the acquisition of the ability to read from a subskills approach fragments language, destroys meaning and complicates the learning process. Fragmentation of language may simplify research designs, but it "seriously distorts processes, tasks, cue values, interactions and realities" (44) and inappropriately creates the impression that reading is a hierarchical series of decisions (129). Reading is far more complicated than a decoding process (20). "It is a universal fact of reading...that the effort to read through

decoding is not only futile but unnecessary" (127). In fact, exercises and rote learning designed to teach reading play little part in learning to read and "may interfere with comprehension." Meaning facilitates "the identification of words, not the reverse" (128). One must learn to read in order to identify meaning, not to identify letters or words (20; 80; 126). It is simply not possible for a person to process letters, words, and meanings all at the same time. Natural limitations in our visual processing and memory systems prevent it (128). "Readers who set a high criterion level [those who feel that they must have all possible information or be absolutely certain of the meaning] for making reading comprehension decisions will find comprehension more difficult." These people read tentatively and probably letter by letter or word by word (65; 66; 127).

Holdaway concludes that "there are no logical or practical excuses for the dismemberment of literacy - only instructional precedents" (80). The more the reading process is controlled by an insistence on the teaching of subskills, the more difficult it will be for the individual to learn to read effectively because trying to read by subskills destroys the strategies by which the brain acquires language (20; 60; 66; 80; 114; 129). Harmon believes that the use of a subskills approach with adults is boring and not very effective. "Learners lose sight of

the words and their significant meanings and find themselves engaged in activities that cannot have much appeal . . . Precisely this syndrome has been the root of high drop-out rates in literacy programs" (72).

### Comprehension approach to reading

Instead of a series of discrete subskills, reading is a process involving both the prior experience of the reader and the use of the natural language processes of the brain.

Prior Experience. The goal of reading is comprehension. Rigg and Kasemek (115) state that "comprehension - getting meaning - is not the result of reading; it is reading." The reading process is a highly complex interaction among all the knowledge systems operating within the brain of the reader and all the linguistic systems operating within the text (20; 80; 63; 106; 129). This "interaction of knowledge systems" indicates that meaning resides in the experience of the reader as well as in the context of the text" (106). The "sounds that are supposed to reveal the meaning of sequences of letters cannot in fact be produced unless a probable meaning can be determined in advance" (127). This is not possible unless the reader has some prior experience

which enables him/her to understand and recognize the concepts being read (20; 60; 80; 116; 127).

Prior knowledge and experience provide the necessary context for comprehension (3; 84). Reading itself then does not rely upon the instruction of specific skills because "the essential skills of reading - namely the efficient uses of nonvisual information - cannot be taught" (127). It is not, as Wardhough points out, "barking at print" which is the recitation of a series of words or sounds with no understanding of what they mean (127). Ultimately, a lack of experience or what Smith describes as a lack of "nonvisual information" can make reading impossible (127; 128). Therefore, it follows that one's ability to comprehend written language, as with spoken language, depends on the experiences of the learner - what he or she knows before sitting down to read. The ability to comprehend text depends more upon what the reader does not see (information based on experience which the mind has stored) than upon his or her ability to code and decode language (3; 18; 60; 63; 64; 127; 134).

Reading as a natural language process. Reading also uses people's knowledge of language and conceptualizations "to get meaning from print, to develop the sampling, predicting, confirming and correcting strategies parallel to those [used] in listening" (60).

Successful readers employ this hypothesis/test strategy to predict meaning in solving textual problems just as they do in listening comprehension. "Prediction is the basis of meaning identification [comprehension]" (127), and anyone who can understand the spoken language of the environment is an expert at prediction (20; 80; 127; 129). The language user depends on strategies which yield the most reliable prediction with the minimum use of information available (4; 61; 63). In reading, this entails "bringing meaningful expectations to the text, sampling detail, hypothesizing, and confirming (80)." Reading then becomes a search for meaning which is both input and output between the reader and the text. It is an extension of natural language (64). For this reason, aspects of the reading process and the way that process functions cannot be isolated from the construction of meaning which is the ultimate goal (20; 60; 80; 129). According to Goodman

reading involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation. As this partial information is processed, tentative decisions are made to be confirmed, rejected, or refined as reading progresses (60).

Readers seek information to answer questions (to make predictions) that will vary according to the situation, and "what readers see depends on what they are looking for in their implicit questions or uncertainty." Thus prediction means asking questions or developing hypotheses and

"comprehension means getting answers to those questions."  
 Comprehension then "is not a quantity [of knowledge] it is  
 a state - a state of having no unanswered questions" (127).  
 As the reader becomes more experienced, s/he responds  
 automatically to "a continuous flow of responses,  
 syntheses, readjustment, and assimilation" (116).

The comprehension approach to reading implies "access  
 to understanding [language] structure without awareness of  
 the grammar relating to this structure, to the physical  
 events that impinge directly upon our senses" (129).

Reading is the construction of meaning from text and as  
 such is a transaction with the text (60; 116).

Comprehension concerns itself with the "making of meaning  
 at a deep level" (80) and a recognition that the

constraints of the brain, the reality being  
 represented, the schemata of the speaker or  
 writer, the syntax and lexicon of the language  
 and the situational and social contexts all shape  
 the process. None of these constraints may be  
 ignored or avoided without reduction of the text  
 to nonsense (60).

It is the organization or integration of the many different  
 reading subskills

into a total complex pattern, and effective  
 integration is the chief characteristic of  
 proficient reading [which integrates] a variety  
 of sub-skills to reach the target of  
 comprehension of the author's message (39).

According to Kenneth and Yetta Goodman, while awareness of  
 the uses of language may be needed, it is

not possible or profitable for the competent language user to be linguistically aware...In reading as in listening, pre-occupation with language itself detracts from meaning and produces ineffective language use (64).

In summary, for purposes of this research reading is viewed as a natural language process drawing upon the reader's prior experience. It is a transaction between the reader and the text in which a continual integration of the various psychological and linguistic subskills within the brain occurs enabling the reader to make meaning from or comprehend written language without a conscious awareness of the grammar, words, or sounds which make up the text. Each component of the reading process functions by virtue of the presence of the others, not in isolation from each other. This becomes important when determining how best to measure the reading ability of low-level readers.

#### Learner Goals

The identification of the goals adults have for entering literacy programs is important to their success. This issue will be discussed for the following reasons:

1. The determination of learner goals is an important part of an adult learning situation and

2. Goals help to motivate, place and retain learners.

### Adult Learning

Adult learners differ from children in the sense that they enter learning activities when they feel a need which motivates them to seek further education (21; 94). Their reasons or goals are specific. They feel that additional education will help them "to gain and retain certain fairly clear knowledge and skills, or to produce some other lasting change..." (136). Additionally, they may have an immediate problem of some kind which they wish to solve. Children, on the other hand store knowledge for later application (21; 29; 93).

Because adult learners are typically self-motivating and able to articulate their learning needs, they expect to participate in the direction which the learning takes (21; 94). When adults identify issues which they wish to resolve, their goals become the solutions.

Since the orientation of adults is typically problem centered and directed toward the resolution of a concern, effective adult education programs depend on the careful determination of the goals of the learners (21; 94; 104). In goal setting, the learner "is the primary source," not the teacher (97). The clear identification of goals makes

it possible for the educator and the student to establish a direction for the learning, plan an appropriate program, and evaluate the success or failure of an activity (42; 97). The effectiveness of adult education programs depends in part on the accurate assessment of learner goals. Once they have been identified, appropriate objectives can be established with the student (21; 94; 103).

As with literate adults, illiterate men and women seek further education for specific reasons. In this case, however, reading is almost always embedded in activities which are linked to larger motives. Individuals rarely engage in reading as an end in itself (114). Seldom do illiterate adults see literacy as the sole solution to their immediate problems (83). Instead, they enter literacy programs, according to Fingeret (51), "when their social networks are already in flux." This implies that some life change caused them to realize the need to develop their reading skills in order to respond to an immediate need. A personal or work-related reason or goal for improving their reading ability has been identified (26). Reading becomes the essential tool that literacy students need in order to pursue their goals (79). Understanding learner goals may enable literacy programs to "make the connection between the work in the classroom and the real world" (96).

Motivation, Placement, and Retention. Motivation, placement, and retention are interrelated concerns in adult literacy programs.

Motivation is an important factor in any learning situation. According to Knowles, when adult educators involve students in the identification of their goals, they feel more involved in the learning process (92). Further than that, in a summary of recent research on adult literacy programs, Conti and Fellenz found that students learn more in classrooms in which educational objectives are based on individual goals (24). More specifically, adults enrolled in literacy programs demonstrate a greater motivation to learn to read if they participate in the design and conduct of educational efforts directed toward needs that they themselves perceive (60; 79; 83).

Rigg and Kasemek (115) argue that adult literacy programs fail to respond to those in need of literacy skills. They cite annual national drop out rates of over 33% as proof of this. In addition, Hunter and Harman (81) point out that those who now enroll in literacy classes are self selected and may not represent the population in greatest need. This suggests the importance of developing programs which respond to the goals of the illiterate student. Because the poor make up the largest segment of the illiterate population, those concerned with illiteracy believe that when education involves the identification and

discussion of issues of importance to the poor (53; 58; 93; 96; 97;), the student demonstrates greater determination to learn and to remain in the program. Motivation must come first from the learner, not from the program. Based on his review of the successful literacy programs, Haggstrom concluded that when education involves the identification and discussion of issues of importance and concern to the poor, they will want to learn and are more likely to persist. This is so because when the poor are involved in a situation which allows them to question "the basis of their lives, many of them develop an intense and far-ranging thirst for knowledge" (93). The key to motivation, according to Kozol,

is to abstain from any inclination to provide motivation as an outside force and to discern that motivation which exists already in even the most seemingly disheartened human beings" (97).

Materials based on the expressed interests and goals of the learners are highly motivating (60; 79). Hoffman (79) indicates that the "radical prescription for ABE [adult literacy] reading instruction would be to find what the learner wants to read and provide it . . ."

Finally, Kozol warns that if the goals of a literacy program fail to focus on the needs of the learner and instead focus only on societal or program goals, "recruitment will forever seem to be the problem while the real one will not even be acknowledged" (97). Diekhoff and

Diekhoff found that a knowledge of "student variables" at intake, including goals, enables programs to focus on student concerns. This helps to improve retention (42).

In summary, the identification of learner goals upon entry to a literacy program is important for the following reasons:

1. It establishes an adult environment,
2. It makes possible the placement of students with materials related to their goals which makes learning to read more motivating, and,
3. It improves retention since materials and the process are more interesting and motivating and because students feel that the program is responding directly to their goals.

#### Impact Research

Impact or program outcome research provides for the subjective evaluation of programs by former or current students. According to Kirchner (91), if measurement is to be used in adult education, the subjective evaluation by students of the impact of literacy programs on them and their lives is viewed as a more useful means for the assessment of program effectiveness "than comparison with other groups or other students." Fallon (50) and Darkenwald and Valentine (31) support this notion. In

addition, both Fallon (50) and Walker (136) believe, based on their review of studies of adult literacy projects, that this type of data strongly "complement that obtained by objective measures already used in evaluations of program outcomes" (50).

The value of collecting data on the impact of literacy programs on adults will be examined from the following perspectives:

1. The limited amount of information currently available and
2. The need for impact or follow-up studies.

#### Limited Information

According to Rouche (120), successful developmental education programs (including adult literacy) recognize the need to collect impact or follow-up evaluation data. These programs structure it as an important and regular part of their work with students and their efforts to improve. Unfortunately, "most community colleges cannot document evidence of student success" in their developmental programs (120). In addition, reviews of studies of adult literacy programs indicate that while recent research now pays more attention to the impact or outcomes of literacy projects, far more research in this area is needed and that which has been done has either been limited in scope or

flawed in terms of research design (31; 50; 103; 136). A thorough evaluation of the impact of literacy education on students should assess the following: "attainment of students' goals for participation," "program effects on tangible indicators of social and economic well being", and changes in self-concept (31).

Moore (103) states that the effectiveness or success of adult literacy programs cannot be measured precisely because of differences in record keeping and "because no one has had the time and money to investigate what happened to a reliable sampling of students . . ." He also cites the mobility of adults as a limiting factor for impact researchers. Most important, however, he contends that follow-up data is sparse because of the lack of an evaluative process. Darkenwald and Valentine (31) bluntly state that based on their review of literacy program impact studies, "there are few well-designed, large scale studies conducted to determine the impact of participation in any form of adult education."

In summary, while researchers recognize the importance of follow-up research as a significant component of adult literacy programs, such research seldom occurs or when conducted, is often not well designed.

The need for impact research. Impact research is important for both practical and programmatic reasons.

First, the need and rationale for an outcome component in the evaluation of literacy programs "relates both to the importance of furthering tested knowledge of the effects of participation in [adult literacy programs] and of securing" evidence of the impact of programs in order to "meet pressing demands for accountability in these times of shrinking. . . support for educational programs" (31). Comprehensive data "on specific, highly significant benefits to participation and society are required if adult literacy programs are to thrive, or perhaps even survive . . ." (31).

At the program level, outcome evaluation helps to identify project successes and failures (97; 120) so that "we can get on with rethinking and remodeling developmental programs" (120). In addition, follow-up research on adult literacy will:

1. Provide more comprehensive program evaluation beyond just the issue of how much more effectively a student reads,
2. Indicate what is needed to attract, retain, and teach the educationally disadvantaged adult.
3. Help evaluate knowledge acquired by literacy students and the application of that knowledge in day-to-day situations, and

4. Help describe the value of literacy programs from the perspective of the learners themselves (50; 76; 103).

In conclusion, a need for impact research in adult literacy exists for two important reasons. First, it can provide data which support the need for such programs. Second, the information gathered can be used to implement change to improve literacy education. The effect of such change will be better recruitment, education, and retention of disadvantaged adult students for whom literacy programs are indeed the "last gamble on education" (31).

#### Research on Current Adult Literacy Programs

A review of descriptions and research concerning current adult literacy programs will be discussed for the following reasons:

1. To determine whether or not current programs evaluate their students in any way.
2. If evaluation takes place, to learn what areas are evaluated and how the evaluation takes place.
3. To determine whether or not a process exists which provides for the evaluation of learner goals, reading comprehension, and program

impact as elements of adult literacy programs.

### Review of Program Descriptions

A review of program descriptions of adult literacy projects which have received wide national or regional attention indicates that most adult literacy projects do evaluate the reading ability of learners new to a program. Some request information on learner goals but others do not. In addition, not all programs attempt to determine the impact of literacy education on their students after they have left the project. Adult literacy programs were examined to learn whether or not they evaluated their students on the basis of learner goals for entering a literacy program, reading comprehension, and program impact.

### Project F.I.S.T.

Project F.I.S.T. (30), a national dissemination project for adult literacy, was reviewed. It determines students' reading ability with the Woodcock Reading Mastery Tests. The program does not ask questions concerning learner goals at the time students enter the program. To determine impact, students fill out a questionnaire as they leave the program. It is administered orally to those with extremely poor reading skills.

While the Woodcock Reading Mastery Tests battery "has superior psychometric properties" (30), it evaluates reading subskills and as such does not determine students' reading comprehension ability which is critical as a baseline for the development of other reading skills (36). In addition, the failure to obtain information concerning learner goals is a significant omission. This kind of information is useful in the identification of reading materials and helps direct the students' learning programs. Finally, the instrument which assesses the impact of literacy instruction on students appears to be comprehensive. It asks for information concerning economic, educational, family and social, and personal outcomes as a result of participation. Darkenwald and Valentine identify all of these areas as important for thorough follow-up or impact research (31). The questionnaire is, however, administered only to those still enrolled or upon exit. This does not allow for the passage of time which is felt to be important in order to obtain information based on actual experience rather than on "hoped-for outcomes" (31).

#### Jefferson County Reading Program

The Jefferson County Reading Program (34), another national dissemination adult literacy project, was also

reviewed. It too uses a standardized test to measure reading ability. In this case, the Test of Adult Basic Education (TABE) is administered to students when they enter the program. The Program gathers student goals for seeking literacy skills upon entry, and evaluates progress toward those goals on an on-going basis. No follow-up to determine program impact takes place.

The TABE was developed from the 1970 version of the California Achievement Test (CAT) (15). Its authors modified the language of the CAT to make it sound more adult in focus (15). As with the Woodcock, the TABE measures reading subskills, not reading comprehension. The use of goals as a focus for on-going progress evaluation and for instruction is appropriate and focuses the learning on the student which is important in adult education settings (29; 80; 134). The absence of a process for follow-up study, however, leaves a gap in the evaluation process for this program. Information gained from impact research could facilitate continual program improvement.

#### ABLE Project

The Adult Basic Literacy Education Project (ABLE Project) (1) places a heavy emphasis on the use of Laubach literacy materials for "students whose skills are at fourth grade level or below" and computer assisted materials for

those "whose skills are at the fourth grade through eighth grade levels" (1). ABLE Project tests student reading ability with the Slossen Oral Reading Test. Volunteers assist learners to set personal goals during the in initial intake interview. Follow-up perceptions of program impact are not sought.

The use of the Slossen as a measure of reading ability for ABLE Project provides information on students ability to understand words read to them by an instructor or volunteer. It does not, however, measure reading comprehension. The determination of learner goals during the initial interview is an important step. However, the placement of learners with Laubach materials or pre-programmed computer software does not necessarily represent placement with reading materials of interest to the learner. The failure to obtain program impact data makes a complete evaluation of the program impossible since students' opinions of the value of the instruction are not obtained.

Platform for Excellence. Platform for Excellence, a statewide study of Washington Adult Basic Education (ABE) and developmental education programs (109), demonstrates that all ABE programs use a standardized test to measure students' reading ability. While most ABE literacy projects do seek learner goals, a consistent effort

statewide or within individual programs to gather outcome information does not appear to exist. However, some programs do ask about expected or anticipated outcome responses from currently enrolled students or from students as they leave a program. None the less, when describing a sound basic skills education program, the Platform for Excellence does not mention the value of determining student goals of conducting follow-up research (109).

A review of the standardized reading tests in use in the State of Washington reveals that all of the tests measure reading subskills and not comprehension as defined in this research. Some literacy projects gather information on learner goals others do not. The absence of consistent efforts to gather outcome information appears to be common issue and reflects the fact that such efforts can be costly in terms of time and money (31). Programs which gather outcome data on currently enrolled or exiting students do not obtain information on actual outcomes but rather on the hoped-for results of participation.

In summary, a review of information on current literacy programs reveals a broad range of approaches to evaluation. However, it demonstrates that a process for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs does not exist.

### Delphi Technique

According to Sackman (121), the Rand Corporation developed the Delphi technique in the late 1940's as "a systematic method for soliciting expert opinion on various topics." Helmer (78) made the technique a more common one in educational research. Delphi "is intended to be a forecasting tool" and a

method for structuring a group communication process that is effective in allowing a group of individuals, as a whole, to deal with complex problems (130).

Its ultimate goal is to arrive at consensus "when sufficient information exchange has occurred" (130).

Delphi is seen as a useful tool in education in the following areas:

- 1) as a method for studying the process of thinking about the future,
- 2) as an educational tool which forces people to think about the future in a more complex manner than they ordinarily might, and
- 3) as a planning tool which may aid in probing priorities held by members and constituencies of an organization (130).

The appeal of the Delphi technique relates to the "presumed superiority of group rather than individual opinions" (130).

Soukup (130) and Samahito (123) indicate that a number of conditions can lead to the need to utilize the Delphi technique. If any one them exists, Delphi may be employed. For this research, the following conditions existed:

- 1) The problem did "not lend itself to precise analytical techniques" but could "benefit from subjective judgments on a collective basis,"
- 2) The research requires more Delphi panelists than could interact effectively on a face-to-face basis,
- 3) Time costs and distance made frequent meetings impractical,
- 4) The heterogeneity of the participants had to be preserved to assure the validity of the results (e.g. avoidance of domination by quantity or by strength of personality).

Finally, while a six member Delphi panel may be acceptable (123), Soukup (130) suggests a member size of 18-25. For this research, a panel of 18 adult educators provided input in the development of an instrument to assess learner goals.

#### Summary

This chapter contains a review of research and writing which supports the notion that the identification of learner goals is an important part of an adult education

program. In addition, it discusses reading comprehension as a holistic process, a concept that has significance for adult literacy programs as they evaluate the reading ability of their learners. The literature review also discusses impact research and its use for purposes of program development and improvement. This chapter includes review of recent research on adult literacy programs. Finally, the Delphi technique is described in order to lay the ground work for its use as method to develop a form for the collection of information on learner goals.

### Chapter III Design of the Study

The goal of this research was to develop a process for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs. The investigation proposed to: 1) develop an intake form to identify learner goals upon entry to adult literacy programs, 2) identify a test of reading comprehension, 3) develop adult norms based on the test of reading comprehension, and 4) identify an instrument for the evaluation of program impact. This section includes the following information:

1. A description of the process used in the development of the intake form for gathering learners goals,
2. A description of the standardized test of reading comprehension identified for the process,
3. A description of normative information to be developed,
4. a description of the population used to develop normative information,
5. A description of the goodness of fit test used to analyze the distribution of scores within the stratified random sample,
6. The null hypothesis, and

7. A description of the impact survey instrument.

Procedures

Development of the Intake Form

The Delphi technique guided the development of the intake form. A format designed by Literacy '84, St. Paul, Minnesota provided the initial model for the field test instrument.

A Delphi panel of adult educators who work with adult literacy programs throughout the state of Oregon was first chosen. It met as group at Oregon State University in December of 1984. It agreed that any form for the measurement of learner goals should also obtain all required demographic information. Immediately after this meeting, the researcher added the appropriated demographic questions and distributed by mail the suggested format to the panel for the first round of the Delphi process. The three steps in the Delphi process, as outlined by Soukup (130), then served as a guide in the development of the instrument. In the first step, a panel comprised of adult educators from around the state of Oregon including literacy program administrators, instructors, and educators at the state level reviewed the initial draft of the form. This step called for each member to "retain," "reject," or "revise" each statement and to submit comments or

additional information. As discussed by Soukup (130), any statement rejected by one third of the panel was eliminated. In the second phase, panelists ranked the value of each statement's importance for inclusion in the final questionnaire. In the third round, panelists suggested final changes to the remaining questions. All three phases of the Delphi process were processed by mail with the researcher making appropriate changes and then sending the revised form to the panel for its review.

Field testing of the final version took place at Chemeketa Community College in Salem, Oregon (Appendix A). The researcher conducted the field test during spring term of the 1984-85 academic year. The instrument was administered to 50 adults during the college's regular two-hour weekly enrollment session for those entering the adult literacy program. During this period of time, students with a wide range of reading ability were tested for reading level, oriented to the program, and introduced to their instructors. In addition, demographic information and data concerning learner goals were gathered.

#### Standardized Test of Reading Comprehension

The "real concern with literacy is not the sort of competence measured in tests of usage and mechanics" but instead with the development of the reading comprehension

skills of predicting and confirming which enable one to read with understanding (101). With this in mind, a test which measures students' reading ability as a comprehension process of predicting and confirming was added to supply the second element of the process.

Degrees of Reading Power. The Degrees of Reading Power (DRP), an untimed, standardized test of reading ability, was identified as the measure of reading ability because "it measures reading comprehension holistically" or from a comprehension perspective (117). The College Board and Touchstone Applied Science Associates, Inc. developed the DRP for the New York State Department of Education for purposes of providing the State of New York with a means for the measurement of the reading ability of public school children.

The DRP determines "a student's ability to process and understand English prose passages written at increasing levels of difficulty or readability" (88). It resembles a modified cloze format, but it is not a cloze test. Cloze procedure mechanically deletes words from text while

the DRP deletions were purposefully selected. The passage writers deleted the word they thought would best determine the reader's comprehension of important information (88).

The passage contains all that readers need to know to answer each test item. The items assess "the reader's

ability to integrate meaning across sentences" (87), or to predict and confirm meaning.

The College Board constructed four forms or levels of the test - the PA-8, PA-6, PA-4, and PA-2. The PA-8 is the easiest level and the PA-2 the most difficult. Each form consists of several 325-word prose passages with seven words removed from each passage (Appendix B). Students choose the omitted word from five possible alternatives, using the surrounding text as a guide. While all of the alternatives represent a grammatically correct response, only one answer for each blank is semantically correct. Students must be able to read and understand the passages in order to respond correctly. The passages are arranged in order of difficulty "to ascertain a student's highest level of comprehension." Testing involving the deletion of words from passages requires the reader to infer or predict from the context the word that the author used in the passage. This defines reading "in terms of the processes involved in reducing uncertainty while testing hypotheses through a continuous sequence of inferences about what semantic and/or syntactic information is most likely to follow" (112).

This research employed the PA-6 form of the test because it is now in use in all community college adult literacy programs in Oregon. The panel chose the PA-6 because it represents a middle ground between the two more

difficult and thus potentially more threatening versions of the test and the easiest level which they believed might not provide enough information at the upper and lower ends of the scale.

The results of the test may be used for any of the following purposes:

- 1) to evaluate a student's present level of reading achievement,
- 2) to determine the most difficult material a student can read independently and instructionally,
- 3) to evaluate student growth in reading, and
- 4) to match learners with material they can read with comprehension (38).

Finally, the DRP eliminates grade levels to describe reading ability which is "unquestionably the most significant aspect of the DRP methodology" (89).

The DRP provides "immediately interpretable information" (112) which, according to Koslin (36) predicts "the difficulty of materials that readers can read with understanding in the real world." This demonstrates the ecological validity of the DRP (112). Ecological validity refers in this case to the extent to which the results of a reading test demonstrate a person's ability to "meet the literacy demands of the real world" (112). Ecological validity, like content validity, refers to whether or not

the material is similar to what the testee would encounter in a normal situation . . . The reading passages [of the DRP] are clearly typical of the required reading for [educational situations] and appear to be interesting (88).

The DRP is based on a readability formula developed by Bormuth (36). According to Rankin, the generalizability of readability formula results

gives them their validity and utility in a statistical sense. The use of a wide variety of topics for DRP passages also facilitates the generalizability of results (112).

Finally, Kibby notes that the construct validity of the test is "in order." It correlates with the California Achievement Test of Reading Comprehension at between .73 and .80 and with total IQ scores on the Short Form Test of Academic Aptitude, Level 3 at the .75 to .82 level (89).

#### Development of Norms

The Degrees of Reading Power is "unlike conventional standardized tests which use different tasks in different grades" or levels and "assume a normal distribution of abilities" in each grade or level (36). Instead,

the DRP uses a single reading task [comprehension] and makes no assumptions concerning the distribution of abilities within grades. Because the DRP is a criterion-referenced test . . . , it can be used in instruction for the matching of materials with student ability, in program evaluation, and in the assessment of individual and group gain, without employing normative scores . . . (36).

However, if norms are utilized, they can be interpreted "like other norm-referenced scores provided the user understands that the distribution of abilities is non-normal in each grade" or for each level (36).

The use of normative information may help literacy programs compare the progress and level of their students with that of the "norm." The norms developed by The College Board for the Degrees of Reading Power are based on elementary and secondary students. Thus normative data developed on adult literacy students newly enrolled in Oregon programs could be used as a means of comparison with other literacy programs as well as for Oregon programs.

The DRP yields scores which indicate students' reading ability at the independent, instructional, and frustration levels. Normative information developed from this research was based on the mid-instructional level ( $P=.75$ ) since the community college literacy programs in Oregon focus primarily on this level of comprehension.

The researcher drew a stratified random sample of 300 adult literacy students from a population of 4,623 in order to create tables showing the following normative information:

1. Percentile ranks and
2. Stanines

### Population

The population from which the stratified random sample was drawn for the development of the normative information consisted of 4,623 adult literacy students newly enrolled in programs in Oregon community colleges during the fall and winter terms of the 1985-86 academic year whose first language is English. As new learners in literacy programs, they took the Degrees of Reading Power test of reading comprehension immediately prior to entry into the literacy classes. The administration of the test typically occurred during an initial session which included orientation and placement testing. Literacy programs then forwarded the results to the researcher for analysis.

### Null Hypothesis

In order to test whether or not the stratified random sample represents the population, the following null hypothesis was tested:

H01      The distribution of scores on the standardized test of reading comprehension is a chance variation from the normal population.

This hypothesis was tested using goodness of fit. Goodness of fit uses chi square to determine whether or not

a normal distribution exists (43A). The application is to see if the data fit the normal curve. Chi square is a non-parametric statistical tool used when the research information is in the form of nominal data or frequency counts (43A; 125). Chi square is considered a contrastive (inferential) tool which is used to suggest cause and effect as well as to determine whether two frequency distributions differ significantly from each other. Chi square "is used to determine whether there is a significant difference between expected frequencies and the observed frequencies in one or more categories" (125). That is, do the number of scores that fall into each category differ significantly from the number expected mathematically? According to Sharp (125), chi square requires a random sample. The mathematical formula for chi square is the following (27; 125):

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where, O represents the observed cell count and E represents the expected calculated value.

The .05 level of significance was selected as the basis for acceptance or rejection of the null hypothesis.

### Impact Survey Instrument

An instrument which provides a complete assessment of learners' perceptions of program impact covers the following areas. The effect of program participation on:

1. The students' economic and social well being,
2. The attainment of students' goals for entering the program, and
3. The self-perception of students.

Researchers in adult literacy call for follow-up studies of the effect of literacy programs on learners' economic and social well being and the attainment of learner goals (10; 31; 51; 133; 136). In addition, in order to obtain a complete picture of program impact, students' opinions concerning the effect of literacy on their self-perceptions are equally important (31; 136). Thus it was concluded that this issue should also be included in any survey of program impact. Finally, in order to obtain information on those who do not achieve their educational goals as well as those who do, the instrument should be appropriate for surveying learners who reach their goals and for those who drop out (31). Information from those who leave before attaining their goal(s) can help educators to make program changes directed at reducing the current high drop out rate.

### Adult Education Follow-Up Survey

The Adult Education Follow-up Survey (Appendix C) was selected for use as the instrument to measure program impact. It utilizes a telephone survey format for gathering data on those who achieve their goals before leaving the literacy programs and on those who drop out before reaching their goal(s). The researchers recommend delaying contact with students until six months after they have entered or dropped out of their literacy classes (31).

The survey measures learners' opinions concerning the following:

1. impact of literacy programs on their economic and social well being,
2. the attainment of their educational goals, and
3. changes in self-perception (31).

This questionnaire is appropriate since the final goal of the investigators was "to design a model instrument and procedures for ongoing . . . student follow-up" (31).

Darkenwald and Valentine developed the instrument through a rigorous process which included the following steps:

1. The identification of outcome measures determined by a review of prior outcome studies.

2. The generation of a list of outcome measures through meetings with practicing ABE teachers and administrators. The outcome measures met the following criteria:
  - a. importance for students and society,
  - b. relevance, ie, logical connection to ABE curriculum practices and priorities, and
  - c. "application, ie, utilization of skills and tangible changes in life circumstances were deemed more important than attitudes or opinions."
3. The separation of the outcomes into five domains: work-related, family-related, community or societal-related, personal growth-related, and academic.
4. A review of the identified domains and measures by an advisory board for the project.
5. The construction of the questionnaire through a "meticulous process of developing, field testing, and revising successive drafts."
6. The inclusion of a large number of open-ended questions because, according to Labow, such questions

are indispensable to a thorough understanding of complex issues and topics . . . Free response or open-ended questions . . . are the only way the researcher can give the respondent the opportunity

to 'have his own say . . .' The main purpose of an interview, the most important goal of the entire survey profession, is to let the respondent have his say, to let him tell the researcher what he means, not vice versa (31).

After initial field testing, the instrument was administered to a statewide random sample of 400 adults who had been enrolled in Adult Basic Education programs for six months or more in the state of New Jersey. In New Jersey, ABE includes all educational programs for undereducated adults. This encompasses those involved in English language instruction (ESL), instruction for the illiterate and functionally illiterate, and "programming for more advanced students preparing for high school completion via the GED test or the adult high school" (31). As a result, the population included "all basic skills students enrolled in publicly supported programs sponsored by school districts and community colleges . . ." (31). Not included were students enrolled in ESL classes and "those in programs for special, atypical populations . . ." (31).

The "'probability proportionate to size' sampling technique was employed to select a random sample proportionate to program (cluster) size" instead of a simple random sampling because, according to Darkenwald and Valentine, "a total listing of the population including addresses and phone numbers, was not available" (31).

Those surveyed were either "continuers" or had enrolled "no later than October 1, 1983, and completed 12

hours of instruction by November 15, 1983" (31). Data collection took place by telephone survey. Their research employed a telephone survey for the following reasons:

1. The response rates for mailed questionnaires are typically very low (10; 31; 52; 136).
2. They yield a higher response rate than mailed instruments (10; 31; 52; 136). An analysis of the statewide survey conducted by Darkenwald and Valentine shows an unadjusted completion rate of 74% and an adjusted rate of 97% (31).)
3. The interviewer can, if necessary clarify questions and use probes in order to obtain more complete and accurate data. According to Bradburn and Sudman, "meaningful differences in response bias between telephone and face-to-face interviews does not appear to exist except that "cooperation was highest by telephone" (31).
4. It is a low-cost means of gathering data in comparison to face-to-face instruments.

The follow-up survey instrument is included in Appendix C.

#### Summary

This chapter described the design of the study including the following:

1. The Delphi procedures employed for the development of the intake form for the collection of learner goals,
2. A description of the Degrees of Reading Power test of reading comprehension,
3. The normative information to be developed from the data gathered by statewide testing with the Degrees of Reading Power,
4. The population from which the sample was drawn for development of the normative information,
5. The null hypothesis tested to determine whether or not the sample represents the population,
6. The goodness of fit test, and
7. The impact survey instrument selected for the process of evaluating program impact as an element of adult literacy programs.

Chapter IV  
Results of the Research

The purpose of this research was to develop a process for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs.

In order to do this, the following steps were taken:

1. An intake form for the determination of learner goals was developed using the Delphi technique.
2. A test of reading comprehension was identified. Adult normative information was then developed using the data gathered from the administration of this test to learners newly enrolled in adult literacy programs.
3. A survey instrument was identified which measures the impact of literacy programs on participants' educational and personal goals and on self perception.

This chapter will describe the following:

1. The process used to construct the intake instrument and the results of the field test of that instrument.
2. The process used to identify the test of reading comprehension.
3. The goodness of fit analysis of the frequency distributions collected from the testing of adults

- enrolled in literacy programs and the analysis of that data's impact on the null hypothesis.
4. The adult normative data developed from the administration of the reading test.
  - 5\ . The process used to identify the program impact survey instrument.

#### Intake Form

An intake form for use in the determination of learner goals and for the gathering of data required by state and federal agencies providing financial support for adult literacy projects was developed using the Delphi process. Initially, the form was conceived of only as an instrument for the measurement of learner goals. However, at a planning meeting held at Oregon State University in December 1984, the Delphi panel agreed that the form should include all information which a program might require of an entering adult literacy student. A group of 18 adult educators who work directly with literacy programs served as the Delphi panel (See Appendix F).

The model for the form was one developed by Literacy '84, an adult literacy program in St. Paul, Minnesota. A three step Delphi process as outlined in Chapter III refined and validated the intake instrument.

Once the final revisions had been made, a field test of the intake form (Appendix A) took place at Chemeketa Community College in Salem, Oregon during spring term of the 1984-85 academic year. The researcher administered it fifty adults during the college's regular two-hour weekly enrollment session for those entering the adult literacy program. During this period of time, students with a wide range of reading ability were oriented to the program and tested for reading level. In addition, demographic information and data concerning learner goals were gathered using the intake form.

### Findings

The following is the result of the field test:

The intake instrument proved to be too long for administration in the limited time frame of the intake or orientation process. The researcher, in consultation with the test administrator, instructional staff, and the program director concluded that in light of the limited time frame of the orientation period, it is not possible to complete a four page form and cover all of the other necessary details. The following observations resulted in this evaluation:

1. Adults enter literacy programs with a wide range of reading abilities. For this reason many of the

people who enroll either cannot read the form or they are unable to complete it without assistance. Therefore, the researcher concluded, after consultation, that the intake form would have to be read to the students as they filled it out. While this seemed to make it possible for most to complete the it, administration of the instrument in this manner proved to be too time consuming.

2. The person supervising the enrollment session must accomplish a great deal in a relatively short time period. S/he collects demographic information, tests all students for reading ability, places students in classes, and responds to a number of questions.

Both of these factors combined to create a situation in which there was not enough time to administer the instrument and complete all of the other required activities.

#### Identification of the Test of Reading Comprehension and Development of Normative Information

In order to identify a test of reading comprehension, a panel of six (6) adult educators (See Appendix G) who work with literacy programs in Oregon was established with the following responsibilities:

1. To recommend reading tests for the researcher to review.
2. To study information gathered by the researcher on the suggested tests.
3. To recommend a test of reading comprehension appropriate for administration to adults enrolled in literacy programs.

The researcher undertook the following:

1. Collected descriptive information on the reading tests suggested for study by the panel as well as those identified by the researcher.
2. Reported findings to the panel.

The panel and the researcher determined that the test agreed upon must meet the following criteria:

1. Measure the reading process as defined in Chapter I and discussed in Chapter II.
2. Be easy to administer and score.
3. Be non-threatening for the student.
4. Not take more than 40 to 50 minutes to complete.

During the winter and spring terms of the 1984-85 academic year the researcher collected information on the tests identified by the panel. Following its review of this information, the panel recommended the use of the PA-6 form of the Degrees of Reading Power (DRP). There are four forms or levels of this test - the PA-8, PA-6, PA-4, and PA-2. The PA-8 is the easiest level and the PA-2 the most

difficult. The panelists agreed upon the PA-6 because it represents a middle ground between the two more difficult and thus potentially more threatening forms and the easiest level, which would not provide enough information at the upper and lower ends of the scoring scale. The panel felt that the DRP most closely represented the four criteria outlined above.

The PA-6 form of the Degrees of Reading Power was administered during the fall and winter terms of the 1985-86 academic year to 4,623 adults newly enrolled in adult literacy programs offered through Oregon community colleges. Literacy programs did not test new students under the following conditions:

1. They were non-readers.
2. The test administrator or program director felt they were too frightened to take the test.

A stratified random sample of 300 learners was drawn from the population for purposes of analysis, generalizing to the population, and the development of adult normative information.

#### Null Hypothesis

The goodness of fit test was applied to the frequency distributions obtained from the sample drawn for purposes of determining if it represents the tested population.

Goodness of fit uses chi square to determine whether or not the distribution of scores on the Degrees of Reading Power standardized test of reading comprehension was a chance variation from the normal population. The following hypothesis was tested:

H01 The distribution of scores on the standardized test of reading comprehension is a chance variation from the normal population.

Table 1

Goodness of Fit Test Applied to a Random Sample of Scores From Adults Tested With the Degrees of Reading Power

Score Dist.	(1) O	(2) E	(3) O	(4) E	(5) O-E	(6) <sup>2</sup> (O-E)	(7) <sup>2</sup> $\frac{(O-E)^2}{E}$
91-99	59	29	59	29	30	900	31.034
82-90	36	47	36	47	11	121	2.574
73-81	73	58	73	58	15	225	3.879
64-72	43	58	43	58	15	225	3.879
55-63	43	44	43	44	1	1	0.023
46-54	26	26	26	26	0	0	0.000
37-45	11	12	20	17	3	9	0.530
28-36	4	4					
19-27	3	1					
9-18	2	0.3					
$\Sigma = 300$						$\chi^2 = 41.919$	

Using goodness of fit, the scores from the random sample were normalized. Table 1 (see page 62) shows the results of the chi square analysis. The calculations indicate that  $\chi^2 = 41.919$ . The tabular value of chi square equals 12.59 with six degrees of freedom at the .05 level of significance. Therefore, the null hypothesis is rejected. The distribution of scores does represent the tested population.

#### Normative Information

The results of the testing program from fall and winter terms of the 1985-86 academic year were analyzed and norms in the form of percentile ranks and stanines were derived from the sample.

Adult norms were developed for the following reasons:

1. No such normative information on an adult literacy population tested with the DRP currently exists.
2. Adult literacy programs in Oregon could use the data to compare their students with those of the norming population.

Percentile Ranks. The percentile ranks (PR) along with score frequencies (f), cumulative frequencies (Cf), and cumulative percents (cp) are displayed in Table 2 and in Appendix D. It should be noted that individuals who can read the most difficult prose (99 DRP Units) cannot obtain a higher score on DRP tests. Because of this, percentile

ranks are not reported above 90+ percentile. This is consistent with research conducted by The College Board using the DRP. The College Board states:

This practice reduces the possible misinterpretation of scores, especially when such scores appear without explanatory text. In particular, fixing the highest possible percentile score at 90+ avoids the possibility that very high-scoring students may appear to be declining in ability over time. By reporting the highest percentile rank as 90+, students who are near the ceiling on DRP tests are not penalized by the lack of opportunity to increase their mid-Instructional scores. For similar reasons, . . . the eighth and ninth stanine scores that exist for normally distributed scores are collapsed into the 8+ stanine (37).

The scores are reported in DRP units at the mid-Instructional level at a 75% comprehension level (P=.75).

Table 2

Percentile Ranks Developed From a Random Sample of Scores Obtained by Adults Tested With the Degrees of Reading Power

---



---

DRP Units Instructional (P=.75)				
Score	f	Cf	cp	PR
99	41	300	100.00	90+
91	18	259	86.33	86
87	22	241	80.33	80
84	14	219	73.00	73
81	19	205	68.33	68
79	13	186	62.00	62
77	19	173	57.67	58
75	15	154	51.33	51
74	7	139	46.33	46
72	7	132	44.00	44

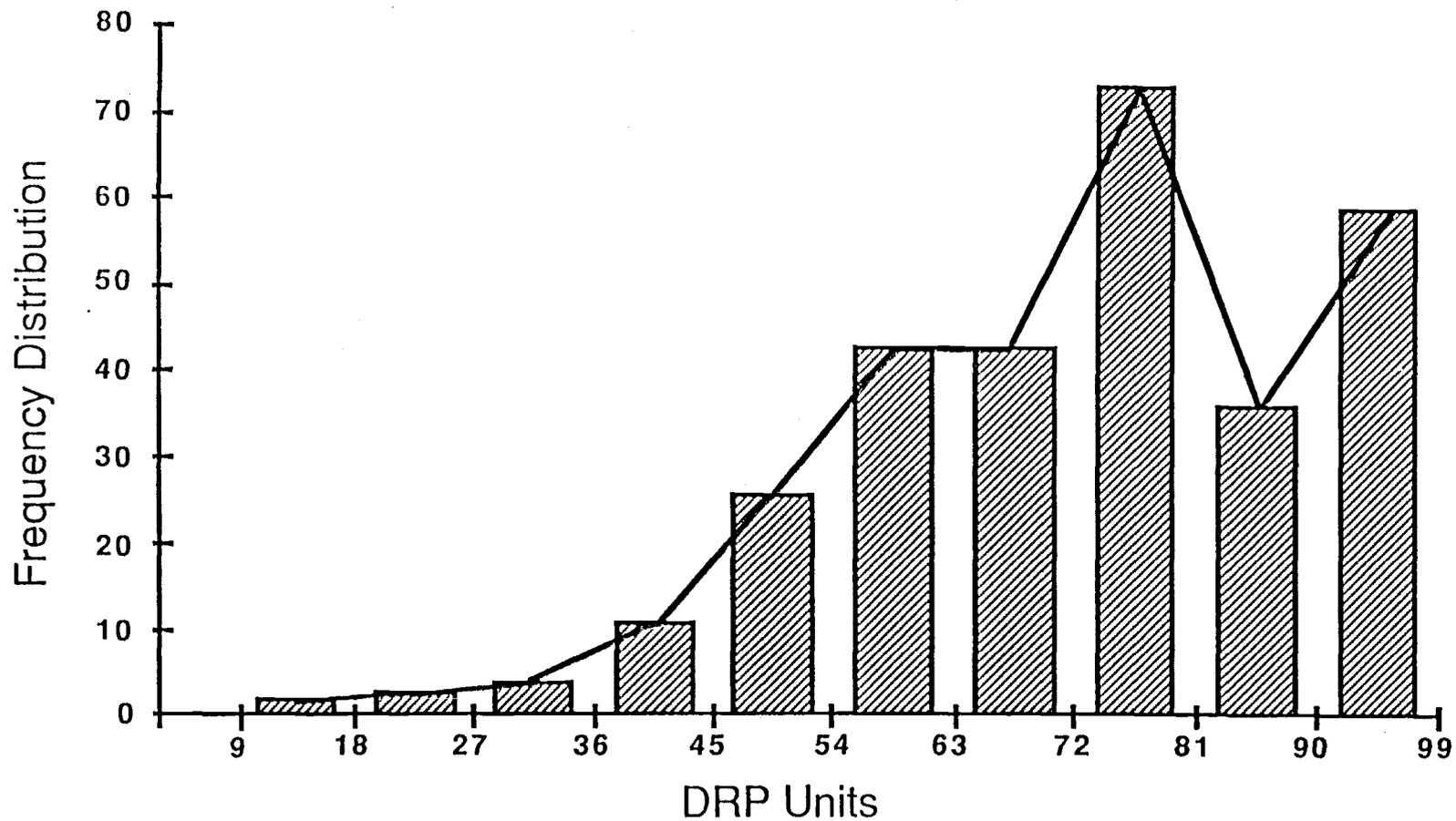
Table 2 (continued)

Score	f	Cf	cp	PR
71	5	125	41.67	42
70	3	120	40.00	40
68	13	117	39.00	39
67	7	104	34.67	35
66	3	97	32.33	32
65	4	94	31.33	31
64	1	90	30.00	30
63	4	89	29.67	30
62	7	85	28.33	28
61	2	78	26.00	26
60	9	76	25.33	25
59	6	67	22.33	22
58	7	61	20.33	20
57	3	54	18.00	18
56	3	51	17.00	17
55	2	48	16.00	16
54	5	46	15.33	15
53	4	41	13.67	14
52	1	37	12.33	12
51	2	36	12.00	12
50	5	34	11.33	11
49	5	29	9.67	10
48	3	24	8.00	8
47	1	21	7.00	7
45	1	20	6.67	7
44	2	19	6.33	6
43	3	17	5.67	6
42	2	14	4.67	5
41	1	12	4.00	4
40	1	11	3.67	4
39	1	10	3.33	3
34	1	9	3.00	3
32	1	8	2.67	3
30	1	7	2.33	2
29	1	6	2.00	2
27	2	5	1.67	2
21	1	3	1.00	1
15	2	2	0.67	1

In order to further describe and highlight the distribution of scores, a frequency polygon has been developed (Figure 2). It shows a negatively skewed curve.

Figure 2

Frequency Distribution From the Random Sample of Scores  
Obtained by Adults Tested With the Degrees of Reading Power



Stanines. The cumulative frequencies were used to calculate stanines. Using the data gathered from the stratified random sample, the stanines appear in Table 3 and in Appendix E. Consistent with research conducted by The College Board, the eighth and ninth stanines have been collapsed into the 8+ stanine (37).

Table 3

Stanines Developed From a Random Sample of Scores Obtained From Adults Tested With the Degrees of Reading Power

---

DRP Units  
Instructional Level  
(P=.75)

Score	f	cp	Stanine
99	41	100	8+
91	18	86	7
87	22	80	7
84	14	73	6
81	19	68	6
79	13	62	6
77	19	58	5
75	15	51	5
74	7	46	5
72	7	44	5
71	5	42	5
70	3	40	4
68	13	39	4
67	7	35	4
66	3	32	4
65	4	31	4
64	1	30	4
63	4	30	4
62	7	28	4
61	2	26	4

Table 3 (continued)

Score	f	cp	Stanine
60	9	25	4
59	6	22	3
58	7	20	3
57	3	18	3
56	3	17	3
55	2	16	3
54	5	15	3
53	4	14	3
52	1	12	3
51	2	12	3
50	5	11	2
49	5	10	2
48	3	8	2
47	1	7	2
45	1	7	2
44	2	6	2
43	3	6	2
42	2	5	2
41	1	4	1
40	1	4	1
39	1	3	1
34	1	3	1
32	1	3	1
30	1	2	1
29	1	2	1
27	1	2	1
21	1	1	1
15	2	1	1

Program Impact Survey Instrument

A survey instrument for the evaluation of the impact of literacy programs on adults was identified through a review of literature which describes survey tools developed to assess various aspects of program impact on adult literacy students.

The literature review clearly indicated that any study of the effectiveness of an adult literacy program should focus on learner perceptions of changes in their economic and social well being as a result of participation in literacy classes and on the success the students feel they had in reaching their personal goals (9; 26; 50; 104; 111). In addition, the impact of the program on learners' self perceptions was felt to be of equal importance for purposes of program evaluation (26; 31; 111). Consequently, the search for an appropriate instrument focused on the following criteria. It should yield students' perceptions of the following:

1. The impact of the program on their economic and social well being.
2. The impact of the program on the achievement of personal goals for entering a literacy program.
3. The impact of the program on the learners' self esteem.

Finally, Darkenwald and Valentine (31) argue that such a survey tool must be one which collects information on those adults enrolled in a literacy program at the time of the survey as well as with those who have left. This too was added to the criteria for the evaluation of program impact research instruments.

A study of research instruments implemented for the evaluation of adult literacy programs (Appendix I) revealed

that nearly all failed to meet the criteria outlined above. In addition, Darkenwald and Valentine (31) provide a comprehensive review of other similar program impact studies.

The review of program impact research instruments determined that the Adult Education Follow-Up Survey developed by Gordon Darkenwald and Thomas Valentine (31) meets the criteria outlined above and is included as the tool for use in measuring the impact of adult literacy programs on their students (See Appendix C).

#### Summary

The results of the research indicate that the intake form developed to measure learner goals is too long to be administered during an intake process with a limited time frame particularly when testing and placement must also occur.

Research conducted to determine whether or not an appropriate measure of reading comprehension existed determined that the Degrees of Reading Power meets the criteria established by the test review committee and the researcher. In addition, normative information from the results of a random sample of adults tested using the DRP has been calculated and described in the form of percentile ranks, stanines (Tables 2 and 3), and a frequency polygon

(Figure 1). Summarizing the test scores in these ways makes it possible for adult literacy programs to compare the test scores of their students with the normative group. These norms represent the first such information developed using the Degrees of Reading Power with an adult population. A goodness of fit analysis of the data shows that the sample does represent the population.

Finally, the Adult Education Follow-Up Survey instrument is appropriate for the gathering of program impact data on adults who have participated in or are currently enrolled in literacy programs.

## Chapter V Summary, Conclusions and Recommendations

The purpose of this research was to develop a process for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs. The final chapter includes a discussion of the study and recommendations which grew from the research. This chapter presents the following:

1. A review of supporting literature.
2. Steps in this research.
3. Related findings
4. Suggestions for the implementation of the identified evaluation measures.
5. Recommendations for further research
6. Observations and implications
7. Summary

### Supporting Literature

The review of literature (Chapter II) supports the need for the evaluation of the three identified areas of research in adult literacy programs: 1) learner goals, reading comprehension, and 3) program impact.

### Steps in the Research

Learner goals. In order to determine learner goals, the researcher designed an intake form using the Delphi technique. The form includes information to assess learner goals and to record demographic data which all programs must gather. A field test of the final version (See Appendix A) took place during spring term of the 1984-85 academic year. Fifty learners enrolling for the first time in the adult literacy program at Chemeketa Community College in Salem, Oregon filled out the instrument during that time.

Test of reading comprehension. A panel of adult educators reviewed information both on reading tests which literacy programs in Oregon administer to incoming students and on other tests suggested by panelists. The panel and the researcher determined that the test agreed upon should meet the following criteria. It should:

1. Measure the reading process as defined in the research,
2. Be easy to administer and score,
3. Be non-threatening for students, and
4. Not take more than 40 to 50 minutes to administer.

Once an instrument had been identified, testing of adults newly enrolled in literacy programs was undertaken at all community college literacy projects in Oregon during the fall and winter terms of the 1985-86 academic year.

The researcher drew a stratified random sample of 300 from a population of 4,623 in order to develop normative information in the form of stanines and percentile ranks. Next, the goodness of fit test was administered to the test score frequencies obtained from the sample in order to determine whether or not the scores of the sample represented the tested population. The results of the analysis indicate that the sample represents the population. Therefore, percentile ranks and stanines were calculated. Finally, a frequency polygon was developed to further describe the data.

Program impact assessment form. A review of studies which gathered follow-up data on adult literacy students was undertaken for purposes of identifying an instrument for the assessment of the impact of literacy programs on students. Previous research demonstrated that an appropriate survey form should identify information concerning the following:

1. The impact of the program on students' economic and social well being.
2. The impact of the program on the achievement of personal goals for entering a literacy program.
3. The impact of the program on the learners' self esteem.

### Related Findings

Learner goals/intake instrument. Based upon the recommendations of the test administrator and members of the instructional staff at Chemeketa Community College and upon the observations of the researcher, the field test of the intake instrument revealed that the form takes too long to fill out in the time allotted which must also include testing, placement, and instructions for the first class meeting.

It is important to point out that, in the opinion of the Delphi panel, a group composed of adult educators who work with literacy programs, the goals information contained in the intake instrument is very important to obtain. It is not possible to know whether or not the panelists considered the length of the instrument as they evaluated and responded to its content. However, it seems clear that these adult educators believe that the data which could be gathered with the instrument has local and statewide value for adult literacy. A means would have to be found to obtain information on learner goals at the time of enrollment or very soon thereafter in order to immediately apply it for instructional purposes.

Test of reading comprehension. The panel of adult educators identified the Degrees of Reading Power (DRP) as

the instrument which measures reading comprehension in a way consistent with the definition established for this research, and it meets the other criteria outlined above. As a result, the panel recommended the use of PA-6 form of the DRP because it represents a middle ground between the two more difficult and thus potentially more threatening versions of the test and the easiest form.

Based on the data gathered from the testing of adults newly enrolled in literacy programs, normative information in the form of percentile ranks (Appendix D) and stanines (Appendix E) was developed for the following reasons:

1. No such normative information of an adult literacy population tested with the DRP currently exists.
2. Adult literacy programs could use the test data from the DRP to compare their students with those of the norming population.
3. The information can be used to describe the reading ability of those students entering Oregon's adult literacy programs.

A review of the scores obtained from testing with the Degrees of Reading Power, the frequency polygon, the accompanying normative data, the analysis of the goodness of fit test, and national and statewide test results with the DRP of public school students reveal the following:

1. The results of the goodness of fit test applied to the sample group demonstrate that the scores do

represent the tested population. The null hypothesis that the distribution of scores on the standardized test of reading comprehension is a chance variation from the normal population was rejected.

2. The frequency polygon shows a definite negative skew. In addition, it demonstrates that, from a sample of 300 new adult literacy students, 211 or 70% read at or above 63 DRP units with 75% comprehension.
3. Sixty-three DRP units represents the 50th national percentile score for eighth graders tested in the spring (36A).
4. Oregon eighth graders tested in the spring of 1985 had an average DRP score of 67 (108) while the average DRP score in this research was 73.3 units.
6. A study of the percentile ranks indicates that entering adult literacy students in Oregon who scored in the 50th percentile read at a level of nearly 75 DRP units with 75% comprehension. This compares with national public school scores on the DRP which show that eighth graders who read at 75 DRP units with 75% comprehension fall into the 80th percentile (36A).

Program impact survey instrument. The Adult

Education Follow-Up Survey, a telephone survey instrument developed at Rutgers University by Gordon Darkenwald and Thomas Valentine, meets the criteria outlined above and is included in Appendix C as the third element in this process for use by educators to evaluate the impact of adult literacy programs on participants.

Suggestions for Implementation of the Identified Evaluation Measures

A discussion of suggestions for ways to implement the evaluation measures identified in this research includes the following areas: 1) learner goals/intake form, 2) test of reading comprehension, and 3) program impact.

Learner Goals/Intake Instrument

Information on learner goals can help programs to place students with materials of interest, assess their progress toward personal goals, and be used to describe the types of students who enter adult literacy programs.

Therefore, the following recommendations are made:

1. Since each adult literacy program gathers some demographic information when students first enroll, a common form which obtains demographic data should be used to lend statewide consistency

to the data collection. This would make possible the collection of the same information from different sites for purposes of analysis.

2. Instructors should then use the same learner goals form to collect goal information as a part of the process of becoming acquainted. This would help the instructor to develop individualized instructional plans and place students with materials of interest. In addition, the collection of the same data at all program locations would enable educators to better understand the needs and expectations of adult literacy students.
3. A statewide data base containing this information should be developed for the following purposes:
  - a. To create a base of information for use in describing learners and their goals,
  - b. For discussions with legislators, private funding sources, and concerned citizens, and
  - c. For the examination of the data by local literacy projects to make program changes, determine whether or not those most in need are being attracted and served, and for discussion with local constituencies.

Test of Reading Comprehension

1. Statewide testing of adult literacy students using the Degrees of Reading Power should be continued in order to provide continually updated normative data.
2. Undertake a program to pre- and posttest literacy students for purposes of demonstrating student progress in reading and to measure that improvement over time. The collection of this type of information would also enable the development of continually updated normative data on both students' reading ability upon enrollment and on their progress.
3. Perform DRP readability analyses of materials commonly used in adult literacy programs. This would make it very easy to place students with materials which they could read with understanding.
4. Obtain readabilities in DRP units for "real life" materials such as newspapers and magazines so that instructors can make those materials available to students who are able to read them.
5. Distribute the results of the testing to state adult literacy programs for discussion and

suggestions to aid in the improvement of literacy projects.

### Program Impact

Moore (103) remarked that success in adult literacy programs has not been well documented because of differences in recordkeeping systems (as well as a lack of time and money). With this in mind, research in the development of this evaluation process and the selection of the Adult Education Follow-Up Survey suggest a need for the following:

1. A statewide study of students who were enrolled in adult literacy programs for a minimum of six months, as recommended by Darkenwald and Valentine (31), should be undertaken at regular intervals with the Adult Education Follow-Up Survey under the direction of the Oregon Department of Education.
2. The results of this survey should be disseminated to literacy programs across the state for purposes of discussion and programs improvement.

### Recommendations for Further Research

This study suggests a need for the following research:

1. Because writing and mathematics are important literacy skills, research should be conducted to add to the processes identified by this study compatible evaluative methods in both areas.
2. Theory and research describe reading and writing as related language processes. Therefore, research should be conducted to determine the degree to which the ability to read improves when reading and writing are taught as separate skills and when they are taught concurrently to adults.
3. Research should be conducted to assess the the learners' views of the impact literacy programs have had on their economic and social well being, educational goals and needs, and their self perceptions.
4. A study of learner goals should be undertaken to determine the degree to which they are consistent with those of literacy programs themselves.
5. A study of learner goals and the changes which may occur in those goals as a result of participation in literacy programs should be pursued.
6. Continued research should be conducted to evaluate the question of whether or not literacy programs are serving those adults most in need.

### Observations and Implications

The following observations and implications are not a direct part of this research. However, they are included in light of recommendation six (6) above which calls for further research to examine the question of whether or not those most in need are being served. The observations and implications examine the pattern of information gathered from the statewide testing of literacy students with the Degrees of Reading Power. The reader should keep in mind the following as when reviewing this section:

1. The Directors of Oregon adult literacy programs determined that not all students new to adult literacy programs would be tested.
2. Students were not tested if they were clearly nonreaders, if they exhibited a high level of test anxiety, and if their first language was not English.
3. All testing took place only in Oregon community college Adult Basic Education programs.

The initial results of the testing conducted with the Degrees of Reading Power suggest the following:

1. The tested population of adults entering literacy programs in Oregon reads at level well above that of the average eighth grader tested in the

spring in the United States and above the average Oregon eighth grader tested at the same time.

2. This in turn indicates that Oregon adult literacy programs are not attracting and serving those most in need but rather a high percentage of people who already have fairly well developed reading skills. It is very important to add that this does not in any way imply that money currently allocated for literacy programs in Oregon is not being well spent. Oregon Adult Basic Education programs, which serve most adult literacy students, do a very effective job of responding to the needs of those who elect to enter their programs. However, the findings described in this section are consistent with research conducted by Hunter and Harman. They indicate that "existing programs are fine as they are and as they may be improved" for those adults best able to take advantage of such opportunities. However, they conclude that ABE programs "are creaming operations" which take those who "are most ready" (83).

#### Summary

Adult illiteracy represents an enormous problem for the United States. Today as many as twenty-three million

adults cannot read. Another 40 million lack functional literacy skills which prevents even these low-level readers from involvement in a society which relies heavily on the written word. People who cannot comprehend written language lack the liberating power which comes with the ability to read. They are cut off from full participation in our political system and remain a disenfranchised population with little control over the direction of their lives. They are typically poor and unemployed and, because of their lack of literacy skills, they cannot compete for or secure jobs which require such skills. Finally, our economy loses an estimated \$400 billion dollars each year in welfare costs, unemployment compensation, poor job performance, crime, and lost income as a direct result of poor literacy skills.

Currently adult literacy programs in the United States reach no more than 2-4 percent of those in need, and of those who enroll in literacy classes over one third drop out before completion. Given the magnitude of the problem, strong and effective programs are necessary to effectively reach and teach those most in need. As a result, this research was conducted to develop a means for the evaluation of learner goals, reading comprehension, and program impact as elements of adult literacy programs. The end in mind was to make available the tools for the gathering of information about literacy so that with those

data new programs could be developed or existing ones strengthened to better serve this population. To that end the following was done as a part of this research:

1. An intake form for the collection of information on learner goals was developed.
2. The Degrees of Reading Power was identified as an appropriate measure of reading comprehension for use with adult learners.
3. Normative information on reading ability was created using the test results of the Degrees of Reading Power with Oregon adults newly enrolled in literacy programs.
4. A program impact instrument was identified for purposes of measuring learner perceptions of the impact of literacy programs on them. The Adult Education Follow-Up Survey developed by Darkenwald and Valentine was determined to meet the criteria for thorough evaluation of adults who had participated or were enrolled in adult literacy programs.

This chapter contains a review the literature which supports the need for research on the three elements of adult literacy programs identified for this study. It includes a review and discussion of the findings and makes recommendations consistent with the results of the research and the needs which exist.

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## Appendices

Appendix A

## Intake Form

Interviewer \_\_\_\_\_

Student Phone Number:

Home \_\_\_\_\_

Work \_\_\_\_\_

Message \_\_\_\_\_

1. Name \_\_\_\_\_  
Last First Initial2. Address \_\_\_\_\_  
Number Street City Apt No. Zip

3. Social Security Number - - \_\_\_\_\_

4. Date of Birth - - - \_\_\_\_\_

5. Sex: M \_\_\_\_\_ F \_\_\_\_\_

6. Do you have any handicaps? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, please describe \_\_\_\_\_

7. Ethnic Background

- Asian  
 Black  
 Hispanic  
 Indian/Naive American  
 White

8. What is your first language? \_\_\_\_\_

Have you taken an ESL class before? Yes \_\_\_\_\_ No \_\_\_\_\_

9. Education:

When were you last enrolled in public school? \_\_\_\_\_

Last Grade Completed? \_\_\_\_\_

Where did you last go to school? \_\_\_\_\_

Comments:

10. Have you taken an adult education class in reading before? Yes \_\_\_ No \_\_\_

What was it? \_\_\_\_\_

11. What is your goal for entering an adult class at this time? \_\_\_\_\_

12. Have you had any other education besides public school? Yes \_\_\_ No \_\_\_  
If yes, what was it? \_\_\_\_\_

Comments:

13. Are you currently receiving any kind of public assistance such as food stamps or ADC? Yes \_\_\_ No \_\_\_

Comments:

14. Have you received formal job training? If yes, describe \_\_\_\_\_  
\_\_\_\_\_

Comments:

15. Employment:

Are you currently employed outside the home?

Yes \_\_\_ No \_\_\_

If yes, where? \_\_\_\_\_ Part time \_\_\_  
Full Time \_\_\_

If no, are you: \_\_\_ Available to work  
\_\_\_ Not available to work

What is your job? \_\_\_\_\_

What kind of career do you want? \_\_\_\_\_  
\_\_\_\_\_

Comments:

16. People want to improve their reading skills for many reasons, please tell me if any of the following reasons fit you. Indicate as many as apply:

A. Job Related Reasons

- \_\_\_ I want to get a job  
 \_\_\_ I want to keep my job  
 \_\_\_ I want to find a better job  
 \_\_\_ I want to read a job application  
 \_\_\_ Other \_\_\_\_\_

Comments:

B. Personal Reasons

- \_\_\_ I want to improve my ability to read newspapers and magazines  
 \_\_\_ I want to be a better shopper  
 \_\_\_ So that I will feel better about myself  
 \_\_\_ I want to read my mail  
 \_\_\_ I want to qualify for citizenship  
 \_\_\_ I want to read the Bible  
 \_\_\_ I want to read to children  
 \_\_\_ Other \_\_\_\_\_

Comments;

C. Family Reasons

- \_\_\_ I want to help my children with school work  
 \_\_\_ I want to help more with my children's school activities  
 \_\_\_ So that I can work with the school  
 \_\_\_ I want to read to an elderly relative  
 \_\_\_ I am on my own for the first time  
 \_\_\_ Other \_\_\_\_\_

Comments:

D. Educational Reasons

- \_\_\_ I want to be able to learn more  
 \_\_\_ I want further education  
 \_\_\_ I want to earn my GED  
 \_\_\_ I want my high school diploma  
 \_\_\_ I want to learn more English  
 \_\_\_ Other \_\_\_\_\_

Comments: \_\_\_\_\_

17. How much do you read each week?

- A little (1-15 minutes)  
 Some (16-30 minutes)  
 A lot (more than 30 minutes)  
 None

Comments:

18. What do read now? Indicate as many as apply to you.

- Work related information  
 Bible  
 Newspaper  
 Books  
 Magazines  
 Storybooks to children  
 Instructions for product use  
 Medicine labels  
 Citizenship materials  
 Other \_\_\_\_\_

Comments:

19. How did you hear about this program? \_\_\_\_\_

20. Is there anything else you would like to tell me in order to help you attain your goal? \_\_\_\_\_

FOR OFFICE USE

Testing - Test(s) administered

Results

Placement

Progress

Appendix B

## Degrees of Reading Power Sample Passage

It is winter. It is cold. Trees are bare. There is a nest. It is in the tree. It is a robin's nest. But it is quiet now. No robins are there. The nest is 1. The robins have gone away.

- 1 a) new                      b) empty  
c) loose                      d) strong  
e) flat

Where did they go? They went south. They went for the winter. The north was too cold. There was too little to eat. Robins eat bugs. They eat worms. In winter there are few bugs. There are few worms. So robins go to the south. There will be more 2 there. So they will have enough to eat.

- 2 a) rain                      b) room  
c) food                      d) salt  
e) grass

Some robins may stay north. They look for the sun. They try to keep warm. But it snows. There is little sun. So they are cold. Robins eat berries. But snow falls. It covers the berries. They can not get enough to eat. Some will 3. The winter is too hard. It kills them.

- 3 a) die                      b) drink  
c) help                      d) work  
e) follow

Spring comes. It gets warm. Robins fly north. It is a long trip. They fly for a while. They get tired. They get hungry. So they 4. They land. They rest. They eat. Then they fly on.

- 4 a) hide                      b) pull  
c) listen                      d) stop  
e) cry

Robins come. They reach the north. The male comes first. He looks. He finds his nest. He sings. His song says, "Halt! This is my nest. It is my land. Stay away. Go!" He chases other birds. He keeps them away. This is how he protects his 5.

- 5 a) wings                      b) dinner  
c) home                      d) eyes  
e) throat

Soon young robins are born. They are small. They are weak. They are hungry. These 6 must be cared for. So their parents feed them. They keep enemies away. They watch them.

- 6 a) wounds                      b) places  
c) tails                      d) babies  
e) legs

Summer ends. Robins get set to go south. Each morning they fly out. They eat. At night they come back to the nest. One cold day they do not come back. The robins have 7. They will not be back until spring.

- 7 a) changed                      b) washed  
c) learned                      d) grown  
e) left

Appendix C

Oregon State University  
Department of Post-Secondary Education  
Adult Education Follow-Up Survey

Interviewer	Respondent's Name	ID#
Date Completed	Telephone Number	
Start Time	Program Name	ID#
Finish Time	Program Address	
	R's Age	R's Sex

A. Hello, may I speak to \_\_\_\_\_?

(IF CONNECTION IS MADE), Go to B below.

(IF NOT HOME), Ask when to call again or how else to reach respondent. Enter response below.

(Note: If asked to identify yourself, give your name and say: "I'm from Oregon State University and I wanted to ask him/her some questions about education.")

B. This is \_\_\_\_\_ from Oregon State University. We are conducting a study to help community colleges improve their adult education classes. \_\_\_\_\_ is one of the programs we're working with. I'm calling to ask if you would help by answering a few questions. We're asking the same questions of other students from \_\_\_\_\_. Your answers are very important and completely confidential. All answers will be used without names.

Section I

1. First, we are interested in knowing the reasons people enroll in adult education classes for reading, math and writing skills. Think back to when you first enrolled in the program. (PAUSE.) What were your reasons or goals for enrolling? (PROBE: Were there others?)
  
2. Which one of these reasons was the most important to you?
  
3. Why did you decide to take a class at that particular time? Was there something happening in your life that made you decide to enroll?
  
4. Once you enrolled, was the adult education course what you had expected it to be like or was it different?
  1. EXPECTED
  2. DIFFERENT
  3. UNCERTAIN

(IF DIFFERENT), How was it different? (PROBE: Were there things you didn't like?)

5. Thinking back to your reasons or goals for enrolling in the adult education class, has the class helped you to reach them?

1. TOTALLY
2. A LOT
3. SOME
4. A LITTLE
5. NOT AT ALL

(IF NOT AT ALL), Why do you think the class hasn't helped you?

6. Now I'd like to ask you about some problems adults often experience in going to classes. After I read each statement, please tell me if it is very true, somewhat true, or not true.

	<u>VERY</u>	<u>SOME</u>	<u>NOT</u>
a. You didn't feel you were making enough progress toward your goals.	3	2	1
b. You didn't receive enough help or attention in class.	3	2	1
c. The classwork was harder than expected.	3	2	1
d. You didn't get support or encouragement from family or friends.	3	2	1
e. You had trouble attending class due to job or family responsibilities.	3	2	1

7. Can you think of any other important problems you had, things you didn't like or that made it hard to attend class?

8. Of all the problems mentioned, which was the most serious or difficult for you?
9. Are you still attending the adult education class or have you stopped attending?
1. STILL
  2. STOPPED
- (IF STOPPED), Do you plan to start class again later this spring or next fall?
1. YES
  2. NO
  3. UNCERTAIN

### Section 2

Now I would like to ask you about some of the benefits you might have gained from going to the adult education class.

10. Were you employed at the time you first entered the adult education program?
1. YES
  2. NO
- (IF NO), GO TO QUESTION 11.
- (IF YES), Do you have the same job now, did you change jobs, or did you recently become employed?
1. SAME
  2. CHANGE
  3. UNEMPLOYED

(IF SAME), GO TO QUESTION 12.

(IF UNEMPLOYED), GO TO QUESTION 13.

(IF CHANGE), Compared with your last job is the job you now have:

1. A BETTER JOB
2. ABOUT THE SAME
3. NOT AS GOOD A JOB

(IF BETTER JOB), Did the fact that you were in an education program help you in any way to get the job you now have?

1. YES
2. NO
3. UNCERTAIN

(IF NO OR UNCERTAIN), GO TO QUESTION 12.

(IF YES), How did it help?

GO TO QUESTION 13.

11. Are you currently employed?

1. YES
2. NO

(IF YES), GO TO QUESTION 12.

(IF NO), GO TO QUESTION 13.

12. Regarding your present job, in the last six months:

a. Do you feel you are doing your job better, about the same, or not as well?

1. BETTER
2. THE SAME
3. NOT AS WELL

(IF BETTER), Did the fact that you were in an adult education class help you a lot, some, or not at all?

1. A LOT
2. SOME
3. NOT AT ALL

(IF A LOT OR SOME), How did it help?

b. Did you get a raise?

(IF YES), Did the fact that you were in an adult education class help a lot, some, or not at all?

1. A LOT
2. SOME
3. NOT AT ALL

(IF A LOT OR SOME), How did it help?

c. Did you get a promotion?

(IF YES), Did the fact that you were in an adult education class help a lot, some, or not at all?

1. A LOT
2. SOME
3. NOT AT ALL

(IF A LOT OR SOME), How did it help?

d. Do you think you're more likely to keep you job, less likely, or about the same?

1. MORE LIKELY
2. ABOUT THE SAME
3. LESS LIKELY

(IF MORE LIKELY), Did the fact that you were in an adult education class help?

1. YES
2. NO
3. UNCERTAIN

(IF IT HELPED), How did it help?

GO TO QUESTION 14.

13. Are you currently looking for employment?

1. YES
2. NO

(IF YES), Do you think the fact that you took an adult education class might help you get a job?

1. YES
2. NO
3. UNCERTAIN

(IF YES), How do you think it might help?

14. Since you began the adult education class, have you become a better reader, not improved as a reader, or had more difficulty reading?

1. BETTER
2. NOT IMPROVED
3. MORE DIFFICULTY

15. Since enrolling in the class have you used your reading skills outside of the classroom to do something you couldn't do before or to do it better?

1. YES
2. NO

(IF YES), Think about the ways you use this skill in your life. What are some things you have done or can now do outside the classroom with your improved reading skills?

16. Has the adult education class helped you to write better, about the same, or not as well?

1. BETTER
2. ABOUT THE SAME
3. NOT AS WELL

17. Since enrolling in the class have you used your writing skills outside of the classroom to do something you couldn't do before or to do it better?

1. YES
2. NO

(IF YES), Think about the way you use this skill in your life. What are some things you have done or can do outside the classroom now with your improved writing skills?

18. Since you started the adult education class, are your math skills improved, about the same, or not as good?
1. IMPROVED
  2. ABOUT THE SAME
  3. NOT AS GOOD
19. Think about the ways you use this skill in your life. Since enrolling in the class have you used your math skills outside the classroom to do something you couldn't do before or to do it better?
1. YES
  2. NO

(IF YES), What are some things you have done or can do now with your improved math skills?

20. Aside from reading, writing, and math, were there any other things you learned in the adult education class?
1. YES
  2. NO

(IF YES), What other things?

21. Did the class help you pass the GED exam or earn an adult high school diploma?
1. YES
  2. NO

22. Do you have any school-aged children or teenagers living with you at home?

1. YES
2. NO

(IF YES), Has your participation in the adult education class resulted in any of the following changes?

- a. Do you help the children with their schoolwork more than you used to, less than you used to, or the same?
  1. MORE
  2. THE SAME
  3. LESS
- b. Do you talk with them more than you used to about school, less than you used to, or the same?
  1. MORE
  2. THE SAME
  3. LESS
- c. Has their attitude toward school gotten better, worse, or stayed the same?
  1. BETTER
  2. THE SAME
  3. WORSE
- d. Are they now getting better grades, worse grades, or the same grades?
  1. BETTER
  2. THE SAME
  3. WORSE
- e. Have you become more involved with the school, less involved, or about the same? For example, do you attend meetings or other activities, or talk with teachers?
  1. MORE
  2. THE SAME
  3. LESS

23. In general, do you feel better about yourself, the same, or worse as a result of attending the adult education program?

1. BETTER
2. THE SAME
3. WORSE

(IF BETTER), Why or in what way do you feel better about yourself?

(IF WORSE), Why or in what way do you feel worse about yourself?

24. Aside from the class we've been talking about, are you currently enrolled in any kind of job training or education program?

1. YES
2. NO

(IF NO), GO TO QUESTION 25.

(IF YES), a. What are you studying?

b. Where are you studying it? (Name of school, college, agency).

c. Did the adult education class help you get into, prepare for, or find out about this program?

1. YES
2. NO

GO TO QUESTION 25.

25. Do you plan to enroll in any kind of training or education program in the near future -- say within six months or a year?

1. YES
2. NO
3. UNCERTAIN

(IF YES), a. What do you plan to study?

b. Where do you plan to study it? (PROBE: college, employer, vocational-technical school, trade school)

26. Many people receive public assistance, such as ADC or food stamps. Have you received such assistance at any time during the past year?

1. YES
2. NO

(IF YES), Since \_\_\_\_\_ has the amount of assistance decreased, remained about the same, or been totally eliminated?

1. SAME
2. DECREASED
3. ELIMINATED

(IF DECREASED OR ELIMINATED), Was the reduction of public assistance due to your getting a job, your making more money, or to something else?

1. GETTING JOB
2. MORE MONEY
3. SOMETHING ELSE

27. One final question. Taking everything into account, what is the one most important benefit you gained from participating in the adult education class?

THANK YOU VERY MUCH FOR YOUR HELP.

Appendix D

Appendix D  
Percentile Ranks Developed From an Adult Population  
Using the Degrees of Reading Power

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DRP Units Instructional (P=.75)				
Score	f	Cf	cp	PR
99	41	300	100.00	90+
91	18	259	86.33	86
87	22	241	80.33	80
84	14	219	73.00	73
81	19	205	68.33	68
79	13	186	62.00	62
77	19	173	57.67	58
75	15	154	51.33	51
74	7	139	46.33	46
72	7	132	44.00	44
71	5	125	41.67	42
70	3	120	40.00	40
68	13	117	39.00	39
67	7	104	34.67	35
66	3	97	32.33	32
65	4	94	31.33	31
64	1	90	30.00	30
63	4	89	29.67	30
62	7	85	28.33	28
61	2	78	26.00	26
60	9	76	25.33	25
59	6	67	22.33	22
58	7	61	20.33	20
57	3	54	18.00	18
56	3	51	17.00	17
55	2	48	16.00	16
54	5	46	15.33	15
53	4	41	13.67	14
52	1	37	12.33	12
51	2	36	12.00	12
50	5	34	11.33	11
49	5	29	9.67	10
48	3	24	8.00	8
47	1	21	7.00	7
45	1	20	6.67	7
44	2	19	6.33	6
43	3	17	5.67	6
42	2	14	4.67	5
41	1	12	4.00	4
40	1	11	3.67	4
39	1	10	3.33	3

## Appendix D (continued)

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Score	f	Cf	cp	PR
34	1	9	3.00	3
32	1	8	2.67	3
30	1	7	2.33	2
29	1	6	2.00	2
27	2	5	1.67	2
21	1	3	1.00	1
15	2	2	0.67	1

Appendix E

Appendix E  
Stanines Developed From an Adult Population Using the  
Degrees of Reading Power

DRP Units  
Instructional  
(P=.75)

Score	f	cp	Stanine
99	41	100	8+
91	18	86	7
87	22	80	7
84	14	73	6
81	19	68	6
79	13	62	6
77	19	58	5
75	15	51	5
74	7	46	5
72	7	44	5
71	5	42	5
70	3	40	4
68	13	39	4
67	7	35	4
66	3	32	4
65	4	31	4
64	1	30	4
63	4	30	4
62	7	28	4
61	2	26	4
60	9	25	4
59	6	22	3
58	7	20	3
57	3	18	3
56	3	17	3
55	2	16	3
54	5	15	3
53	4	14	3
52	1	12	3
51	2	12	3
50	5	11	2
49	5	10	2
48	3	8	2

## Appendix E (continued)

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<u>Score</u>	<u>f</u>	<u>cp</u>	<u>Stanine</u>
47	1	7	2
45	1	7	2
44	2	6	2
43	3	6	2
42	2	5	2
41	1	4	1
40	1	4	1
39	1	3	1
34	1	3	1
32	1	3	1
30	1	2	1
29	1	2	1
27	1	2	1
21	1	1	1
15	2	1	1

Appendix F

## Appendix F

Delphi Panel for the Development of the Intake  
Instrument

Patricia Amsberry  
Director of Adult Basic Education  
Blue Mountain Community College  
Pendleton, Oregon

Carol Evans  
Coordinator of Adult Basic Education  
Clackamas Community College  
Oregon City, Oregon

Richard Gates  
Director of Adult Basic Education  
Umpqua Community College  
Roseburg, Oregon

Dale Haynes  
Director of Adult Basic Education  
Treasure Valley Community College  
Ontario, Oregon

Elizabeth Johnen  
Director of Developmental Education  
Chemeketa Community College  
Salem, Oregon

Charles Mann  
Director of Adult Basic Education  
Linn-Benton Community College  
Albany, Oregon

Margaret McGuire  
Director of Adult Basic Education  
Southwestern Oregon Community College  
Coos Bay, Oregon

Linda Oldenkamp  
Director of Adult Basic Education  
Clatsop Community College  
Astoria, Oregon

Bonnie Orr  
Director of Adult Basic Education  
Central Oregon Community College  
Bend, Oregon

## Appendix F (continued)

Lance Reuther  
Director of Adult Basic Education  
Lane Community College  
Eugene, Oregon

Michael St. John  
Coordinator of Adult Basic Education  
Portland Community College  
Portland, Oregon

Linda Stevenson  
Director of Adult Basic Education  
Rogue Community College  
Grants Pass, Oregon

Hilda Thompson  
State Director of Adult Education (former)  
Oregon Department of Education  
Salem, Oregon

Marcia Truman  
Coordinator of Adult Basic Education  
Lincoln County  
Lincoln City, Oregon

Sharlene Walker  
Director of Adult Basic Education  
Treaty Oak CCSD  
The Dalles, Oregon

Donna Warren  
Director of Adult Basic Education  
Tillamook Bay CCSD  
Bay City, Oregon

Joyce Wilson  
Acting Director  
Developmental Education  
Chemeketa Community College  
Salem, Oregon

Richard Young  
Director of Adult Basic Education  
Portland Community College, Rock Creek  
Portland, Oregon

Appendix G

## Appendix G

Test Review Panel

Richard Gates  
Director of Adult Basic Education  
Umpqua Community College  
Roseburg, Oregon

Edward McMahon  
Director of Adult Basic Education  
Mt. Hood Community College  
Gresham, Oregon

Bonnie Orr  
Director of Adult Basic Education  
Central Oregon Community College  
Bend, Oregon

Lance Reuther  
Director of Adult Basic Education  
Lane Community College  
Eugene, Oregon

Michael St. John  
Coordinator of Adult Basic Education  
Portland Community College  
Portland, Oregon

Linda Stevenson  
Director of Adult Basic Education  
Rogue Community College  
Grants Pass, Oregon

Appendix H

## Appendix H

Reading Tests Reviewed

1. California Reading Test  
Publisher:
2. Degrees of Reading Power (DRP)  
Publisher: The College Board
3. Gates-MacGinitie, Form E  
Publisher: Houghton-Mifflin, Company
4. Nelson-Denny  
Publisher: Houghton-Mifflin, Company
5. Nelson Reading Skills Test  
Publisher: Houghton-Mifflin Company
6. Read For Understanding (RFU)  
Publisher: SRA
7. Reading Evaluation Adult Diagnosis  
Publisher: Literacy Volunteer of America
8. Reading/Everyday Activities in Life (R/EAL)  
Publisher: Westwood Press
9. Test of Adult Basic Education (TABE)  
Publisher: McGraw-Hill

Appendix I

## Appendix I

Adult Literacy Program Impact Survey  
Instruments Reviewed

1. Adult Basic Education Follow-Up Study  
By Ruth Fallon.
2. Adult Basic Education in Ohio: A Program Impact  
Evaluation  
By David L. Boggs, Terry F. Buss and Steven M.  
Yarnell.
3. Adult Education Follow-Up Survey  
By Gordon Darkenwald and Thomas Valentine
4. Assessment of Adult Basic Education Program Impact  
By Betty R. Bramnick.
5. Evaluation of Adult Basic Education in Tennessee  
By Paul L. Jones and John R. Petry.
6. A Follow-Up Study of Adults Who Were Administered  
the GED Test in Kentucky  
BY Linda Moore.
7. Perceptions of Program Impact: ABE/GED in Maryland  
By Sharon Walker.