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THE DEVELOPMENT OF AN INSTRUMENT FOR THE EVALUATION OF PUBLISHED MATERIALS IN ADULT BASIC READING INSTRUCTION

By

David Harrison

A Dissertation Submitted to the Faculty of the

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THE UNIVERSITY OF ARIZONA

GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my direction by David Harrison

entitled THE DEVELOPMENT OF AN INSTRUMENT FOR THE EVALUATION OF PUBLISHED MATERIALS IN ADULT BASIC READING INSTRUCTION

be accepted as fulfilling the dissertation requirement for the degree of Doctor of Philosophy

Raymond S. Schultz — Dissertation Director — 3-12-79 — Date

As members of the Final Examination Committee, we certify that we have read this dissertation and agree that it may be presented for final defense.

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ABSTRACT

A critical shortage of published instructional materials has been identified in adult basic literacy programs. Textbooks in this field have generally been found lacking in either (a) application of principles of adult learning, or (b) an integrated approach to basic reading instruction. An underlying cause of this problem may be the lack of any clear set of criteria by which to evaluate materials.

The purpose of this study was to develop and validate an instrument for the evaluation of published materials for adult basic reading instruction. A Materials Evaluation Guide was designed for use by adult basic education practitioners in the screening of basic reading textbooks prior to adoption for classroom use. The Guide was constructed after a review of relevant literature on adult learning, and on the theory and practice of basic reading instruction. Specific evaluation criteria were derived from the literature.

The Guide took the form of a written questionnaire. It consisted of dichotomous-choice questions relating to the product design, adult learning, and reading instruction aspects of a text under review. The items were grouped into ten elements: format and content, instructional resources; motivation, individual differences, principles of instruction, relevance; word recognition, word analysis, comprehension and assessment. A six-point Likert scale was provided for a summary rating of each element, and for an overall rating of the text.

To establish the content validity of the Guide, an initial form of the instrument was submitted to ten university professors, five from the field of adult learning, and five from reading education. All had experience with adult literacy programs. These judges independently rated each item for relevance, and a content validity index was subsequently estimated for the instrument. Items with low content validity were revised or replaced. The revised form of the Guide had an estimated content validity index of 0.82, which was accepted as satisfactory.

Instrument reliability was investigated in a pilot study, using a small sample of adult basic education instructors from selected community colleges in British Columbia. Five instructors each independently rated the same two recently published textbooks, using the Revised Form of the Materials Evaluation Guide. Inter-rater agreement was estimated at 0.67 and 0.71 (kappa = 0.35 and 0.34). Alpha coefficients of internal consistency for the instrument were estimated at 0.88 and 0.95. Instrument usability was studied through interviews with the five instructors, and found satisfactory. The average time taken to evaluate a textbook was 1 hour, 40 minutes.

In summary, the findings of the study were: (1) a set of evaluation criteria for adult basic reading materials could be derived from the literature of adult learning; (2) an additional set of criteria could be derived from the theory and practice of basic reading instruction; (3) these criteria could be articulated in an evaluation instrument which demonstrated satisfactory validity and reliability;

and (4) the instrument was considered by a sample of practitioners to be a useful aid to critical judgement and decision-making in the evaluation of textbooks. A limitation of the findings was that this pilot reliability study involved only a small sample of evaluators.

Further validation of the Materials Evaluation Guide is required. Reliability needs to be investigated more extensively, using a larger number of evaluators and various text materials. Additionally, students should be involved in judging the content validity of the Guide.

The findings of this study indicate that, after further refinement, the Materials Evaluation Guide could be of value to instructors, teacher trainers, textbook authors, reviewers and publishers, as an aid in the selection of materials for adult basic reading instruction.

CHAPTER I

THE PROBLEM

Rationale of the Study

Despite a growth in the numbers of adults turning to community colleges and other agencies for basic education, there are still only a relatively small number of published materials available for adult basic reading instruction. It would be encouraging to report that even this limited supply of curriculum materials is of generally high standard. However, such is not the case. Examination of currently available materials suggests that texts frequently are not designed according to either (a) widely held principles of adult learning, or (b) an integrated approach to basic reading instruction.

This study proceeds from the position that the existing scarcity of well-designed texts in this field partly results from the lack of any clearly defined set of evaluation criteria. Explicit standards for adult basic reading texts should be available at several key points in the process from composition to classroom use. Textbook authors need guidelines to direct their creative efforts; publishers need a basis beyond market demand for the decision to invest in, and publish new texts; program administrators and teachers require standards against which to measure text materials before and after adoption for classroom use. A further use for materials evaluation schemes exists in teacher education programs of universities and colleges,

where instructional materials should be subjected to systematic, critical analysis.

Review of the literature on adult basic education (ABE) programs reveals, however, that no well-validated instrument exists for the express purpose of evaluating adult basic reading materials. While several noteworthy attempts have been made to close this gap, the results have been largely superficial, incomplete, and lacking in evidence of validity or reliability.

Barnes and Hendrickson (1965), in a study for the US Office of Education, reported on visits to 35 adult education programs in 15 states in an effort to evaluate methods, techniques, tests and materials directly from publishers. Since they found that measures were almost totally lacking for determining the effectiveness of materials, they constructed a set of criteria and applied them to materials at the beginning level (Grade 0-4). The criteria were extremely broad and included scant reference to quality, instructional approach, technical or pedagogical excellence.

A survey by Hayes (1967) was restricted to basic adult literacy materials in Chicago ABE programs. It did not differentiate clearly between texts for adults whose native language was English, and texts for 'English-as-a-Second-Language' (ESL) students. It is now the general practice to recognize that these two groups require different methodology and materials (Mattran, 1976). The materials evaluation scheme developed and applied by Hayes nevertheless included more specific criteria than the previous study, and did address some critical issues.

Otto and Ford's handbook Teaching Adults to Read (1967) was the first widely available guide to materials and methods in this field. As part of a national survey of adult basic literacy programs, the investigators collected materials from publishers, and applied a checklist of 50 Yes/No criteria to the texts. While the checklist presents a wide range of criteria, little background was provided on how the standards were established or validated; many of the items were quite superficial, not being related to any stated measure of quality.

The most recent studies addressing the materials evaluation problem in adult basic education are those by Bolton (1975) and Grotelueschen, Gooler, and Knox (1976). Both studies, however, were more concerned with overall evaluation procedures for ABE programs, and gave limited attention to materials evaluation. Neither study specifically dealt with criteria for the evaluation of basic reading texts.

Approaching more closely the problem of evaluation criteria for adult basic reading materials were the studies of Lyman (1973), and Simpson and Loveall (1976). Both studies focused on the provision and evaluation of materials for the 'adult new reader' whom they defined as one who was bridging the gap from (basic) literacy skills to independent reading habits. Their concern was thus with materials for those who had already achieved a minimum standard of reading literacy of about grade 4 equivalence. The major outcome of their research which is of value to the present study was the Materials

Analysis Criteria (MAC) Checklist. This provides for a quantitative and qualitative analysis of published reading materials, but would have required considerable adaptation to the context of the beginning reader.

While the ABE materials analysis schemes provide little or no evidence of reliability, or of validity other than face validity, an instrument for the assessment of general instructional materials has been developed and adequately validated by Eash (1974). It has been applied to a variety of curriculum product evaluations by the Educational Products Information Exchange; at least two of these EPIE reports contain evaluations of children's beginning reading programs (EPIE, 1973, 1974). The Eash instrument focuses primarily on the structure of materials rather than their content. Nevertheless, Eash's general approach to instrument construction and validation provided a useful model for the present study.

In summary, this study is based on the rationale that there exists a need, in the field of adult basic reading instruction, for an instrument that can be used to systematically evaluate existing textbook materials. The instrument should be specifically designed for this purpose, and appropriately validated. Two recent studies provided additional direction: Lyman's MAC Checklist for evaluating reading materials for adult new literates, and the Eash instrument for general instructional materials assessment.

Purpose of the Study

The purpose of this study was to develop an instrument for the evaluation of published materials available for use in adult basic reading instruction.

The instrument was designed for use by materials evaluators who have professional background in reading instruction and the teaching of adults, either by training, experience or both. Its function is to serve as an initial screening device for proposed instructional materials, prior to their introduction and further evaluation in classroom use.

Research Questions

The study addressed the following research questions related to the evaluation of adult basic reading materials:

1. What are the appropriate criteria for materials evaluation that can be drawn from the body of knowledge about adult learning?
2. What are the appropriate criteria for materials evaluation that can be drawn from the theory and practice of basic reading instruction?
3. How can the criteria so established best be articulated in an evaluation instrument?
4. How useful is such an instrument to practitioners in the field of adult basic education, as an aid to critical judgment and decision-making?

Importance of the Study

The findings of this study should be of value:

1. To guide adult basic education administrators and teachers in the evaluation and selection of materials;
2. To guide authors, publishers and teachers in the design of new and more effective materials;
3. To provide a model for the evaluation of materials in ABE teacher education programs in universities, colleges and other agencies.

Definition of Terms

To clarify their meanings as they were used in this study, the following terms are defined:

1. Adult: A person beyond the age of compulsory school attendance.
2. Basic Reading Instruction: A sequence of planned learning experiences, under the guidance of a teacher, in the skills and processes of reading, at levels approximately equivalent to grades 1 through 4 in the school curriculum.
3. Evaluation: The process of ascertaining or judging the value of something by use of a standard of appraisal.
4. Evaluation Criteria: The standards against which a product or process may be judged.
5. Instructional Materials: Materials designed for use by a student or a teacher in the learning of specific skills or competencies.

6. Materials Evaluation: Application of a set of criteria in the context of a given product's use; estimating the extent to which each criterion is met; and making an overall judgment about that product's efficacy.
7. Published Materials: Printed instructional materials, currently available from commercial publishers.

Assumptions

The basic assumptions underlying this study were that:

1. Attainment of basic reading competence is an essential requirement for an adult in North American society.
2. Printed instructional materials are now, and will continue to be a critical element in adult basic reading instruction.

Limitations

For the purpose of this study, the following limitations applied:

1. The instrument was designed for the evaluation of commercially published, printed instructional materials. The evaluation of non-print media was considered beyond the scope of the study.
2. The instrument was developed for the evaluation of materials designed specifically, but not necessarily exclusively, for use in the instruction of adults.
3. The instrument was developed for the evaluation of materials that placed primary emphasis on the development of reading competence, rather than on knowledge of substantive content.

4. The instrument did not include measures for the evaluation of materials designed primarily for the instruction of students whose first language is other than English.
5. The validity of the instrument was assessed by a test of content validity. While it is recognized that an assessment of criterion-related validity might establish whether material rated as effective by teachers is found to be as effective in actual use with students, this aspect was not examined in the present study.
6. The reliability of the instrument was estimated using a small pilot sample of ABE evaluators in selected British Columbia community colleges, and only two textbooks were evaluated. The preliminary evidence of reliability cannot be generalized to other situations.

CHAPTER II

REVIEW OF LITERATURE

Every year, publishers of instructional materials must make decisions about the degree of excellence of potential products. While their criteria include such commercial elements as market, distribution, profit potential and return on investment, many other criteria elements are common to those of the teacher (Squire, 1976). The publisher and the teacher, to be successful, should both be aiming to provide materials that will foster learning. Publishers support the concept of continuous evaluation and improvement of materials before and after publication. They recognize the effective use of materials as a dual responsibility of the publisher and the user (American Association of Publishers, 1974). For their part, authors of published instructional material write to meet certain criteria. Some of these criteria may be externally set: a publisher may commission a workbook of about 10 units to help adults improve basic comprehension skills. More often, the criteria are likely to be set by the actual writer, who may decide, for example, to use skill lessons ordered in a hierarchy, high-interest-low-vocabulary, or readability at a specific grade level.

Thus the author, publisher and teacher constitute a chain of decision-makers about instructional material that will eventually help (or not help) students learn. Finally, and most important, adult students have their own special set of criteria for instructional

materials: they want materials that will instruct and not frustrate, that will simplify and not complicate, that will interest and not insult, that will provide another step towards their learning goal. Students, however, as consumers, have typically very few options available in the selection of materials. Nevertheless, they can usually make one casting vote: they can 'vote with their feet' and abandon learning——perhaps for the last time.

The focus of the present study, therefore, is on the establishment of standards for the evaluation, and selection of instructional materials for the beginning stage of adult literacy instruction. The context is the course in basic literacy for adults who are already fluent in spoken English, but who are unable to read and write English at a level of about grade 4 equivalency. Such a course may be given in a wide variety of situations. It may be given formally, as part of the adult basic education (ABE) program of a community college, public school, penitentiary, commercial or voluntary organization; or it may be pursued as informally as one adult tutoring another, or even an adult learning alone.

The focus of this review of literature is basic literacy learning by fluent English-speakers, and does not address the situation of the adult who is learning English as a second language (ESL), and who has not achieved oral fluency in English. While the two fields of basic literacy in ABE and ESL are clearly related, the growing practice in the field is to treat them as separate curriculum concerns and, where possible, to operate separate courses of instruction.

The review of the relevant literature is organized as follows:

1. Significance and Dimensions of Adult Illiteracy
2. Adult Literacy Programs, Methods and Materials
3. The Problem of Instructional Materials
4. Criteria of Excellence for Instructional Materials
5. Towards an Improved Materials Evaluation Scheme
6. Conclusion

Significance and Dimensions of Adult Illiteracy

Definitions of Adult Illiteracy

There is no one definition of 'illiteracy', any more than there is any universally acceptable definition of 'literacy'. The terms are not only relative——and to a shifting standard——but also semantically loaded with connotations. This is especially so when used to label the intellectual status of adults. In all ages and most countries of the world, the 'illiterate adult' has been considered a problem, and more recently a problem to be quantified, if not always treated.

The standard relative to which the term illiterate has meaning has varied considerably, depending on the historical, political, social and educational context. Thus, the social historian examining the literacy of 18th century England will probably count as illiterate the persons who signed the marriage register with an X instead of their names, while in North America of the mid-1970's, educators are tending to abandon a shifting grade-equivalent standard for a behavioral

definition termed 'functional literacy'——a set of abilities far more complex than that X in the register of the parish church (Resnick and Resnick, 1977).

Viewed historically, this varying standard of illiteracy has tended to reflect the values of the society of the time. In the 20th century especially, the continued prevalence of a large population of illiterate-defined adults has attracted the attention and resources of governments. Identification of this 'target population' has become important for educational and manpower planning. Significant national efforts to reduce or eliminate adult illiteracy have occurred in the last half-century in most countries of the world.

This section of the review deals with the definition of and response to adult illiteracy in the United States, Canada, and Great Britain as well as the UNESCO Experimental World Literacy Program.

Illiteracy in the United States

DeCrow (1972) and Peck and Kling (1977) chronicled the trend in this decade away from defining illiteracy in relation to grade levels and towards an operational definition in terms of 'functional' or 'real-life' reading skills. After reviewing the perspectives of the Bureau of the Census, Right to Read (1969), the survival literacy study of Harris and Associates (1970), the National Assessment of Educational Progress (Ahmann, 1975), Sticht (1972), Lichtman (1972), Bormuth (1973), and the adult performance level studies of Northcutt (1975), Peck and Kling conclude that the newer, more 'functional' definition appears at first to be valid but raises other troublesome

questions in terms of standards, and the subjectivity of deciding what shall be the new criterion measurements.

Former U.S. Commissioner of Education, James E. Allen, launching the Right to Read program (1969) cited these figures:

1. One out of every four students nationwide has significant reading deficiencies.
2. In large city school systems up to half of the students read below expectation.
3. There are more than 3 million illiterates in our adult population.
4. About half of the unemployed youth, ages 16 to 21, are functionally illiterate.
5. Three-quarters of the juvenile offenders in New York are 2 or more years retarded in reading.
6. In a recent U.S. Armed Forces program called Project 100,000, 68.2 percent of the young men fell below grade 7 in reading and academic ability.

The Right to Read program goal is to achieve by 1980 a literacy rate of 99 percent for people aged 16 and under, and of 90 percent for people over 16.

Harris and Associates (1970) in a study for the National Reading Council set out to measure 'survival literacy' skills by assessing adults' ability to fill out application forms for jobs, Social Security, bank loans, Medicaid and income tax. The results indicated not only that 18 million adults were functionally illiterate, but also that many U.S. government forms were too difficult.

The National Assessment of Educational Progress (Ahmann, 1975), sampled people of ages 9, 13, 17 and 26-35 on performance in these reading objectives:

- to comprehend, analyze, use, reason logically and make judgments concerning what is read,
- to have attitudes about and interest in reading.

An unfortunate limitation of this study was that it did not sample older adults, many of whom would doubtless have failed to meet the criteria. The NAEP findings, however, included the following:

- less than half of the 17-year-olds and young adults could accurately read all parts of a ballot,
- only 57 percent of the adults wrote adequate directions for making or doing something,
- only 49 percent of the adults composed acceptable letters for the purpose of ordering a product (Ahmann, 1975).

Sticht (1975a, p. 4) spearheading contracts to the U.S. military for literacy training, defined literacy in the most functional terms to date: "possession of those literacy skills needed to successfully perform some reading task imposed by an external agent between the reader and a goal the reader wishes to obtain," functional literacy skills being "reading skills sufficient to perform such tasks."

Lichtman (1972) and Northcutt (1975) have sought to operationalize and assess the functional literacy skills by developing specific test instruments in the civilian context. Lichtman's Reading/Everyday Activities in Life (R/EAL) test presented test items related to the

everyday reading tasks of the adult such as highway signs, supermarket flyers, and job applications.

Finally, in a large-scale study to define and assess adult functional literacy, Northcutt conducted a 3-year study from the University of Texas. This Adult Performance Level (APL) survey defined 65 specific competencies necessary for adult success. Tests were administered to a national sample of 7,500 adults.

The findings of the APL survey were that, overall, about 20 percent of the population were "functioning with difficulty." Performance at this level ("APL 1") was associated with inadequate income, either at poverty level or less; inadequate education of 8 years of school or fewer; unemployment or occupations of low job status.

Illiteracy in Canada

Canada, while larger in area than the United States, has only one-tenth of its population; it nevertheless ranks high among the nations of the world in terms of gross national product, standard of living and average wages. Education has been compulsory since 1912, and it is still widely assumed in the general population that illiteracy would likely only be found among 'Eskimos' (Inuit) of the far north, native Indians and Metis of central and southern Canada, and the isolated outposts of the eastern maritime coast. Recent analyses of 1961 and 1971 census, however, have shown otherwise.

Adamson (1966) reviewed the educational attainments of the Canadian population as recorded in the 1961 census, which asked respondents to state the "highest grade or year of schooling ever

attended." Of the population 15 years of age and over and out-of-school, 9.3 percent had no more than 4 years of schooling——just over one million persons. Adamson's analysis points out, however, that the headline of "One Million Illiterates" which appeared at the same time as a conference on poverty in Ottawa in 1965 was misleading because:

1. No literacy test or question was administered.
2. No data were collected on out-of-school education or vocational training.

Yet she also discovered that:

- Canadian-born Indians and Inuit contributed only 5 percent to the illiterate group; from another perspective, 43.6 percent of Indians and 90 percent of Inuit 15 years and over had less than grade 5 education.
- The non-Canadian-born (other than of British Isles or French origin) represented 25.8 percent of the illiterate group.
- A total of 48 percent were women aged 15-54 and not in the labor force.
- And 1.8 percent were engaged in managerial, professional and technical occupations.

Thomas (1976a) surveyed the nature and extent of functional illiteracy in Canada, with a focus on those activities currently being undertaken in 'Anglophone Canada'. She found that the federal government was still the major provider of adult basic education, but that in terms of basic literacy, local manpower centers did not refer (sponsor) people needing this kind of training; so alternatives needed

to be developed. Thomas found scattered but uncoordinated activity at the grade 0-4 level across the country. The 1971 census, however, showed the following comparison with 1961 figures (Canada, 1974):

Table 1. Population 15 years and over not attending school, by education level, Canada, 1961 and 1971.

Year	Total 15 Yrs. and Over	Less than Grade 5 Number	%	Grades 5-8 Number	%
1961	11,046,605	1,024,785	9.3	4,141,561	37.5
1971	13,168,020	937,440	7.1	3,961,905	30.1

Despite the decreased percentages nationally, the provinces of British Columbia and Quebec, and the Northwest Territories actually had an increase in absolute numbers of adults with less than grade 9.

In 1976, the first national conference on Adult Basic and Literacy Education for 10 years was convened in Toronto by a private foundation, World Literacy of Canada. Since Canada has neither a federal department nor office of education, no right-to-read program or national literacy goals, the conference was a significant event. Its major recommendations were for the creation of a non-government national umbrella organization; increased "consciousness-raising" around literacy issues and adult basic education; and development of Canadian-content ABE materials (Thomas, 1976b).

Illiteracy in Great Britain

Universal compulsory elementary education in Britain dates from 1870, while adult literacy efforts through the Mechanics Institutes extend back to the 1820's. Kelly (1970) in a history of adult education reported that, even in 1840, on the average about three-quarters of the adult population had some knowledge of reading, and three-fifths some knowledge of writing.

Kedney (1975) provides a useful summary of British estimates of the numbers of illiterate adults which range from one to nine percent. Notwithstanding the shaky foundations of all of the estimates and the similar variability of definitions of adult illiteracy, there has been a remarkable increase in the provision of adult literacy education since 1950. Haviland (1973) chronicled the growth of programs, from less than 10 in 1950 to more than 230 in 1973. Hargreaves (1976), reporting on the response to a current national campaign, stated that 60,000 adult students and 80,000 volunteer tutors came forward in the first 7 months of the project. Most of the programs in the British system are provided by local education authorities, supported by grants from the national Department of Education and Science. The British Broadcasting Corporation is heavily involved, providing national TV and radio broadcasts that act as stimulus, recruitment and consciousness-raising, as well as tutor manuals and student workbooks (Stevens, 1975; British Broadcasting Corporation, 1975). The instructional emphasis in the current programs also appears to be strongly based on the concept of a functional literacy standard established on the basis of the

individual adult's needs to perform the tasks required of him or her in the societal context, as well as for self-satisfaction.

UNESCO Adult Literacy Activities

The worldwide magnitude of the problem of adult illiteracy far transcends that reported on in the developed countries of North America or Europe. According to UNESCO estimates made in 1972:

- the world in 1950 had some 700 million illiterates out of an adult population of 1,579 million (44.3 percent);
- in 1960, 740 million out of 1,881 million adults (39.3 percent);
- in 1970, 783 million out of 2,287 million adults (34.2 percent).

Thus, while the illiteracy rate is steadily falling because of the extension of primary education and adult literacy programs, the absolute numbers remain intolerably high and are still on the increase. In certain sub-groups, illiteracy rates are much higher than the global figures suggest; for instance, while the global rate for women generally is 70 percent, it rises to 85.7 percent for women in Arab countries (Lowe, 1975, p. 66).

UNESCO decided in 1963 to launch an Experimental World Literacy Campaign which later resulted in new national initiatives in eight countries (UNESCO, 1976). In 1975 a World Congress of Ministers of Education on the Eradication of Illiteracy, meeting at Tehran, issued this statement (Lowe, 1975, p. 92):

> Adult literacy, an essential element in overall development, must be closely linked to economic and social priorities and to present and future manpower needs. All efforts should therefore tend towards functional literacy. Rather than an end to itself, literacy should be regarded as a way of preparing man for a social, civil and economic role that goes far beyond the limits of rudimentary literacy training consisting merely in the teaching of reading and writing.

Levels of Reading Literacy

The social and civil role of literacy in the life of the adult in the 1965 UNESCO statement goes beyond the concepts both of (a) literacy defined in terms of grade levels or years of schooling, and (b) literacy defined in terms of minimum competencies needed for job training or performance.

The 1965 UNESCO statement appears the most flexible general guideline for the planning and evaluation of adult literacy programs and campaigns, for it is readily focussed on the individual needs of the adult learners themselves.

Within this general framework, however, which establishes broad program objectives, there remains a need to establish levels of literacy instruction that can guide more specifically the evaluation of curriculum and materials.

The "stairway of reading literacy" proposed by Robinson (1963) presents a useful progression of levels.

Complete illiteracy denotes the inability to read English at all. This at least appears to be an absolute in an area where relativity is the norm.

Low-level literacy defines the ability to read at (North American) grade levels 1 to 4; persons are barely able to contend with the adult reading materials available. The ability often 'disintegrates' to complete illiteracy because of lack of use or practice. This level also approximates the level of the "less than grade 5" target group in Thomas' Canadian analysis and the "reading age of a child of 9" cut-off in the British studies referred to above. The level also seems to have relevance for Third World countries where lack of universal primary education has been the major cause of adult illiteracy.

Partial literacy defines ability to read at grade levels 5-6. The adult is just able to read essential information for daily living and working at low levels. Rapid progress occurs with help for those who are capable. Regression may take place when extensive opportunities for extensive reading are not available.

Variable literacy is attained when the adult is able to read many kinds of material at a variety of levels. Guidance is needed to help this reader adjust his performance to the material at hand; he may need help in the development of specific kinds of reading skills for more effective reading.

Complete literacy is achieved when the adult is able to read effectively, suiting reading rate and approach to the purposes and difficulty of material. Comprehension is at a high level, including the ability to read critically. The completely literate person not only evaluates what he reads, but makes use of concepts gained to help

him understand the further reading he undertakes. This definition bears a strong relationship to widely held views of reading held by reading specialists today who are stressing once again that reading is a psycholinguistic process through which a person brings meaning to the printed word.

The remaining sections of this literature review discuss the instructional resources and needs for the education of the 'complete illiterate' or 'low-level literate' adult, at the approximate levels of grade 0 to 4 in reading and writing. This will be referred to as the level of adult basic literacy.

Adult Literacy Programs, Methods, and Materials

What organizations provide adult basic literacy programs? What is the general state of instructional methods and materials in the field? These are the two main questions that guide this section of the literature review. While the main focus is on adult literacy education in the United States and Canada, reference is made to significant developments in Britain and the Third World.

Provision of Adult Literacy Programs

The U.S. National Advisory Council on Adult Education (1974) reported that about 849,000 adults participated in the U.S. federal/state grant program during fiscal 1973. Much of this activity is conducted as part of the adult education division of the public schools. In many other communities, it is the local community college that is responsible.

Additional information from the National Center for Educational Statistics (U.S. Department of Health, Education, and Welfare, 1969, 1972, 1975) shows that it is the 2-year and technical-vocational colleges that have reported the most remarkable increase in participants in adult education between 1969 and 1975 (see Table 2 below). It should be noted that in this report, 'adult education' is defined as "all organized instruction for persons beyond compulsory school age who have terminated or interrupted their formal schooling and who are not available for regular full-time instruction."

Table 2. Participants in adult education, by source of instruction: United States, 1969, 1972, and 1975.

Source of Instruction	Participants (in thousands)			Percent change, 1969 to 1975
	1969	1972	1975	
1	2	3	4	5
Total	13,041	15,734	17,059	30.8
4-year colleges or universities	2,831	3,367	3,257	15.0
Employers	2,274	2,613	2,605	14.6
2-year colleges or technical-vocational	1,550	2,561	3,020	94.8
Elementary or secondary schools	1,970	2,200	1,881	-4.5
Community organizations	1,554	1,996	1,784	14.8
Trade, vocational, or business schools	1,504	1,393	1,469	-2.3
Other (labor unions, professional associations, hospitals, tutors, government agencies or correspondence schools)	2,552	3,360	5,511	115.9
Not reported	54	98	71	31.5

SOURCE: U.S. Department of Health, Education, and Welfare, 1969, 1972, 1975.

In many respects, community colleges would appear to be the ideal delivery system for adult basic education. Mission statements of most community colleges; policy statements of the American Association of Community and Junior Colleges (1975); and numerous analysts of U.S. and Canadian community college development (Thornton, 1960; Harlacher, 1969; Myran, 1969; Bushnell, 1973; Dennison et al., 1975; Ratcliff, 1976) have reported on community college responsiveness to the educational needs of diverse adult learners in the community.

Roueche (1968, 1973) and Cross (1976) have described community college programming for the 'non-traditional', non-transfer, non-credit adult student, as well as for the 'mature student' admitted with less than grade 12, who may be university-bound. Roueche and Snow (1977) reported a national survey which revealed a wide range of remedial and developmental courses and services to this new college population.

The only national survey specific to reading programs in junior and community colleges was undertaken by Sweiger in 1971. She collated information from 288 colleges in 30 states. Findings of particular significance to the present study are shown in Table 3 below (Sweiger, 1971, p. 6).

Table 3. College reading programs: selected data from Sweiger's 1971 study of 288 U.S. colleges.

Colleges with open admissions policy	95%
Colleges with reading programs	86%
Average reading level of students in reading courses:	
Below 6	6%
Grade 6-7	11%
8-9	33%
10-11	44%
12 and over	9%
Lowest reading grade level of students entering the course:	
Grade 3 or below	30%
Grade 4-5	23%
6-7	37%
8-9	7%
10-11	7%

Practice within community college systems nevertheless varies from state to state. In North Carolina, for instance, the community colleges are the only educational agencies with a mandate to offer adult basic education, and have committed themselves along with the State Board and four universities to "eliminate illiteracy in the adult population" (Dudley, 1977). In Arizona, however, legislation requires community colleges to provide programs beyond the 12th grade and beyond the basic education courses for adults.

In addition to courses and services for basic literacy education provided by the public schools and colleges, predominantly through Office of Education funding, Mezirow, Darkenwald, and Knox (1975) also located courses offered under the Departments of Labor, Defense, Veterans Administration, Agriculture, Indian Affairs, Justice, Transportation and Commerce; as well as by 600 non-governmental agencies. Lyman (1973) reported on extensive involvement of the public library service in providing for the 'adult new reader'.

The situation is similar in Canada, where Thomas (1976a) found, outside the federal Manpower involvement in full-time ABE, considerable activity but little coordination nationally or provincially between the adult literacy activities of colleges, schools, libraries, penal or correctional institutions, volunteer organizations and a similar plethora of government agencies.

Methods and Materials in Adult Basic Education

Methods of adult basic education include correspondence or directed individual study: a class, laboratory, clinic, or learning center. Techniques may include programmed instruction, class discussion, oral reading or workbook activities. Materials and devices include textbooks, films, audio-tapes, videotapes or photographs.

Worldwide, the method of instruction which still dominates adult education practice is the class, and the predominant technique is oral teaching (Lowe, 1975).

This is no less true for adult basic education in North America, largely because the system of financing encourages the economics of this type of grouping. Cook (1977), however, reports on two alternative methods that have become established in the last two decades: the first is volunteer-one-to-one tutoring, coordinated usually by the organizations such as Laubach Literacy or Literacy Volunteers of America (Smith and Fay, 1973); the second is the adult learning center (Sherk and Mocker, 1970; University of Texas, 1974; Niemi, 1976; Harrison, 1976), an open-door, highly accessible facility able to assess and prescribe individualized basic skills programs for undereducated adults, often studying on flexible time schedules. A spin-off of the growth of the latter more individualized methods is the increased demand for a wider range of instructional materials.

Experience in Britain has suggested that even the use of mass media in adult basic literacy education has increased the need for published instructional materials and the human contact of a local

teacher, tutor or learning group (Stevens, 1975). The need for good resources to train teachers and tutors in the evaluation and selection of instructional materials is also clearly a matter of critical concern.

It is apparent that whatever methods and techniques are employed in adult literacy instruction, the need for well-designed print materials will remain high, so long as the objectives of that instruction are focussed on the many-dimensioned skills of reading and writing.

The Problem of Instructional Materials

A number of research studies and reports accentuate the importance of using instructional materials which are specifically designed for adults in literacy programs.

Varnado (1968) compared the effectiveness of three types of materials: (1) regular child-centered public school textbooks, (2) elementary school materials considered reasonably appropriate for adult classes, and (3) materials written especially for under-educated adults. Participants were blacks, mainly women from a wide age range. Varnado reported a significant reading gain within classes in which the specially prepared new materials were used, regardless of instructional method. The greatest improvement was made in the pupil-centered classroom in which the specially written materials were used.

Three published adult literacy series that have enjoyed widespread use in North America are the Mott Basic Language Skills books (Chapman, 1973), Sullivan Programmed Reading for Adults (Sullivan and

Buchanan, 1966), and the New Streamlined English series (Laubach, Kirk and Laubach, 1971). Steuart (1968) evaluated the effectiveness of the Mott and Sullivan linguistically oriented series. His student populations, however, were all Spanish-speaking illiterates: thus, his findings that students learned to read with both systems, but had better comprehension with the Sullivan series, are not generalizable to the education of the native-born illiterate. Laubach and Laubach (1960) who based their materials on a synthetic phonics approach, used for one-to-one tutoring, enthusiastically reported success in over 50 countries of the world: the method is highly structured with very detailed instruction for the tutor.

Another widely used adult literacy series is Henney's System for Success (Henney, 1973), based on a "family phonics" approach. Henney (1964) investigated the effectiveness of this method in an unusually controlled environment, the Indiana Reformatory. He concluded that (1) age, I.Q., and beginning reading level do not affect the progress or rate of improvement of a functionally illiterate adult in reading performance, (2) in both group and one-to-one teaching situations, the "family phonics" system aids the person to recognize words, blend common word sounds and spell. Henney did not refer to comprehension skills in his conclusions. While the findings relative to age and intelligence are encouraging and conform largely to other findings in the literature of general adult education, the validity of these findings for a non-institutionalized setting would be questionable.

Two investigators studied the role of television in reaching illiterate adults——specifically the program Operation Alphabet. Bunger (1964) evaluated the program in Florida and found that 63 percent of the 243 adults were still reading at less than grade 3 level at the end of the program: although pre-tests did not appear in the design, Bunger used the post-program criterion to evaluate the experiment as unsuccessful. Cass (1969) studied Operation Alphabet in New York in 1963 and evaluated the program against 36 standards of excellence in a discrepancy design: only 16 standards were met adequately. Cass inferred, nevertheless, that teaching via television should be regarded as an integral part of an educational program for illiterate adults.

One of the more unusual approaches to literacy instruction was Gattegno's Words in Color program (Gattegno, 1969). Hinds (1966) studied 70 Cleveland adult illiterates to determine the effectiveness of Words in Color, compared to a 'traditional method': she found a significant difference in reading achievement over 30 hours of instruction in favor of the former approach. While the novelty effect of these materials may account for this initial gain, the techniques appear to merit further investigation.

The results and implications of several major American literacy projects have produced more valuable indications than the foregoing studies——at least in terms of specific needs for instructional materials. They include Goldberg's summary of the Army's World War II literacy program (1951); the Norfolk State College Project (Brooks,

1964); the Greenleigh Associates Project (1966); Wayne County ABE Program (Clark, 1965); the Buffalo Study of Adult City-Core Illiterates (Brown and Newman, 1968); and the Missouri Adult Vocational-Literacy Development Project (Heding, Artley and Ames, 1967). Each of these studies has been analyzed and reviewed by Brown and Newman (1970), who summarized the research in adult literacy to that date.

To this list should be added the reports of basic literacy projects in two uniform populations: the reports of Sticht and others in the Human Resources Research Organization (Sticht, 1975a, 1975b) who have pursued the somewhat restricted approach of job-oriented literacy training over many years; and the 1973 survey of 300 penal institution programs by the Clearinghouse for Programs on Offender Literacy (1973), established by the American Bar Association. The need for specially designated instructional materials is also emphasized in these reports.

Brown and Newman summarized the state of the art as follows (1970, p. 42):

> . . . <u>effective teaching</u> of the adult illiterate has seemed to involve:
>
> 1. Methods and materials especially developed for an adult population (Army, Norfolk, Missouri, Buffalo)
>
> 2. Individualization of instruction (Army, Norfolk, Missouri, Buffalo)
>
> <u>Trends</u> for future seem to be:
>
> 1. Further individualization of instruction through such means as programmed and computer assisted instruction. . . .
>
> 2. Expanded use of paraprofessionals. . . .

The severest limitations of the field seem to be:

1. Inadequately trained teachers;
2. Inappropriate materials——especially at the beginning levels;
3. Inadequate measurement devices;
4. Lack of professional status for adult basic education.

Criteria of Excellence for Instructional Materials

The previous sections of this review have established the existence of a continuing national and international population of adult illiterates, the continuing provision of instruction for this group by a variety of agencies, and the continuing need for more appropriate instructional materials. The need is most pronounced at the beginning stage (grade level 0-4) of adult literacy instruction.

It follows that, if existing materials are to be evaluated and improved, and if new materials are to be designed, then there should exist some standards of excellence, a set of criteria against which to measure a product.

Several researchers have set out to evaluate the adult literacy materials currently in use in the United States. While usually taking a comprehensive inventory of what is in use, these efforts have not had much impact on the field. The standard series such as Mott, Sullivan, Laubach and a few others continue to pervade basic literacy classrooms in the late 70's as they did in the early 60's, but instructors, students and administrators widely express dissatisfaction with their form, content and methodology. The current wave of materials

production in ABE is focussed on the 'functional competency' theme of the Texas APL study (Northcutt, 1975). Materials have already been published, and many more are under development to teach the skills of reading, writing, and computation within the content areas of the APL curriculum: consumer economics, occupational knowlege, health, community resources, government and law. But teachers still have to bring the basic reading skills of many adult students up to at least the grade 4 level, at which the easiest of APL-oriented materials are generally written.

Why the paucity of appropriate materials at the beginning stages of adult literacy instruction——especially considering the potential market? The problem may persist because educators and publishers have not set adequate criteria of excellence to use in product evaluation.

It should be instructive therefore, (1) to review the efforts made so far to establish such criteria, (2) to examine alternative sources for better criteria, and (3) to suggest a means of developing an improved set of criteria of excellence.

Evaluative Surveys of Basic Literacy Materials

Of the numerous annotated bibliographies of instructional materials, only a few contain more than passing reference to any criteria for evaluation. Annotations tend to be superficial (e.g., 'grade level', 'supplementary workbook') and usually offer no consistent comparison of performance to criteria, perhaps because the latter are either indeterminate, unstated, or both.

Among the better annotated bibliographies are those by Smith (1966); Rancier and Brooke (1970); the Free Library of Philadelphia (Forinash, 1977); and a recent Canadian contribution by Anderson (1978).

A much more systematic approach to materials evaluation is taken in Otto and Ford's handbook, Teaching Adults to Read (1967). As part of a national survey of adult basic literacy programs in 1966 at the University of Wisconsin, Otto and Ford first compiled a list of publishers from 500 ABE program bibliographies, and requested titles of materials which the publishers would recommend for the adult basic literacy market. The materials were obtained through a local bookstore, as an extra check of availability to practitioners. The investigators then applied a checklist of 50 Yes/No criteria to the materials. The checklist shows quite careful design and attention to these main concerns: external appearance, informational content, initial placement, source of vocabulary and rate of introduction, provision of practice materials and progress checks, other language arts instruction, opportunity for development of confidence and independence, field testing of materials, graphic and layout considerations, and a detailed program manual. There was no provision for an overall suitability rating. While this checklist for materials presents a wide range of criteria, there is relatively little explanation of how many of the standards were determined. Many are superficial, and not related to any stated measure of quality. However, though some of the materials reviewed are now obsolete, or out of print, Otto and Ford's checklist itself does at least provide a starting point for a set of evaluative criteria.

Other attempts to apply a structured set of evaluation criteria to basic literacy instructional materials include studies by Barnes and Hendrickson (1965), Hayes (1967), and Sherk and Mocker (1972).

In the Barnes-Hendrickson study for the USOE, an observation team visited 35 separate adult education programs in 15 states; the study aimed to evaluate methods, techniques, tests and materials. Materials were requested which (in the opinion of the publishers) would be felt to be applicable in teaching basic education skills to adults and which were written to appeal to adults' interests and needs. As the researchers found that measures were almost totally lacking for determining the effectiveness of materials for ABE, they constructed a set of eight criteria which addressed these concerns: recommended level v. readability, basic v. supplemental, adult format and content; special features, advantages and disadvantages. These criteria were extremely broad; thus the ratings of 18 titles or series at the beginning level (grade 0-4) provided minimal indication of quality, instructional approach, technical or pedagogical excellence. The authors' overall assessment of the use of instructional materials is, perhaps, in its brevity more illuminating:

> In general, in the programs observed, the team felt that the materials being used were giving the direction to the program and being used to establish whatever objectives happened to exist, rather than the direction being supplied by carefully formulated objectives (Barnes and Hendrickson, 1965, p. 92).

The Hayes survey (1967) was restricted to adult literacy materials in Chicago ABE programs: many were ESL materials while others are now obsolete. The scheme nevertheless included more

specific criteria than the previous studies, such as: reality of illustrations, controlled vocabulary and sentence length, sequential treatment of basic skills, reinforcement, quality of written exercises and comprehension questions, rural/urban orientation, and quality of teacher's manual. Two other findings are cogent:

1. The most effective literacy programs observed laid heavy stress on the meaning of printed material from the first session, in addition to word attack skills.
2. An eclectic approach to selecting materials was advised. No one adult basal series was found to be so complete in itself as to justify exclusive adoption for the use of all individuals.

Evaluations of Materials for the Adult New Reader

Two of the best evaluative studies of printed instructional and supplementary materials for adults of low reading ability, but beyond the basic literacy level, are those by Lyman (1973), and Simpson and Loveall (1976). Both studies focussed on the provision and evaluation of materials for the 'adult new reader', whom they defined as: aged 16 or over, native English speakers or ESL learners, with formal education of less than grade 12, and reading level not exceeding grade 8.

Lyman's study (1973), under the aegis of the University of Wisconsin-Madison Library School, reflected the national library service's commitment to the needs of the 'new literates'. Her objectives included:

1. Identifying and evaluating published reading materials being used by the adult new reader after the first (0-3) stage of literacy to an eighth grade reading level; that is, bridging the gap from literacy skills to independent reading habits;

2. Identifying the nature of reading materials appropriate for the variety of categories of adult new readers;

3. Developing criteria for evaluation of materials for the adult new reader;

4. Identifying implications for the retail market of materials (Lyman, 1973, p. 48).

Lyman collected and analyzed a wealth of data, over a 5-year period, on the characteristics, interests, needs and reading behavior of the adult new reader. The major outcome of this research was the MAC (Materials Analysis Criteria) Checklist, which provides for a quantitative and qualitative analysis of print materials for this clientele.

The findings of the Lyman study have been incorporated and updated in the recent monograph by Simpson and Loveall (1976). They offer an adaptation of the MAC Checklist, as a guide to both the analysis and preparation of adult learning material. The major criteria sub-sets are Bibliographic Evaluation, Content Analysis, Measurement of Readability, and Appeal to Readers.

The limitations of the MAC Checklist are:

1. Its focus on the 'adult new reader'; though an adaptation could be possible to the context of the adult beginning reader.

2. Its attention to supplemental and content reading; an adaptation could be possible to the context of adult basic reading instruction.

3. Its relative neglect of the 'baseline knowledge' of readability.

The final section of this literature review identifies additional potential sources for a more viable set of criteria of excellence for the evaluation and selection of adult basic literacy materials.

Towards an Improved Materials Evaulation Scheme

The literature of adult basic literacy instruction suggests various sources of criteria of excellence for the evaluation of materials. Lyman drew on some of these for the MAC Checklist, but restricted her focus to 'adult new reader' materials; the Missouri Project (Heding, Artley and Ames, 1967), after an intensive phase of research into learner characteristics and teaching methodologies, drew significant inferences from the research and developed their own materials; however, they limited the product to a rather narrow vocational orientation, and the methodology to the specialized i.t.a. alphabet. A viable evaluation model should be more generalizable.

Sources that were considered to merit further examination, in the development of a new materials evaluation model, included the following works.

Educational Evaluation Theory and Practice

At the broadest and most general level, but providing a sound foundation for evaluation research, are the perspectives of theoreticians such as Cronbach, Krathwohl, Popham, Provus, Scriven, Stake, and

Stufflebeam that have been brought together in Worthen and Sanders' volume, Educational Evaluation: Theory and Practice (1973).

General Models of Educational Product Evaluation

Scriven (1974) proposed a 13-dimension product evaluation checklist; a spectrum of other models and strategies has been compiled by Borich (1974). The strengths and limitations of these models were analyzed by Eraut, Goad and Smith (1975) at the University of Sussex, resulting in the production of the "Sussex Scheme" for materials evaluation, a comprehensive but lengthy system.

Principles of Adult Learning and Development

Knox's (1977) review and synthesis of over 1,000 recent studies; the standard overviews of Brunner et al. (1959), Bischof (1969), Knowles (1973), and Kidd (1973); the specialized contributions of Havighurst and Orr (1956), Maslow (1970), Tough (1971), and Erikson (1975). For the needs, motives and interests of less educated adults, major sources are the Missouri Project report (Heding, Artley and Ames, 1967), the research reviews of Anderson and Niemi (1970), and the Lyman study (1973).

Principles of Reading Instruction

Widely accepted theories and practices in this field are rarely synthesized, and must be collected from a variety of sources. These include Singer and Ruddell (1976) for models and theories of the reading process; Rakes (1973), and Klare (1975) for readability; Harris and Sipay (1975) for a guide to developmental and remedial teaching strategies; Aukerman (1971), and Spache and Spache (1977) for approaches

to beginning reading; Smith and Culyer (1975), and Bowren and Zintz (1977) for approaches and techniques for teaching reading in adult basic education.

Evaluation Models for Elementary Reading Materials

The most comprehensive guide to materials selection for children's reading instruction was found in Goodman et al's Choosing Materials to Teach Reading (1966, pp. 130-147). It consisted of 218 questions relating to psychological, sociocultural, educational, linguistic and literary principles. Many of these criteria appear equally relevant to adult basic reading instruction.

Also developed in the context of the elementary school have been the numerous evaluations of reading texts and supplemental materials by the Educational Products Information Exchange (EPIE, 1973, 1974, 1977). The criteria for the EPIE evaluation reports were originally established in a research study by Eash (1974), which established and validated a systematic evaluation procedure. It comprised a series of Yes/No questions and rating scales. While this model focussed primarily on general instructional design, it provided a framework of considerable value to the present research.

Conclusion

The conclusion which emerges from this review of literature is that there is a major unfulfilled need in the field of adult basic literacy education. It is to develop a new set of criteria of excellence for materials for the beginning stages of instruction. The

sources for the establishment of these criteria already exist, embedded in the research and practice of adult learning, reading instruction, and evaluation methodology.

The new materials evaluation model that could result from a synthesis of these sources should be designed for two significant purposes:

1. To guide practitioners in the evaluation and selection of materials;
2. To guide authors, publishers, and teachers in the design of new and better materials.

CHAPTER III

DESIGN OF THE STUDY

This was a formative study, designed to develop and pilot test an instrument for the evaluation of published materials in adult basic reading instruction. The resulting Materials Evaluation Guide (MEG) also served as a focus for the investigation of the four research questions stated in Chapter I, above (p. 5).

The study was divided into five major phases:

1. Instrument Construction;
2. Test of Content Validity;
3. Instrument Revision;
4. Pilot Test of Instrument Reliability;
5. Survey of Usability.

Instrument Construction

The objective of this phase of the study was to design and construct an instrument which an appropriately qualified evaluator could use to assess materials under consideration for an adult basic reading program.

The general form of the instrument was a written questionnaire. It consisted of a number of items requiring the evaluator to examine specific characteristics of the material, and to make observations and/or judgments based on that examination.

Three types of schedule items identified by Kerlinger (1964) were considered for inclusion in the evaluation guide:

1. Fixed-alternative (closed) items: the two main variants of this type are the dichotomous (Yes/No) question, and the multiple-choice option;
2. Scale items, which require the evaluator to indicate the response as a position along some scale of rating; numbers and/or verbal descriptions may be assigned by the researcher to the various points on the scale;
3. Open-ended items, which offer the respondent the opportunity to make a free response to a question.

A prototype instrument which comprises these three forms of items is the "Assessment of Instructional Materials (Form IV)" developed by Eash (1974). The evaluator proceeds through an atomistic Yes/No analysis of some characteristic of the material, then makes a summary rating on a scale of one to seven. The purpose of the Yes/No items is to prompt or shape the thinking of the evaluator as a lead-in to the summary rating. Eash reported more consistent ratings with this method, compared to results when only the summary ratings were used. At certain points, free responses are also elicited.

This approach to the design of a materials evaluation instrument appeared to have considerable merit, and it was therefore adapted in the following ways by the researcher to fit the purpose of the present study.

The content of the Materials Evaluation Guide was divided into three major sections. The sections corresponded to the three domains from which the items were to be derived. They were entitled Product Design, Adult Learning, and Reading Instruction.

The items for each of the three major sections were grouped under a number of headings, or elements, as shown in Table 4, below.

Table 4. Structure of materials evaluation guide.

Sections	Elements	Items
Product Design	I. Format and Content	Initial Form: 50 dichotomous items, and a summary (Likert scale) rating for each element.
	II. Instructional Resources	
Adult Learning	I. Motivation	
	II. Individual Differences	
	III. Principles of Instruction	
	IV. Relevance	Revised Form: 40 dichotomous items, and a summary (Likert scale) rating for each element.
Reading Instruction	I. Word Recognition	
	II. Word Analysis	
	III. Comprehension	
	IV. Assessment	

It should be noted that the Initial Form of the MEG, which was used in the test of content validity, to be described later in this chapter, consisted of 50 items. The Revised Form, used in the pilot reliability test, also described below, consisted of 40 items.

The titles for the sections and elements of the instrument were chosen as representative of widely understood constructs from the literature of the respective domains of product design, adult learning, and reading instruction.

The items were written with the dual objectives of (a) defining widely held criteria of excellence gleaned from the review of literature, and (b) being readily understandable by faculty in colleges who are responsible for textbook evaluation and selection. The content validity test would later test the success of the instrument in attaining the first objective; while the pilot reliability test would serve as a check on attainment of the second objective.

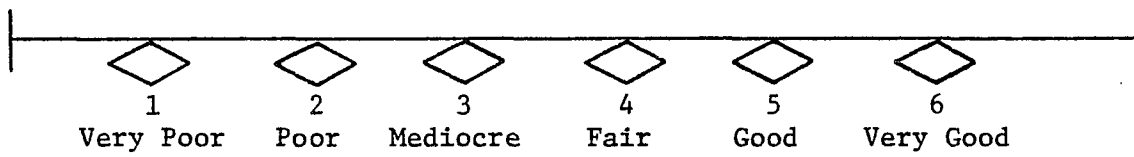
Oppenheim (1966, p. 73) indicated that sets of questions are more reliable than single opinion items in questionnaires. They give more consistent results, "mainly because vagaries of question wording will probably apply only to particular items . . . whereas the underlying attitude will be common to all the items in a set or scale."

At the end of each group of Yes/No question items in the MEG, the evaluator was asked to use a six-point rating scale, to summarize the evaluation of that particular element. A similar scale was presented at the end of the instrument to elicit an overall rating of the material under review. An open ended 'comments' section provided opportunity for subjective observations of the evaluator, and completed the instrument proper.

Kerlinger (1964, p. 516) advocated the use of a graphic rating scale, consisting of a continuous line segmented into marked intervals,

as probably the best form of rating scale. He stated that it fixes a continuum in the mind of the observer, suggests equal intervals, is clear and easy to understand and use. The guidelines for scale construction proposed by Guilford (1954, pp. 267-8) were generally followed, including the use of cue-words as descriptive anchors.

A six-point scale was selected after consideration of issues of reliability raised by Nunnally (1967, p. 521). He reported that the reliability of scales tended to increase with the addition of steps, but to level off at about seven points; however, there was a slight advantage in having an even number of steps. An odd number of steps would produce a definable mid-point, which might encourage the error of central tendency among raters. The scale and response options are shown below:



A preliminary form of the complete instrument was constructed at this stage of the research. It was informally submitted to examination and comment by a professor of adult education, a professor of reading, an elementary reading teacher, an ABE instructor, and an institutional research officer. After further refinement, the Materials Evaluation Guide, Form I (Initial) was prepared for submission to a number of expert content judges in order to estimate instrument validity. Form I of the Materials Evaluation Guide is provided in Appendix A.

Test of Content Validity

The objective of this phase of the study was to demonstrate the content validity of the Materials Evaluation Guide. Content validity is demonstrated by showing "how well the content of the test samples . . . the subject matter about which conclusions are to be drawn" (American Psychological Association, 1966, p. 12).

Procedure

The simplest and most direct evidence of content validity requires examination of the instrument itself by a competent judge or judges (Ebel, 1956, p. 275). The study used 10 judges in the following manner:

1. The researcher wrote to 10 university professors (five in the field of adult education, five in the field of reading education) requesting their assistance as judges in the content validity study. All 10 agreed to participate. The 10 judges were from eight different universities in the United States and Canada; eight judges were American, two Canadian; all 10 were known by the researcher, through their publications and/or experience, to be familiar with the field of adult basic education. The names and affiliations of the judges are given in Appendix B.
2. The five adult education judges were each provided by the researcher with a copy of the Materials Evaluation Guide, Form I, along with the Instructions to Content Validity Judges

and Judging Form as shown in Appendix C. The instructions to judges were to decide, independently, the relevance of each item in the Product Design and Adult Learning sections. Specifically, the judges were to decide whether each item was 'relevant' or 'not relevant' to the evaluation of the element in question. They were also requested to add suggestions for the revision of any items, especially in any case where they decided that an item was 'not relevant'.

3. Similarly, the five reading education judges were asked to judge, independently, the relevance of each item in the Product Design and Reading Instruction sections of the MEG. It will be noted that all 10 judges thus validated the Product Design section, while five judges validated each of the other two sections.

4. In addition, all of the judges were asked at the conclusion of the evaluation to answer the following four general questions:

   (a) Do the items of the ABE Materials Evaluation Guide adequately sample the domain of possible evaluation criteria?

   ☐ Yes ☐ No (comment requested) ☐ Questionable

   (b) Do the Summary Rating Scales need to be improved?

   ☐ Yes (comment) ☐ No

   (c) Does the structure of the instrument need to be improved?

   ☐ Yes (comment) ☐ No

(d) Will the wording of the instrument, in your opinion, be readily understandable to most ABE reading instructors and materials evaluators?

☐ Yes ☐ No (comment) ☐ Questionable (comment)

Analysis of Data

After the judges had completed and returned the evaluations, an analysis of these judgements of content validity was carried out. The procedure followed was similar to that described by Martuza (1977, p. 286) for the empirical validation of domain-referenced test items. In this case, each of the MEG items was considered a test item, and the judges were making a decision as to whether or not each item was relevant to the domain (the element) in which it was located in the instrument.

Two statistics which may be used to quantify the extent of agreement between judges in making decisions are:

P_o, defined as the proportion of items rated as relevant by each possible pair of judges, and

K, defined as the proportion of agreement between judges after correction for chance agreement (Cohen, 1960).

Where P_o and P_c are the proportions of observed and chance agreements, respectively,

$$K = \frac{P_o - P_c}{1 - P_c}$$

While P_o may range from 0 (total disagreement) to 1.00 (total agreement), the value of K ranges from near -1.00 (total inconsistency) to +1.00 (total agreement beyond chance).

Martuza recommended P_o greater than or equal to 0.80, or K greater than or equal to 0.25 as acceptable levels of inter-judge agreement. These values were adopted as the minima for the present study.

P_o and Kappa (K) statistics were calculated in the following manner. For each of the 10 elements, inter-judge agreement was examined for each possible pair of judges. The P_o and K values, respectively, were summed and the means calculated for each element, for the three sections, and for the instrument as a whole.

Once it was established that an acceptable level of inter-judge agreement had been attained, a content validity index (CVI) was calculated. This index is defined by Martuza as the proportion of items rated as 'relevant' by all judges. A CVI of 1.00 would thus represent perfect content validity as evaluated by the set of judges; the minimum value of the CVI would be 0. It was decided to accept Martuza's recommendation that a CVI of 0.80 represent the minimum acceptable level of content validity for the instrument, i.e., that 80 percent or more of the items were judged relevant by all judges.

The CVI was computed for each section of the instrument, and for the instrument as a whole. An unacceptable CVI for a section, or for the whole instrument, would indicate the need for instrument revision.

Acceptable CVI values would indicate the readiness of the instrument for the field test of reliability.

Instrument Revision

The purpose of the instrument revision phase was to incorporate the changes indicated as necessary in the content validity test. The responses of the ten content specialists had yielded (1) judgments of the relevance of each item to the domain being evaluated, and (2) specific suggestions for item revision.

Consequently, an item-by-item review of the MEG, Form I was carried out. Items on the MEG which were rated as 'relevant' by fewer than 80 percent of the judges were deleted. Duplications were rectified, and ambiguous wording clarified. Care was taken in the editing of retained items, not to materially alter the sense of the original wording.

The content validity index was then recalculated, to ensure that the CVI of the revised instrument satisfied the criterion previously set for acceptability (CVI = 0.80).

Thus, the outcome of this phase of the study was the Materials Evaluation Guide, Form R (Revised), as shown in Appendix B. This was the form used for the pilot test of instrument reliability.

Pilot Test of Instrument Reliability

The objective of this phase of the study was to measure the reliability of the Materials Evaluation Guide, as used in the field by a pilot sample of ABE teachers who have responsibility for materials

selection. This research was carried out in the community college districts of the Lower Mainland and Southern Vancouver Island regions of British Columbia.

Procedure

The basic procedure was to have five evaluators use the MEG, Form R, to rate two textbooks designed for adult basic reading instruction. Analysis of the resulting 10 evaluations yielded two estimates of instrument reliability: an estimate of inter-rater agreement, and an estimate of the internal consistency of the instrument.

The Evaluators

Five evaluators were selected by the researcher in the following manner. Six of the seven public community colleges in the Lower Mainland and Southern Vancouver Island regions of British Columbia were contacted, in order to establish a list of college faculty who were responsible for textbook evaluation for adult basic reading programs. The colleges contacted are given in Appendix E. The seventh college (Malaspina) was excluded from the study as the researcher is responsible for ABE text selection there.

A list of 10 qualified evaluators resulted. Using a table of random numbers (Rand Corp., 1955, p. 99), five evaluators and alternates were selected: two of the original list were unable to participate because of other commitments, and substitutions were made from the alternates.

The five participating evaluators were from four separate programs in three different colleges: their names and affiliations are listed in Appendix F. The evaluators were paid a small stipend for their work, in order to more closely simulate a normal situation, in which they would be evaluating textbooks as part of their employment.

Selected characteristics of the evaluators are presented in Table 5, below. To preserve the confidentiality of the personal information, the order of the evaluators has been changed from that of the list in Appendix F. The identifying letters of the evaluators in Table 5 (A through E) are, however, the same as those used in reporting the findings of the reliability study.

Table 5. Selected characteristics of evaluators in reliability test.

Characteristic	Evaluator				
	A	B	C	D	E
Highest degree	B.A.	M.Ed.	B.A.	B.Sc.	B.A.
Major(s)	History	Reading	English	Speech Pathology	English/ Psychology
Teacher Training and Credential	Yes	Yes	No	Yes	Yes
Teaching Experience (yrs.) Total:	8	21	6	7	6
Elementary:	-	8	3	-	-
Secondary:	4	2	-	1	3
Community College:	4	1	3	1	3
ABE Reading Programs:	4	11	3	3	1
Other:	-	10[a]	-	5[b]	-
Texts Reviewed Each Year	11-20	11-20	6-10	11-20	11-20
Previous Use of Another Evaluation Guide	No	Yes	No	No	No

[a]School district ABE teacher.

[b]School district speech pathologist.

The Textbooks

The two textbooks chosen by the researcher for the trial evaluations were:

Cass, Angelica W. Reading Power (Books I and II). New York: Monarch Press, 1975.

Henney, R. Lee. Basic Education Reading (Book I plus Instructor's Manual). Chicago: Follett, 1977.

These were chosen as representative of the range of ABE reading texts available after an extensive survey of publishers in the first quarter of 1977. A total of 108 publishers out of the 394 listed in El-Hi Textbooks in Print (Bowker, 1976) had titles listed in that source under the headings of Adult Education, Reading, or Language Arts——Adults. These 108 were asked to supply information on any texts they published which met the following criteria:

(a) Published commercially in North America, and in print during the year 1978;

(b) Designed with primary emphasis on the development of basic reading competence, at levels equivalent to grades 1 through 4 of the school curriculum;

(c) Designed specifically, but not necessarily exclusively, for the instruction of adults;

(d) Written in English, primarily for students whose first language is English;

(e) Primarily printed materials. Non-print media would only be evaluated in cases where the publisher or author

stated such media to be an essential adjunct to the print material.

Responses were received from 83 publishers, but only 15 texts or series (from 14 publishers) were found to meet the selection criteria. As a further check on the availability of textbooks, three recent independent bibliographies were reviewed (Lamarre, Palmatier, and Memory, 1975; Forinash, 1977; Anderson, 1978), but no additional titles qualified. The researcher then reviewed the 15 materials and made the selection indicated above.

The two texts reflected two distinct but prevalent approaches to the teaching of reading. The Cass text was based on the gradual building of a large sight-word vocabulary, drawn from common adult contexts. The Henney text generally took a linguistic phonics approach with a highly structured sequence of word analysis activities. Both texts gave attention to comprehension, but used different techniques. Two other characteristics of the texts should be noted. The Cass text in two volumes spanned (according to the publisher) grade reading levels 0-3; the Henney text, in one volume, was intended to span levels 0-4. The Cass text had no instructor's manual, the Henney text did.

Administration of the Instrument

The five evaluators were each mailed the following materials: the two Cass books (for the first evaluation), the Henney book plus instructor's manual (for the second evaluation), one relevant page from each publisher's promotional brochure, two copies of the Materials

Evaluation Guide, Form R, including the Instructions to Evaluators (see Appendix D).

It was considered likely that evaluators would need less time to complete the second evaluation, having become familiar with the instrument; also, that their ratings might become more consistent on the second run. In order to make some preliminary observations on these effects, therefore, the researcher requested all evaluators to record the actual time spent on each evaluation, and to evaluate the texts in the same order (first Cass, then Henney). A two-week period was allowed for the work to be completed.

When the evaluations were ready, the researcher collected the forms in person, and asked the reviewers a number of questions about the usability of the instrument. A report of these interviews is given in Chapter IV.

Analysis of Data

The outcomes of the foregoing procedure were 10 textbook evaluations; five of the Cass text, five of the Henney text. The item judgments (40 Yes/No items per evaluation) and element ratings (10 summary ratings per evaluation) were then subjected to statistical analysis in order to obtain two estimates of reliability for the instrument.

The first estimate of instrument reliability obtained was a coefficient of inter-rater agreement. This is an indication of the extent of agreement between the observations of two or more evaluators, and is often used as an assessment of reliability of the observations

(Kerlinger, 1964, p. 507). Estimates of inter-rater agreement on the 40 Yes/No items of the MEG were therefore computed. Separate coefficients were calculated for each of the three major sections and for the instrument as a whole.

The statistics used to estimate inter-rater agreement were:

P_o (the percentage of observed agreement); and

K (the percentage of agreement corrected for chance).

The use of these statistics generally followed the procedures recommended by Cohen (1960), and Martuza (1977).

The second estimate of instrument reliability obtained was a coefficient of internal consistency. This provided an indication of the extent to which the 10 elements of the MEG measured the same overall characteristic (Martuza, 1977, p. 126). The data from the 10 rating scales on each text evaluation were used to calculate a coefficient of internal consistency for the overall instrument. Coefficients were also derived for each of the two major sections of the instrument, i.e., Adult Learning and Reading Instruction.

The statistic used was coefficient alpha (Cronbach, 1951). Alpha is recommended by Nunnally (1967, p. 211) as "a good estimate of reliability in most situations, since the major source of measurement error is because of the sampling of content." He also states that reliability estimated from internal consistency is usually very close to the reliability estimated from correlations between alternative forms of an instrument. "The reliability coefficient," he adds, "is one index of

the effectiveness of an instrument, reliability being a necessary but not sufficient condition for any type of validity."

The formula used in this study to compute alpha was the following (Cronbach, 1951, p. 299):

$$\text{alpha} = \frac{n}{n-1}\left(1.00 - \frac{\Sigma \text{Var (i)}}{\text{Var (t)}}\right)$$

Where, n = number of items in a test (in this study, the number of rating scales)

ΣVar (i) = sum of the variances of the various item score distributions (in this study, the sum of variances of the rating score distributions)

Var (t) = variance of the distribution of test scores (in this study, the distribution of rating score totals for an element, or for the instrument as a whole).

The standard for minimum level of acceptability for the coefficient of internal consistency was set at alpha = 0.80, both for the instrument as a whole and for its two major sections. Possible values of Cronbach's alpha range from 0 (no reliability) to +1.00 (perfect reliability). Fox (1969, p. 362) notes that "expectations for the reliability of an instrument will differ, depending on the nature of the information sought." He states that when seeking to estimate knowledge and ability (and conceivably, therefore, the excellence of a publication) coefficients of 0.80 are useful minima. Kerlinger (1964, p. 522) states that test-retest reliability coefficients from 0.67 to

0.96 are satisfactory, while coefficients greater than 0.90 are "extremely high."

Survey of Usability

A third and important attribute of an evaluation instrument is its usability (Lyman, 1978, p. 39). This aspect includes the practical factors that enter the decision to use a particular instrument. The following factors were investigated briefly by the researcher, by means of a short, structured interview with the five ABE evaluators after they had completed both textbook evaluations:

1. Time taken to do each evaluation: it was anticipated that an evaluation would take from 1 to 3 hours. A longer time might possibly deter a normal evaluator from using the MEG in a practical situation; a shorter time might suggest that the MEG encouraged too superficial a review of the texts. The evaluators recorded their time at the end of each text evaluation.
2. Acceptability by evaluators of the time taken to use the MEG.
3. Attitude of the evaluators towards actual use of the MEG in a practical (non-research) situation.
4. Value of the MEG to the evaluators in terms of strengths and limitations.

Two other factors, availability and cost, were not investigated. It was assumed that the instrument would be readily available, through eventual publication; further, that the cost of reproducing the MEG for repeated use would be minimal.

CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this chapter is to present the findings relevant to the four research questions which were articulated in Chapter I of this study. The findings are presented in the following order: (1) Instrument Construction, (2) Instrument Reliability, and (3) Instrument Usability.

Instrument Construction

The overall purpose of this study was to develop an instrument for the evaluation of published materials in adult basic reading instruction. The first two of the four research questions (p. 5) were specifically addressed to the phase of instrument construction. They were:

1. What are the appropriate criteria for materials evaluation that can be drawn from the body of knowledge about adult learning?
2. What are the appropriate criteria for materials evaluation that can be drawn from the theory and practice of basic reading instruction?

It was necessary to establish some tentative answers to these questions, in order to design the framework of the Materials Evaluation Guide, and to draw up the initial schedule of items.

Initial Form

It was not anticipated that there would be universal agreement in the literature on the specific traits essential to superior instructional materials. Nevertheless, a general consensus emerged from this review of the literature of adult learning and reading instruction as to the major elements required for successful learning. These elements were reflected in the headings of the Materials Evaluation Guide, Initial Form (MEG, Form I), as shown in Appendix C.

For the Adult Learning section, the element headings chosen were 'Motivation', 'Individual Differences', 'Principles of Instruction', and 'Relevance'. For the Reading Instruction section, the elements were named 'Word Recognition', 'Word Analysis', 'Comprehension', and 'Assessment'.

A third section was necessary to address the more general domain of 'Product Design'. Elements within this section were named 'General Format and Content', and 'Instructional Resources'.

In writing specific items for each element, it was difficult to avoid introducing a bias. For instance, in the Product Design section, a group of items relating to behavioral objectives might have implied the superiority of such an approach to the exclusion of other strategies. Similarly, in writing items in the Reading Instruction section, a balance was sought that recognized both the 'psycho-linguistic' and the 'skills' approach to beginning reading instruction.

In summary, the first set of criteria produced were designed (1) to reflect the major elements of superior product design, adult

learning, and reading instruction, and (2) to avoid a bias in favor of any restrictive or narrow approach to instructional materials.

Once an initial set of materials evaluation criteria were established in the manner just described, attention was turned to the third and fourth research questions of the study:

3. How can the criteria so established best be articulated in an evaluation instrument?

4. How useful is such an instrument to practitioners in the field of adult basic education, as an aid to critical judgment and decision-making?

An effective evaluation instrument, like any other measurement tool, should meet acceptable standards of validity, reliability, and usability. To investigate research questions 3 and 4, therefore, the Materials Evaluation Guide was submitted to tests of validity and reliability, and a usability survey.

Content Validity

Content validity was selected as the primary indicator of instrument validity. It was tested by submitting the MEG, Form I, to 10 expert judges. Their independent judgments as to the relevance of each item to its respective domain were analyzed in order to estimate (1) the level of agreement amongst judges, i.e., an indication of the reliability of the judges' decisions, and (2) given acceptable inter-judge agreement, a content validity index (CVI) for the instrument and its three sections. The findings of this analysis follow.

Inter-judge Agreement. The itemized results of the content validity test are shown in Appendix G. The level of inter-judge agreement on the relevance of items was estimated, using the statistics P_o (to represent percentage of agreement between judges), and K (percentage of agreement corrected for chance).

For each of the 10 elements of the MEG, statistics P_o and K were computed for each possible pair of judges. Mean values of P_o and K were then calculated for each element and section. Finally, mean values of P_o and K were derived for the total instrument, by taking a mean of the three section values. These estimates of inter-judge agreement are given in Table 6.

Table 6. Estimates of inter-judge agreement (P_o and K) in content validity test, for elements, sections, and total instrument.

Section	No. of Judges	Pairs of Judges	Element	Mean P_o	Mean K
Product Design	10	45	I	0.87	+0.05
			II	0.93	+0.02
			Section Means	0.90	+0.04
Adult Learning	5	10	I	0.76	-0.04
			II	0.72	-0.01
			III	0.88	+0.10
			IV	0.84	-0.03
			Section Means	0.80	+0.01
Reading Instruction	5	10	I	0.92	0.00
			II	1.00	0.00
			III	0.92	0.00
			IV	1.00	0.00
			Section Means	0.96	0.00
Total Instrument			Instrument Means	0.89	+0.02

The analysis of inter-judge agreement as indicated by statistic P_o showed high levels of agreement for Product Design (P_o = 0.90) and Reading Instruction (P_o = 0.96), and a minimally acceptable level for the Adult Learning section (P_o = 0.80). In the latter section, Elements I (Motivation) and II (Individual Differences) yielded the lowest levels of agreement in the instrument.

The analysis of inter-judge agreement as indicated by statistic K only reflected levels of agreement which were at or near the chance values. This outcome may be explained by a property of the Kappa statistic itself. In a case where a pair of judges each uses only one of two possible categories (such as selecting the 'relevant' option throughout a section), then the value of K is zero. Yet the desirable result of the content validity study was that each judge should declare every item as 'relevant'. In that optimum case (as in Elements I, II, and IV of Reading Instruction), the value of K would be zero. It was concluded, therefore, that the original target value of K = 0.25 (see p. 51) was not appropriate to this situation.

Consequently, the level of inter-judge agreement for the total instrument as indicated by P_o (= 0.89) was accepted as a satisfactory base from which to proceed to the calculation of the content validity index (CVI).

Content Validity Index. The indices of content validity are estimates of the extent to which the items of the MEG adequately represent the domains to which they are related in the test instrument. The CVI's were calculated simply by counting the number of items

determined as relevant by all judges, and expressing that number as a percentage of the total items in an element, or in the instrument as a whole. The findings are presented in Table 7.

Table 7. Content validity indices: MEG, Form I.

Section	No. of Items	No. of Items Judged Relevant by All Judges	Content Validity Index (CVI)
Product Design	10	7	0.70
Adult Learning	20	11	0.55
Reading Instruction	20	18	0.90
Total Instrument	50	36	0.72

NOTE: Minimum standard of acceptability for instrument: CVI = 0.80.

Analysis of the CVI's for the Initial Form in Table 7 shows that the instrument as a whole failed at this stage to meet the minimum standard of acceptability (CVI = 0.80) set out in the research design. In addition, although a minimum acceptable standard had not been pre-set for each element, the CVI for Adult Learning (0.55) was clearly unsatisfactory in itself, as well as pulling the overall instrument CVI below the limit.

Questionnaire to Content Judges. The content validity of the Initial Form was also studied by means of a questionnaire submitted to each of the content judges. The findings of the questionnaire are presented in Table 8.

Table 8. Questionnaire items and responses of content validity judges.

Questions	Responses (N = 10)		
	Yes	No	Questionable
a. Do the items of the ABE Materials Evaluation Guide adequately sample the domain of possible evaluation criteria?	9	1	-
b. Do the Summary Rating Scales need to be improved?	3	7	-
c. Does the structure of the instrument need to be improved?	1	9	-
d. Will the wording of the instrument, in your opinion, be readily understandable to most ABE reading instructors and materials evaluators?	8	0	2

The questionnaire responses and supporting comments indicated approval of key aspects of the instrument design. With one exception, the judges agreed that the MEG adequately sampled the domain of possible evaluation criteria; the remaining judge pointed out that the domain of criteria could include "everything, such as grade of paper, color, print, attractiveness, cost, supply, etc."

Criticisms of the rating scale were minor: one judge found difficulty distinguishing between the values 'fair' and 'mediocre', another preferred rectangles to diamonds for the check-off boxes, and a

third felt that the phrase "you may consider factors other than those mentioned" in the rating scale directions could be confusing to evaluators.

Only one judge was critical of the structure of the instrument, stating a general preference for Likert scale response formats throughout. The two judges who questioned the appropriateness of wording for those who were to use the instrument in the field each made specific suggestions for item revision.

Revised Form

As a result of the findings of the content validity test, the Materials Evaluation Guide underwent the following revision:

1. Deletion of all items which had been rated as 'relevant' by fewer than 80 percent of the judges: as may be seen by reference to Appendix G, it was necessary to delete four items failing to meet this criterion;
2. Deletion of a number of items which the content judges had indicated as duplications: e.g., Adult Learning I-4 which essentially addressed the same factor of 'persistence' as did I-5 (Motivation);
3. Deletion of several items with ambiguous wording: e.g., Reading Instruction III-5 (Comprehension) which called for assessment of four separate characteristics;
4. Addition of examples to several items, for clarification: e.g., items 2, 3 and 4 of Adult Learning IV (Relevance);

5. Addition of one new item (Adult Learning II-2 of Form R): this was a modification of items II-2 and II-3 of Form I, each of which concerned provision for individual differences for adults with varied life experiences;
6. Deletion of the phrase, "You may consider factors other than those mentioned" from the rating scale instructions, in order to foster higher consistency among evaluators.

The outcome of the revision phase was the Revised Form of the Materials Evaluation Guide (MEG, Form R), as shown in Appendix D.

One result of the instrument revision was a reduction in the length of the instrument, from 50 to 40 dichotomous items. While this reduction might be expected to lower reliability (Martuza, 1977, p. 136), it was anticipated that the loss would not be serious, and that a shorter instrument would be more practical to an evaluator.

A second result of the changes was an overall improvement in content validity, because of deletion of items with low CVI. The revised content validity indices for the MEG, Form R, are provided in Table 9.

Table 9. Content validity indices: MEG, Form R.

Section	No. of Items	No. of Items Judged Relevant by All Judges	Content Validity Index (CVI)
Product Design	8	6	0.75
Adult Learning	15[a]	11	0.73
Reading Instruction	16	15	0.94
Total Instrument	39[a]	32	0.82

[a]Item II-2 was not included in CVI recalculation, as no content validity data were available for it (see p. 71).

As Table 9 shows, the MEG, Form R, attained an acceptable content validity index of 0.82. A major improvement had been effected in the Adult Learning section, while CVI's for the other sections also showed marginal improvement. The MEG, Form R, was therefore accepted as having sufficient content validity to proceed with the pilot test of instrument reliability.

It should be noted that the revised CVI's of Table 9 were established by use of existing data on the items of the Initial Form, rather than by resubmission to the panel of judges.

Instrument Reliability

The two forms of reliability investigated were inter-rater agreement, and internal consistency. Both were derived by analyzing the results of a pilot reliability test. Five field evaluators each

used the Materials Evaluation Guide, Form R, to review the same two textbooks, i.e., Cass' Reading Power and Henney's Basic Education: Reading (see p. 55).

The itemized results of the pilot reliability test are shown in Appendix H.

Inter-rater Agreement

Analysis of the results on the Yes/No dichotomous-choice items yielded estimates of inter-rater agreement. Values of P_o (percentage of observed agreement), and K (P_o corrected for chance agreement) were first computed for each of the three sections for every possible pair of evaluators. To arrive at the estimate of P_o and K for the total instrument, new calculations were made for the 40 decisions taken as a whole. The summary of statistics is shown in Table 10.

Table 10. Estimates of inter-rater agreement (P_o and K) among five evaluators using the MEG, Form R, to evaluate two texts.

Section	No. of Evaluators	Pairs of Evaluators	No. of Decisions	Texts: Cass		Texts: Henney	
				Means			
				P_o	K	P_o	K
Product Design	5	10	8	0.75	0.49	0.80	0.62
Adult Learning	5	10	16	0.65	0.27	0.69	0.09
Reading Instruction	5	10	16	0.66	0.34	0.70	0.33
Total Instrument	5	10	40	0.67	0.35	0.71	0.34

NOTE: Minimum standard of acceptability: $P_o = 0.80$, $K = 0.25$.

Reliability of the Materials Evaluation Guide, Form R, as indicated by level of inter-rater agreement in Table 10, is thus still open to interpretation. The Kappa statistics for the instrument (0.35 and 0.34) exceeded the acceptability standard of $K = 0.25$; but the P_o values of 0.67 and 0.71 fell below the pre-set criterion of 0.80. Both statistics were also low for the Adult Learning section.

Examination of the itemized data in Appendix H, moreover, reveals the impact of one evaluator making consistently one to two points below the mean of his colleagues' ratings. Thus, in both the Adult Learning and Reading Instruction sections, evaluator C rated the Cass text consistently low, while evaluator A rated the Henney text

similarly low throughout. This impact on the mean values of P_o and K was particularly noticeable, given the small sample of five evaluators.

It may be argued that the standards for this form of reliability were set too high in view of (1) the subjective nature of many of the judgements called for in the MEG, (2) the varying preferences of different ABE instructors in their criteria for instructional materials, and (3) the lack of a universal standard of acceptability for measurement instruments of this nature.

Internal Consistency

Estimates of internal consistency were obtained by using alpha coefficients. Coefficients were derived for the Adult Learning and Reading Instruction sections, and for the total instrument. Separate coefficients were not calculated for the Product Design section because there were only two rating scales in that section; however, the Product Design ratings were used in computing coefficients for the total instrument. Table 11 shows the alpha coefficients of internal consistency. Minimum standard of acceptability was set at 0.80 (p. 60).

Table 11. Alpha coefficients of internal consistency: MEG, Form R.

Section	Alpha Coefficients		
	Cass	Henney	Mean
Adult Learning	0.88	0.85	0.87
Reading Instruction	0.89	0.93	0.91
Total Instrument	0.88	0.95	0.92

On the basis of the data presented in Table 11, the instrument appeared to demonstrate a high level of internal consistency with respect to the summary rating scales.

Instrument Usability

In order to gather opinions at first-hand on the usability of the instrument, data on several usability factors were obtained from the five evaluators in the reliability sample. The findings reported below are from responses to the last page of the MEG, Form R (see Appendix D), and from brief, structured interviews which the researcher conducted after the two evaluations were complete. The factors surveyed were: (1) Time of administration, (2) Acceptability of administration time, (3) Strengths and limitations, and (4) Attitude toward use in the field.

Time of Administration

The time taken by each evaluator to complete the two textbook evaluations is given in Table 12. No time limits were specified in advance by the researcher.

Table 12. Administration times for MEG, Form R, in pilot reliability test.

Evaluator	Administration Time (hrs:min.)	
	Text: Cass	Text: Henney
A	1:10	1:00
B	1:30	1:30
C	2:00	2:00
D	1:45	1:30
E	2:15	2:05
Mean Times	1:44	1:37

As anticipated by the researcher, the mean time for evaluation of the second text was lower. The comments of the evaluators suggested that this lower time may have been due either to a practice effect, or to the design characteristics of the two texts, e.g., a 'linguistic' approach (Henney) as opposed to a 'sight-word' approach (Cass).

Acceptability of Administration Time

The evaluators were asked whether the time they had spent on each evaluation would be, in a normal situation: (1) too long, (2) barely acceptable, or (3) quite acceptable. All five stated that the administration time would be quite acceptable.

Strengths and Limitations

The evaluators were asked to identify the strengths and limitations of the instrument. Table 13 summarizes their responses.

Table 13. Summary of evaluators' opinions on strengths and limitations of the MEG, Form R.

	Times Mentioned
"Strengths"	
Comprehensive list of criteria	4
Organization under headings	3
Summary rating scales	2
Other: "Wouldn't take too long."	1
"Yes/No questions zeroed in my thinking."	1
"The section for subjective comments."	1
"Showed what you need to think about in writing your own materials."	1
"Limitations"	
Minor difficulty with some terminology ('critical and inferential comprehension', 'word analysis', 'deal adequately with', 'comprehension exercise', 'mediocre').	5
Other: "For some questions, I would have liked to mark between 'Yes' and 'No'."	1
"I have reservations about quantitative rating scales."	1
"I don't know of any way to find out the frequency of sight words in adult use."	1
"Checklist was more difficult to apply to a text with a sight word approach (i.e., Cass)."	1

The most frequently mentioned strength of the instrument was the comprehensiveness of the list of evaluation criteria. The organization of those criteria under element headings also appealed strongly to at least three of the five evaluators. Other strengths identified were: the provision of numerical rating scales to summarize judgments; the reasonable length of administration time; the dichotomous-choice format of the items; the section providing for subjective comments; and the potential use of the instrument as a set of guidelines for teacher-produced materials.

Each of the five evaluators mentioned as limitations some specific difficulties with terminology used in the instrument. Two evaluators questioned whether 'critical and inferential comprehension' should form part of instruction at the basic level, while another felt that it was sometimes difficult to judge whether a particular textbook exercise was really a 'comprehension exercise'. Other limitations noted, by only one evaluator in each case, were: initial difficulty with the dichotomous-choice format; a general reservation about the use of quantitative scales; a problem assessing the appropriateness of an author's choice of adult sight-word vocabulary; and a concern that the instrument seemed to be more difficult to apply to a text that emphasized the sight-word approach.

Attitude Toward Field Use

Finally, the evaluators were asked (1) whether they had previously used a structured checklist to evaluate materials, (2) whether they would now use the Materials Evaluation Guide. Only one of

the five had previously used a formal checklist, but all five stated that they would now use the MEG when it became available.

The overall impression conveyed by the evaluators in the interviews was that they were satisfied with the instrument as a practical tool for use in the evaluation of published materials for possible use in adult basic reading instruction.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

This chapter presents: (1) a summary of the study, (2) findings and conclusions, and (3) suggestions for further research.

Summary of the Study

This study was initiated in order to develop an instrument for the evaluation of published instructional materials in adult basic reading programs of community colleges. The experience of the researcher had suggested that there was not only a paucity of effective instructional materials in this field, but also a lack of any clear criteria by which to evaluate new materials.

The development of the Materials Evaluation Guide (MEG) served as a focus for (1) the investigation of previous research in materials evaluation, (2) a review of the baseline knowledge of adult learning and reading instruction, with particular reference to adult basic reading, and (3) the construction and validation of a new instrument.

The review of literature revealed that adult illiteracy continues to be a world-wide problem, even in the developed nations. In North America, the community colleges in their increasingly important mission to serve adult education needs, are becoming heavily involved in adult basic reading programs. Numerous projects have pointed out the need for more and better text materials for these

programs. It was also found that previous attempts to evaluate adult basic reading materials, with practical instruments incorporating valid criteria, had been superficial.

On the other hand, further study of the literature of adult learning and reading instruction brought to light a consensus as to what factors were most critical to the learning of basic reading skills by an adult. It was found possible to articulate these factors in the form of the Materials Evaluation Guide, which was then submitted to tests of validity and reliability.

Findings and Conclusions

The first two research questions posed in Chapter I of this study (p. 5) were:

1. What are the appropriate criteria for materials evaluation that can be drawn from the body of knowledge about adult learning?

2. What are the appropriate criteria for materials evaluation that can be drawn from the theory and practice of basic reading instruction?

The preliminary answers to these questions were demonstrated in the two major sections of the Materials Evaluation Guide, Initial Form. The appropriateness of those criteria (i.e., their content validity) required further investigation. Thus, the test of content validity was devised and administered.

The major finding of the test of content validity was that the MEG, Initial Form, had an estimated validity index of 0.72. The conclusion followed that this value was below the lower limit of CVI = 0.80 set for acceptability. Additional comments of the judges

showed overall satisfaction with the form and purpose of the instrument. Instrument revision was nevertheless required before the planned field test. Item-by-item analysis of the review of the instrument by the 10 expert judges facilitated the work of instrument refinement. The MEG, Revised Form, was prepared. After recalculation of the content validity index, it was concluded that the new form had an estimated CVI of 0.82, satisfactory for field testing.

Submission of the MEG to field testing by five ABE evaluators in British Columbia community colleges enabled preliminary data to be collected on instrument reliability. The two types of reliability studied were inter-rater agreement, and internal consistency.

The findings of the reliability study were that the MEG, Revised Form, in this limited trial, had satisfactory internal consistency (alpha = 0.92), but that reliability as estimated by the level of inter-rater agreement was still open to question. The standard of acceptability for P_o and K had been set at 0.80, and 0.25 respectively. The attained levels were: $P_o = 0.67$ and $K = 0.35$ on the first text; $P_o = 0.71$ and $K = 0.34$ on the second text. Both statistics were relatively low on the Adult Learning section.

If one were to accept the Kappa statistic (which is corrected for chance agreement) as a better indicator than P_o, then it could be concluded that the level of inter-rater agreement adequately met the pre-set standard. Nevertheless, the low value of both statistics in the Adult Learning section gave cause for concern. Again, it is possible that the expectation for inter-rater agreement, in the use of

a novel instrument which called for so many subjective judgments, was set too high for practicality. Clearly, additional data need to be collected from a larger sample of evaluators before more definite conclusions can be reached.

With this reservation, the answer to the third research question, "How can the criteria so established best be articulated in an evaluation instrument?" can be considered demonstrated in the form of the revised version of the Materials Evaluation Guide.

The fourth research question, relating to the usability of the instrument, was:

> How useful is such an instrument to practitioners in the field of adult basic education, as an aid to critical judgement and decision-making?

The findings of the usability survey, which was conducted along with the pilot reliability test, confirmed that, for this sample of ABE evaluators, the MEG was regarded as a valuable aid in textbook evaluation and selection. Conclusions beyond this sample are not appropriate at this point. Nevertheless, the responses of both the content validity judges and the field evaluators encouraged further development of the instrument.

This study provided an opportunity to bring together a variety of research techniques into an effective approach to instrument development. There were few models of materials evaluation instruments available, and only one, the Eash instrument (Eash, 1974), had undergone systematic validation. The approach taken in this study for instrument construction and validation appears viable as a model for

further work in this field. The same approach might be followed for further development of this instrument, or for construction and validation of a similar one.

It should also be emphasized that the pilot study of reliability involved only a small number of evaluators and evaluations. Its purpose was to give a preliminary indication of the reliability of the MEG in actual use in the field. The findings of this phase of the research must therefore be interpreted with caution, and are not generalizable beyond the sample studied.

Suggestions for Further Research

Clearly, the next phase required in the development of the MEG is further research in reliability. A larger sample of field evaluators rating the same two textbooks, for instance, would be expected to yield higher inter-rater reliability. Another approach would be for evaluators to rate a larger number of texts, and rank them by MEG total scores; the rank-order coefficient of correlation could then serve as a further indicator of reliability. Experience is also needed in the suitability of the MEG for various types of material. The two materials chosen for the pilot reliability test were both essentially 'workbooks'. If an adult 'basal reader' were to become available, for instance, would the MEG be an appropriate, and reliable means of evaluating it, and how would inter-rater reliability compare with results obtained from evaluating workbooks?

Students could also be brought more directly into the content validation process. It should be productive to investigate the

characteristics that adult basic reading students appreciate in their instructional materials.

Two other possible contexts for research investigation are the commercial and institutional publishers of adult basic reading materials, and the teacher training programs of universities and other agencies. Inasmuch as publishers might be expected to guard more closely their selection criteria, and to be governed more stringently by economic factors, the teacher training situation may be the more fruitful of these two contexts for evaluation research.

A final point worthy of note is the international nature of this research study. The literature review explored United States, Canadian, British and Third World aspects of the problem of adult illiteracy; the content validity test employed U.S. and Canadian expert judges; the reliability study was conducted with Canadian field evaluators. With this international dimension in mind, the researcher attempted to construct the Materials Evaluation Guide with a minimum of national or cultural bias. Consequently, the instrument, or some adaptation of it, should prove equally valuable as a means of improving the selection of materials in any country where adults are engaged in the struggle to overcome the barriers of illiteracy.

APPENDIX A

MATERIALS EVALUATION GUIDE, FORM I

Adult Basic Education

MATERIALS

EVALUATION

GUIDE

A systematic way to evaluate
published materials for possible
use in adult basic reading programs.

RECOMMENDATIONS
FOR USE:

1. Become familiar with the general form of this evaluation guide.
2. Become generally familiar with the instructional materials you intend to evaluate.
3. Go through all three parts of this guide, on PRODUCT DESIGN, ADULT LEARNING, and READING INSTRUCTION, evaluating the instructional materials against each item. Complete the summary ratings for each section as you go, and the OVERALL RATING at the end.
4. Come to a decision about the potential value of the material for your program.
5. Evaluate the materials in actual use with students.

PRODUCT DESIGN

I. GENERAL FORMAT AND CONTENT

		Yes	No
1.	Is the material under review intended for adult basic reading instruction?	☐	☐
2.	Are the physical features such as size, type legibility and page layout acceptable?	☐	☐
3.	Is the general content, including illustrations likely to be acceptable to the learners? (Check for unacceptable ethnic emphasis, stereotyped sex-roles, social class bias, etc.)	☐	☐
4.	Is there a teacher's manual, handbook, annotated edition or similar teacher resource material available?	☐	☐
5.	Does the format or general content display any qualities of originality, imagination, literary or artistic merit?	☐	☐

SUMMARY RATING: Summarize your rating of the quality of the GENERAL FORMAT AND CONTENT. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.

1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

II. INSTRUCTIONAL RESOURCES

		Yes	No
1.	Could a teacher obtain adequate information on rationale, objectives, scope and sequence of the program either from a handbook (if supplied) or by reviewing the instructional text?	☐	☐
2.	Does the material include either the means or some recommendations for assessment of student achievement before and after instruction?	☐	☐
3.	Does the program appear to require an excessive amount of specialized teacher training or preparation?	☐	☐
4.	Does the program require a significant amount of special equipment not normally found in adult education settings?	☐	☐
5.	Are the answers to problems and exercises readily available to students and/or teachers in the text or manual?	☐	☐

SUMMARY RATING: Summarize your rating of the quality of the INSTRUCTIONAL RESOURCES. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.

1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

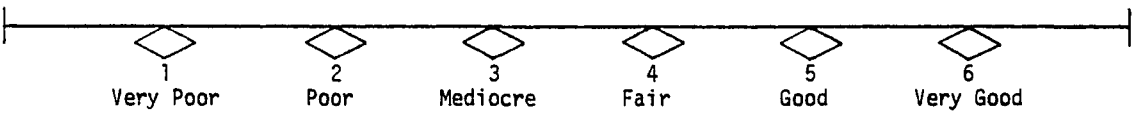
Please Turn To Page 2

ADULT LEARNING

I. MOTIVATION

1.	Do the materials have an adult appearance (e.g. avoidance of covers or titles which mark the learners as illiterates)?	Yes ☐	No ☐
2.	Does the content adequately reflect the interests and needs of the adult learners in your class?	Yes ☐	No ☐
3.	Is the level of difficulty sufficient to challenge but not frustrate the adult learners in your class?	Yes ☐	No ☐
4.	Are the materials likely to motivate the adult to persist at the learning task?	Yes ☐	No ☐
5.	Do the materials promote successful completion of learning tasks?	Yes ☐	No ☐

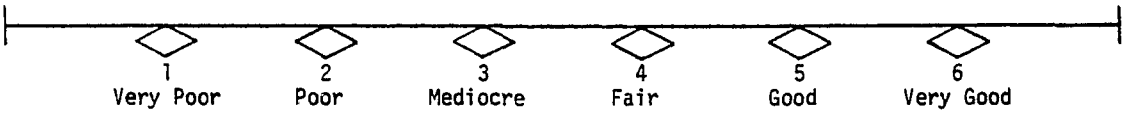
SUMMARY RATING: Summarize your rating of the quality of the provision for MOTIVATION. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



II. INDIVIDUAL DIFFERENCES

1.	Do the materials provide for the range of learning abilities of adults in your class? (e.g. for 'slow' or 'fast' students)	Yes ☐	No ☐
2.	Does the subject matter provide for a range of different interests?	Yes ☐	No ☐
3.	Does the material appear to take account of the previous knowledge and experience of the adult?	Yes ☐	No ☐
4.	Are there opportunities for the adult to apply previous knowledge and experience to the new learning tasks?	Yes ☐	No ☐
5.	Does the material provide for learning through different sensory modes (reading, writing, speaking, listening)?	Yes ☐	No ☐

SUMMARY RATING: Summarize your rating of the quality of the provision for INDIVIDUAL DIFFERENCES. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.

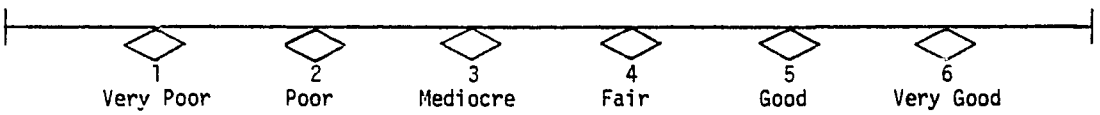


Please Turn to Page 3

III. PRINCIPLES OF INSTRUCTION

1.	Is the instruction consistently presented in a structured, understandable way?	Yes ☐	No ☐
2.	Are adequate examples of concepts and skills given?	Yes ☐	No ☐
3.	Is there adequate provision for practice of new learning in a variety of contexts?	Yes ☐	No ☐
4.	Can the adult learner independently obtain feedback on progress through means such as answer keys, self-scoring tests and progress charts?	Yes ☐	No ☐
5.	Do the skills, competencies and knowledge taught have potential for transfer to real-life adult situations?	Yes ☐	No ☐

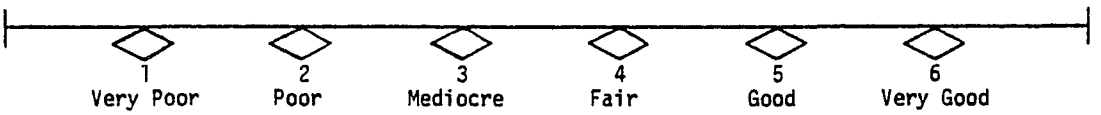
SUMMARY RATING: Summarize your rating of the use of PRINCIPLES OF INSTRUCTION. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



IV. RELEVANCE

1.	Does the content include material directly relevant to vocational and career interests?	Yes ☐	No ☐
2.	Does the content include material directly relevant to social or community interests?	Yes ☐	No ☐
3.	Does the content include material directly relevant to adult 'coping' or 'survival' skills?	Yes ☐	No ☐
4.	Is there a significant amount of information in the text that could be relevant and useful to many adults?	Yes ☐	No ☐
5.	Does the language used in the text approximate the typical language of adults in the community?	Yes ☐	No ☐

SUMMARY RATING: Summarize your rating of the quality of the RELEVANCE. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



Please Turn to Page 4

READING INSTRUCTION

I. WORD RECOGNITION

1. Does instruction begin from basic sight words that the learner probably knows already? Yes ☐ No ☐

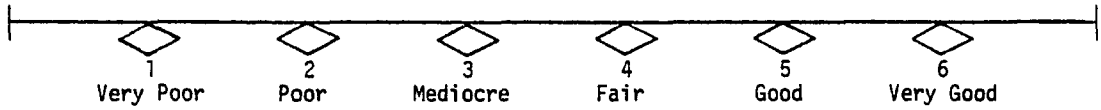
2. When new sight words are introduced, have they apparently been selected because of high frequency in adult use? Yes ☐ No ☐

3. Is the word recognition vocabulary introduced and used in the context of meaningful passages? Yes ☐ No ☐

4. Is there adequate repetition and practice of new words in context? Yes ☐ No ☐

5. Is the learner taught more than one aproach to word recognition? (e.g. use of cues from passage meaning/passage structure, or word structure). Yes ☐ No ☐

SUMMARY RATING: Summarize your rating of the quality of the WORD RECOGNITION instruction. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



II. WORD ANALYSIS

1. Does the material provide instruction in any method of systematically 'decoding' words? Yes ☐ No ☐

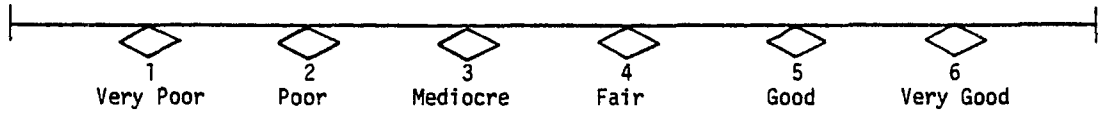
2. Does the program avoid undue emphasis on decoding isolated letters or syllables out of context? Yes ☐ No ☐

3. Are there adequate examples and practice of word analysis skills? Yes ☐ No ☐

4. Does the program avoid undue emphasis on syllabication, pronunciation or articulation skills? Yes ☐ No ☐

5. Are word analysis skills taught that may be used often and reliably in actual continuous reading? Yes ☐ No ☐

SUMMARY RATING: Summarize your rating of the quality of the WORD ANALYSIS instruction. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.

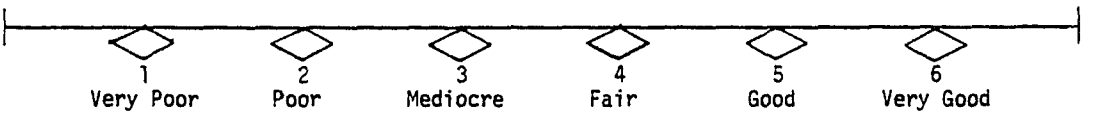


Please Turn To Page 5

III. COMPREHENSION

		Yes	No
1.	Are practice comprehension passages included at the appropriate level of difficulty for the stage reached in instruction?	☐	☐
2.	Do the materials deal adequately with ways of reading for a variety of different purposes? (e.g. for enjoyment, for information, for person-to-person communication)	☐	☐
3.	Is the learner required to look for meaning beyond the literal level (e.g. at the inferential level, critical reading, 'between and beyond the lines')?	☐	☐
4.	Are the reading tasks consistently related to the goal of comprehension of the whole passage?	☐	☐
5.	Are comprehension passages included that display imagination, humor, ingenuity or literary merit?	☐	☐

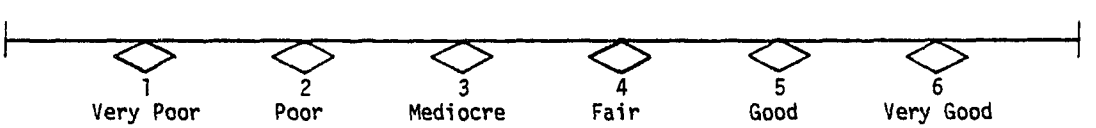
SUMMARY RATING: Summarize your rating of the quality of the COMPREHENSION instruction. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



IV. ASSESSMENT

		Yes	No
1.	Is an adequate placement test, formal or informal inventory, or other assessment method recommended or supplied to establish the starting point of instruction?	☐	☐
2.	Would it be clear to an average teacher, after reviewing the instructional materials, what prior competence a learner would need to begin the program?	☐	☐
3.	Are progress tests, unit tests or mastery tests included or recommended, which relate directly to the instructional material.	☐	☐
4.	Are means other than tests included or recommended to assess student learning or provide the learners with feedback on their progress?	☐	☐
5.	Is there assessment of how the students can use their reading ability in real-life situations?	☐	☐

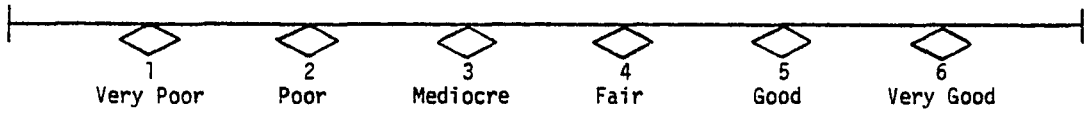
SUMMARY RATING: Summarize your rating of the quality of the ASSESSMENT. You may consider factors other than those mentioned. Mark an X in ONE of the boxes below.



Please Turn To Page 6

OVERALL RATING

Please indicate your OVERALL RATING for the material under review, in terms of its potential for successful use in adult basic reading instruction, by (a) marking an X in one of the boxes on the scale below, and (b) adding your subjective comments.



Comments: (Please continue on back of this sheet if necessary.)

APPENDIX B

JUDGES OF CONTENT VALIDITY

Dr. Wilbur S. Ames
University of Arizona

Dr. Gary Anderson
Arizona State University

Dr. Don A. Brown
University of Northern Colorado

Dr. A. Michael Colbert
Oregon State University

Dr. Glen Farrell
University of Victoria, Canada

Dr. William C. Liddle
The Colorado College

Dr. John A. Niemi
Northern Illinois University

Dr. Mark Rossman
Arizona State University

Dr. Raymond E. Schultz
University of Arizona

Dr. James Thornton
University of British Columbia

APPENDIX C

INSTRUCTIONS TO CONTENT VALIDITY JUDGES,

AND SAMPLE JUDGING FORM

ABE MATERIALS EVALUATION GUIDE

INSTRUCTIONS
to
Content Validity Judges

A: PURPOSE of this content validity study is to elicit the judgement of a number of experts in the fields of Adult Learning and Reading Instruction. Your opinions and suggestions will lead to further refinement of the instrument prior to field testing.

B: PROCEDURE:

1. Briefly familiarize yourself with the attached ABE Materials Evaluation Guide, the Judging Form and these Instructions.

2. Note that you are only asked to judge the two sections, PRODUCT DESIGN and

3. Examine each of the five YES/NO items in the section entitled PRODUCT DESIGN: I. GENERAL FORMAT AND CONTENT.

4. Judge whether each item is RELEVANT or NOT RELEVANT to the evaluation of the construct, GENERAL FORMAT AND CONTENT. Mark the Judging Form with an X in the appropriate box.

5. Add any comments or suggestions for revision of the item. This is especially requested in any cases of 'NOT RELEVANT'.

6. Proceed similarly for each item in PRODUCT DESIGN and sections of the instrument.

7. Finally, please respond to the 'General Questions' on page 4 of the Judging Form.

** 8. PLEASE RETURN the Judging Form in the enclosed envelope by SEPTEMBER 25, 1978.

If you have any questions about this procedure, or in case of unavoidable delay such as mail strikes, etc., please phone me collect at (604) 758-3185 any evening after 6 p.m.

JUDGING FORM: PRODUCT DESIGN

Judge: _____

I. FORMAT AND CONTENT

1. ☐ Relevant ☐ Not Relevant
2. ☐ Relevant ☐ Not Relevant
3. ☐ Relevant ☐ Not Relevant
4. ☐ Relevant ☐ Not Relevant
5. ☐ Relevant ☐ Not Relevant

For each item please mark an X in one box.

For items judged Not Relevant, please add a comment below.

Comments:

II. INSTRUCTIONAL RESOURCES

1. ☐ Relevant ☐ Not Relevant
2. ☐ Relevant ☐ Not Relevant
3. ☐ Relevant ☐ Not Relevant
4. ☐ Relevant ☐ Not Relevant
5. ☐ Relevant ☐ Not Relevant

For each item please mark an X in one box.

For items judged Not Relevant, please add a comment below.

Comments:

APPENDIX D

MATERIALS EVALUATION GUIDE, FORM R

A.B.E. (READING) MATERIALS EVALUATION GUIDE

INFORMATION

for

Materials Evaluators
in the Field Test

1. THE PURPOSE OF THIS STUDY is to field test, with your assistance, the enclosed Materials Evaluation Guide.

2. THE GUIDE provides a systematic way for A.B.E. instructors and co-ordinators to evaluate published materials for possible use in adult basic reading programs. ('Basic' here means about Grade 0-4 level.)

3. THE NORMAL USE of the Guide would be to make a first choice of materials, for more detailed try-out in actual use with students.

4. MATERIALS: You have been supplied with:

   (a) Two copies of the Materials Evaluation Guide, one for each set of texts;

   (b) Reading Power - Books 1 and 2, plus publisher's brochure: these are all the instructional resources available for these texts. Publisher's designated grade level: 0-3.

   (c) Basic Education: Reading - Book 1, plus Instructor's Manual and publisher's brochure: these are all the instructional resources available for these texts. Publisher's designated grade level: 0-4.

   (d) Stamped Addressed Reply Card to advise me when evaluation completed.

5. PROCEDURE: Read and follow the instructions on the front page of the Guide.

►► IMPORTANT - Please evaluate the texts in this order:

FIRST: Reading Power, Books 1 and 2 (one evaluation to cover both texts).

SECOND: Basic Education: Reading, Book 1.

6. COMPLETION DATE

Please complete both evaluations by December 11th.

Phone me (collect) at 753-3185 if any delays arise.

Adult Basic Education

MATERIALS EVALUATION GUIDE

A systematic way to evaluate published materials for possible use in adult basic reading programs

INSTRUCTIONS TO EVALUATORS

1. Become familiar with the general form of this evaluation guide.
2. Become generally familiar with the instructional materials you intend to evaluate.
3. Go through all three parts of this guide, on PRODUCT DESIGN, ADULT LEARNING, and READING INSTRUCTION, evaluating the instructional materials against each item. Complete the summary ratings for each section as you go.

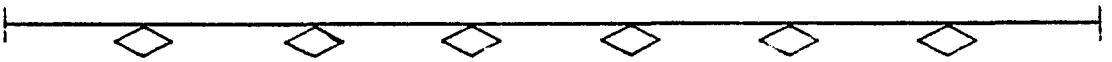
   NOTE: For each feature (such as I - GENERAL FORMAT AND CONTENT), there are four YES/NO questions. These are to guide your review of the materials, but not dictate your summary rating on the 6-point scale. For example, you might respond YES to all four questions, but give a summary rating of 3 (mediocre).
4. Complete the OVERALL RATING of the materials, on page 6, adding your extra comments about the materials.
5. Complete the general questions on page 7.

PRODUCT DESIGN

I. GENERAL FORMAT AND CONTENT

1. Is the material under review intended for adult basic reading instruction?	YES ☐	NO ☐
2. Are the physical features such as size, type legibility and page layout acceptable?	YES ☐	NO ☐
3. Is the general content, including illustrations, likely to be acceptable to adult learners? (Check for inappropriate ethnic emphasis, stereotyped sex-roles, social class bias, etc.)	YES ☐	NO ☐
4. Does the format or content display any qualities of artistic or literary merit?	YES ☐	NO ☐

SUMMARY RATING: Summarize your rating of the quality of the GENERAL FORMAT AND CONTENT. Mark an X in ONE of the boxes below.

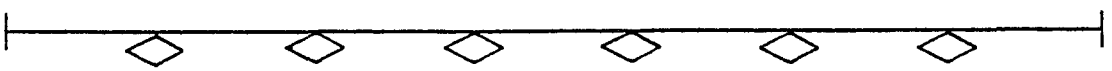


1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

II. INSTRUCTIONAL RESOURCES

1. Could a teacher obtain adequate information on rationale of the materials (including objectives and scope) either from a teacher's manual or by reviewing the instructional text?	YES ☐	NO ☐
2. Does the material include provision for evaluating student achievement before and after instruction?	YES ☐	NO ☐
3. Does the material appear to require an unusual amount of specialized teacher training or preparation?	YES ☐	NO ☐
4. Does the material require special equipment not normally found in adult education settings?	YES ☐	NO ☐

SUMMARY RATING: Summarize your rating of the quality of the INSTRUCTIONAL RESOURCES. Mark an X in ONE of the boxes below.



1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

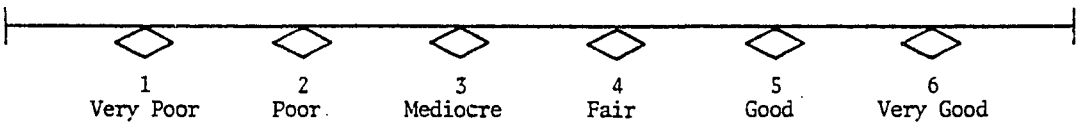
Please turn to Page 2 ►

ADULT LEARNING

I. MOTIVATION

1. Do the materials have an adult appearance (e.g. avoidance of covers or titles which mark the learners as illiterates)?	YES ☐	NO ☐
2. Does the content adequately reflect the probable interests and needs of the adult learners in your class?	YES ☐	NO ☐
3. Is the level of difficulty sufficient to challenge but not frustrate the adult learners in your class?	YES ☐	NO ☐
4. Do the materials encourage successful completion of learning tasks (e.g. by clear objectives, manageable units of study)?	YES ☐	NO ☐

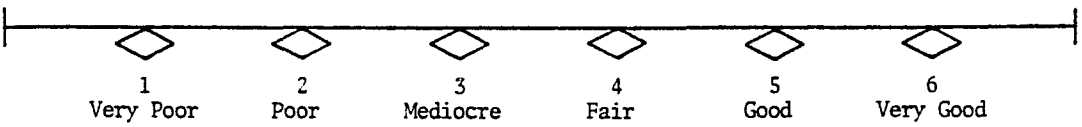
SUMMARY RATING: Summarize your rating of the quality of the provision for MOTIVATION. Mark an X in ONE of the boxes below.



II. INDIVIDUAL DIFFERENCES

1. Do the materials provide for the range of learning abilities of adults in your class (e.g. for 'slow', 'average', or 'fast' students)?	YES ☐	NO ☐
2. Does the material provide for the interests of adults of different age groups?	YES ☐	NO ☐
3. Are there opportunities for the adult to apply previous knowledge and experience to the new learning tasks?	YES ☐	NO ☐
4. Does the material provide for learning through more than one sensory mode (reading, writing, speaking, listening)?	YES ☐	NO ☐

SUMMARY RATING: Summarize your rating of the quality of the provision for INDIVIDUAL DIFFERENCES. Mark an X in ONE of the boxes below.

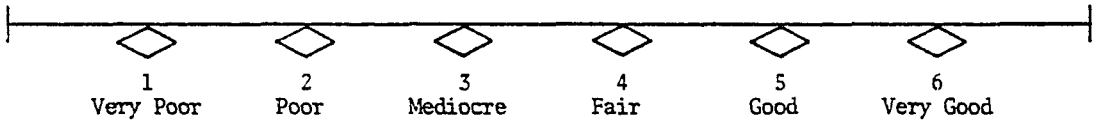


Please turn to Page 3 ►

III. PRINCIPLES OF INSTRUCTION

1. Is the instruction consistently presented in a way that the adult learner can readily understand?	YES ☐	NO ☐
2. Are adequate examples of concept and skills given?	YES ☐	NO ☐
3. Is there adequate provision for practice of new learning in a variety of contexts?	YES ☐	NO ☐
4. Can the adult learner independently obtain feedback on progress through means such as answer keys, self-scoring tests and progress charts?	YES ☐	NO ☐

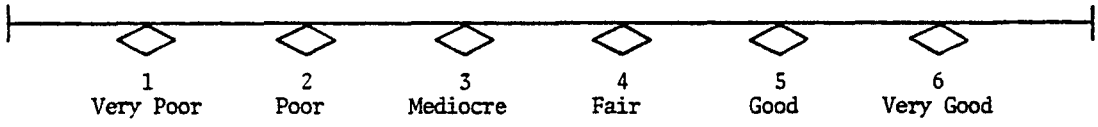
SUMMARY RATING: Summarize your rating of the use of PRINCIPLES OF INSTRUCTION. Mark an X in ONE of the boxes below.



IV. RELEVANCE

1. Does the content include material directly relevant to vocational and career interests?	YES ☐	NO ☐
2. Does the content include material directly relevant to social interests (e.g. voting, sports, hobbies, TV)?	YES ☐	NO ☐
3. Does the content include material directly relevant to personal 'coping' or 'survival' skills (e.g. reading medicine labels, reading supermarket ads)?	YES ☐	NO ☐
4. Is there a significant amount of information in the text that could be relevant and useful to many adults (e.g. how your tax dollar is spent, how to make long distance phone calls cheaply)?	YES ☐	NO ☐

SUMMARY RATING: Summarize your rating of the quality of the RELEVANCE. Mark an X in ONE of the boxes below.



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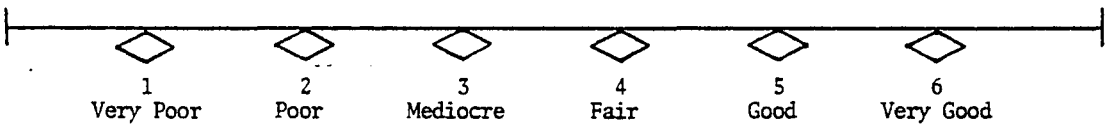
READING INSTRUCTION

I. WORD RECOGNITION

1. Does instruction begin from basic sight words that the learner probably knows already?	YES ☐	NO ☐
2. When new sight words are introduced, have they apparently been selected because of high frequency in adult use?	YES ☐	NO ☐
3. Is the word recognition vocabulary introduced and used in the context of meaningful passages?	YES ☐	NO ☐
4. Is the learner taught more than one approach to word recognition (e.g. use of cues from passage meaning/passage structure, or word structure).	YES ☐	NO ☐

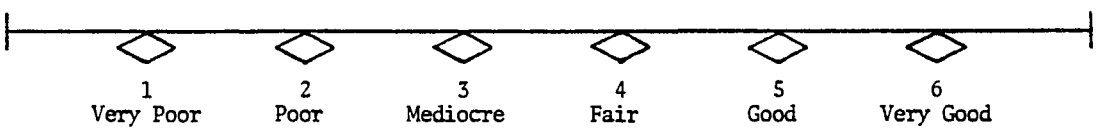
SUMMARY RATING: Summarize your rating of the quality of the WORD RECOGNITION instruction. Mark an X in ONE of the boxes below.



II. WORD ANALYSIS

1. Does the material provide instruction in any method of systematically 'decoding' words?	YES ☐	NO ☐
2. Does the program place emphasis on decoding isolated letters or syllables out of context?	YES ☐	NO ☐
3. Are there adequate examples and practice of word analysis skills?	YES ☐	NO ☐
4. Are word analysis skills taught that may be used often and reliably in actual continuous reading?	YES ☐	NO ☐

SUMMARY RATING: Summarize your rating of the quality of the WORD ANALYSIS instruction. Mark an X in ONE of the boxes below.



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III. COMPREHENSION

		YES	NO
1.	Are practice comprehension passages included at the appropriate level of difficulty for the stage reached in instruction?	☐	☐
2.	Do the materials deal adequately with ways of reading for a variety of different purposes (e.g. for enjoyment, for information, for person-to-person communication)?	☐	☐
3.	Is the learner required to look for meaning beyond the literal level (e.g. at the inferential level, critical reading, 'between and beyond the lines')?	☐	☐
4.	Are the reading tasks frequently related to the goal of comprehension of the whole passage?	☐	☐

SUMMARY RATING: Summarize your rating of the quality of the COMPREHENSION instruction. Mark an X in ONE of the boxes below.

1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

IV. ASSESSMENT

		YES	NO
1.	Is an adequate placement test, formal or informal inventory, or other assessment method recommended or supplied to establish the starting point of instruction?	☐	☐
2.	Would it be clear to an average teacher, after reviewing the instructional materials, what prior competence a learner would need to begin the program?	☐	☐
3.	Are progress tests, unit tests or mastery tests included or recommended, which relate directly to the instructional material?	☐	☐
4.	Is there assessment of how the students can use their reading ability in real-life situations?	☐	☐

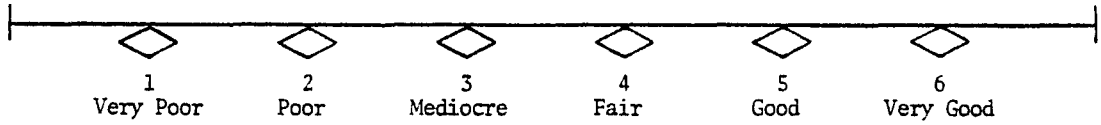
SUMMARY RATING: Summarize your rating of the quality of the ASSESSMENT. Mark an X in ONE of the boxes below.

1	2	3	4	5	6
Very Poor	Poor	Mediocre	Fair	Good	Very Good

Please turn to Page 6 ►

OVERALL RATING

Please indicate your OVERALL RATING for the material under review, in terms of its potential for successful use in adult basic reading instruction, by (a) marking an X in one of the boxes on the scale below, and (b) adding your subjective comments.



Comments: (Please continue on back of this sheet if necessary.)

Please turn to Page 7 ►

1. About how long did you spend on the evaluation just completed? _____ Hr. _____ Min.
2. Had you ever reviewed the material before this evaluation? YES ☐ NO ☐
3. Would you use it now in an appropriate instructional situation? YES ☐ NO ☐

   Comment:

4. Have you already used this text with ABE students? YES ☐ NO ☐

   If YES, then:

   (a) How successful (or otherwise) did you find it in actual use? What did you like/dislike?

   (b) What was the general response of students to the text? What did they like/dislike?

This is the end of the Evaluation for this text. THANK YOU.

APPENDIX E

COMMUNITY COLLEGES SELECTED FOR STUDY

Camosun College
Victoria, B.C.

Capilano College
North Vancouver, B.C.

Douglas College
New Westminster, B.C.

Fraser Valley College
Chilliwack, B.C.

Pacific Vocational Institute
Burnaby, B.C.

Vancouver Community College
Vancouver, B.C.

APPENDIX F

EVALUATORS PARTICIPATING IN RELIABILITY TEST

Ms. Barbara Bowmar
Coquitlam Campus
Douglas College

Ms. Beverly Conklin
Carey Road Campus
Camosun College

Ms. Laurie Gould
Britannia Community Services Centre
Vancouver

Ms. Barbara McCallum
Carey Road Campus
Camosun College

Mr. Don Richardson
King Edward Campus
Vancouver Community College

APPENDIX G

CONTENT VALIDITY TEST: ITEMIZED RESULTS

Key: R = Item rated 'Relevant' by judge
N = Item rated 'Not Relevant' by judge

1. Results of Product Design Section

	Element	Item	Judge A	B	C	D	E	F	G	H	I	J	Percentage 'R' Ratings
I.	Format and Content	1	R	R	R	R	R	R	R	R	R	R	100
		2	R	R	R	R	R	R	R	R	R	R	100
		3	R	R	R	R	R	R	R	R	R	R	100
		4	N	N	R	R	N	R	R	R	R	R	70
		5	R	R	R	R	R	R	R	R	N	R	90
II.	Instructional Resources	1	R	R	R	R	R	R	R	R	R	R	100
		2	R	R	R	R	R	R	R	R	R	R	100
		3	N	R	R	R	N	R	R	R	R	R	80
		4	R	R	R	R	R	R	R	R	R	R	100
		5	R	R	R	R	R	R	R	R	R	R	100

Total no. of items rated 'R' by all judges = 7

Section CVI (percentage of items rated 'R' by all judges) = 0.70

2. Results of Adult Learning Section

	Element	Item	Judge A	B	C	D	E	Percentage 'R' Ratings
I.	Motivation	1	R	R	R	R	R	100
		2	N	R	R	R	R	80
		3	R	R	R	R	R	100
		4	R	R	N	R	R	80
		5	N	R	R	R	R	80
II.	Individual Differences	1	R	R	R	R	R	100
		2	N	R	R	R	N	60
		3	R	R	N	R	R	80
		4	N	R	R	R	R	80
		5	R	R	R	R	R	100
III.	Principles of Instruction	1	R	R	R	R	R	100
		2	R	R	R	R	R	100
		3	R	R	R	R	R	100
		4	R	R	R	R	R	100
		5	R	N	R	R	N	60
IV.	Relevance	1	R	R	R	R	R	100
		2	R	R	R	R	R	100
		3	R	R	R	R	R	100
		4	R	N	R	R	R	80
		5	R	R	R	R	N	80

Total no. of items rated 'R' by all judges = 11

Section CVI (percentage of items rated 'R' by all judges) = 0.55

3. Results of Reading Instruction Section

	Element	Item	Judge F	G	H	I	J	Percentage 'R' Ratings
I.	Word Recognition	1	R	R	R	R	R	100
		2	R	R	R	N	R	80
		3	R	R	R	R	R	100
		4	R	R	R	R	R	100
		5	R	R	R	R	R	100
II.	Word Analysis	1	R	R	R	R	R	100
		2	R	R	R	R	R	100
		3	R	R	R	R	R	100
		4	R	R	R	R	R	100
		5	R	R	R	R	R	100
III.	Comprehension	1	R	R	R	R	R	100
		2	R	R	R	R	R	100
		3	R	R	R	R	R	100
		4	R	R	R	R	R	100
		5	R	R	R	N	R	80
IV.	Assessment	1	R	R	R	R	R	100
		2	R	R	R	R	R	100
		3	R	R	R	R	R	100
		4	R	R	R	R	R	100
		5	R	R	R	R	R	100

Total no. of items rated 'R' by all judges = 18

Section CVI (percentage of items rated 'R' by all judges) = 0.90

APPENDIX H

PILOT RELIABILITY TEST: ITEMIZED RESULTS

Key: Y = Yes
N = No

Element	Item	Text: Cass					Text: Henney				
		Evaluator					Evaluator				
		A	B	C	D	E	A	B	C	D	E
Product Design:											
I. General Format and Content	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
	3	N	Y	Y	N	N	Y	Y	Y	Y	Y
	4	N	N	N	Y	N	N	N	Y	N	Y
Rating		5	4	3	4	5	3	5	5	5	4
II. Instructional Resources	1	Y	N	Y	N	N	Y	Y	Y	Y	Y
	2	Y	N	N	N	N	N	Y	Y	Y	N
	3	N	N	N	N	N	N	N	N	N	N
	4	N	N	N	N	N	N	N	N	N	N
Rating		5	2	3	3	1	4	5	5	6	6

Element	Item	Text: Cass					Text: Henney				
		Evaluator					Evaluator				
		A	B	C	D	E	A	B	C	D	E
Reading Instruction:											
I. Word Recognition	1	Y	Y	N	Y	Y	N	N	N	Y	Y
	2	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
	3	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
	4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rating		5	4	4	6	6	3	4	5	5	6
II. Word Analysis	1	Y	N	N	N	Y	Y	Y	Y	Y	Y
	2	N	N	N	N	N	N	Y	Y	Y	Y
	3	Y	N	N	Y	N	N	Y	Y	Y	N
	4	Y	N	N	Y	Y	Y	Y	Y	Y	Y
Rating		5	2	1	4	3	3	4	6	6	4
III. Comprehension	1	Y	Y	N	Y	N	Y	Y	Y	Y	Y
	2	Y	N	N	Y	N	N	Y	Y	N	N
	3	N	N	N	N	N	N	N	Y	Y	Y
	4	Y	N	Y	Y	Y	N	Y	Y	Y	Y
Rating		4	3	3	5	3	2	4	6	6	6
IV. Assessment	1	N	N	N	N	N	N	N	Y	N	N
	2	N	Y	N	Y	N	N	Y	Y	Y	Y
	3	Y	N	Y	N	N	Y	Y	Y	Y	Y
	4	N	N	N	N	Y	N	N	N	N	N
Rating		4	1	2	4	4	2	4	5	5	4
Total of element ratings		47	34	27	45	34	27	46	53	52	51
Mean element rating		4.7	3.4	2.7	4.5	3.4	2.7	4.6	5.3	5.2	5.1
Overall rating by evaluator		5	4	3	5	2	2	4	5	5	4
Decision to adopt (Y) or not (N)		Y	Y	Y	Y	N	Y	Y	Y	Y	Y

Element	Item	Text: Cass					Text: Henney				
		Evaluator					Evaluator				
		A	B	C	D	E	A	B	C	D	E
Adult Learning:											
I. Motivation	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
	3	N	Y	N	N	N	N	Y	Y	Y	Y
	4	Y	Y	Y	Y	N	N	Y	Y	Y	Y
Rating		5	5	4	5	4	2	5	6	5	6
II. Individual Differences	1	Y	N	Y	N	N	N	N	Y	Y	Y
	2	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
	3	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
	4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rating		5	4	3	4	4	2	5	5	5	6
III. Principles of Instruction	1	Y	Y	N	Y	N	Y	Y	Y	Y	Y
	2	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	3	N	Y	N	Y	Y	N	Y	Y	Y	Y
	4	N	N	N	N	N	N	Y	Y	Y	Y
Rating		4	4	2	5	2	3	5	5	5	5
IV. Relevance	1	Y	N	N	Y	N	Y	Y	Y	N	Y
	2	Y	Y	N	Y	Y	Y	Y	Y	Y	N
	3	Y	Y	N	Y	N	Y	Y	N	N	N
	4	Y	Y	N	Y	N	N	N	Y	Y	Y
Rating		5	5	2	5	2	3	5	5	4	4

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