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ABSTRACT

The establishment of an instructional system for primary pupils in the village schools of Alaska, a major developmental effort of the Northwest Regional Education Laboratory, is described. The objectives of the system, materials specifications, multiple-agency involvement, the production team, and problems the instructional system did not attack are discussed. The new system, Alaskan Readers, was evaluated in order to provide the development team with a constant flow of data on how well the individual components of the Alaskan Readers are performing under classroom conditions and to accumulate information and data on the total 3-year program and its effects on teaching and learning. The methods used in the evaluation are described. Sample questionnaires, data tables, and flow charts are included along with other information in the appendixes. (NH)



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A READING AND LANGUAGE DEVELOPMENT SYSTEM
FOR AN INTERCULTURAL SETTING

AERA SYMPOSIUM

March 1, 70



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A READING AND LANGUAGE DEVELOPMENT SYSTEM

FOR AN INTERCULTURAL SETTING

AERA Symposium
Hotel Radisson
March 3, 1970
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Papers Presented By NWREL Staff Members

Dr. Robert Rath - The Developmental Model
Mrs. Virginia Jones - The Alaskan Reading
and Language Development Program
Dr. Michael Giammatteo - Evaluating an
Innovational System

Discussants

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INTRODUCTION

The story of the Alaskan Reader unfolds the development process for everyone to view. It provides insight into the rigorousness of development, shows the details that must be attended, and the many disciplines involved. Unlike research which must be narrowly defined and closely controlled to be productive, development is broadly based, flexible, adaptable and constantly changing. If the quality of education is to be increased, both research and development are needed.

In addition to our major presenters, Mrs. Virginia Jones, Drs. Rath and Giammatteo, we are indebted to Drs. Mary Austin and George Gabriel for their willingness to participate as discussants. We deeply appreciate their assistance in this Symposium.

The three presenters today represent divergent areas of expertise and illustrate a wide range of talent and skills that are demanded in this highly coordinated team effort. A major task in itself is staffing such a team, obtaining and maintaining commitment to a common purpose, meeting the rigorousness of development schedules and deadlines. While this type of activity is not unique within NWREL, this team exemplifies one of the best.

The Symposium is intended to tell a story. The story begins where the users (students) are--in the Alaskan village. Depicted in real life settings, these students are seen faced with a bleak and desolate environment. This scene was deliberate in order that we may realize the cultural distance these students are expected to travel to become productive citizens in our modern society. Dr. Robert Rath, who has been intimately involved with the planning and coordination of the Alaskan Readers from the very beginning, is especially well qualified to introduce the story. His introductory statement depicts the care with which materials have been developed; the very necessary participation of many agencies and groups; the "mix" of the development team and a quick mention of problems associated with the effort which cannot be confronted within the scope of this project.

THE DEVELOPMENTAL MODEL

Dr. Robert Rath
Coordinator of Planning

The development of an instructional system for primary pupils in the village schools of Alaska is a major developmental effort of the Northwest Regional Educational Laboratory.

In the next few minutes I wish to make five points about this unique development of instructional materials. I want to talk about objectives, materials specifications, multiple-agency involvement, the development team, and problems this instructional system has not attacked.

Objectives

The priority need to develop reading and language development materials for intercultural settings has a high priority by teachers, administrators and cultural groups. This priority need can be documented from achievement data, value statements and opinions.

The objectives of the materials development for any given cultural group--and today we are primarily talking about native Alaskans--can be viewed at three levels: (1) The generalizable objectives of development applicable to any intercultural setting whether it be Alaskan, Indian, the inner city, or the South Pacific. (2) The series of systems objectives in the development of materials required to assist both the development process and the effectiveness of the components of the system. (3) A series of objectives to determine cost effectiveness and comparative effectiveness of the instructional system with the "traditional" system.

The Northwest Regional Educational Laboratory has approached the development of the Alaskan Readers with the first two sets of objectives-- the generalizable model for intercultural settings; and a series of systems objectives. Comparative objectives are being delayed until after development.

Materials Specifications

The classroom products developed in the Alaskan Reading and Language Development materials are focused at a series of statements from knowledgeable Alaskans which set the parameters for the system. Specific innovations in the Alaskan system include:

Cultural (conceptual) relevance for the family and village which expands rapidly to the states and nation; that is, the content of the first levels will concentrate on the Alaskan village culture and succeeding levels will expand students' understanding of other cultures and environments.

Word attack skills based upon the generalizable regularities of the English language taught in an orderly, sequential pattern.

Use of literary story elements to capture interest and develop motivation.

Teaching of listening, speaking, reading, writing and spelling in integrated Language Development Units.

Performance objectives and criteria established over a three-year, twelve-level cycle.

Use of natural speech patterns for beginning instruction.

Adaptability to a variety of organizational patterns, including individualization, nongrading, grouping and team teaching.

Multiple Agency Involvement

A number of different agencies have been intimately involved in the development of the Alaskan system. Two major agencies--the Division of State-Operated Schools and the Bureau of Indian Affairs--operate nearly 200

village schools. Since these agencies were the primary target, they have played the unique role of providing field test teachers, classrooms and sites. The University of Alaska and the Alaska Rural School Project have provided Alaskan orientation, monitoring and assistance in the teacher training phases of the program. The Alaska Federation of Natives has participated in the planning of the program from the beginning. The Laboratory has coordinated the multiple agency focus of the program as well as provided the expertise for creating and producing the classroom products. This combination of people and institutions has brought success in combining the new and promising with the old and traditional. The result has been a reading and language development system which is Alaskan, based upon the best knowledge available, and classroom usable in remote Alaska.

The Production Team

The production team includes several different areas of expertise. The author, Mrs. Virginia Jones, creates and manages the development of the classroom materials. Two types of screening are provided: (1) A cultural anthropologist, Dr. William Loyens of the University of Alaska, examines materials for cultural relevance, and (2) Dr. Patrick Groff of San Diego State College critiques each level of the Readers. Of course, the technical and artistic talents necessary to illustrate and produce the Alaskan Readers are also a part of the production team. The pilot and field testing of the materials by seventeen Alaskan village teachers provides an essential check in several ways for the developers. In fact, the pilot test teachers are a part of the development team as they feedback about cultural relevance, "teachability," and responses of students and villagers to the materials. The production and testing schedule is shown in Table 1.

TABLE 1

SCHEDULE FOR DEVELOPMENT OF ALASKAN READERS

	Summer 1968	School 1968-69	Summer 1969	School 1969-70	Summer 1970	School 1970-71	Summer 1971	School 1971-72	Summer 1972	School 1972-73
Field Test Group No. 1 17 teachers 260 students	Teacher Training	Introduce Levels I, II, III and IV	Feedback and Instructing	Introduce Levels V, VI, VII and VIII	Feedback and Instructing	Introduce Levels IX, X, XI and XII	Feedback and Instructing	Data Summary Revision	Technical Report	Revisions Available
Field Test Group No. 2			Teacher Training	Introduce Levels I, II, III and IV	Feedback and Instructing	Introduce Levels V, VI, VII and VIII	Feedback and Instructing	Introduce Levels IX, X, XI and XII	Data Summary	Technical Report
Implementation					Teacher Training	Introduce Levels I, II, III and IV		Introduce Levels V, VI, VII and VIII		Introduce Levels IX, X, XI and XII

Problems Not Attacked

It would be easy to leave the impression that the Alaskan Reading and Language Development program is a "silver bullet" for primary children in remote Alaska. There are several problems which are not approaches in this development effort.

These materials are not bilingual, while cultural relevance is carefully included. The materials do not teach any of the Eskimo dialects, the Athapascan language, the Aleut language or any of the Southeastern Alaska languages.

The teachers in Alaskan villages indicate that up to half of the students have major educational problems which have their roots in health, nutrition and medical problems. Obviously, an Alaskan instructional system cannot overcome these kinds of problems unless coordinated with other intervention programs.

The question of control of education is contentious where cultural groups are involved. The Advisory School Board issues have reached remote Alaska. The Alaskan Readers do not approach this problem, even though the material is being used as a point of identification between the cultural groups and the school.

The instructional system provides an essential structure and word attack system. It does not provide all of the materials, all of the experiences or a rigid protocol for the teachers. It is basal in the sense of structure and word attack but not in terms of content.

To most people, the difficult environmental and cultural setting in Alaska would alone be an adequate challenge. Surviving the rigors of climate and the hazards of Alaskan bush flying, Virginia Jones, NWREL authoress, has subjected her creative endeavor to the added rigors of development. In addition, Virginia is always constrained to create interesting and intriguing reading content within the confines of a "foreign culture." Backed by years of personal research, she believes strongly that learning to read the English language can be facilitated by using the regular structure of English words (graphoneme) as part of a total language development program. Therefore, Virginia, has been extremely alert to the integration of listening, speaking, spelling, writing, arts and crafts, music and poetry experiences into this language arts program.

Thus the Alaskan Readers have grown out of a sound research base. They were created to be meaningful within the Alaskan culture, to be used with real teachers and real students in villages, to be monitored by language arts specialists, cultural anthropologists, artists, illustrators, and administrators. Systematic feedback is collected and analyzed by evaluators. Virginia Jones is alive and well and still living in Portland, Oregon but is here today to present the heart of the Alaskan Readers story to you.

THE ALASKAN READING AND LANGUAGE DEVELOPMENT PROGRAM

Virginia W. Jones

The process involved in developing a reading and language development program for any target population is an exciting yet demanding adventure. It is exciting because of the challenge it presents; it is demanding because of the tremendous responsibility the developer must feel toward the user; it is an adventure because regardless of how carefully the instructional continuum may have been planned, one can never fully anticipate the limitless variables, the unexpected avenues of approach that constitute the final product. You can well imagine the added challenge which an Alaskan target population presents.

The initial problem facing the developer was the planning of the overall instructional continuum. It was decided that because of the vast range of differences among villages and among pupils in any one village, an ungraded primary structure offered the best opportunity of accommodating these differences. Furthermore, such a structure could be readily adaptable in graded classrooms. The three-year time period was divided into twelve levels of instruction. (Transparency #1) In viewing this instructional continuum, one must understand that our goal was to accept the first grader at whatever stage of language proficiency he brought to the school and then prepare him so that at the end of the three-year period, he might function at an acceptable performance level in a regular fourth grade curriculum using standard commercial materials. The thrust of this structure could be said to be two-fold; on the one hand pupils are expected to acquire

skills in all areas of language arts (listening, speaking, spelling, reading, writing) and on the other, they are to acquire a sufficient experiential background to enable them to deal effectively with cognitive elements in an environment that is alien to them. In other words, pupils are to become skillful using content which is relevant to them.

Let us first consider the matter of concept development. I have become increasingly aware of the fact that cultural relevance may actually be a misnomer, and that conceptual relevance may well be a term which more explicitly defines the attitudes, the orientation which an instructional program for a particular target group must assume. In a land such as Alaska, decisions regarding the conceptual relevance of the content were not easily determined, for anthropologists tell us that in Alaska we have four basic ethnic groups--the Eskimo, the Athapascan, the Aleut, and the Indians of the southeast (the Tlingit and Haida), and that each of these groups differs from the others in their customs, religion, language, crafts, etc. To further illustrate the magnitude of the problem one has only to learn that in the Athapascan group there are twenty-seven identifiable dialects. And so we began this whole process of conceptual relevance using one basic concept as our foundation: I am Alaskan.

In investigating the ways in which children acquire concepts, we consulted current research. It was decided that we would begin by limiting the introduction of all cognitive elements to those found in a typical Alaskan environment; that we would proceed from this to the development of connotative meaning of these elements; that vicarious experiences would be reserved until a later date. A good illustration of this kind of sequencing concerns itself with the development of the word "dog." In the early levels

of the Alaskan Readers, all of the dogs drawn and all of the stories relating to dogs, concern themselves with the Alaskan huskie. As early as Level One, a special page is provided in the book where we illustrate other breeds of dogs and the children are told that in other parts of their country they would find dogs like this. When we reached Level Seven we introduced the hot dog--which of course would be a vicarious experience for children both in the way in which the word "dog" is used and because of the nature of the element itself. This flow of concept development can best be described by briefly examining the titles in the various levels of the continuum.

The story book in Level One "Alaskan Friends" deals with the adventures of a group of young children in a typical Alaskan village. Level Two is called "Surprises" and in this book we deal with those elements which bring surprise and pleasure to a village child--the arrival of a new teacher by bush plane, the arrival of a new Sears Roebuck catalog, a village mother being flown out of a village to have her baby, and so forth. In Level Three we trace the story of an Alaskan huskie from the time he is born until he takes his place as a working member of a dog team, and this book is called "Snowball." Level Four deals with stories related to adventures in the world of school, and again each of these stories is based upon the developer's observation of activities carried on in Alaskan village schools. Level Five, "Fun In The Village," describes various work and play activity of villagers.

It must be remembered that our overall goal was to lead this child from the world he knew into the world in which he would someday be called upon to assume his rightful place as an American citizen. Therefore, upon the

completion of Level Five, the decision was made that it was at this juncture that the broad expansion of concepts should increase. Subsequently, Level Six and Level Seven were written as companion pieces. In Level Six, which is called "A Visit To Quignuk," we tell the story of a Caucasian boy and his father who have been on a trip to the oil fields. Their plane is downed in a blinding snowstorm and Roy and his Dad are compelled to spend three days and two nights in the imaginary village of Quignuk. The family which takes them in assists in the repair of minor damage to the plane, and provides them food, shelter, and entertainment during their stay. Great emphasis is placed upon the pride, the dignity, and the resourcefulness of the native family. At the conclusion of the three-day visit, the Caucasian father asks the Eskimo father's permission to return to the village in spring when school is over, and take Ed, the Eskimo boy, to Fairbanks for a visit. Thus we have made a smooth entry into Level Seven, which is entitled "Going Places." Level Seven was prepared in an interesting way. Since our chief goal at this juncture was the expansion of concepts, it was decided that the illustrations must, as realistically as possible, portray the city of Fairbanks, and so the Laboratory media center arranged for one of their staff to go to Fairbanks, and to secure written permission to actually engage an Eskimo boy, a white boy and his sister in a series of pre-planned activities--all centering about life in Fairbanks. This resulted in approximately 500 photographs and for the first time, the developer was confronted with the task of writing a book based upon illustrations, the reverse of the usual process. Ed's adventures in the city of Fairbanks were carefully structured so that at no time would he feel inferior or out of place. This is extremely important, for the anthropologists tell us

that it is safe to assume that every child now in primary grades in an Alaskan village school will at some time in his life visit Anchorage or Fairbanks and that a large percentage of these children will eventually live in these or other metropolitan areas. Throughout both books the Eskimo boy is self reliant, questioning, but always able to deal effectively with the situation confronting him.

Level Eight will be a literature level and the title of this book has not yet been determined. Literature, as exemplified in Alaskan legends, was introduced first as a part of the oral language development by using legend picture cards during Levels One, Two and Three. Beginning with Level Four, each of these books has contained an authentic Alaskan legend, sometimes Indian, sometimes Aleut, sometimes Eskimo. Level Eight will be entirely a literature level, 50% of which will deal with Alaskan legends, the balance containing stories from the traditional American literary heritage.

Level Nine will be entitled "Real Things" and this will attempt to acquaint children with the kinds of knowledge and work necessary to produce all of the everyday things about them--sources of food, furniture, clothing, etc. Level Ten will be called "Outside" (the term used by natives to refer to those people and places in the contiguous 48 states) and it is our intent to write of the adventures of children living in New England, in Florida, in the Midwest, of Spanish American children living in the Southwest and so forth. Our objective here is to promote among these children a feeling of oneness, a feeling of belonging to a part of a larger culture. Level Eleven will be called "When I Grow Up" and this will deal with the aspirations of the native children. Because Alaska is a land where economic change is

bringing about a very rapid western acculturation, it is important that these children be encouraged to aspire to many of the more traditional American pursuits, while at the same time, be furnished a sense of pride in choosing to remain in Alaska and continue those special pursuits which we now describe as being typically Alaskan.

Level Twelve will never be written in this series, for it is at this juncture that the child will make entry into his first standard basal reader. In order to help him bridge this gap, special planning will characterize Level Eleven. Our research assistant has already tabulated all of the concepts which constitute the contents of the six basal readers most commonly used in our country, and has also tabulated the vocabulary for each of these. We will soon be starting to run these data through a computer in order to find out which concepts, which vocabulary must be known to our children in order to make built-in provisions for their success in the broader reading experience. Level Eleven will be constructed using the data furnished us through these procedures.

The decisions regarding the teaching of skills and the way in which the various strands of skill teaching evolves through the levels is an exacting process. If one were to just look at the materials we have created, one might be tempted to say "This is a basal reading system much like others, different only in that it is conceptually relevant to the Alaskan child." Actually, there is only one way in which our material resembles basal reading, and that is in its systematic, sequential skill development. In all other ways it is different. For example, we treat reading truly as a part of language development. Instead of reading lesson plans, we have Language Development Units, LDU's, and before any one segment of any level can be

said to have been taught, pupils will have had experiences in listening, speaking, spelling, writing, arts and crafts, music, and poetry, as well as reading. Perhaps the greatest difference between our program and other programs is the manner in which words are introduced and word attack skills are taught. Over the past ten years, I have been arduously researching the structure of English words. It is as a result of this research, (which, incidentally is an ongoing aspect of our work at the Laboratory) that the graphoneme Concept was conceived and developed as an important aspect of the methodology. A detailed account of The Graphoneme Concept can be found in our Overview. Suffice to say, a graphoneme is a closed syllable, one that begins with a vowel and ends with a consonant or semi-vowel. Since this is a linguistically oriented concept, it is important that we present our operational definition of linguistics, for like so many terms in education today, it has become popular to attach the word linguistic to all kinds of activities. We say that our program is linguistic for three reasons: First, it deals with those regular structures which exist within English words--graphonemes; second, careful attention is paid to variations in patterning in the structure of our English sentences; third, realizing that language only has meaning as it communicates in context, we have made every endeavor to keep our language expression within a contextual framework and as close to natural speech as possible.

The decisions regarding the teaching of skills, and the ways in which the various strands of skill teaching evolves to the levels is an exacting process. As each level is completed, these skills are charted out.

(Transparency #2) Since a linguistically oriented method of word attack is the focal point for the teaching of reading, special attention has to be given to tracking these reading skills. (Transparencies #3, 4, and 5)

This kind of analysis in the developmental process serves several important functions:

1. The developer is kept aware of skill progression at the same time the development is proceeding.
2. At the conclusion of each level, the developer can assess progress in two ways:
 - a. Against the stated objectives for that particular level.
 - b. Against the overall objectives to be accomplished during the entire program.
3. Such an analysis is a valuable asset as one of the determiners of revision. For example, charts such as these (Transparencies #6, 7, 8, 9, 10, 11) provide a graphic impact which makes the developer immediately aware of excesses and omissions that must be re-examined.

Language development is not tracked in exactly the same way. Instead, each of the strands of language development has been picked up and examined. For example, we know already that we need even more language experiences than we have provided. Furthermore, we want to refine our spelling procedures. These other areas of language development are examined by having our research assistant go through the program, identify these, and furnish us with data that can be examined in detail for purposes of refinement.

At the present time, the thrust of our activity, could be said to be five-fold; (Transparencies #12, 13, 14, 15 and 16) for we are engaged in continuing initial development in revisions, in language supplements, in teacher training, and of course, in a certain amount of public relations activity.

Through all of these activities and processes, the challenge is being met. The responsibility is being carried out, and the adventure is being permeated by an excitement never before experienced by this developer.

The twofold purpose of evaluation is to provide the Alaskan Readers development team with a constant flow of data on how well the individual components of the Alaskan Readers are performing under classroom conditions and to accumulate information and data on the total three-year program and its effects on teaching and learning. Dr. Mike Giammatteo was responsible for developing the evaluation design from the very beginning. His task encompassed the usual problems of helping to sharpen the objectives, adapting to their change as the program developed and coping with short budgets and the lack of skilled help. In addition, the evaluation has had the added complications of communication over thousands of miles (which is costly and time consuming) and the need to use unsophisticated data collectors to obtain the needed information. A high level of conceptualization was required to build in evaluation procedures from the start. Busy and productive as Dr. Giammatteo is, he has been more than equal to the task.

EVALUATING AN INNOVATIONAL SYSTEM

Dr. Michael C. Giammatteo
Coordinator
Intercultural Program

EVALUATION OF A PROGRAM THAT INVOLVES DEVELOPERS AS WELL AS USERS OF THE MATERIALS DEMANDS A DELICATE BALANCE.

The outline plan following is sufficient for evaluative needs.

However, revision data often relates to "printing" factors, i.e., "picture comes too soon in a story and kids read the picture clue." OR, "pictures of people are too mean for this kind of story."

Some data relates to morale factors: If I am a supervisor, shouldn't I be taught the system prior to the teachers? OR, I teach second grade and my children keep asking me for the Alaskan Readers; when can I get them? OR, I don't think I can teach in this type of structure....etc. Data on morale often calls for a bush pilot trip. Based on morale data we were able to provide for one supervisor's workshop and several statewide lectures at learned societies.

We also have unsolicited kid data....cards, letters, and talk sessions during village visitations.

Another kind of data is political and comes in the form of requests. "Please include our ten villages next year.....the teachers are really hot for this material."

Now you and I can pull in our turtle-like evaluative necks and claim a defense behind our statistical-proof shield. Friends, clinical evidence not part of a formal design often provides the real meat for revision. Unfortunately, we must still deal at the level of proving effectiveness with a worn-out set of expectancies. The classic is studying two methods of

teaching (group centered vs. teacher centered) only to find out the kids were "grade" attainment centered. The side elements of the design are providing State Department of Education and Bureau of Indian Affairs personnel with cost, distribution and morale data. It will never hold up in a graduate seminar on design weaknesses. BUT KIDS WILL LEARN.

Complete data analysis will be provided at the end of year three in the project (1971). Our system has a pacing factor which accounts for cumulative skills development. Thus by year three our children will be equal to or better than children on a recognized standardized test.

The general features around which evaluation occurs includes:

1. Teachability Data
2. Materials Appropriateness
3. Skills Mastery
 Comparative
 Tasks Within System

The research plans and appendices will provide the interested reader with a framework for following our discussion.

Research Plans

The plan includes a description of the procedures for administering the criterion tests or for gathering the criterion information during the developmental phase.

Population

Forty-nine classrooms in thirty-six Alaskan Village schools are identified as test sites. In seventeen of these schools, materials are in use for the second year; in nineteen this is the first year. Appendix A lists the schools with locations. Test site criterion were to offer geographic, isolation, and ethnic balance.

Data will be collected from these test sites as follows:

Teacher Descriptive Data

A questionnaire developed at NWREL (see Appendix B for sample items) will be filled out by each teacher during site visitations by a contact man in Alaska. He will return the questionnaires to NWREL as they are completed.

Pupil Descriptive Data

The general descriptive data for each class will be collected from the questionnaires mentioned above.

Specific data on each pupil is maintained by the classroom teacher and forwarded to NWREL when the child completes the test inventory for each level.

Community Descriptive Data

This data will be collected by the Alaskan contact and will be forwarded to NWREL for tabulation and interpretation. Some pieces of this data will be obtained from the questionnaire. A complete monograph on these features will be available in the near future.

Pupil Achievement Tests

Inventories are administered as per direction in the Teacher's Manual. Each pupil is tested as he completes each level of the materials. This data is forwarded to NWREL regularly as outlined in the manual. The evaluation is thus internal to the system.

Standardized test scores, as available from schools or government agencies, will be collected by mail or through the contact person. Normative data from past years will be sought to create more accurate baseline information.

The plans contain behavioral indices of what students can or will do after experiencing the product or process and includes descriptions of criterion tests or measures which reflect the attainment of those outcomes.

The behavioral objectives for the Alaskan Readers are contained in the writer's original work. They are being implemented for each level (eventually through twelve levels), Level 12 being an interface manual between this system and available commercial texts.

Internal Tests

The Alaskan Readers include tests to measure the objectives presented by the developer. These are related item-by-item to the objectives for each level. The instrumentation is included in the packet of materials given to the teacher of the test site classes. Content validity checks have revealed a need for item revision.

External Tests

For comparative data, test scores from the Metropolitan Reading Readiness Tests are collected. These results allow a measure of consistency with normative expectation of the test populations.

Teacher Opinion Data

These data will be collected from the questionnaire referred to previously.

Teachers will write on the materials, notes of weak points, strong points, and points where pictorial or story relevancy is not acceptable. This opinion data will be fed in immediately to the development team.

Data Treatment

The data collected in this phase will be for the benefit of the developer and for feedback to users and potential users. Descriptive factors will be statistically isolated with respect to their effect on

pupil success. Emphasis will be placed on obtaining more standardized test data from past years to draw firmer conclusions about deviance from expected progress patterns. Opinion data will be categorized and summarized primarily for the benefit of the developer.

The plan contains a written description of the contents of the activity or process which is sufficient to enable a panel of lay readers to know what the product or process contains or does. Such a description also identifies the particular version of the product under description.

The Alaskan Reader materials are published and available for the perusal of lay observers. All of the supporting teaching aides are also physically observable.

The Alaskan REaders were conceived as a set of culturally-relevant readers for children in isolated villages in Alaska.

There will ultimately be twelve levels of readers, each with its set of supporting aids, and evaluation inventories to be administered by the teacher as each pupil completes each unit.

It contains a description of the intended consumer population including information about the educational levels, cultural background, age, and other characteristics and skills which influence the consumer's attainment of objectives established for the product.

The Alaskan Readers are designed for use in isolated villages in Alaska. Indian and Eskimo children in these villages have been identified as seriously retarded in their reading achievement, perhaps due to lack of reading materials relevant to their culture.

The materials are to be available in twelve levels which will constitute a full reading course for the primary grades.

It contains a description of the procedures and conditions for administering the product.

Very carefully constructed and complete Teachers' Guides accompany the Alaskan Reader materials.

These are reinforced by periodic workshops and visitations.

It contains a listing of the questions to be answered and the data to be gathered during the developmental testing phase.

Teacher Descriptive Data

Name
Sex
Age
Highest degree earned
Number of years teaching experience
 Total
 In Alaska

Pupil Descriptive Data

Number
Names
Ages
Sex
Handicaps
Ethnic makeup
Areas of unusual difficulty

Community Descriptive Data

Size
Ethnic makeup
Measure of isolation
Educational level
School population
Pupil/Teacher ratio
Type of school
Reaction of community to use of Alaskan Readers

Pupil Achievement Data

Results of inventories
Standardized test scores

Teacher Opinion Data

Measure of changes in teaching as a result of using Readers
Value judgments on total package and individual components
Comparative measure of time spent teaching language arts
Need for more supporting materials

Areas where use has been limited
Areas in which workshop was helpful
Ideas for future workshops
General comments

Cycle Two: Research Plans

Now that the testing of the Alaskan Readers is well into its second year, there is growing need for more specific types of research data.

Plans are being made for moving in these directions in the evaluation effort of this project:

1. More intense assessment of progress patterns of a smaller sample of pupils. The increasing use of Alaskan Reader materials has created a user population which is much larger than is needed statistically to draw inferences about the impact of the materials.

2. Closer study of correlations of pupil progress with variables such as:

- Entry Age Levels
- Ethnic Background
- Teacher Variables
 - Age
 - Tenure
 - Career Pattern

Data matrices created by these types of data will be valuable in isolating those variables and combinations of variables which effect the achievement of pupils.

3. Establishment of control groups (similar with respect to specific identified variables) which are not using the Alaskan Readers. This will add weight to conclusions drawn about the effects of the Alaskan Reader Program.

Presentation and discussion of the evaluation plan, its operation and its implications, as an integral part of the summer workshop.

Evaluation of the workshop itself.

4. Further use of ethnic data and standardized test data from the Alaska Department of Education to establish firmer norms against which to compare progress of children in the Alaskan Reader Program.

5. Evaluation of dissemination factors.

6. Dissemination approaches with built-in evaluation. University personnel and State Department personnel will be taught the technology of this reading development program. They will be asked to run experimental studies to see how much of the system really is required to meet their criterion. Substudies of content and "cultural" relevancy must also be studied.

7. Assessment of the most effective teacher training approach to insure the system is used as per protocol.

Summary

The Alaska Project is one of eighteen designed to facilitate acquisition of language and reading development skills. The data gathered here fits into a larger matrix and was not considered in today's discussion.

APPENDIXES

- Appendix A - Test Site Schools
- Appendix B - Alaskan Readers Teacher Questionnaire
- Appendix C - Projected Time-Line of Events Related to Spread of Alaskan Readers
- Appendix D - Normative Flow Across Activities Currently in the Intercultural Program
- Appendix E - Selected Characteristics of Villages
- Appendix F - Source of Power and Fuel
- Appendix G - Sample Pages from Forthcoming Document
- Appendix H - Language and Reading Development Program for Cross-Cultural Settings - Component 280 - Activities One and Seven

APPENDIX A
TEST SITE SCHOOLS

Second Year

Allakaket

Angoon

Bethel

Chevak

Chignik Lake

Hooper Bay

Kaltag

Kasigluk

Kipnuk

Koyukuk

Lower Kalskag

Metlakatla

Port Heiden

Quinhagak

Togiak

Wainwright

Wales

First Year

Aleknagik

Barrow

Clarks Point

Egegik

Ekuk

Ekwok

Koliganek

Kongiganak

Levelock

Manakotak

New Stuyahok

Nulato

Platinum

Scammon Bay

Shungnak

St. Mary's

Tuntutuliak

Tununak

Unalakleet

3. In what ways are you teaching Language Arts differently since you have been using the Alaskan Readers? Please discuss briefly.

4. What things, if any, do you dislike about using the Alaskan Readers?

5. In what areas are your children experiencing unusual difficulties?
(Rank 1, 2, 3, etc., as many as apply)

- graphoneme concepts
- word recognition
- rhyming
- beginning sounds
- writing letters learned
- story sequencing
- psycho-motor coordination
- spelling
- reading
- other (specify)
- other (specify)

Comments:

11. Have you given any demonstrations about the Alaskan Readers at your school? To whom?

12. What reactions have you received from parents or other members of the community relating to the Alaskan Reader Program?

13. Circle the number which best expresses your feelings about each component. The scale runs from 1 (excellent) to 5 (needs many improvements.)

Student Workbook	1	2	3	4	5
Student Book	1	2	3	4	5
Teacher Manual	1	2	3	4	5
Reading and Language Development Book	1	2	3	4	5
Holiday Book	1	2	3	4	5
Object Cards	1	2	3	4	5
Rhyming Cards	1	2	3	4	5
Legend Illustrations	1	2	3	4	5
Work Cards	1	2	3	4	5
Encoding Cards	1	2	3	4	5
Inventories	1	2	3	4	5
Drawings	1	2	3	4	5
Printing	1	2	3	4	5
Binding	1	2	3	4	5
Other _____	1	2	3	4	5
Other _____	1	2	3	4	5
Other _____	1	2	3	4	5

APPENDIX C

PROJECTED TIME-LINE OF EVENTS

RELATED TO SPREAD OF ALASKAN READERS

September

September

1970

Expansion of Alaskan Reader Project Materials

1972

1971

Alaskan Reading Development Program Available
on Request to Any District Who Agrees to Meet
the Criterion for Use

Teacher Training
Full System of Materials

1971

Available for Researchers and Experimental Use
to See How Much of System Really is Needed

1972

1971

Teacher Training Institutes Select One Person
Per Appropriate Staff to be Trained in Alaskan
Readers Technology

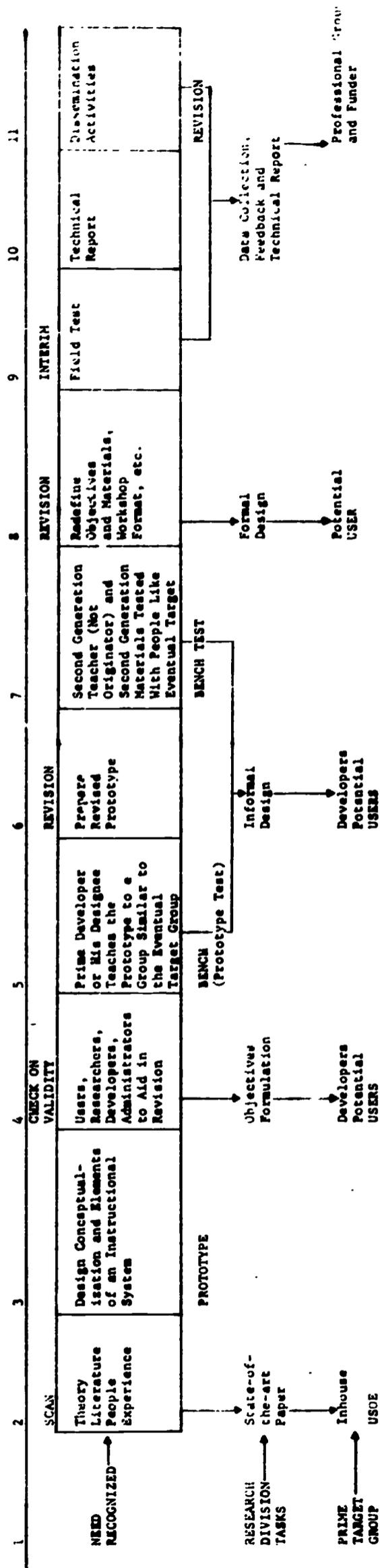
1972

All Factors Within Control of People in Alaska

APPENDIX D

These charts and text are designed to show the normative flow across activities currently in the Intercultural Program. The real advantage of a Laboratory is we can do sequential and collaborative research under one structure. The Alaskan Project is one of a series designed to give us feedback about a "good" language and reading development program.

Figure 1
GENERAL DEVELOPMENTAL ACTIVITIES IN PROGRAM 200



Development Strategy

The Intercultural Program development strategy includes a series of phases as shown by Figure 1 and the following outline. (Phase 1 - Phase 8)

Phase 1 - Need Recognized

- a. Assess needs by (National, Regional, State, Ethnic) priorities published.
- b. Identify goals and current needs via inhouse assessments.
- c. Define target populations related to such needs.
- d. Generate criteria for possible discipline where a literature scan would be beneficial.

Note: Phase One suggests more personnel than found within NWREL or the program team structure.

Main Developmental Phases related to program, team level.

Phase 2 - Scan Function

- a. Scan for related systems or conceptions.
- b. Retrieve related systems.
- c. Meet with people with experience in the general area of concern.

Phase 3 - Develop Prototype and Specify Components

- a. Develop conceptual framework.
- b. Specify components and elements of a prototype.
- c. Specify and select development personnel and resources.
- d. Design management and review procedures.
- e. Design a prototype.
- f. Tentative

Phase 4 - Viability Check

- a. Bring several ultimate users, administrators, teachers, researchers and developers together.
- b. Review prototype listing constraints against its use.

- c. Review system and prepare prototype for bench test.
- d. Start formulation of objectives.

Phase 5 - Bench Test

- a. Use of system by target groups in simulated, neutral or real environments.
- b. Preparation of trainers started.
- c. Sessions led by originator or his designee.
- d. Collection of data needed for evaluation related to teachability, clarity, workshop format, etc.

Phase 6 - Revision Includes

- a. Determination of extent to which criteria specified in design were met.
- b. Consideration of technical quality of materials or media when applicable.
- c. Possible action as a result of evaluation includes:
 - 1. Entry to redesign (includes possible revision of evaluation methods).
 - 2. Termination of activity.
 - (a) Reached success criteria.
 - (b) Judgement that projected end product not worth projected costs.
 - 3. Revision of success criteria.
 - 4. Revision of workshop format.

Phase 7 - Second Generation Testing

- a. Change in evaluation plans.
- b. Change in content of learning materials.
- c. Change in the media of presentation.
- d. Change in the instruction for presentation and instructors.
- e. Improvement in quality of media presentation.

- f. Change workshop participant group.

Note: Redesign in a, b, c, or d may require further testing with target groups.

Phase 8 - Revision Cycle

- a. Redefine goals.
- b. Generate specific objectives.
- c. Specify evaluation design.
- d. Obtain additional form clearances if required.
- e. Develop new evaluative tools if required.
- f. Prepare interim product.

Phase 9 - Field Test

- a. Field test on target population.
- b. Complete plans of development as per phase 6 if required.
- c. Initiate into NWREL sign off procedures.

Phase 10 - Post Development

Technical reports include:

- a. Description of program objectives.
- b. Contents of system.
- c. Success criteria.
- d. Evaluation procedures and results.
- e. Location of test sites and description of samples used in tests.
- f. Specifications of conditions and limitations of tests.

Phase 11 - Dissemination Plan

Includes:

- a. Methods to be used to make product available for use within region.
- b. Methods to be used to make product available outside region.

LEVELS OF TESTING RELATED TO STEPS IN THE DEVELOPMENT PROCESS

Steps in Development

1. Identify product to be developed.
2. Survey relevant research data.
3. Design and elaborate specification of product.
4. Prepare a prototype product.

Related Testing and Evaluation

Bench Testing--During the generation of prototype materials, they may undergo a variety of tests before the product is ready for prototype status. Bench tests may be conducted to examine various aspects of the material such as appropriateness, efficacy and correctness.

AT THIS POINT, A PROTOTYPE PRODUCT HAS BEEN DEVELOPED

5. Field trial the prototype product.
6. Analyze test data and identify implication for redesign.
7. Assemble a revised product.

Field Trial--The prototype product is tested to provide the developer with information crucial to the revision into interim form.

AT THIS POINT, AN INTERIM PRODUCT HAS BEEN DEVELOPED

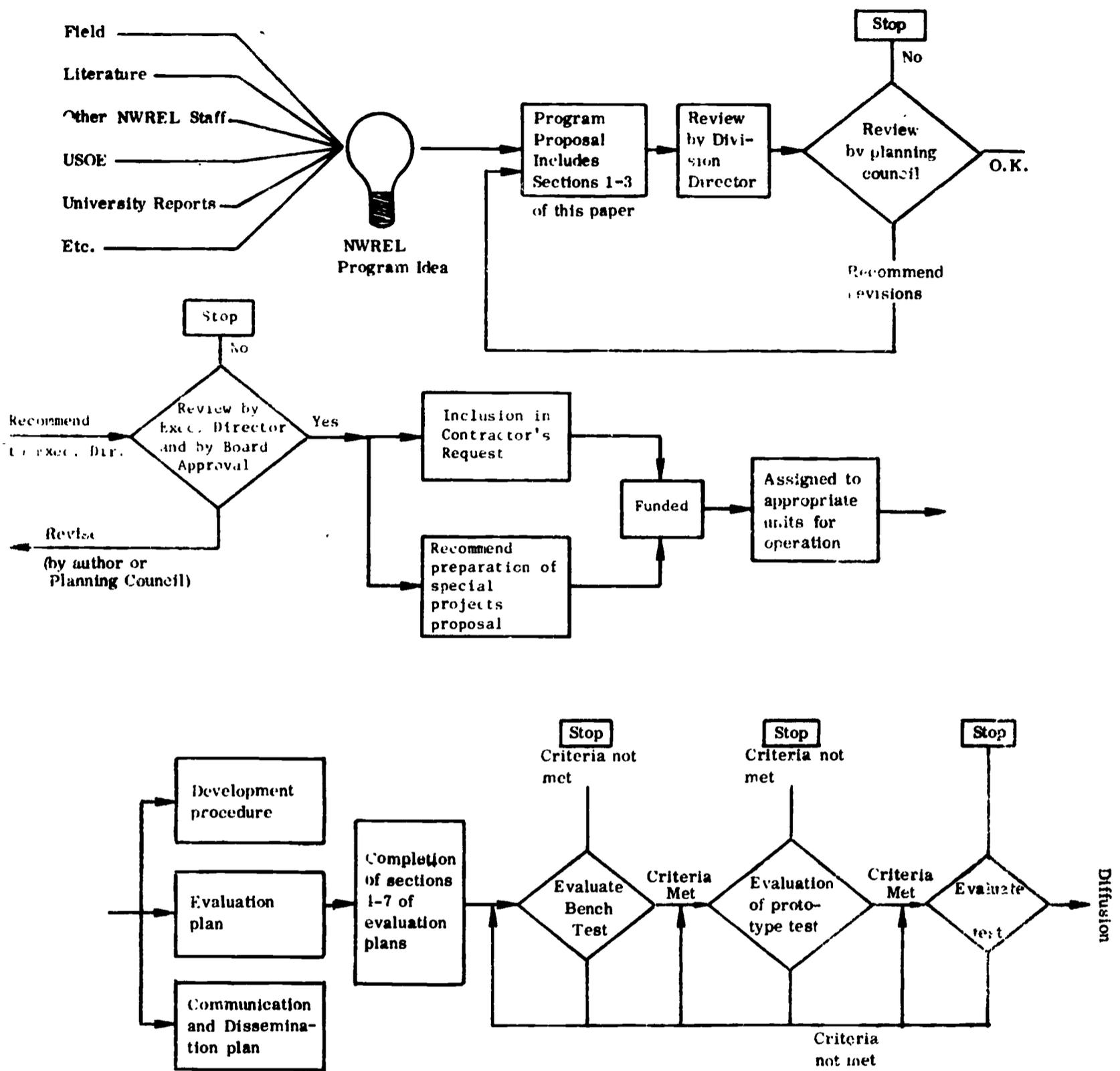
8. Use the product experimentally.

Final Field Test or Final Product Test--When the interim product is sufficiently polished so few, if any, changes are anticipated, the final product is conducted as a quasi-experiment using rigorously selected samples of the intended consumer proportions in a natural educational environment with statistical controls to assess the impact of environmental constraints.

AT THIS POINT, THE FINAL PRODUCT IS READY FOR NATIONAL DISSEMINATION

9. Development and implementation of a dissemination plan.

Flowchart
EVALUATION PLANNING IN RELATION TO PROGRAM DEVELOPMENT



- NOTE: 1. Plans for evaluation begun in the program proposal may be modified at any following stage. Each subsequent revision should be collected for file purposes behind the document it revises. This results in a chronologically oriented file, by sections in this outline, that illustrate:
- a. Evolution of evaluator plans
 - b. Impact of evaluation on decision making
 - c. Current status of data
2. Any or all of the bench, prototype or final test may be skipped. If all are omitted, it is not a developmental program. Bench and/or prototype testing can be skipped only if prior evidence included in Sections 1, 4 or 5 shows testing to be unnecessary.
3. Not all iterative looping inherent in the development of a NWREL product is shown in this chart. Only those aspects of the iterative cycling of major significance to the evaluation plans are included. The time span covered by this flow may vary widely. It does include the possibility of multi-year consideration.

Research Base

The key elements in evaluating an innovative program are these:

- (1) Estimate who the prime target groups are that will use your findings, process, techniques, and recommendations. Then determine what questions they will ask of you before, during, and after your project is terminated. (Complete details of this technique and methods for teaching this technique are available upon request.)
- (2) Block out what skills will be needed during each of the following phases of evaluation:
 - o Antecedent: prior history; recognized needs demographic data; political factors; and other critical factors that would permit fair assessment to occur. Skills generally useful are those of historical researchers, anthropologists and sociologists.
 - o Intent: statements of what should occur if certain interventions are planned; narratives of specific sub steps; planning for management, evaluation and measurement. Skills generally useful are those of psychologists, educational researchers, and practitioners who can formulate specific educational objectives and provide for data collection, data management and data reduction.
 - o Transactions: Observations or measurements of how many of the intents, and in what ways the intents were met. Skills demanded here are clinical in nature.
 - o Outcomes: Data analysis, data display, and technical reporting skills related to the typical outcomes are crucial. People able to relate to specific target groups should be trained in interpretation of the outcomes so honest and clear reporting can be facilitated.

APPENDIX E

SELECTED CHARACTERISTICS OF VILLAGES

Village	Village Established	Village Population	Ethnic Composition						
			Eskimo	Athapascan	Aleute	S.E. Indian	White	Other	
1	1907	172	X	X*					
2	1800	425				X*		X	
3	1885	1800	X*					X	
4	1951	405	X						
5	1960	120			X				
6	--	511	X*					X	
7	1925	229		X*				X	
8	1940	261	X*					X	
9	1935	304	X						
10	1900	95		X					
11	1940	169	X						
12	1887	900					X*	X	Japa- nese
13	1900	66			X*			X	
14	1875	354	X*					X	
15	1935	408	X*					X	
16	1895	307	X*					X	
17	1800	120	X						
		5647 Total							

*Dominant Group

SOURCE OF POWER AND FUEL

Village	Power		Fuel for Heat			
	Central Light Plant	Personal Light Plant	Oil	Gas Propane Fuel	Wood	Beach Coal
1	X				X	
2	X		X		X	
3	X		X		X	
4		X 4	X		X	
5		X 6	X			
6	X		X		X	
7	X				X	
8		X 4	X	X	X	
9	X	X 10	X			
10		X 1			X	
11		X 1	X		X	
12	X		X			
13		X 3	X			
14		X 30	X		X	
15	X	X 5	X		X	
16	X		X			X
17		X 1	X			

APPENDIX G

SAMPLE PAGES FROM FORTHCOMING SUPPORT DOCUMENT

Table 2 - Number of Students Participating in Alaskan Reader Program 1968-69, by Age and Field Test Site

Field Test Site	Total	Age of Student (Years)						
		5	6	7	8	9	10	11
Allakaket	8	1	6	1	-	-	-	-
Angoon	18	-	12	6	-	-	-	-
Bethel	26	2	16	7	-	1	-	-
Chevak	34	2	16	10	5	1	-	-
Chignik Lake	4	-	3	1	-	-	-	-
Hooper Bay	25	-	-	5	12	4	3	1
Kattag	14	-	4	8	2	-	-	-
Kasigluk	7	-	-	7	-	-	-	-
Kipnuk	13	-	4	8	1	-	-	-
Kayukuk	8	1	4	1	2	-	-	-
Lower Kalskag	15	-	1	7	3	4	-	-
Mettakatla	18	2	11	5	-	-	-	-
Port Heiden	6	-	2	2	-	1	1	-
Quinhagak	15	-	1	9	3	1	1	-
Togiak	23	1	16	6	-	-	-	-
Wainwright	24	5	15	4	-	-	-	-
Wales	5	-	2	1	2	-	-	-
Total	263	14	113	88	30	12	5	1

Table 3 - Number of Students Participating in Alaskan Reader Program
1968-69, by Sex and Field Test Sites

Field Test Site	Total	Sex of Student	
		Male	Female
Allakaket	8	6	2
Angoon	18	8	10
Bethel	26	14	12
Chevak	34	15	19
Chignik Lake	4	4	-
Hooper Bay	25	16	9
Kaltag	14	8	6
Kasigluk	7	3	4
Kipnuk	13	7	6
Koyukuk	8	5	3
Lower Kalskag	15	5	10
Metlakatla	18	10	8
Port Heiden	6	4	2
Quinhagak	15	8	7
Togiak	23	13	10
Wainwright	24	13	11
Wales	5	4	1
Total	263	143	120

One analysis conducted ascertains how well the children did as measured by tests internal to the system (i.e., Level I inventories.*) Percentage mean achievement scores were calculated for each test part included in Level I. Table 4 illustrates the results.

Table 4 - Percentage Mean Achievement Scores: Level I, by Score Type

Test Part	% Mean Achievement	
	Task Score	Language Arts Score
A	88.6%	88.6%
B	78.6%	78.6%
C	85.4%	67.5%
D	72.3%	71.9%
E	52.2%	41.4%
F	67.0%	58.8%
N=264		

Another area of concern dealt with subgroup differences. Specifically, were there differences in performance on Level I inventories by boys and girls, were there test site differences and was age or ethnic composition a factor in producing satisfactory performance.

*See Appendix C for sample of inventory-Level I.

In order to determine differences in performance by boys and girls on Level I inventories, percentage mean achievement scores were calculated for both sexes for each test part (A-F) included in Level I. Table 5 lists the results.

Table 5 - Percentage Mean Achievement Scores; Level I, by Sex and Score Type

Test Part	Task Score		Language Arts Score	
	Boys	Girls	Boys	Girls
A	84.7%	92.4%	84.7%	92.4%
B	74.9%	82.2%	74.9%	82.2%
C	80.5%	90.3%	62.6%	72.4%
D	70.5%	74.0%	70.4%	73.3%
E	49.7%	54.6%	39.1%	43.7%
F	62.6%	71.3%	54.5%	63.0%
N=143 boys 121 girls				

An analysis of variance is being computed to ascertain the variability in student performance based on the following variables: test site, age, and ethnicity. These data are forthcoming.

Evaluation personnel wanted to answer the question - how good are the tests? In order to accomplish this task, a content validity check was made comparing the stated objectives with the actual content of the tests themselves.

APPENDIX H

LANGUAGE AND READING DEVELOPMENT PROGRAM FOR CROSS CULTURAL SETTINGS Component 280 Activity One (280.1)

Alaskan Reading and Language Development Program

COMPONENT GOAL

To prepare a language development and reading development program and support activities for cross cultural groups.

ACTIVITY ONE OBJECTIVE

To prepare and field test readers and supplementary materials designed for use in isolated villages in Alaska.

GENERAL PROCEDURES

Assemble a developmental team including cultural anthropologist, linguist, State Department of Education and university experts in language arts and two teachers from schools enrolling ethnically different children to identify key components of a language and reading development system.

Begin preparation of remedial materials, teachers' manuals, resource book, alphabet strips, readers, etc. related to the developmental teams suggestions.

By use of an advisory group review and teacher reviews of materials, recommend content changes relevant to Alaskan village schools.

An evaluation design team will set policies for evaluation, criteria for site and teacher selections, and bases for evaluation. Groups will be carried for three years during the system development.

Teachers, author and Laboratory staff will carry out workshops to inform supervisors of the Alaska State Department of Education and the Bureau of Indian Affairs about developmental processes and progress. Also to conduct one workshop for teachers engaged in second year of testing and one for teachers beginning use of readers; and to prepare remaining levels of readers and associative materials making revisions as required.

PLANS (December 1, 1969 to November 30, 1970)

Package teacher training and support materials for transfer to Alaskan colleges and universities and explore possible uses of the technology in inner city and eventually island cultural settings.

Evaluate materials and prepare technical report.

PRODUCTS EXPECTED

See Attachment A in original document.

LANGUAGE AND READING DEVELOPMENT
PROGRAM FOR CROSS CULTURAL SETTINGS
Component 280
Activity Seven (280.7)

Screening and Development Activities Related to Language Disabilities

COMPONENT GOAL

To prepare a language development and reading development program and support activities for cross cultural groups.

ACTIVITY SEVEN OBJECTIVE

Phase One - To work with the Permanente Clinic Pediatricians, Portland State Special Education personnel, Portland Public School children and preschoolers, and their parents to develop screening and diagnostic procedures that can be taught to classroom teachers who eventually deal with children with language disabilities.

Phase Two - To develop treatment and remediation techniques based on the results of the diagnostic techniques developed in phase one.

GENERAL PROCEDURES

Exploratory discussions with educationalist, psychologists and medical personnel revealed a need for a longitudinal and programmatic activity to talk to the objectives one and two noted above. Specific program plans would require use of children in local Foundation Health Plan. These children will have complete medical and socio-cultural data collected. Collaboration and role relationships will be developed with the pediatric, neurology, special education, remedial reading and Program 200 personnel involved who represent one hospital, one college, one school district and the Laboratory.

While phase one will focus on screening and diagnosis, the main effort is to be in rehabilitation or treatment.

The second phase will provide information and guidelines for schools, with emphasis on effective and efficient training of ancillary personnel.

The techniques will be disseminated through the appropriate agency of those involved.

PRODUCTS EXPECTED

A screening and diagnostic system related to specific language disabilities.

A teaching program to pass these skills onto school personnel.

SUMMARY

The story of the Alaskan Readers has been told. In a sense it is Chapter I of a continued story since many years will be required before the final chapter can be written.

Today, we demonstrated an example of how Northwest Regional Educational Laboratory perceives its role in the educational milieu. We believe that the uniqueness of a Laboratory provides an ideal setting in which a longitudinal development effort can be generated, nurtured and completed with dispatch. Utilizing the best that is known from research, adapting instructional materials, techniques and processes that work in classrooms, demonstrating their effectiveness with learners, and making them generally available to people with educational needs, is the process called development. This is the story we have attempted to tell. We believe it to be a fine example of speeding up the process of getting research into practice.