A rating scale for measuring the validity of reading instructional materials for the use of minority groups

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Service Paper

A RATING SCALE FOR MEASURING THE VALIDITY OF READING INSTRUCTIONAL MATERIALS FOR THE USE OF MINORITY GROUPS

In Partial Fulfillment of the Requirements for the Degree of Master of Education.

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CHAPTER I
DEFINITION OF THE PROBLEM

Purpose of the study. (To construct a rating scale which will be of use to teachers of all minority groups in selecting reading textbooks. Which can be used by inexperienced or new teachers in the field to give a maximum of help to Alaskan native pupils.)

Justification. A letter from the Director of Education for Alaskan natives, Dr. Dale, suggested the need for the construction of an instrument for rating textbooks. After having taught in Alaska and seeing the needs for textbooks more suited to the experiences of the Eskimo children, I can plainly see that the start of a program for furnishing pertinent material for their needs would begin with an instrument for measuring the textbooks which are on the market today. The weakness and strength of different books as regards their suitability to the native child, can be measured by each teacher for her particular situation, which varies greatly throughout the Territory. It was also tentatively suggested by the Board of Education in Alaska that this instrument would be of value to other minority groups.

As Candler College, Havana, Cuba, is attempting to
introduce English textbooks to its Spanish-speaking students, Dr. Carlos Perez, President, felt that the rating scale would be of value in aiding these teachers also. In Atlanta, Georgia, Miss Ira Jarrell, Superintendent of Schools, felt the rating scale could be of much help to her minority group teachers. As Supervisor in schools which teach the minority group of Indians living on the North American Continent, Mrs. Minna Lee Coughlin of Modesto, California, desired an instrument for aiding her teachers to select appropriate books. This rating scale is the result of the felt need of these various educators.

**Purposes served by evaluation.** When men and women who have been trained for educators in urban or semi-urban communities, as most of them have been, are sent to an extremely isolated community such as Alaska, their duties are manifold. Not only do they have a multitude of new responsibilities, but they are apt to be perplexing ones. Schorling\(^1\) says that, "It is very common for a beginning teacher to be appointed a member of a committee to which is delegated the task of selecting a new textbook for some

course." Things usually left to the judgment of a supervisor, such as the outlay of considerable money for the purchase of new textbooks for their particular area, is a typical example. Of course a supervisor aids as much as possible, but considering the immense area of thousands of square miles, the Alaskan weather, lack of traveling facilities, one can readily see why a teacher must make many basic decisions for himself.

Durrell\(^2\) says, "Reading textbooks are sometimes bought in the belief that every child in a certain grade, such as the third, needs a copy of the same reader for study in that grade. Instead, buying three to ten copies of each of several different readers can often be recommended as the better plan." He also says, "Children in the same grade will differ greatly in their abilities even though they have received a similar amount and type of reading instruction. These differences in development are due to variations in intelligence, in sensory capacities, and physical condition, in background of language development, and in confusions and faulty habits in the learning process."\(^3\) Therefore to prevent this happening it is the


\(^3\)Ibid., p. 38.
aim of this rating scale to help a teacher to select books, which, as Durrell⁴ says, "protect the pride of the slow learner by not using books which have been studied in the lower grades, yet which are on the necessary level," and to help a teacher, again as Durrell⁵ advises, to "recognize the rights of teachers in the grades above by selecting for bright pupils books which will not ordinarily be used in later grades." The teacher may use the rating scale to help her add to a library collection of reading books for her classroom, including as Durrell⁶ says, "A specific list of books suitable for future purchase, the list being prepared in relation to the instructional needs of the class."

Every textbook should fill a particular need and have a specific purpose. To select books indiscriminately, or even by subjective judgment, will hardly prove effective. Durrell⁷ says, "The most important factor in meeting a child's reading needs is the provision of reading materials suited to his level of reading ability . . . a sense of

⁴Ibid., p. 2.
⁵Loc. cit.
⁶Loc. cit.
⁷Ibid., p. 65.
security and a realization of steady growth are essential to a child's success in reading."

Campbell\(^8\) says: "The influence of the subjective element in rating has long been discussed by educators; and almost since the beginning of this century much attention has been given to establishing more reliable standards."

Alstetter\(^9\) states: "The scientific phase of educational development has emphasized the need for more accurate measurement."

Moisolo\(^10\) says: "It is possible that subjective opinion utilizes many factors contributing to readability not considered by objective means, such as organization of the contents, appeal to interests of children, and the types of concepts involved. Until other devices for measuring difficulty are produced, both objective and subjective techniques would seem to be useful in judging the difficulty of textbooks."

However, since evaluation plays so important a part

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\(^9\)M. L. Alstetter, "What Shall We Measure and How," Educational Administration and Supervision, XXII, May, 1936, p. 381.

in the selection of books, it is the opinion of the author that elimination of as much subjective opinion as possible is best.

Maxwell\textsuperscript{11} agrees with this viewpoint and states: "A competent committee investigating textbooks will make a better selection if they have a definite guide."

Brethorst\textsuperscript{12} says: "When choosing a textbook, the teacher should have certain criteria on which to base her selection." And also, "The scores for each item could be entered in the appropriate column of the score card summary. A comparison of the total points for each book would give her a basis on which to select her textbook."

The American Council on Education\textsuperscript{13} says: "Books can be used for many purposes and in many ways. In the modern school they are used as sources of information, for enjoyment, for the cultivation of aesthetic taste, and for the development of critical ability."

Schorling\textsuperscript{14} states: "To an increasing extent,


\textsuperscript{14}Raleigh Schorling, Student Teaching, (New York: McGraw-Hill Book Co., p. 168.)
books, not only in the reading field but in the other school subjects, are being published without grade labels; this obviously makes it easier for a teacher to find materials that are adjusted in difficulty to the abilities of the slow-learning pupil."

However, this factor adds to the perplexing situation among untrained, or inexperienced teachers. To assist Alaskan, or teachers of minority groups in selecting books which will serve them well is a unique problem. They must have books which not only fulfill the above-mentioned purposes, but they must have literature which develops sensitiveness to differing value patterns. These pupils need books which will extend insight into the many different cultural patterns of which they are ignorant. They must learn different kinds of acceptable behavior, and when that behavior is acceptable. They must learn to judge and evaluate different experiences and only in the wise selection of books is this possible in this isolated Northland. This introduces an element of evaluation of children as well as critical appraisal of books.

Durrell\textsuperscript{15} says: "Adapting instruction to individual differences and needs of pupils is a problem so new to

\textsuperscript{15}Durrell, op. cit., p. 2.
education that we have hardly made a beginning in solving it. It is comparatively recently that individual differences have even been recognized in education; formerly the child who could not conform to the classroom instruction offered simply dropped out of school . . . it is safe to say that large numbers of children left school because they were unable to adapt themselves to the instruction."

He also states in connection with this important fact that: "School libraries should, in particular, provide adequate reading material to widen the interests and insure the growth of pupils of limited ability. Owing to small budgets, many classroom libraries are extremely limited in the number of books available. Yet books of appropriate range and difficulty and content are so important to successful reading instruction (and other teaching) that every effort should be made to obtain them." 16

It is well for a teacher to stick to the tried and true textbooks. But she must evaluate new books and new editions of old ones frequently, or she becomes merely another routine page-by-page teacher, her work lacks life, and no progress is evident. In many isolated sections the only way a teacher can keep abreast of the newer ideas is

16Durrell, op. cit., p. 66.
to study carefully new books, adopting them for use if they prove valuable.

Johnston, Editor-in-Chief of Scott Foresman and Co., says: "New ideas either here or in Germany or anywhere need new or revised textbooks. Curriculum changes, new content, new teaching methods, just do not seem to get down off the lecture platform or out of the yearbooks unless they find their way into textbooks one way or another." When one textbook alone has an estimated cost, according to Johnston, of "Total plate expense, $20,400; editorial expense, $13,250; not including pro rata salary of editor-in-chief, rent, light, heat and taxes, $33,650. All this before a single copy is printed!" the teacher is bound to be under some pressure from book companies to buy their products. Naturally the books are good. The question is, do they fulfill the purpose for which the teacher is buying them?

And Hoyt, Editor of the High School Department, Houghton Mifflin Company, New York, states also: "Yet


18Ibid., p. 211.

ideas--new ideas are the life-blood of the textbook maker. In the long run, all successful educational publishing had been built on ideas--ideas which are immediately practicable and which meet and satisfy a definite need in the schools."

Durrell\textsuperscript{20} agrees with this, and says: "Provision of many different books in the content subjects provides for differences in reading ability. The social atmosphere of the class and learning efficiency are also improved when each child can enrich the group experiences by his reading of new materials related to the topic under discussion, without being tied to the uniform assignment in which each child presents information already known to the others."

Reisner\textsuperscript{21} also says, "The learning process calls for alertness and receptivity on the part of the learner. To learn he must wish to know, and in order to get him to wish to know, the material to be learned has to have some relationship to the established and already consolidated parts of his experience."

It is the belief of the author that teachers of other minority groups should have this rating scale placed

\textsuperscript{20}\textit{Durrell, op. cit.}, p. 67.

at their disposal also.

Redd\textsuperscript{22} says:

No section of the country is however, entirely free of some problem associated with the education of its citizens. As the result of various practices and opinions the problems involved in the administration and supervision of education for Negroes are legion. These problems are not confined solely to techniques of administration and finance, but they pervade the entire area of child growth and development. Too often policies and procedures have been conditioned by political expediency, and by emotionalism of various kinds and degrees. This has contributed much to present confusion and unrest. If intelligent action in matters affecting education is to be the goal, the basis of such action should be dependent upon those pertinent facts discovered and discoverable through scientific investigation and research. A rather disproportionate amount is devoted to descriptive or status studies pertaining to certain administrative problems, or general aspects of school for Negroes. Investigations in such areas as curriculum and teaching, the learning process, motivation, emotional life, attitudes and interests are conspicuously absent. The direct utilization of the results of existing research among school administrators of both races, who are responsible for the administration of various aspects of Negro education is almost negligible.

Plan for this study. It is planned to investigate literature for similar studies and to consult rating scales dealing with reading textbooks. To investigate six children's series to determine classification of

content as rural or urban, material, illustrations, etc. To study Cuban textbooks and those used by the Southern Negroes and to obtain and examine Russian textbooks for Siberian Eskimos. To find out what the most important thing is, in a textbook, if possible. It is necessary to do research on illustrations in textbooks and their importance to children in minority groups; research as to the best format of books, which will include styles of type face, type form, size of type, width of line, leading, spatial arrangements of the printed page, color of print and background, paper surface and their relation to each other. Research as to content and organization of books, and vocabulary considerations, must also be done. Research as to educational philosophy and its application, and finally as to teacher helps to be included, will be accomplished.

The construction of the Rating Scale itself will follow the research completed above, and will then be sent to taken to competent judges in Alaska, California, Georgia and Cuba, who will be asked to evaluate the items as to validity and practicability for use by teachers of the Alaska Territory and of these other minority groups.

Upon study of the returned Rating Scales from the judges, they will be revised and placed in the hands of
teachers of these minority groups, who will be asked to study and use them, and then return to the author any criticism or helpful suggestions they may have regarding further improvement.

Maxwell\textsuperscript{23} says: "The teachers are the ones who must ultimately use a textbook. They are the ones who ought logically to have a voice in its adoption. They are working with the pupils. They understand the needs, attitudes, and capacities of students at this particular stage of development. They understand what adaptation must be made of the material that is to be taught. They must see that this adaptation is made, and if the tool which they are using is inferior, the work will be much more difficult and less efficient."

He also says: "The reason for the poor selection of textbooks has frequently been due to the lack of justifiable standards for selection."\textsuperscript{24} This resulted in the use of books, which taught children so that, as Dewey\textsuperscript{25} says: "Their information was not knowledge, because it was not integrated in thought-patterns. They could recall

\begin{itemize}
\item \textsuperscript{23}Maxwell, \textit{op. cit.}, p. 29.
\item \textsuperscript{24}Maxwell, \textit{op. cit.}, p. 57.
\end{itemize}
facts, but they did not use them in thinking." They will not acquire intellectual curiosity, nor abiding interests until a teacher can be trained to choose books which will give them a possible use in interpreting life.

Maxwell\textsuperscript{26} concludes this idea with the thought: "Teachers and school officials have had practically no training in a scientific examination of textbooks; consequently they have not protested vigorously against selection by authorities who have not been closely in touch with school conditions. Had they realized that it is just as important to have definite standards for selecting textbooks as it is for selecting a teacher, they would not have acquiesced in such a complacent manner."

\textsuperscript{26}Maxwell, \textit{op. cit.}, p. 58.
CHAPTER II

PREVIOUS STUDIES IN THE FIELD

Review of research. There do not seem to be any studies of Rating Scales which relate to minority groups. The few Rating Scales available in the field were made up principally by and for, separate States which used them for the adoption of textbooks. None of these were related to minority groups.

What to measure. Durrell states that, "The highest objective for reading is the enrichment of living." And then he further says: "The first characteristic of effective instruction in oral reading is the maintenance of interest of the listeners in the content of the story being read." These points must be our starting point in measuring reading instructional material for minority groups. The importance of this has been stressed in other groups as far back as the time of John Amos Comenius, who is quoted by Reisner: "John Amos Comenius (1592-1671)

1Rating Scales for Reading Textbooks, State Department of Education, Rochester, New York; Texas; New Jersey.
2Durrell, op. cit., p. 12.
3Durrell, op. cit., p. 8.
4Reisner, op. cit., p. 135.
stands out as a prophetic figure because he felt that all school materials should be carefully graduated to the needs and abilities of the learner, and in such a way that the earlier studies should prepare for and throw light upon the later; that learning should proceed from the general to the particular; that the use of everything taught should be continually kept in view; and that all instruction should be based upon the child's interest. Through his Orbis Pictus and other books which he prepared for the use of children in school, he stimulated the improvement of textbooks and particularly the use of illustrations in them."

In setting up a Rating Scale for teachers of minority groups to use, we must educate so that books, teachers, and things are secondary to the child in the educative process. Reisner\(^5\) quotes Froebel as saying: "The child also contains within itself irrepressible tendencies to grow, to expand, to develop, to master its environment, to enter into relationships with its fellows. These inner forces of growth are the essential factors in education."

Reisner,\(^6\) himself, has this to add: "The chief principle of education is to provide working materials

\(^{5}\) Reisner, op. cit., p. 446.

\(^{6}\) Loc. cit.
appropriate to the child's inborn urge to do, and a human environment in which his tendency to become a socialized individual may meet with encouragement."

As a starting point, Durrell\textsuperscript{7} says: "One of the first observations for the teacher to make is of the interest and attitude of her pupils in reading."

Dewey\textsuperscript{8} felt that the life and study of primitive peoples was a most appropriate starting point for education, because the activities of primitive life are already present in the child's desire to build a hut, play at hunting, etc. He felt the intellectual interest is led on from simple beginnings to larger fields of investigation and intellectual discipline that is the accompaniment of that research. He believed that the child is born to be active, manipulating his environment, modifying it to suit his ends. He is curious, eager for new knowledge and receptive to information that falls in with his needs and desires. He takes delight in color, form, rhythm, and sound, and wishes to express himself in song and language and in artistic and dramatic representations. He is also a social being, born to make adjustments with his fellows and to enter into cooperative relationships with them."

\textsuperscript{7}Durrell, \textit{op. cit.}, p. 49.

\textsuperscript{8}Dewey, \textit{op. cit.}, p. 48.
Durrell\(^9\) says: "If the reading is related to observation of objects and situations in the child's experience, to planning, and thinking in relation to immediate problems, and to conversation and action, it is likely to be found a useful tool. The world of the child, particularly in the elementary school, is a sensory-motor world; he is interested in things that he can see, hear, touch, taste, make, plan, do, and try. A child manifests little interest or concern about experiences that are remote in time or distance and that do not concern his immediate welfare."

Reisner\(^10\) states that Froebel's kindergarten had as its aim: "Motive power furnished by the child's native tendencies toward activities engaged in, intellectual curiosity and natural desire to fit into group life." The teacher must endeavor to select books that will fit in with these scientifically proven facts.

Tuttle\(^11\), Editor-in-Chief of Row Peterson and Company, says: "In recent years at least 100,000,000 copies


\(^10\)Reisner, \textit{op. cit.}, p. 447.

of books especially designed for classroom use have been manufactured and sold to schools in the United States each year. They represent every degree of complexity from the little paper-covered Preprimer for the beginner in reading, built around several dozen words, to the college text in atomic physics, latest frontier of scientific advance."

To know what to measure and how to do it correctly and scientifically in all this mass of publications is our problem.

The reputations of the author and of the publishers must be taken into consideration. When books are selected it is quite essential that they represent the most modern research. A textbook definitely fills a need, and is the almost joint responsibility of author and publisher alike.

As Tuttle\textsuperscript{12} says: "In short he (the author) tries to prepare a text which will make a maximum contribution to accepted goals of teaching and learning in the field covered. This preparation may, and usually does, take years of arduous effort on the part of the author, but it is his greatest contribution."

Another consideration when selecting a reading text is to carefully weigh the author's scholarship and his

\textsuperscript{12}bid., p. 266.
familiarity with scientific research in reading and related fields.

The publisher works in conjunction with the editor to publish the author's material in the most attractive way possible.

Tuttle\textsuperscript{13} says: "His editorial handling is, therefore, more than merely a matter of seeing that capitals and commas are in their proper places. He is concerned with every element which makes for ease of reading, clear understanding, and teachability. These elements include vocabulary, sentence length, and structure, paragraphing, sequence of ideas, and the like."

Maxwell\textsuperscript{14} states: "The author conveys his message through the material he incorporates in his book. If his organization is effective it will make his purpose clear."

Reisner\textsuperscript{15} adds: "The thing that establishes order among ideas and develops relationships is meaning. It is only when an idea points to some other idea that it can be assimilated to the existing body of experience." He also says: "The meaning must be plain. It must be a part of an organized experience, so that in later connections it

\textsuperscript{13}Ibid., p. 267.

\textsuperscript{14}Maxwell, op. cit., p. 62.

\textsuperscript{15}Reisner, op. cit., p. 474.
may be an active agent of interpretation or classification."\textsuperscript{16}

However, Brandt\textsuperscript{17} believed that "All teaching should start from a strictly scientific basis, and all aids in teaching, reference books, etc., should be constructed upon a strictly scientific basis."

We must think of and weigh the general appearance of a book. The attractiveness of the cover, kind and size of type, kind, number and coloring used in illustrations, size and weight of book, number of pages, binding, quality of paper, all enter into the question of which book we shall choose.

The binding must be durable and attractive. A child will take a great deal more care of something beautiful than he would of something not pretty, or worn.

The paper must be hard and have plenty of fiber. Heavy paper will look as though it would wear wonderfully, yet at the end of a year will show more wear and tear than it should at the end of three or four years.

\textsuperscript{16}Reisner, \textit{op. cit.}, p. 475.

\textsuperscript{17}H. G. G. Brandt, "How Far Should Our Teaching and Textbooks Have a Scientific Basis?" \textit{Transactions of the Modern Language Association of America}, Published by the Association, Baltimore, Md., 1886, Vol. I, p. 57.
Tuttle\textsuperscript{18} states: "While the editing of the text is going on, the finished book is visualized as far as possible—the page size and maximum number of pages; the kind and size of type, together with the length of line and the number of lines on a page; the margins around the type page; the style of headings; the kind and amount of illustrations; the type of binding and cover design."

As to styles of Type Face, Patterson and Tinker\textsuperscript{19} recommend: "Since our studies show that type faces in common use are equally legible it follows that any modern type face such as Garamond, Antique, Scotch Roman, Bodoni, Old Style, Caslon, and Cheltenham may be used. Readers prefer a modern type face that appears to border on bold face, hence there is an advantage in employing such a type face as Antique or Cheltenham. American Typewriter type definitely retards speed of reading and therefore should not be used unless a novelty effect is desired. Old English type, (Black Cloister) retards reading to such a marked degree that its use should be restricted to those printing situations where brief messages of a sacred,

\textsuperscript{18}Tuttle, \textit{op. cit.}, p. 267.

\textsuperscript{19}D. G. Patterson and M. A. Tinker, \textit{How to Make Type Readable}, (New York: Harper and Brothers, 1940), p. 146.
solemn, or formal kind are involved. Ultra modern type such as Kabel Light does not retard reading speed to any great extent, therefore such type may be freely used in advertising copy and possibly in book and magazine printing as well."

Dr. Eames\textsuperscript{20} states that: "The type which is easiest to read which is used in printing, is the American Book Type. The American Typewriter Type is 5\% slower to read, and the Old English Type is the hardest, being 14\% slower."

In regards to Type Form, Patterson and Tinker\textsuperscript{22} have found that "the use of italics should be restricted to very short passages used solely for the purpose of emphasis." That "material set in all capitals is read much more slowly than material set in lower case."

Patterson and Tinker\textsuperscript{23} state: "Scientific studies have proven lower case letters to be 12\% faster to read than upper case. Mixed style forms of printing are 12\% slower reading than one style alone."

\textsuperscript{20} Thomas H. Eames, Lectures to Graduate Class at Boston University, April, 1949.

\textsuperscript{21} Patterson and Tinker, \textit{op. cit.}, p. 16.

\textsuperscript{22} Patterson and Tinker, \textit{op. cit.}, p. 147.

\textsuperscript{23} Patterson and Tinker, \textit{op. cit.}, p. 23.
They also say that: "Bold face printing neither slows down nor speeds up reading rate. Yet readers believe that it is far more illegible than ordinary type. For this reason bold face printing should be used sparingly and then only when emphasis is desired." However they also say that "Definite evidence exists proving that bold face is more legible than ordinary type in reading at a distance." 24

As regards size of type, Patterson and Tinker 25 say: "It is difficult if not impossible to determine the effect of type size on speed of reading without controlling or varying line width and leading." For this reason their recommendations are confined to an average line width of about 19 picas (slightly over 3 inches) set solid. Thus they recommend that:

Eleven point type seems to be better than larger or smaller type sizes. Readers also definitely favor 11 point type. Apparently one can vary type size from 8 point to 12 point without markedly affecting speed of reading. Readers, however, prefer 10, 11, and 12 point type over 8 and 9 point type. Type sizes smaller than 8 point or larger than 12 point are quite unsatisfactory.

Our findings in general run contrary to the emphasis most writers on typography place on line width. For 10 point type set solid three studies

24 Patterson and Tinker, op. cit., p. 147.
show that line widths between 17 and 28 picas are equally legible, whereas shorter or longer line widths are undesirable. For 10 point type leaded 2 points the limits of 'equal legibility' range from 14 to 31 picas. Our study of reader preferences indicates quite clearly that readers believe that moderate line widths (such as 19 picas for 10 point type) are more legible than longer or shorter line widths. Printers, therefore, would do well to stick to moderate line widths even though line widths are really not a very important factor in legibility ... recommend that printers should tend to concentrate on 10 and 11 point type printed in moderate line widths.

In general leading seems to be an important factor tending to promote good legibility. For 10 point type and a 19 pica line width, 2 point leading is optimal. One point leading is no better than set solid and both should be abandoned in printing practice. More than 2 point leading is not only not desirable but also is actually disadvantageous. Furthermore readers prefer 2 point leading.

The theory that 8 point type with 2 point leading would be read more rapidly than 10 point set solid was found to be false. Furthermore readers prefer 10 point set solid as against 8 point leaded with 2 points. We recommend, therefore, that a larger size of type set solid should be used rather than a smaller size of type leaded.26

Dr. Eames27 says: "The average size of the letters for primary books is 18 point type, 21-24 pica, line, and 1-6 points of leading. A college textbook would be a great deal different. For example, Dr. Kingsley's28 book

26Patterson and Tinker, op. cit., pp. 149-51.
27Thomas H. Eames, Lectures to Graduate Class at Boston University, March, 1949.
has 12 point type, 27 pica lines and 2 point leading."

The color of print and background also has much bearing on reading speed, legibility and fatigue.

Patterson and Tinker\textsuperscript{29} say that: "The legibility depends on brightness contrasts. It favors dark ink on light background. In order of their legibility, the following colors are used: 1. Black on white, 2. Green on white, 3. Blue on white, 4. Red on white.

"The colors which cut down speed are also in order: 1. Green on red, 2. Orange on black, 3. Orange on white, 4. Red on green, 5. Black on purple."

Patterson and Tinker\textsuperscript{30} state: "Black print on white background is much more legible than white on black. The difference is so great that white on black should never be used except for a very brief message in an advertisement which uses white on black as a device for attracting attention.

"In using colored ink on colored paper stock the following rule should be adhered to: In combining colors (print and background) care must be taken to produce a printing arrangement which shows a maximum brightness

\textsuperscript{29}Patterson and Tinker, \textit{op. cit.}, p. 120.

\textsuperscript{30}Patterson and Tinker, \textit{op. cit.}, p. 153.
contrast between print and background. Just what colors are used is relatively unimportant. The important thing is to produce the maximum amount of brightness contrast possible between print and background."

The writers on typography used to assume that glossy paper should be avoided. Webster and Tinker\textsuperscript{31} say that there is no difference in legibility in paper surface in using glossy or unglazed.

The British Association Committee\textsuperscript{32} says: "We favor unglazed paper, with no lines, because reflection from paper is harmful when it exceeds 56%. In test situations there is not much difference in glazed or flat white paper. In a study situation glazed paper tires the eyes--it is like a mirror shooting light directly into the eyes."

Patterson and Tinker\textsuperscript{33} conclude by saying: "In spite of the fact that no differences in legibility were found for different paper surfaces, the printer should whenever possible use dull finish paper stock to meet the opinions and prejudices of the overwhelming majority of

\textsuperscript{33}Patterson and Tinker, \textit{op. cit.}, p. 136.
readers who believe that dull finish paper greatly promotes legibility and also to insure good legibility even under poor conditions of artificial light distribution. It is obvious that the use of thin, transparent, or semi-transparent paper should be avoided because of possible blur effects due to print showing through."

The National Society for the Study of Education gives these recommendations which best suit school children:

1. Size of the book--Smaller books which can easily be held in one hand are preferred. Larger books usually rest on a support, with the result that the letters are often exposed at an angle, thus greatly lessening their legibility.

2. Texture of the paper--The paper should be of such a quality that the printing on one side will not show through on the other. Furthermore, the printing on one side of the page must be so done that the evenness of the surface of the other side of the page is not affected.

3. Color of the paper--The paper should be pure white inasmuch as the legibility depends in part on the contrast between the black of the printed letters and the white of their background. Furthermore, the surface of the paper should have no gloss, since a glossy surface is especially trying to the eyes.

4. Color of type--The printed letters should have sharp, clear cut outlines and should be deep black.

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5. Color of pictures--The use of highly colored pictures and drawings is questioned by some investigators. Experiments indicate that peripheral color stimuli may affect the accuracy of fixation and interfere with the accuracy of the reading movements.

6. Length of lines--Investigators generally favor the shorter rather than the longer lines. There is a preference for lines between 60 and 80 mm. in length, with 90 mm. as a maximum. Experiments show that lines the length of those in the columns of a newspaper can be read more rapidly per unit than lines of greater length.

7. Uniformity in length of line--The lines of a given selection should be uniform in length, because a reader drops quickly into a habit of making a constant of movements and pauses per line.

8. Distance between lines--A minimal leading of 2.5 mm. between lines should probably be required. Increasing the leading does not seem to help. If the letters are undersized, the extra space should be used in increasing the size of the letters.

9. Size of Type--Investigators are generally agreed that 11 point type about 1.5 mm. in height for the short letters (m, n, o) should be made a minimum. Material printed in this size of type is read faster and individual words recognized more quickly than when the type is smaller.

10. Thickness of the vertical stroke--The letters should stand out clearly and distinctly. The thickness of the vertical stroke should not be less than 0.25 mm.; and 0.3 mm. is preferable.

11. The space between vertical strokes--The vertical strokes within a letter should be from 0.5 to 0.5 mm. apart; the vertical strokes of adjacent letters should be from 0.5 to 0.75 mm. apart.

12. The space between letters--A minimum of six or seven letters per running centimeter is a convenient approximate gauge.

13. Space between words--A distance of 2.0 mm.
between words has been generally accepted.

Tuttle\textsuperscript{35} says: "Illustrations have come to play a more and more important role in textbooks. Everyone recognizes that a picture is often more meaningful than hundreds of words of text. Pictures in schoolbooks serve a double purpose: they have a definite teaching function as well as a decorative or artistic value. In fact, pictures, charts, maps, diagrams, and the like in textbooks were originally and still are the most widely used of the 'visual aids' to education."

There are many types of illustrations. The simplest and least expensive to reproduce is a pen-and-ink line drawing. The most costly is a color painting or a Kodachrome photograph with much detail in subject and background. Between these extremes are other variations—black and white photographs or wash drawings which when reproduced are called half-tones; line drawings with one or two flat colors added for accent, half-tones or color subjects in outline instead of with solid backgrounds.

Color is very important in pictures. Brandt\textsuperscript{36} says: "Red is better than blue or white as an attention

\textsuperscript{35}Tuttle, \textit{op. cit.}, p. 267.

\textsuperscript{36}Herman Francis Brandt, "Psychology of Seeing," \textit{The Philosophical Library}, N. Y., 1945, pp. 221-225.
getter, and 73% of the cases spent more time on red than on anything else."

Eames\(^{37}\) states, however, that: "When a child works continuously with red he becomes extremely tired because his eye accommodation muscles are being overworked."

Maxwell\(^{38}\) says: "The amount of material in a textbook needs to be checked carefully. Many textbooks have contained a too meager amount to be most serviceable. The development of a topic may be adequate but the drill material to gain the requisite skill in fixing the form has been inadequate. The amount needed in a text will depend to a great degree upon how many different texts are used in one subject. If a school is restricted to one or two textbooks it is essential that a text containing a larger amount of material be adopted than as if one had a half dozen texts available."

A reading book is much more effective if the teacher's manuals which accompany it present a variety of helps; this element is most commonly overlooked, but is most important from the standpoint of more effective instruments.

\(^{37}\)Eames, op. cit., p. 49.

\(^{38}\)Maxwell, op. cit., pp. 67-68.
Watrous\textsuperscript{39} says: "In Alaska the language problem is even more perplexing than that of the foreign communities of the United States, for in general it can be said that the child would have less contact with English-speaking people outside the school." As regards the educational philosophy, etc., he says, "Since the education of Alaska Natives presents many problems peculiar to the locality, it may be suggested that the teacher is at liberty to draw what is applicable from here, there, and everywhere."

Greater care must be taken to select books which will be of help to non-English speaking children, such as these Eskimo boys and girls. Tests and studies which follow show that they have a great deal greater educational handicap than children speaking English alone.

Schorling\textsuperscript{40} says: "Difficulty in reading is not so much a matter of long words and long sentences, as it is unfamiliarity with ideas."

In 1923 Pintner\textsuperscript{41} administered the National

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\textsuperscript{40}Schorling, \textit{op. cit.}, p. 168.

Intelligence Test and the Pintner Non-language Test to third and fourth grade pupils in New York City Schools. The scores on the tests were compared between English-speaking and non-English speaking groups. The curves of distribution of scores were practically identical between the two groups on the non-language test, but showed marked differentiation on the National Intelligence Test in favor of the English-speaking group.

Durrell\textsuperscript{42} says: "A frequent cause of reading difficulty in middle grades and in foreign-speaking communities arises from the pupil's lack of knowledge of word meanings. Every word is the center of a variety of associations. A child who has never seen a boat will associate few ideas with the word, while a youngster in a fishing village will know many types of boats and the merits of each. A word with few associations is difficult to fix sufficiently for permanent retention."

In particular, the choice of Reading texts for the lower grades seems of superlative importance. According to Bere\textsuperscript{43} after a child has attended American schools for one or two years, he would test as high on a Stanford Binet

\textsuperscript{42}Durrell, op. cit., p. 239.

\textsuperscript{43}M. A. Bere, \textit{A Comparative Study of the Mental Capacity of Children of Foreign Parents}, Contributions to Education, No. 154, (New York: Teacher's College, Columbia University, 1924), p. 105.
Test employing the English language, as he would if his native language were used.

Brown\textsuperscript{44} agrees, and in his study done in Michigan, states that children who were tested with the Stanford Binet Test showed retardation in their school achievement, but overcame this language problem after first or second grade.

Arsenian\textsuperscript{45} says that bilingualism has little or no effect on I.Q., but has a great effect on school achievement. His evidence points to the fact that the child is genuinely handicapped who speaks another language, and who must learn English in school.

Books must be selected which take into consideration the language handicap of these native children. Material using low vocabulary levels, and of a high interest rating, should be utilized, because, as Walters\textsuperscript{46} has proved, there is a language of from six to eight months of mental age on the tests of children up to thirteen years of age,

\begin{footnotesize}


\end{footnotesize}
who come from foreign language speaking homes.

The child of a minority group is slow in getting started to read, for the previously explained reasons. This is why books must be selected with so very much care, and not hit-or-miss as some do. The ability to reason, to understand, to grasp facts, and to concentrate increases as the individual learns to use with facility the skills and the knowledge he has acquired in his early years.

Cole\textsuperscript{47} says: "The integration of previous experiences may be one of the underlying causes for the sudden intellectual growth that takes place during adolescence." Care and time taken in selecting just the right thing to have the child read when he is young, will pay the earnest teacher many times over in the future.

Books which contain a maximum of valuable exercises, jingles, songs, proverbs, and practical questions to ask and answer, are necessary, because Powers and Hetzler\textsuperscript{48} found that a special problem with children who are learning to speak the English language is that of pronunciation and


inflection. Books which give a basis for training in phonics and speech training must be chosen.

Barrows\textsuperscript{49} says: "Words must be selected of practical value to the foreign-speaking child. These words should be taught in association with their meaning, heard repeatedly, and presented in connection with an interesting experience."

CHAPTER III

THE RATING SCALE
SUGGESTED RATING SCALE FOR READING TEXTBOOKS

Name of Book__________________________________________

Author________________________________________________

Publisher______________________________________________

Date of Copyright_______________________________________

Grade Placement by Author________________________________

Grade Placement by person doing the rating____________________

Name of Person doing the rating______________________________

Address_________________________________________________

Date____________________________________________________

Rate given book__________________________________________

Remarks_________________________________________________
Please check one.

<table>
<thead>
<tr>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
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I. Constant factors

A. General Considerations

1. Author's scholarship
2. Author's familiarity with scientific research in reading
3. In related fields
4. In technique of book construction
5. Is copyright date a recent one?
6. Does this text correlate positively with our general school objectives?
7. Other points:

B. Mechanical Features--format

1. Appearance in general
2. Cover design
3. Color
Please check one

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<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
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4. Title

5. How durable is binding?

6. How easy is the book to handle?

7. Size

8. Flexibility

9. Does the paper meet scientific standards?

10. Hard finish

11. Good weight

12. Non-glare

13. Soft tone

14. Size, clearness, and attractiveness of type

15. Size, clearness, and attractiveness of page

16. Length of line

17. Length of sentence

18. Spacing

19. Amount of reading per page
20. Amount of reading per story

21. Other points

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<td>Very Good Good Fair Poor</td>
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22. How well do the books measure in regard to illustrations

23. Attractiveness of illustrations

24. Appropriateness of illustrations

25. Usefulness of illustrations

26. Do the illustrations appeal through color?

27. Simplicity of illustrations

28. Are the illustrations arranged so as not to break the printed matter?
29. Do the illustrations provoke ideas?
30. Are there enough illustrations to add clarity and interest without usurping space that should be given to content?
31. Accuracy and usefulness of diagrams, charts or maps
32. Dependability of illustrations
33. Freedom from errors
34. Other points

C. Vocabulary Considerations

Please write in answer

1. Scientific Grading of material (See Title page)
   Use Lorge's Formula for Estimating Grade Placement
Please write in answer of Reading Materials

2. How effectively have scientific studies been used to check the vocabulary of each book?

3. What vocabulary studies were used?

4. Within what range of vocabulary difficulty were the words selected?

5. To what degree is the vocabulary controlled to insure growth in reading power, from level to level?

6. Number of running words from each book

7. Number of different words from each book

8. Number of words common to previous books

9. Average repetition of words

10. Other points
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<th>II. Variable Factors</th>
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<tr>
<td>(Factors which vary with the situation)</td>
<td>Very</td>
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<tr>
<td>1. Content and organization of the series</td>
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<td>2. Adaptability of material to child's needs</td>
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<td>3. Adaptability of material to needs of class</td>
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<td>4. Adaptability of material to needs of community</td>
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<td>5. Variety of practical applications to life situations Needs of child, class and community</td>
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<tr>
<td>6. Learning basic English vocabulary</td>
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<td>7. Association of vocabulary with illustrations in text</td>
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<td>8. Association of vocabulary with actions of real people</td>
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<td>9. Association of illustrations in texts with the fact that they are of real people</td>
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</table>
10. Adaptation of vocabulary to child's own vocabulary
11. Adaptation of illustrations to child's own occupations, home, food, clothing, etc.
12. Association and correlation of English vocabulary with Eskimo (native) concepts
13. Association of textbook illustrations with Eskimo (native) concepts
14. Correlation of English and Eskimo (native) occupations, homes, food, clothing, etc.
15. Does the book offer good health suggestions?
16. Diet for health?
17. Clothing for health?
18. Temperance in eating?
19. Kindness to animals?
20. Fairness to others in work and play?

Please check one

Very Good Good Fair Poor
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<tr>
<th>Question</th>
<th>Very</th>
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<td>21. Ideas of conservation of foodstuffs?</td>
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<td>22. Ideas on adequate sleep or rest?</td>
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<td>23. To what extent do the stories appeal to the child's interests?</td>
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<td>24. Abundance of material to meet individual abilities</td>
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<td>25. Abundance of material to meet abilities of group?</td>
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<td>26. Grading of material to meet individual abilities</td>
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<td>27. Grading of material to meet abilities of group</td>
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<td>28. Sufficiency of detail in presenting material</td>
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<td>29. Are the stories vivid and real?</td>
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<td>30. Is there variety and balance in the stories?</td>
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<td>31. Are the stories simple?</td>
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32. Are the stories written in good literary style?
33. Are the stories long enough to satisfy?
34. Are the stories short enough to hold interest?
35. Is there adaptability to a unit-type curriculum?
36. Are there possibilities of omissions without destroying sequence?
37. To what extent are the stories organized effectively around a theme related to the interests of the child?
38. To what extent are these stories organized around a unit related to the abilities of the child?
39. To what extent have the ideas or concepts of the stories been given consid-
eration so that they are easily understandable at each reading level?
40. Are the sentences direct?
41. Are the sentences simple?
42. Are the sentences meaningful?
43. What is the degree of emphasis on topics?
44. How is the systematic development of reasoning power?
45. Other points:

III. The Application of Educational Philosophy to the Text

1. Provision for meeting individual differences
2. Natural-life situations for motivation
3. Presentation of reading as a pleasant experience
IV. Teacher helps

1. How satisfactorily does the manual provide intelligible
1. Teacher guidance without too set a plan?
2. How well does the manual recognize pupil progress by recommending developmental activities?
3. Flexibility in grouping
4. Functional phonics
5. Comparable types of guidance?
6. Provision for accessory reading material
7. Workbooks
8. Companion books
9. Preface of information for the teacher
10. Table of contents
11. Index
12. Glossary
13. Illustrations, charts, or maps
14. Summaries and reviews

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<td>Teacher guidance without too set a plan?</td>
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<td>How well does the manual recognize pupil progress by recommending developmental activities?</td>
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<td>Flexibility in grouping</td>
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<td>Functional phonics</td>
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<td>Comparable types of guidance?</td>
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<td>Provision for accessory reading material</td>
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<td>Workbooks</td>
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<td>Companion books</td>
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<td>Preface of information for the teacher</td>
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<td>Table of contents</td>
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V. Content Material

1. Rural background of stories
2. Urban background
3. Non-specific background
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<td>Very Good Good Fair Poor</td>
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<td>4.</td>
<td>School</td>
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<td>5.</td>
<td>Garden</td>
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<td>6.</td>
<td>Home</td>
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<td>7.</td>
<td>Transportation--airplanes</td>
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<td>8.</td>
<td>Horses</td>
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<td>9.</td>
<td>Bicycle</td>
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<td>10.</td>
<td>Automobiles</td>
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<td>11.</td>
<td>Boats</td>
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<td>12.</td>
<td>Afoot</td>
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<td>13.</td>
<td>Pets</td>
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<td>14.</td>
<td>Vacations</td>
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<td>15.</td>
<td>Abstract symbols</td>
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<td>16.</td>
<td>Animals--wild</td>
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<td>17.</td>
<td>Animals--tame</td>
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<td>18.</td>
<td>Occupations</td>
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<td>19.</td>
<td>Toys</td>
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<td>20.</td>
<td>Food</td>
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<td>21.</td>
<td>Birds</td>
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<td>22.</td>
<td>Parties</td>
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<td>Tools</td>
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<td>Work</td>
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<td>Play</td>
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<td>Very Good Good Fair Poor</td>
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<td>26.</td>
<td>Seasons</td>
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<td>27.</td>
<td>Clothing</td>
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<td>28.</td>
<td>Games</td>
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<td>29.</td>
<td>House furnishings</td>
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<td>30.</td>
<td>Holidays</td>
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<td>31.</td>
<td>Purely imaginative-- Animals talk, are dressed, hold articles, etc.</td>
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<td>32.</td>
<td>Children's own experiences</td>
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<td>33.</td>
<td>Fairy Tales</td>
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<td>34.</td>
<td>Other points</td>
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CHAPTER IV

SUMMARY AND CONCLUSIONS

Implications for use. Just as we solve an individual problem by analyzing its component factors, then eliminating those detrimental to its solution by assembling data and emphasizing and studying the points that are propitious to its eventual adoption, so, too, must we proceed when facing the problem of correctly using the Rating Scale and the factors that enter into making it worthwhile if it is to be acceptable as a unit of universal measurement among the minority groups.

From a comparison of these facts, brought out and proven by scientific studies, it is clear that the books which a teacher selects should conform to reality and genuineness. A knowledge of the child's previous experiences, his present surroundings and his needs, must be present in order to select the book which is going to assist the child's need to do and to know.

Books have a tremendous influence upon the relationship of the curriculum to the child. They are squarely in the center of the educative process, and control the natural meaning of subject matter as relates to the intellectual growth of the child. They give emphasis and meaning
to the relationship which the child bears to the social life he is to enter.

Much depends on seeing that the text is presented on the correct age level, with the type of print which is easily readable. Thought must be given to the most commonly encountered problems when dealing with minority group children, and letting this guide us appreciably if we are to secure an adequate means of solving the problem to the child's advantage.

In the final analysis we must be mindful of the mode of life, language difficulties, differences in voice inflections, and the many nuances of a new mode of speech, keeping in mind the type of child for whom the text is being selected.

The books must definitely have allure, eye appeal through color, snatches of interspersed songs, short, clever poems, and though we may have to adjust and re-adjust when making a tentative plan, it is only through the trial and error method, when assembling the factual material for the Rating Scale, that we shall reach our desired goal.

We must keep in mind that material things move on, and are constantly undergoing a cycle of change. So if we can have a definitely helpful standard, or a good yard-
stick, so to speak, when evaluating the books to be used in the classroom, it will be a salient asset to be used by the instructor of minority group children.

When we think through the problems of setting up a Rating Scale, we must face the actual situation of the child who is gropingly learning a new language, new customs, new contacts, and we try to visualize the text through his eyes.

Books deficient in elements of pupil initiative, or which do not promote the building of a comprehensive experience pattern with a definite bearing upon the pupil's future life must be avoided. Teachers must select books which will introduce activity and pupil initiative into the child's school day, which will provide a rich, varied program of stimulating, objective experiences. Books should give the child power of interpretation and help him in drawing inferences.

By constant study and concerted effort we must make new adaptations of the Rating Scale to fit the needed situation, so that we shall prepare our students and teachers of the minority groups of today, to be the leaders of tomorrow, by giving them a means of helping themselves.

**Limitations.** The judges felt that due to very poor
training and lack of competency, particularly in Alaska among native teachers, that for the majority, the short form of the rating scale would be used. In Modesto, California, Atlanta, Georgia, and also in Havana, Cuba, the entire scale was used, but invariably the teachers who were not as well educated, preferred the short form.

The biggest limitation seen in the small sampling listed above, was the fact that teachers of minority groups must be educated to use the Rating Scale intelligently.

They do not realize why they should take into consideration the points it stresses, when they are selecting textbooks.

Also it was not possible to judge the results of the use of the scale, nor will it be, until some months, or even years in the future.

Suggestions for Further Study. After using the Rating Scale for several months, or years, various tests could be made as to the improvement in selection of textbooks among the minority groups.

It could be determined whether or not, through continued use, teachers were using the Rating Scale more freely and easily.

Whether by better results obtained in the classroom
and community, they were becoming educated to realize the necessity of using books which fitted their own particular needs.

A check on children's interest in books, before and after the introduction of the use of the scale, would be most helpful in further studies.

The elimination of items found through experience to be superfluous or unnecessary. Perhaps some additions to, and a revision of the scale when the teachers' suggestions prove valuable.


Bere, M. A., A Comparative Study of the Mental Capacity of Children of Foreign Parents, Contributions to Education No. 154, New York: Teacher's College, Columbia University, 1924, pp. 1-125.


Curriculum Foundation Series, New York: Scott Foresman Co., 1940.


Easy Growth in Reading Series, New York: John C. Winston Co., 1940.


New Jersey Scale for Rating When Adopting State Textbooks, New Jersey: State Department of Education.


Rating Scale for Reading Textbooks, Rochester, New York (No date).

Reading for Interest Series, Boston: D. C. Heath Co.


Texas State Textbook Commission, Suggested Rating Scale for Textbooks, Austin, Texas, 1945.


Watrous, Everett T., Experience Method of Teaching Beginning Reading and Its Application to Alaskan Native Schools, Unpublished M. A. Thesis, University of Chicago, 1941.


APPENDIX I

TABULAR SUMMARY OF TYPOGRAPHY RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Typographical Factors</th>
<th>Satisfactory Printing Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Style of Type face</td>
<td>Any commonly used modern or ultra modern type face</td>
</tr>
<tr>
<td>2. Type Form</td>
<td>Caps and lower case. Bold face for emphasis and reading at a distance. Italics for emphasis only</td>
</tr>
<tr>
<td>3. Size of type</td>
<td>9, 10, 11, or 12 point leaded and in optimal line widths</td>
</tr>
<tr>
<td>4. Width of line</td>
<td>Moderate line widths (in neighborhood of 19 picas)</td>
</tr>
<tr>
<td>5. Leading in relation to type size and line width:</td>
<td></td>
</tr>
<tr>
<td>6 point type</td>
<td>2 point leading, 14 to 28 pica line width</td>
</tr>
<tr>
<td>8 point type</td>
<td>2 point leading, 14 to 28 pica line width</td>
</tr>
<tr>
<td>10 point type</td>
<td>2 point leading, 14 to 28 pica line width</td>
</tr>
<tr>
<td>11 point type</td>
<td>2 point leading, 16 to 28 pica line width</td>
</tr>
<tr>
<td>12 point type</td>
<td>Set solid or ledged one or 2 points in moderate line widths (in neighborhood of 25 picas)</td>
</tr>
</tbody>
</table>

1D. G. Patterson and M. A. Tinker, How to Make Type Readable, Harper and Bros. Pub., N.Y., 1940.
<table>
<thead>
<tr>
<th>Typographical Factors</th>
<th>Satisfactory Printing Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Margins</td>
<td>One-quarter inch for top, outer, and bottom margins, three-quarters inch for inner margin</td>
</tr>
<tr>
<td>7. Columnar arrange-</td>
<td>Single column or double column</td>
</tr>
<tr>
<td>ment</td>
<td></td>
</tr>
<tr>
<td>8. Space between</td>
<td>One-half pica space with no rule</td>
</tr>
<tr>
<td>columns</td>
<td></td>
</tr>
<tr>
<td>9. Color of print and</td>
<td>Black print on white background, or dark colored print on light colored background</td>
</tr>
<tr>
<td>background</td>
<td></td>
</tr>
<tr>
<td>10. Paper surface</td>
<td>Dull finish opaque paper stock</td>
</tr>
</tbody>
</table>
## APPENDIX II

CONVERSION TABLE FOR PRINTING MEASUREMENTS

<table>
<thead>
<tr>
<th>Picas</th>
<th>Inches</th>
<th>Picas</th>
<th>Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1 21/32</td>
<td>28</td>
<td>4 21/32</td>
</tr>
<tr>
<td>11</td>
<td>1 27/32</td>
<td>29</td>
<td>4 27/32</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>2 5/32</td>
<td>31</td>
<td>5 5/32</td>
</tr>
<tr>
<td>14</td>
<td>2 11/32</td>
<td>32</td>
<td>5 11/32</td>
</tr>
<tr>
<td>15</td>
<td>2 16/32</td>
<td>33</td>
<td>5 16/32</td>
</tr>
<tr>
<td>16</td>
<td>2 21/32</td>
<td>34</td>
<td>5 21/32</td>
</tr>
<tr>
<td>17</td>
<td>2 27/32</td>
<td>35</td>
<td>5 27/32</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>3 5/32</td>
<td>37</td>
<td>6 5/32</td>
</tr>
<tr>
<td>20</td>
<td>3 11/32</td>
<td>38</td>
<td>6 11/32</td>
</tr>
<tr>
<td>21</td>
<td>3 16/32</td>
<td>39</td>
<td>6 16/32</td>
</tr>
<tr>
<td>22</td>
<td>3 21/32</td>
<td>40</td>
<td>6 21/32</td>
</tr>
<tr>
<td>23</td>
<td>3 27/32</td>
<td>41</td>
<td>6 27/32</td>
</tr>
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<td>24</td>
<td>4</td>
<td>42</td>
<td>7</td>
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<tr>
<td>25</td>
<td>4 5/32</td>
<td>43</td>
<td>7 5/32</td>
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<td>26</td>
<td>4 11/32</td>
<td>44</td>
<td>7 11/32</td>
</tr>
<tr>
<td>27</td>
<td>4 16/32</td>
<td>45</td>
<td>7 16/32</td>
</tr>
</tbody>
</table>

---

# APPENDIX III

## TOTAL NUMBER OF WORDS IN CURRENT READING TEXTBOOKS

<table>
<thead>
<tr>
<th></th>
<th>Grade I</th>
<th>Grade II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Foresman</td>
<td>336</td>
<td>563</td>
<td>899</td>
</tr>
<tr>
<td>(1942)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winston</td>
<td>300</td>
<td>401</td>
<td>701</td>
</tr>
<tr>
<td>(1940)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Row Peterson</td>
<td>385</td>
<td>396</td>
<td>781</td>
</tr>
<tr>
<td>(1947)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver Burdett</td>
<td>365</td>
<td>Full Year</td>
<td>742</td>
</tr>
<tr>
<td>(1945)</td>
<td></td>
<td>377</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semester</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Macmillan</td>
<td>430</td>
<td>430</td>
<td>860</td>
</tr>
<tr>
<td>(1945)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lorge's Formula for Estimating Grade Placement of Reading Materials

Title of Book
Name of Author
Publisher
Date of Publication
Edition
Location of Sample in Text

Basic Data

1. Number of words in sample
2. Number of sentences in sample
3. Number of prepositional phrases in sample
4. Number of hard words in sample

Computation

Item 6, average sentence length
   Divide No. 1 by No. 2 and multiply by .07

Item 9, ratio of prepositional phrases
   Divide No. 3 by No. 1 and multiply by 13.01

Item 9, ratio of hard words
   Divide No. 4 by No. 1 and multiply by 10.73

Constant is 1.6126

Add Nos. 6, 8, 9, and Constant and it equals
Readability Index

Name of Analyst
Date of Analysis

---

Durrell's¹ List of Factors Which Serve as a Guide in Determining the Appropriateness of Library Materials for Individual Needs in an Ordinary Class

a. The range of difficulty of reading materials should be comparable with the range of reading ability of the pupil in the classroom.

b. The books at each level should supply sufficient practice for the pupils' attainment of the next higher level.

c. For pupils of below-grade ability, the easy books should not be those studied in the lower grades. Books already used are seldom welcomed by slow readers and tend to encourage guessing and remembering rather than actual reading.

d. Advanced pupils of above-grade ability should not be given books ordinarily used in higher grades. Teachers in the higher grades should have the right to certain books for initial instruction of all their pupils.

e. So far as possible, enough appropriate material should be provided to enable each child to read at his own level in any required unit of subject matter.

Schorling's Plan for the Selection of Textbooks

1. Secure a statement from the teachers of their criticisms of the textbook to be replaced.

2. Prepare a brief statement of trends with respect to the aims and the scope of materials of the course.

3. Request the publishers to furnish samples of available textbooks, and examine each of these in terms of the goals of your course and the problems that you believe to be most crucial and interesting to students, the scholarship reflected by authorship, and the local community needs.

4. After the five best books have been chosen, ask each teacher who will use them, to make a critical comparison of them by utilizing a simple check list that will reflect the high and low spots on such items as:
   a. Quality of cover, binding, and mechanical makeup
   b. Quality of paper
   c. Quality of printing (type, illustrations, etc.)
   d. Kind and value of teaching aids (review exercises, drill exercises, text material, style, study helps, etc.)
   e. Appeal to pupils (based on examination of three or four pages on the same subject in each book. Note the vocabulary, illustrative material, style, study helps, etc.)
   f. Accuracy of scholarship (based on an examination of the treatment of a difficult topic in each of the books.)
   g. Extent of the use of results of scientific studies of subject matter

h. Success of the author in selecting and organizing materials in terms of the aims and objectives of the course as defined by the teachers.

5. Recommend the first and second choice to the superintendent of schools on the basis of the data submitted.