

Bulletin 1959, No. 19

WRITERS' Handbook

for the Development of

Educational MATERIALS

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Foreword

THIS *WRITERS' HANDBOOK* was prepared in response to the many requests for "a book that tells how to write textbooks and other educational materials for schools." These requests have come from educators of other countries as well as from the United States.

We believe that the handbook holds valuable information and suggestions for heads of educational systems who may be exploring such matters; for teachers and librarians who use and evaluate educational materials; and especially for those persons who may desire to write textbooks, and related works, in which children will find both values and joys in reading.

The handbook is the outcome of the first Washington workshop for the development of educational materials, a cooperative project of the International Cooperation Administration, The George Washington University, and the Office of Education, which was held February-August 1958.

The ever-continuing need for adequate and appropriate educational materials is a widely recognized problem faced by educators around the world. Naturally the need is more acute in some countries than in others. The first Washington workshop had in regular attendance some 20 representatives from 13 different countries, all of whom in varying measure contributed toward the development of this handbook. In fact, it embodies many questions asked and many of the things which members of the workshop learned from each other; and it gives some answers to questions most frequently asked in letters to the Office of Education and the International Cooperation Administration, particularly those from educators responsible for preparing materials in missions overseas. A final chapter deals with how to organize a writers' workshop.

The Office of Education expresses sincere appreciation to the many persons of various countries, including our own, who cooperated with the authors by contributing suggestions, samples of educational materials, pictures and drawings from their respective countries.

It is hoped that this volume will prove of genuine service to educators of all countries seeking such information.

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Acknowledgments

THE AUTHORS of this handbook wish to express appreciation to the following individuals and organizations for the use of the illustrations which appear on the pages listed below:

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IPART I

Part I Overall Planning

CHAPTER 1

What Are Educational Materials?

EDUCATIONAL MATERIALS. Everyone discusses them. What exactly do they include? Some teachers say that whatever interests a child is educational material—caterpillars and clay, birds and bugs, caring for aquariums, assembling model airplanes, looking at films. That may be true. For the purpose of this handbook, however, educational materials will be limited to textbooks, supplementary books, teachers' manuals, workbooks, periodicals, and pamphlets related to the curriculum. Although the term "educational materials" includes all of these different types, the textbook is still the mainstay of most classroom teachers.

What is a textbook?

"Textbook" is the term for a book used in a course as the base around which the course is built. Years ago these books were referred to as schoolbooks and often there was but one reader, one arithmetic, one geography, or other book for a grade. Each day the children read the pages assigned by the teacher, answered the questions at the end of the chapter, and memorized answers to questions which they hoped the teacher would ask.

When the class had completed the book, the children turned to the first lesson and began again. This was called "going through the book," and the number of times a class went through the book in the year was sometimes considered an index of good teaching.

In preparing these early books, little concern for the needs and interests of children seemed indicated. In the reading books little effort to control vocabulary or to provide for logical sequence in learning was made. Geography for the young learner included memorizing the names of continents, countries, oceans, mountains, rivers and their tributaries, States and their capitals.

Problems in arithmetic had little relation to the problems with which the child was concerned. Finding out when two trains travel-

ing at a given speed in different directions would meet or how fast a dog must run to catch a fox were examples of problems over which children puzzled.

The modern textbook

Today it is recognized that children learn more easily when the subject matter has meaning because it deals with their own problems in a familiar environment. The first learning materials begin with family and home, broaden to take in neighborhood and school. Children also need materials that explain in terms they can understand the changes that are taking place in their community and in the rest of the world. For if they are to apply what they learn, they will do this in their own community. What they learn about good health, safety, and conservation measures, for instance, can be put into practice first of all where they live.

Today's textbooks are a basic tool for both teacher and pupil. They help the teacher set up objectives and suggest ways for reaching them. Material is generally presented in simple reference form and is organized to provide for logical sequence in ability. The books are indexed for ready reference. Illustrations are an important part of the modern text. They clarify and extend information and make content more vivid. In addition, many modern textbooks meet the standard set by children themselves—that the book be as “interesting as a story book.” However, even a good text still remains an aid—never a substitute—for the teacher.

What are supplementary materials?

No matter how good the textbook, our broader educational aims require the use of a variety of materials to supplement the textbook. For a single textbook, however complete, is rarely if ever adequate to meet the individual needs and interests of children. Because it covers a broad subject, information in the text must necessarily be condensed. Children need additional materials that help them broaden and deepen this information. Furthermore, all children do not learn in the same way. One type of material may convey meaning and understanding for one child and different material be needed for another.



The modern textbook is interesting as a storybook.

The following paragraphs from a curriculum bulletin of the New York public schools indicates the wealth of printed materials that are used in modern schools:

Instructional materials include wide variety of printed materials, such as textbooks, library books, periodicals. "Library books" is an all-inclusive term which includes almanacs, anthologies, atlases, dictionaries, encyclopedias, and reference books as well as picture books, poetry, travel, and story books.

The use of library books is limitless, depending upon the knowledge, interest, and ingenuity of the individual teacher.

There is no longer a line of demarcation rigidly drawn between textbooks and library books. Textbooks have become more attractive, less formidable in content matter and presentation. Library books have moved into the curriculum areas with increasing assurance. The newer library books are timely in subject matter, accurate in presentation and flexible in age-span level.¹

¹ "Curriculum Development in the Elementary Schools." *Curriculum Bulletin*, No. 1, 1955-56 Series. New York: Board of Education of the City of New York, p. 83-84.

Fitting new needs

To supply the variety of materials to meet curriculum needs in a rapidly changing world poses a problem everywhere. It is a particularly complex one in countries that have changed their educational systems to meet new goals. These countries must have textbooks to replace the books that for years have been imported from other countries. Vietnam, for instance, used books published in France for French children. Textbooks published in the Netherlands for children there were used in Indonesian schools. Australia, India, the Sudan, and many other countries depended on England to supply books for their schools.

Materials with meaning

Children learning to read in tropical countries puzzled over accounts of snowstorms, the pleasures of a day on skates, and the everyday activities connected with the change of seasons in lands far from their own.

Even if countries have the same language, it is seldom considered practical to have textbooks for one country used as the basic books in another. Experience in Latin America has shown that although the official language in 17 of the countries is Spanish, stories about gauchos and the pampas used in the elementary schools of Argentina had little meaning for a child in Panama. The contents of books published in Chile were as unfamiliar to the boy in Guatemala as they would be to a child in Maine or Michigan.

Within the same country, special materials may be needed for special groups. The U.S. Bureau of Indian Affairs has for years had a program for the preparation of materials for Indian children who are in reservation schools, as well as for adults.

To master the skills of reading, for instance, and learn about new customs at the same time puts many obstacles in the path of the learner. Likewise, for effective learning, arithmetic, civics, and social studies should be based on the child's environment and deal with the customs and problems familiar to him.

Need for local materials

Teachers in systems where textbooks are usually available have also found it necessary to prepare special instructional materials. The

local community is more and more recognized as a source of learning for children. Before the child is prepared to understand the activities of the world, his understanding of the things about him in the community must be deepened and enriched. If such learning is to be adequate, there must be organized instruction centered in the community activities, past and present.

To present the subject adequately, the teacher needs as much instructional material on the community as she needs on other subjects. Usually, materials on specific communities and their problems are not produced by publishing companies which produce books to serve a nationwide market. Usually, these materials must be prepared locally.

San Francisco project

It was the need for instructional materials in third-grade social studies that led to the production of a variety of such materials in San Francisco. According to Dr. Harold Spears, superintendent of schools in that city, the idea of the project and the early planning emerged in March 1948. The first booklet, *San Francisco Today*, was published on September 1, 1948. The first printing was 9,000 copies, and a second run of 10,000 was made soon. A month later, a set of plastic-covered study prints to use with the booklet was delivered to each of the 86 elementary schools.

The second booklet, *In and Out of San Francisco*, was completed December 1, 1948, and 19,000 copies run off. Four filmstrips were delivered to each school the same day. A third book, *Fun in San Francisco*, was completed in March 1949, and three others were ready for use in the schools in September 1949. Runs of 19,000 copies were made of each of these 32-page booklets.

Teaching aids to supplement the booklets included filmstrips with captions; a sound transcription of typical harbor and city noises; a set of 35 photostatic prints, 8 by 10 inches, of early and present-day San Francisco, plastic covered, for classroom use; a study-guide for teachers; and, also for teachers, a set of miscellaneous materials collected from governmental agencies and private firms, to provide additional background information.

A committee of teachers, with a principal as chairman, wrote the books under the general supervision of the assistant superintendent in charge of elementary education. The teachers' work was all done during their spare time with the exception of that of three teachers who left their classrooms for 3 weeks to work on copy. Although only 12 teachers served on the committee, many more helped on the project.



Admission Tickets Needed

Boys and girls in country districts bring their farm animals to the Junior Livestock Show at the Cow Palace.

San Francisco children enjoy visiting these exhibits. They like to see the horses and the cattle. They like to see the judges give prizes to the winners.

The Cow Palace is used for many other shows. It is a fine place for basketball games.

Children need local materials: Sample page from San Francisco booklet.

Even the children had a part in the project, for a story cooperatively developed in a classroom was sometimes used.

Assistance on the project was not limited to teachers, supervisors, and the superintendent of schools. Scores of public agencies and private organizations provided photographs and information; individuals gave their time; and the Rosenberg Foundation of San Francisco contributed \$10,000 on the basis of community betterment.

Michigan project

A need for materials on their own community prompted a group of teachers of Grand Rapids, Mich., to undertake the writing of two textbooks: *Michigan, My Michigan* (1949), a fourth-grade text, and *Our City* (1952), for third grade. Both books were written by volunteer groups of teachers because they wanted a story of their community and of their State written in terms which children could understand. Children also shared in the work by drawing the illustrations which add to the attractiveness of the two volumes. The books were published by the Board of Education of Grand Rapids.

New Zealand program

New Zealand's experience may be of interest to other countries which are developing educational materials. New texts were needed to correspond with new educational objectives. A survey made by an official textbook committee showed that most existing materials were so unsuitable that many experienced teachers preferred to do without them. As a result, a Schools Publication Branch was established in the Department of Education in 1939.

The New Zealand report is well documented and describes their problems and the ways they were solved. Countries in the same stages of textbook development will find the report well worth their study.²

After thorough studies of the pros and cons, the New Zealand Department of Education decided to issue only two basic textbook series: English and arithmetic. Other subjects would be covered by bulletins issued five times a year. These bulletins varied from 32 to 48 pages, and were printed in quantities of approximately 1 for every 3 pupils.

The reasons given for publishing only two basic series were two-

² *The New Zealand Schools Publication Branch. Education Studies and Documents, No. 25. Parts: UNESCO Nov. 1957, 46 pp.*

fold. The first was timesaving: "The Department of Education decided not to issue social studies textbooks for primary schools but to produce material needed in this field in the form of bulletins, each of which would deal with a specific topic. One argument in favour of this was that the schools urgently needed material to implement the new syllabus, and it was possible to produce and distribute a whole series of bulletins in the time it would have taken to produce textbooks."³

But timesaving is not a sufficient reason to continue a program of bulletins rather than textbooks, unless there are other important reasons. The second reason, which influenced New Zealand in establishing the bulletins as a permanent publishing venture, is summarized here: "There were still other advantages. New bulletins would come to schools each year, so that the children would constantly have a fresh stimulus to reading. Writers and artists could present ideas in new ways. The size and shape of any particular bulletin could be altered to suit the subject, and new developments in the various subjects could be incorporated more easily into a series of bulletins than into a textbook, which could not be revised frequently."⁴

The New Zealand Schools Publication Branch has expanded since it was organized in 1939 and is now responsible for the planning, production, and distribution of a great variety of publications, including textbooks, bulletins, journals, teachers' manuals, syllabuses, a professional journal for teachers, the official education gazette, and booklets to accompany broadcasts to schools advising young people on careers and helping new settlers to learn English.

Some advantages of flexible materials

Many countries have discovered the advantages of producing booklets, bulletins, and periodicals in order to get a materials program started and to supplement those they already have. It is true that books are usually the ultimate goal of a publications program, but periodicals also have a great many advantages. They are inexpensive and flexible, and can be produced more quickly than books, without lowering standards. They also may require less sustained writing skill and can be more readily illustrated and printed.

From the viewpoint of the reader, periodicals offer a variety of content as they can reasonably include both information and story material. They can also include more than one level of language or understanding.

³ Ibid., p. 19.

⁴ Ibid., p. 19.



NOTAS COSMOGRAFICAS

LAS CONSTELACIONES

Si las estrellas estuvieran distribuidas por el cielo de una manera caprichosa, es decir, que cambiaran constantemente de posición con relación de unas a otras, sería muy difícil conocerlas y, sobre todo, encontrar alguna de ellas cuando quisiéramos hacerlo. Al contrario de esto, sabemos que la posición de los astros, unos con relación a otros, permanece invariable desde hace muchos siglos, y esto ha hecho posible poner nombre a los principales y, lo que es mejor aún, agruparlos en lo que nosotros llamamos constelaciones, que son conjuntos de estrellas que forman figuras que pueden imaginarse con más o menos facilidad y que ocupan, en determinadas épocas, la misma posición en el cielo con relación al que las está observando.

Las estrellas tienen nombres muy

hermosos y las constelaciones también, y vamos a hablar brevemente de algunas de ellas, las más conocidas. La primera es la Osa Mayor, o Carro, conocida de los griegos hace

mucho tiempo y que está formada por siete estrellas principales y muchas otras más pequeñas que, unidas, forman un gran Oso. Los indios incas también llamaban a esta



Venezuela's monthly *Tricolor* features articles on science and other school subjects in every issue.

tion valuable. *Time to Read*, a newspaper produced in the U.S. Operations Mission to Ethiopia, was received with enthusiasm by the people. A report from the USOM/Ethiopia told of teachers and headmasters coming in person to the education program offices to express their appreciation for these new classroom materials. Both students and teachers began at once to send contributions for future issues. *Time to Read*, the English-Amharic magazine, is distributed to Government schoolchildren in grades 5 through 8. The Amharic newspaper, *Yemanbeb Gize*, is planned for children in grades 2, 3, and 4.

"Perhaps the greatest satisfaction," the report continued, "has come from seeing students walking home from school in the evening with copies of *Yemanbeb Gize* and *Time to Read* in their hands. The knowledge that reading matter in both Amharic and English is going from the schools into the homes of students all over the Empire has made well worth while the not inconsiderable effort of getting the periodicals program underway."

The first issue of *Time to Read* includes an article describing the Silver Jubilee celebration of His Imperial Majesty's coronation. Another page is devoted to the Ethiopian version of the fable of the country mouse and the city mouse; an Ethiopian riddle; and discovery of an ancient city beneath the waters of Lake Titicaca in Peru. An article on science in the news discusses scientific measuring of the camel's water-carrying capacity. The issue also includes suggestions to teachers on how to use the various features in connection with school subjects.

Venezuela's *Tricolor*

Still another successful periodical for schools is *Tricolor*, published monthly by Venezuela's National Ministry of Education. Now in its 10th year, the lavishly illustrated 30-page periodical covers a wide range of subjects closely geared to the elementary school curriculum.

A typical issue of *Tricolor* includes such material as biographies of nation builders, incidents in the history of Venezuela, noted places in the country and its capital, articles on arts and crafts, arithmetic, Venezuela's flora and fauna, music, folklore, poetry, the preparation of food, and picture stories of industries. To widen the young readers' horizons, materials from other parts of the hemisphere and the world are included.

A section of *Tricolor* is devoted to the works of young authors and artists together with brief biographical sketches of the contributors. Now and then a *Tricolor* cover is also the work of a young artist.

Materials for translation

Some countries have attempted to meet the need for variety of materials by translating books used in other countries. Except for reference materials, this practice is often not suitable at the elementary level. A UNESCO report on *The Textbook as a Teaching Aid* summarizes the situation in these words: "The extent to which a textbook can be translated is also problematic. The question cannot arise at the primary level, but even for secondary school or college textbooks, the educational value of a translation seems doubtful. At the most, regional and national adaptations of an original may be accepted as an expedient."⁵

In the field of reference material, atlases, dictionaries, and encyclopedias are valuable tools for learning everywhere, but even these offer many difficulties to the translator in adapting from one culture to another. At the lowest level, some simple informational books on engineering and geology which depend largely on diagrams and illustrations have been successfully translated into other languages because the information they contain is of general interest in many parts of the world.

Furthermore, when children have mastered the basic skills in reading, the time comes to introduce the unfamiliar, to give materials that widen their horizons. Books about different regions of the world help children to understand their own environment and to broaden their geographic and emotional horizons. The little girl in Jordan who finished a book on deserts with the comment "I didn't know that people who lived in deserts of other countries had our same problems" was learning to think of the world in terms of her own environment.

A wealth of fictional materials is available for translation for children who have learned to read and are beginning to study other lands and peoples. Book with plots taken from life and customs of another land are a valuable source of information to help children develop an understanding of people and their problems. Children identify themselves readily with the characters in books who show courage or loyalty or leadership in difficult situations.

Although a textbook produced for a beginner in one country is often not suitable for use in another, some material and ideas may be adapted for use as supplementary books. Sometimes this adaptation may be accomplished by changing illustrations or substituting

⁵ *The Textbook as a Teaching Aid*. Education Abstracts, Vol. VII. No. 6. Paris: UNESCO, June 1955, p. 6.

people and animals and houses of the country for which the book is being adapted. The underlying principle is "adapt not adopt."

Summary

In schools today, basic textbooks are not enough. Modern classrooms need a wide variety of materials. These materials should be suited to the ages and interests of many different children in many different schools. The content of this material should be based on customs and culture. It will have more meaning for the reader when it deals with his interests and his problems.

Suggested reading

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CHAPTER 2

Major Steps in Publishing Textbooks

IT is not surprising that the need to supply a variety of educational materials is an urgent one in many countries today. It is urgent in countries which no longer have colonial status, and in all countries where technological developments are bringing about changes in the curriculum, which in turn create a demand for new materials. In schools around the world, new materials are needed to keep pace with children's interests. Today's schools are asking for materials on missiles and jets, electronics, space travel, and many more subjects.

The change from colonial status to national independence is usually followed by need for new educational materials. This was true in the United States in the early years. Noah Webster led the way with a spelling book, a grammar, and a reader based upon American rather than British usage. These books, published in 1783-85, were followed in turn by arithmetics based on American rather than British currency, and in the half century that followed, American authors produced textbooks on history, geography, and other subjects planned for the children of a new country. In the early 19th century, the production of textbooks, like other pioneer industries, has been described as a sort of "hit or miss business, with more misses than hits. There was practically no coordination between the needs and the aims of the educational system and the production of textbooks."¹ As time passed, educators, authors, and publishers saw the need for coordinated planning.

Need for coordinated planning

The need for new educational materials is a continuing one, whether it arises from new political frontiers, new economic developments, or

¹ *Textbooks in Education, A History of Textbooks in America*. New York: American Textbook Publishers Institute, 1949, p. 31-40.



New books must fit the needs of the school and teachers. A school at Ban Pa Thao in Cambodia.

worldwide literacy programs. Wherever such need exists, a carefully thought-out plan is necessary before launching an educational materials program. The urgent need should not cut short the necessary preparation or tempt a country to omit steps that experience has shown are essential in the long run.

In many countries the ministry of education is responsible for the textbook program. But whether it is the ministry or private publishers, or a combination of the two, who are responsible for the program, certain decisions need to be made as planning begins. These may be summarized in four main steps: (1) Determine need; (2) secure authors; (3) supervise writing, illustrating, and printing; and (4) distribute the materials. Each one of these steps may be broken down into several stages, depending on size of the publications de-

partment. The American Textbook Publishers Institute lists the following as the principal steps in publishing textbooks:

Determine need.

Analyze market.

Weigh competition.

Decide method of distribution.

Determine mechanical manufacturing details (size, type, paper, binding, etc.).

Select authors and manuscripts.

Plan with author to meet need, market, and competition.

Edit (rewrite, check accuracy, tailor manuscript to predetermined needs and usefulness).

Distribute or sell.

A number of these points may be worked on at the same time. Often publishers decide on general format—number of pages, chapters, space for illustrations—at the same time that they are analyzing market and weighing competition.

Let us consider briefly the list of steps above. First it is necessary to know what books are available. The time taken to examine texts already in print and to discover the needs and desires of the teachers and pupils in the schools is time well spent. Speaking in Washington at the Inter-American Seminar on Over-All Planning for Education, Lee C. Deighton of the American Publishers Institute told how these needs and desires are discovered.

The thoughtful publisher consults the publications of educational societies. He is closely in touch with newly published curricula in the states and cities. His editors seek out and consult continuously the supervisors of curriculum and instruction. But even more important are the reports from his field representatives. In the U.S.A. there are about 1,100 of these representatives calling on school people every day of the school year, presenting their books, listening to criticism, and seeking the advice of teachers and supervisors as to how their books can be made better. Their reports go back to the editorial offices where they are studied eagerly and in detail. If they were not, the publishers would soon find themselves publishing books that satisfied themselves but no one else. As in every other field of human endeavor, in publishing self-esteem pays low dividends.²

Other decisions must be made after needs are established. Content, method of approach, and format of the new books must be decided, as well as the size of the editions of each book that will be printed and how the books will be priced and distributed. If the books are not furnished free to the pupils, what should be the price so that both children in city and village can pay it?

² Lee C. Deighton. *Bases for the Selection and Publication of School Texts*. Document prepared for the Inter-American Seminar on Over-All Planning for Education, UNESCO/Organization of American States, Pan American Union, Washington, D.C., June 1958.

Special language problems

Language is another point that many countries must consider. Providing books for beginners in the language used in the home is a problem in countries where many languages and dialects are used. Such language problems perplex even small countries. People in remote villages of Laos, for instance, speak a language of their own which differs from the official language. Ethiopia's official language is unfamiliar to people in many parts of that country. Villages in Mexico and the Philippines and dozens of other countries have a confusion of dialects. And the United States to a less degree has a similar problem in providing books for the various Indian tribes.

Who will write the books?

Who will write the books? Again, whether the ministry of education or private firms are the publishers, authors must be found.



The author must know what textbooks are already available. In this photo the staff of the Educational Materials Laboratory in the U.S. Office of Education, Washington, D.C., check over new textbooks.

Usually the search begins in the school. For, as Mr. Deighton said, "Only a very few of the textbooks published today began as manuscripts brought to publishing houses unsolicited. And of these few, it is safe to say that none was published in exactly the form in which it was submitted. Today the textbook author does not seek a publisher; it is the publisher who seeks an author."

If you are a teacher who has demonstrated skill in teaching, or shown talent in preparing materials for your own class, you may be asked to work on the textbook program. You may be asked to write, to help plan, or to try out material in your classroom as it is prepared. You may be asked to work with a professional writer of children's books who has never taught and needs help in fitting material to the curriculum. These are some of the ways in which you may cooperate with a program for the preparation of materials. For textbooks are almost never planned and written entirely by one person. Preparing them is a cooperative effort in which many people are concerned, as the following paragraph from *Textbooks in Education* indicates:

Since the making of a modern textbook is usually a cooperative enterprise, planned and directed by the publisher's own staff, the author's position is quite different from that of a writer of fiction. The fiction writer is like the artist who paints a picture to please himself, hoping that someone else will like it well enough to buy it. The textbook writer is like the commercial artist who contracts with an advertiser; the needs and tastes of his market are known in advance and must be met. The fiction writer works alone and writes what he pleases on a take-it-or-leave-it basis. The textbook writer works with help to produce a cooperatively planned product.²

Bring authors into the program

Lack of an organized textbook production program does not necessarily indicate a lack of authors. In some countries where adequate educational materials are urgently needed, authors are busily writing books which they hope will be selected to help fill this need. Some are professional writers whose knowledge of curriculum and methods may be limited to their own experience as students. Some are teachers or other professional people who may be unfamiliar with general or specific requirements. Sometimes they prepare manuscripts without consulting teachers, supervisors, or the ministry of education as to the needs and interests of children. Obviously this way of producing texts would not provide for the unity and sequence required

² Quoted in *Textbooks in Education*, op. cit., p. 50.

of a graded series; and usually the coordination with the curriculum that is demanded of supplementary books may also be lacking.

These writers may well be brought into a textbook program. They may have good background in a special subject. They have experience in writing and organizing material which can be of value in working with others in a coordinated program. At the same time, they can benefit from working with teachers and supervisors who know the school program and how the materials can be fitted to educational needs.

Know your educational goals

At an early stage of planning both publishers and authors must know what national goals have been set for education and how these affect or influence the production program.

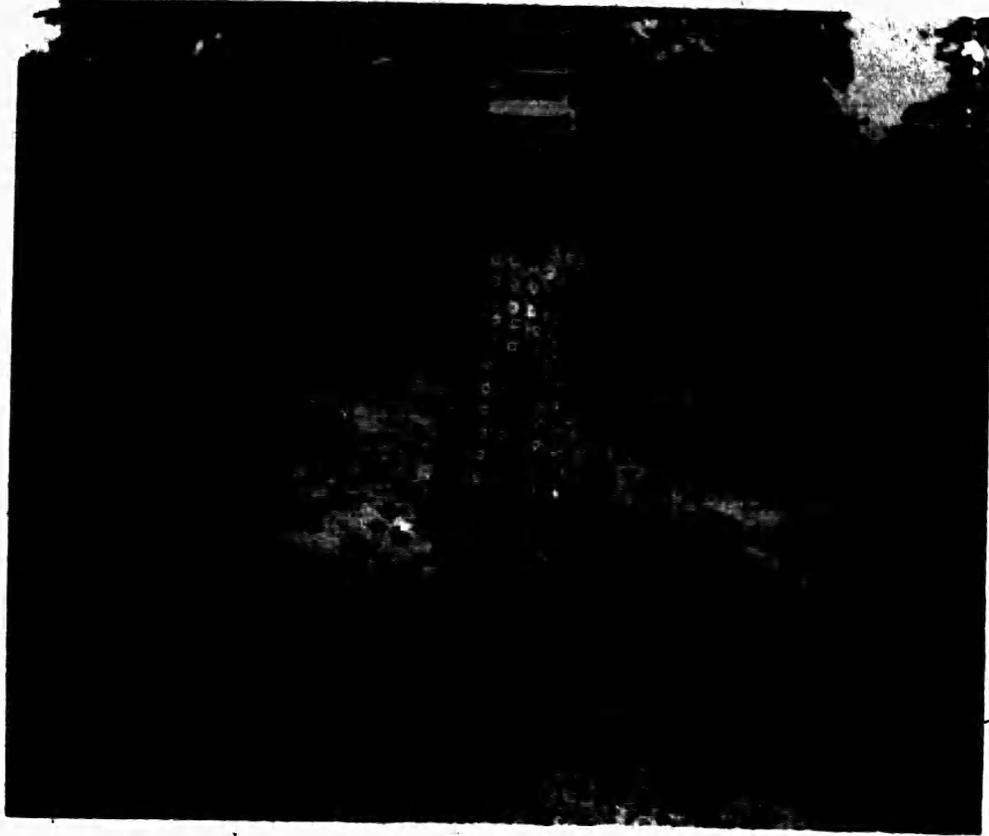
Most countries want an educational system that will help children gain the ideals, understandings, and skills essential to becoming good citizens. An education that makes possible the development of national resources, inculcates national loyalty, and develops sensitivity to the needs of individuals and groups is a common goal adopted by many countries.*

Countries with special conditions may set special goals for education. To instill a feeling of unity and national pride in its people who are spread over 3,000 islands is one of the goals that the young Republic of Indonesia has set for its educational system. An education that stresses training people for leadership is also the educational goal of many nations now emerging from colonial status.

What plans should the author make?

You have considered plans the publisher makes in preparing to launch a textbook production program. As an author you should also make careful preparation. First of all you need to be thoroughly familiar with the course of study. You should know what the objectives are of the course for which the material is being prepared. You must have clearly in mind how your book or the series—if it is

* The role of the school in community improvement is discussed in a series of reports in *Education for Better Living*, the 1957 Yearbook on Education Around the World, U.S. Department of Health, Education, and Welfare, Office of Education. Washington, D.C.: Government Printing Office, 1957.



New books must fit the needs of children like this 11-year-old girl in Liberia who carries her books proudly to school every morning.

part of one—will achieve this objective. You should know what it covers for the grade or age level for which you are writing, and what it includes for grades below and above this level. You should know what interests children and stimulates their imagination.

The length of the school year is another matter to be considered. Do schools in the interior or in remote areas have a shorter school year than those in the cities? If the school term varies, how will you organize the material so that the essential points are covered in the briefer term and still maintain a logical sequence?

Your book will have to fit the age and interests of the child, but it should also fit the teacher who is going to teach it. What background, training, and experience will she have? In the long run, no question is more important. You want to be sure that the improvements in methods and developments in subject matter will be accepted. Sometimes it is wise to follow a cautious approach to reform, for your material must suit the average, not the exceptional, teacher.

What other equipment and materials will be available to help supplement your book? Do you—the author—have a clear picture of

the different regions and the kinds of schools in which your materials may be used?

What is the purpose of your book?

Still other questions must be answered before you begin to write or even to collect material. You must answer these questions about the purpose of your book:

1. Is it to develop skills?
2. Is it to develop understanding?
3. Is it to develop skills and understanding?

Reading, writing, arithmetic, and spelling are the so-called tool subjects, and in developing a book on these subjects the emphasis will be to develop skills. The child or adult who has not developed skill in reading cannot use reading to satisfy his needs. The same is true of other tool subjects.

Perhaps you are writing a book on citizenship for children. In the material you select and the way you present it, you will try to develop certain attitudes—or understanding—in your readers. The same will be true of a book on safety or on good health practices. Much of the material prepared for adult literacy programs is planned to develop attitudes. In *Back to the Farm*, one of the People's Handbook Series published by the Burma Translation Society, the story shows the folly of deserting the farm for the city—an acute problem in Burma today. The advantages of good health practices, of saving, of improving the soil are favorite subjects which countries have used in their adult literacy programs.

If, for instance, you write a modern geography for the elementary school, you may emphasize both skills and attitudes. You will provide exercises to develop skills in reading maps, in interpreting pictures in terms of geography, and in thinking geographically. At the same time, your aim may also be to develop an understanding of, and sympathy for, people of other lands. Not only the material but the way you present it is important if developing attitudes is your aim.

Summary

It will take time to plan. You will need to keep in mind the schools of your country, the teachers, the children, and the specific aims of

the books you are writing. You will need to know the national aims of education. You will need to know the schools in different areas of your country, any differences which may exist in language, economic background, or home training. You will want to be familiar with the course of study and know how your material will fit into its appropriate place with relation to upper and lower grade material. You will want to be informed concerning methods of distribution of school materials and the training of teachers who will use the new materials.

The brief questionnaire which follows may be useful in summarizing the kind of information which will help the teacher-writer to develop materials of greatest use under existing conditions.

QUESTIONNAIRE FOR TEXTBOOK WRITERS

- I. What are the educational needs of children in your country or area?
 - a. Has the curriculum been revised recently?
 - b. If so, what are the new goals?
 - c. Is there a plan for new textbooks?
 - d. What subjects are of primary interest?
 - e. In what subject areas are you qualified or interested?
 - f. For what age group do you wish to write?

- II. Studies for the development of textbooks
 - a. Has a study been made of elementary school vocabulary?
 - b. Has a study been made of children's interests?
 - c. Has a study been made of grade levels? Length of school terms? Logical development of content and skills?
 - d. Has there been a study made of illustrations for text materials?
 - e. Has there been a study made of cultural backgrounds and customs?
 - f. Will the available teachers need additional training or guidance in order to use the new materials?

- III. Survey of existing materials
 - a. What books are currently in use as classroom texts?
 - b. How far do these books meet the needs and interests outlined above?
 - c. Are there any supplementary materials, such as story books, reference books, newspapers, or magazines, which can be adapted for supplementary use?

Suggested reading

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CHAPTER 3

Making the Most of Printing Resources

THE TITLE PAGE of a modern textbook usually lists the author and illustrator, possibly several authors and illustrators, the educational consultants, and the publisher. At the back of the book, you may also find the name of the designer, the printer, and other information about the type used and method of printing. Such information is interesting not only as a formal recognition of the important part played by all these technicians but as a reminder of the need to consider the various steps in production.

Experienced textbook publishers are convinced of the necessity for taking into account the mechanical processes at the same time that educational programs are being planned and manuscripts or illustrations are being prepared. It is advisable to explore thoroughly the printing facilities available before authors undertake specific assignments.

Color printing and mass production

Both the form and the content of textbooks and tradebooks for American children have changed enormously during the 20th century. At the same time, improved machinery for color printing and mass-production methods combine to offer wider scope to writers and illustrators. The schoolbook market has expanded rapidly, making larger printings practical in spite of large initial expense for production costs. All of these factors are recognized as contributing to the variety of American books and the attention which they attract.

Admirers of colorful textbooks produced by large printing presses should not overlook the solid accomplishment of good book design, artwork, and educational planning applied to less expensive printing methods. A survey of the printing resources in a country may well lead to maximum use of the available machinery and technical personnel in the development of many kinds of educational materials, not

only hardbound textbooks, but pamphlets, wall charts, magazines, and other supplementary printed materials.

Where does the printer come in?

There is no one best way of printing educational materials. If several methods are available, the advantages and disadvantages of alternative processes will need to be considered. It is important to call in the printer at an early stage in planning.

The process finally selected may depend on many factors. Primarily, it is essential to know what is available. Next, the decision may rest on number of copies, type of publication, size of the run, contents and illustrations needed, and cost. The time involved in finishing the job is another consideration. Mimeographing is quick, and so are hectograph and stencil processes.

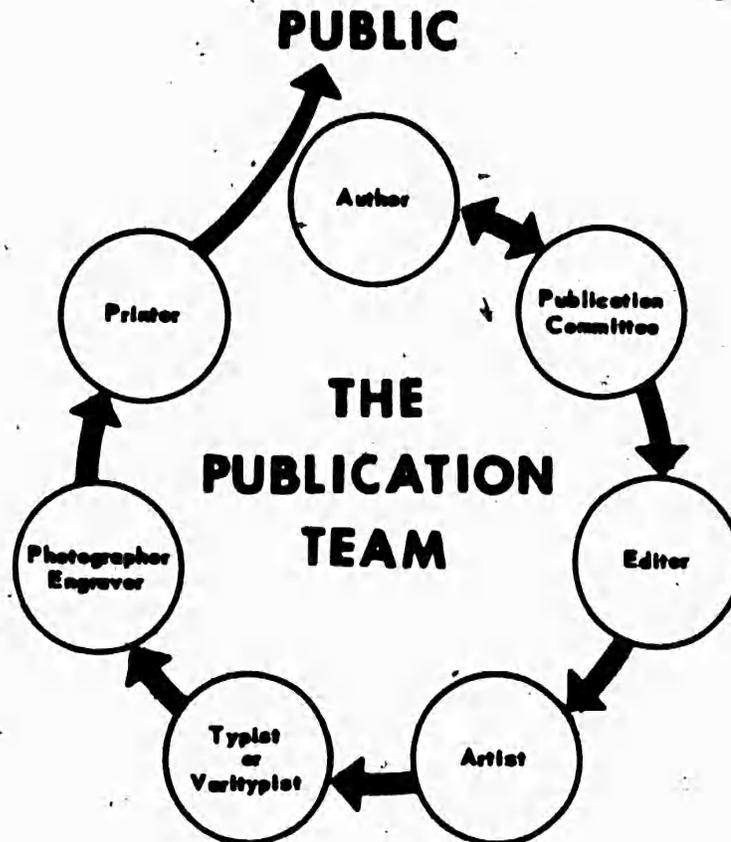
Frequently those responsible for the preparation of textbooks underestimate printing problems. Although much effort must be put into educational research and the preparation of manuscripts, adequate attention also needs to be given to the possible ways in which manuscripts are to result in books in the hands of children.

It saves time and energy to decide the probable length of the whole manuscript, and the units or chapters, too, before much writing is done. If a manuscript is too long, drastically cutting the material when the time comes for publication may damage its unity and usefulness; having to expand the material may prove equally undesirable.

Using expert advice

In a recent article in *The Multiplier*, an ICA information specialist emphasized the interrelationship of content and structure even for so simple an item as a two-page leaflet. For such an assignment these are a few of the problems which the author may well discuss in advance with editor, printer, and artist:

1. Will illustrations be required? (Yes, if only for reader interest!) Will drawings suffice or will photographs be needed?
2. How many colors will be wanted? Will the additional color justify the extra cost and time involved?
3. What kind of paper stock will be needed? Will it be color stock? Is it available?



*Diagram from **The Multiplier**.*

4. Will there be printing on both sides of the page or only one? (If both, make sure the paper is heavy enough to prevent bleedthrough of printing from opposite side.)
5. How many pages will the printed text and illustrations require?
6. How many copies will be needed? Now? Over a period of time?
7. How much time must be allowed for processing the leaflet through the various stages to completion?

The answers to these questions should indicate whether the leaflet can be done adequately on a Mimeograph machine, or whether it will require printing by offset or letterpress. If photographs are a necessity, the job will have to be done either by offset or letterpress. Several colors can be run off by mimeograph, using separate stencil for each color, but this method will not equal the quality of colorwork done by the other two printing processes mentioned.

The artist and printer can offer helpful suggestions. Each is a specialist in his field and each knows ways unknown to the author, of solving a problem. They too are interested in making the leaflet attractive and readable, because real craftsmen take pride in doing good work. If the author gives these men on the publication team a

chance to plan and work with him, the end product will assuredly be better, and many mistakes and other annoying time consumers can be avoided.¹

Printing resources

In addition to seeking advice from experts about the possibilities of different printing processes, it is helpful to examine sample materials produced in other parts of the world. Some countries with limited physical printing resources have shown great creative imagination in developing useful and original material. And in countries which rely on their own creative abilities rather than on copying another culture, a few years' continued experience should bring great strides in production.

Printing facilities vary with climate, with mechanical equipment, technical personnel, paper supplies, and binding materials. Some equipment requires electrical installation. Some can be run by hand. Some printing methods can be taught in a few weeks; some require a 1- or 2-years' apprenticeship; while others may take as long as 7 years.

Equipment may include offset machines of various types, screen printing or Varitype equipment, as well as machines for letterpress or lithography. It is helpful to know what equipment is available to reproduce photographs and line drawings.

The following summary of printing methods cannot cover all those which may be available in your country. Each method has its limitations and its advantages, which have been described and summarized in other handbooks, and which should be examined by your technical experts as soon as a new materials program is started.

In some cases, where funds are available, existing equipment can be supplemented at strategic points by binding equipment, stamping devices, or a special reducing camera for making photostatic copies of artwork and handlettered material. Improvements are constantly being introduced in printing processes.

Small offset printing

An American publisher who is familiar with problems abroad suggests a wider use of small offset printing in countries which are still

¹ *The Multiplier in Technical Cooperation*. Washington, D.C.: International Cooperation Administration. Vol. III, Issue 3, July-Aug. 1958, pp. 12-14. This article by Roger Wolcott is also available in Spanish in *Extencion en Las Americas*, Turrialba, Costa Rica.



Small offset printing is suited to countries which use calligraphy. This page is from the Amharic newspaper *Time to Read*.

lacking large printing plants and trained technicians. Called by various trade names, this method permits rapid production of printed pages, of good quality, by using very simple processes. It is possible to produce color impressions in a limited way, as well as photographs, stencils, and linecuts.

In Ethiopia, a type of small offset press is being used to meet the

need of the Ministry of Education for 120 million pages of printed material a year. Young men were trained to run the press and to make necessary repairs. The cost for the basic equipment, including headliner type, color plates, special pencils, and photo-reducing machine was not prohibitive, even for a limited budget.

Some people were skeptical at first about the practical use of this type of equipment in the Sudan, under conditions of extreme heat. But here also, an offset press was successfully installed and run entirely by Sudanese with no previous experience in printing.

The small offset method was used effectively for *Signs and The Sun and the Earth*, two booklets published at the Intermountain School, Brigham City, Utah, for the U.S. Bureau of Indian Affairs. Thailand used a small offset press to reproduce *The Meter Stick*, a series of homemaking leaflets; and Ethiopia used the same process for the school newspaper, *Time To Read*.

Duplicating

Duplicating machines of various types also are useful in building up a supply of educational materials. These are less expensive than the small offset method and can be used in the early stages of a publishing program. Later, when larger presses are available, the smaller machines can be of supplementary use for trial editions and test papers.

Duplicating machines are of two major kinds: spirit duplicating and ink stencil. The less expensive of these processes is spirit duplicating or "Ditto." This process is limited to blue ink and some use of color, but it is good for trial editions of new text materials. It gives a clear impression up to at least 100 copies.

Ink-stencil duplicating, or mimeographing, may cost two or three times as much as spirit duplicating, depending on whether the model is electrical and has extra parts for printing in color. The small hand duplicator is efficient and practical if the workload is not too heavy. For instance, if the amount of work to be done does not exceed 2 or 3 hours a day and 2 or 3 days a week, the hand duplicator will give good service for such purposes as test papers, outlines, and school newspapers.

Where electricity is available, the electrical model is better suited for steady use and larger quantities. It is adapted for running off 1,000 copies of posters or newspapers which may involve a combination of typed material and hand-drawn illustrations.

Our Bird Book, written and illustrated by a ninth grade on the Island of Yap, is reproduced as a 50-page mimeographed booklet, with stapled pages and stiff paper cover. Other mimeographed ma-

El conejito
 El conejito brinca.
 El conejito salta.
 ¡Que lindo es el conejito!



El Conejito come
 El conejito come.
 El conejito come zacate.
 El conejito corre y brinca.
 El conejito es bonito.



Simple but effective materials can be reproduced by mimeograph. A page from *El Conejito y su Familia*, USOM/Nicaragua.

materials written by children include *Star of the Sea*, a stapled weekly newspaper written and illustrated by a sixth grade on Truk Island. The satisfaction of seeing their own compositions in print is an added reading incentive.

Mimeograph has also been used successfully for materials prepared by teachers, such as *El Conejito y su Familia*, a 16-page booklet with self-cover, produced by USOM/Nicaragua; and for some simple but effective materials produced in the technical assistance program in Honduras, such as *Bees* and *Los Microbios Hacen Fiesta en los Alimentos*.

Mimeographed materials cannot be compared with professionally printed books for durability or style, but they often serve to fill an urgent need for fresh materials. Schools which are introducing new content or new methods may find advantages in this speedy and inexpensive method of reproduction.

Varitype

Varitype machines combine low cost with some of the flexibility and style of typesetting machines. They are desk machines which

differ from typewriters because they are equipped for differential spacing and justification of lines. Also, such machines have interchangeable parts which permit a limited variety of type faces and sizes similar to the typefaces used by standard typesetting machines.

Manuscript copy prepared for Varitype reproduction must be typed carefully to measure, as only one varityped copy is produced from the manuscript. Errors in this varityped copy, should they occur, can be corrected by typing new copy and inserting it in the proper place. The finished corrected copy is then pasted up on exact layout sheets with artwork and headline copy. When these have been photographed, the resulting films, or negatives, are used to prepare zinc plates from which the actual printing is done by an offset press.

This method was chosen for the *Workshop Sampler*, the booklet prepared with sample manuscripts and artwork from the First Washington Workshop for the Development of Educational Materials. It is also used for the monthly issues of *The Multiplier*, a publication of ICA, Washington, D.C., for distribution to overseas missions.

Lithography

Lithography, the term used to describe offset printing on large presses, offers wider use of color and larger printings than Mimeograph or Varitype. It also requires considerable investment and a staff of trained technicians. This was the process used to reproduce the illustrated wordbook, *Hay Tap Doc*, published by USOM/Vietnam. A set of Korean language books, as well as *Tricolor*, Venezuela's magazine for children, are other examples of this process. *Fatu's Experience*, a folk tale of Liberia, and *Wise Sayings of Liberia*, an amusing collection of proverbs, were printed in the United States by lithography.

Letterpress

Letterpress combined with line drawings has been used extensively by the Literature Bureau of the South Pacific Commission to produce a large collection of attractive material from that area. *Wealth from the Coconut*, a 40-page booklet with a heavy paper cover, and *Rice*, an 18-page booklet, are both profusely illustrated with clear

교장 선생 님한테 가서 상품을
을 받았읍니다.

일 학년 줄다리기는 참말 재
이있었읍니다.



Lithography offers use of color and large

line drawings. Both pamphlets give detailed steps in growing these two important crops of the area and are also a source of realistic information for schools in other countries in their study of products and peoples of the South Pacific.

Drawings of plantlife are used effectively as illustrations for *An Island Family*,² a simple story of Guam, produced by letterpress. This method was also used for *The Hiri*,³ the story of a yearly pilgrimage made by the Motu people to the Gulf of Papua to exchange pots for sago. The sharply detailed line drawings supply important details of the islanders and their sailing canoes.

Photography combined with letterpress has had a wide use in producing materials and could be used even more widely. Two interesting examples are *Heroes from Fiji* and *Papua and New Guinea in Pictures*, both published by the South Pacific Commission Literature

² Gurro P. Noble (Irwin K. Vandant, ed.). *An Island Family*. Guam: Commander Marianas Area Education Office, 1957.

³ Camilla Wedgewood. *The Hiri*. London: Longmans, Green & Co., 1955.

백군이 한 번 잡아당기면 백
 이 끌려갔다거, 백군이 한 번
 아당기면 청군이 또 끌려잡니



printings in this language book from Korea.

Bureau. Photographs of current events, from a queen's visit to a missionary doctor and a tidal wave, supply the cues for the text.

Silk screen

The handmade look and simple equipment are both advantages of the silk screen process. In Iran, illustrations by schoolchildren were reproduced by silk screen for their *Handbook for the Development of a School Art Program*, a 40-page booklet with heavy cover, produced by USOM/Iran. In Afghanistan the silk screen process was used to print colorful posters showing native fruits, and USOM/Libya has used this process for posters on nutrition.

These examples should illustrate the desirability of consulting the production specialist before a materials project assumes its final shape and form. The printer and the graphic arts specialist have experience in producing materials. Usually, they can suggest ideas that vastly improve the publication. Often, they can suggest ways of saving money.

THE STORY OF THE HIRI



In a number of villages near Port Moresby live the people called the Motu. The men are very good sailors; the women make very good pots. The men and the women also work in their gardens. In some places the soil is rich and the gardens do well; but in most places the soil is poor. Often there is not enough rain, and then the plants die.

Always in the dry season the Motu need more food than they can grow. Today they can buy food in a store, but long ago there were no stores. They had to get food from another part of Papua.

Far away, to the north-west of Port Moresby,

3

Letter press and line drawings are combined in a booklet, *The Hiri*.

Choosing the format

Decisions on the final details of format for a specific book or pamphlet may have to wait until the manuscript is completed, but certain general specifications should be determined in advance. When possible, an art director should be in charge of designing a book. He will confer with the printer, the editor, and the author. He will probably choose the illustrator or at least work out details with him.

Matters to be decided will include type and size of page. Possibly, a slight difference in format may work out better financially. An increase in the number of copies printed may save unit cost. Different inks or binding can improve durability. Publication experts are also interested in producing materials that are readable and inviting. The number of illustrations, the kind (whether photographs or drawings), the width of margins, the use of color, quality of paper, and the arrangement of headings, subtitles, and captions are all questions which should be discussed with the art director and printer.

Standards of book design

Time and technical skill spent on designing a book should not be considered a luxury but an essential part of effective publication. The balance of text and margins, the use of decorations, can have a functional value. The right design can rest the eye, and make it easier to understand the meaning of the text. Color may be very important for the same reason, not merely as a decoration. Beauty is not a frill.

As a country develops its textbook industry, the ministry of education or the textbook commission will usually draw up a set of physical standards, as well as educational criteria, to serve as a guide for book production. These standards may cover quality of paper, binding, and readability of type, and will be closely allied to the development of printing facilities. Good quality of paper is an important factor in fine bookmaking, but it should be remembered that where a good quality paper is not available, there are many other factors which can make a book easy to read and attractive to the eye.

Since the design of the book may play an important part in helping to organize and clarify his material, the author should know as much as possible in advance about the way the book will be printed. If he is writing a primer or preprimer, for which text must be planned line for line and page by page, he should know the number of words,

سایه روشن که ما آنرا "پاترن" می‌نامیم دو معنی دارد: یکی همان سایه روشن معمولی یعنی متعادل شبیه آرایه و تزیین در مقابل هم که ممکن است دایره تابش نور باشد. معنای دیگر آنکه اگر شیئی یا تصویری چندبار و صفوای تکرار شود هر یک از آنها "پاترن" دیگری می‌نامیم. مثل تصاویر زیر که تکرار عکس کرده است.



تصاویری که در آنجا با سبک خاصی تکرار شده است

عکس گرفته شده از مانکن

۱- از تصاویر و تزیینات خود تصاویری کشید

۲- در فرجه‌های بین آن‌ها با خطوطی که در تصویر اصلی
۳- تصاویری کشید که در هر دو به یک شکل تکرار شده است.

"Pattern"

The handmade look distinguishes materials reproduced by silkscreen like this *Teachers Handbook for the Development of a School Art Program in Iran.*

or characters, in a line, and the number of lines per page. If the book is being printed in units of 8 or 16 pages, the author should not plan for 12 or 24. Knowing how the material will be placed on the page often helps the author as he writes.

Book design also may serve to organize and clarify material at higher levels. It can be of great assistance in technical material, for activity and scientific books.

Function of illustrations

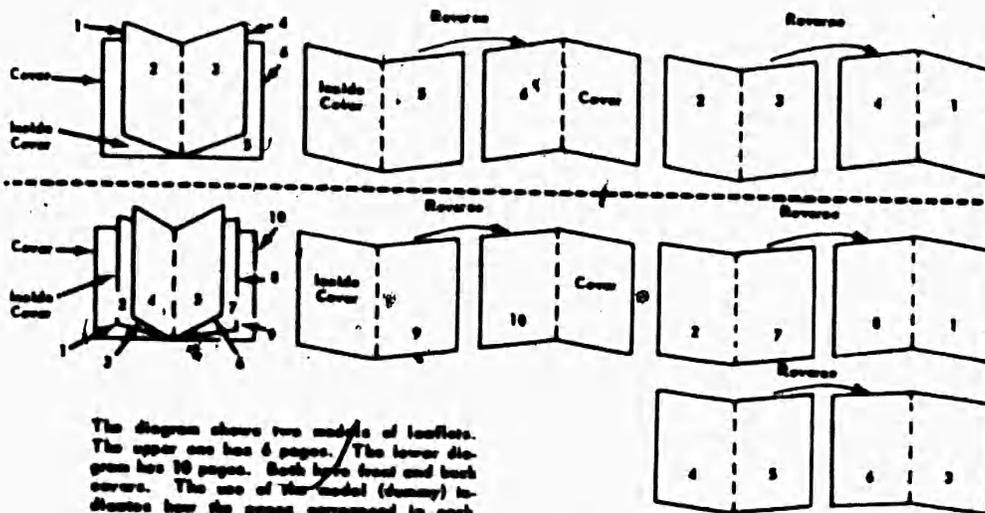
Even though the actual illustrations may not be started until a manuscript is finished, it is important to consider in this early planning stage the general type of illustration which will be needed. For practical purposes of discussion, illustrations may serve one or more of these three main functions: 1. To interpret or explain the text, 2. To supplement the text, 3. To decorate the page.

If the subject matter of the manuscript, or series of manuscripts, calls for interpretive or explanatory illustrations, ample space should

be allowed. Decorative or imaginative illustrations may often be effectively handled in small space. If there are to be diagrams or illustrations of technical material, the author should know in advance how much he may rely on illustrations to supplement the text. This may simplify vocabulary problems enormously in primers and pre-primers. (The functions of illustrations and their relationship to the text will be discussed further in ch. 12.)

Making a dummy

When the printing resources have been surveyed, and some tentative decisions reached about format, illustration, and design, the next step



The diagram shows two models of leaflets. The upper one has 6 pages. The lower diagram has 10 pages. Both have front and back covers. The use of the model (dummy) indicates how the pages correspond in each leaflet plan. Notice that the addition of one page changes the order of the page numbers throughout.

Fold two sheets of paper in the center.

Skip the cover page and the reverse side of it (the inside cover) and start numbering each page at the top. Separate the sheets and you will notice pages two and three are side by side, pages four and one go together, the inside cover goes with page five, and the outside cover faces page six.

For a larger leaflet, now fold one more sheet of paper and reassemble these three sheets. The new sheet should be placed in the center of your dummy

booklet. This time start numbering the pages at the bottom all the way through, commencing on the same page as before. Separate the sheets again and you'll notice that the pairs of numbered pages at the top are different from the pairs at the bottom. This was caused by the addition of one more sheet of paper which altered the entire arrangement of pages. It doesn't pay to try to guess the order of double pages when cutting stencils. Use a dummy and be sure.

Making a dummy, from *The Multiplier*.

is to make a dummy to test the recommendations. A dummy is a layout, or collection of layouts, showing in rough form how the type and illustrations will be arranged on a page. Dummies are frequently made by art editors and illustrators, but editors and authors can learn a great deal by testing their own ideas in this form. Dummies may be made in exact size, or smaller. They can be in sequence on loose sheets or in book form.

For all small books and primary reading materials, material should be planned page by page in dummy form. For upper grade materials, it may be enough to plan a sample type page and determine the general character and number of illustrations. Experimentation and tryout of suitable format will improve the finished product, just as surely as tryout of the manuscript itself.

Manuscript record

When all these various details have been settled, a manuscript record sheet should be prepared, which will serve as a guide to all those who are closely concerned. It may include financial details or more detailed editorial requirements. Dates or specifications may be changed as the program develops, but some brief record form is needed to follow a manuscript from beginning to publication. The form given here may be expanded or adapted to fit the needs of your country and your program.

SAMPLE MANUSCRIPT RECORD

| | |
|--------------------------------|--------------------------|
| Title: (Working) | |
| (Final) | |
| Author: | |
| Editor: | |
| Artists: | |
| Consultants: | |
| Manuscript specifications: | Printing specifications: |
| Curriculum area | Number of pages |
| Grade | Trim size |
| Number of pages | Typeface |
| Number of lines per page | Paper |
| Other limitations | Cover |
| | Binding |
| | Illustrations: |
| | Number |
| | Size |

| MANUSCRIPT SCHEDULE | Date due | Date received | Date approved |
|--------------------------------|----------|---------------|---------------|
| Outline..... | | | |
| Sample chapters..... | | | |
| First draft of MS..... | | | |
| Second draft of MS..... | | | |
| Tryout reports..... | | | |
| Revised, final manuscript..... | | | |
| Illustrations—sketches..... | | | |
| Illustrations—final..... | | | |

| PRODUCTION SCHEDULE | Date due to printer | Date received from printer | Date approved |
|--------------------------------|---------------------|----------------------------|---------------|
| Manuscript to printer..... | | | |
| Illustrations to engraver..... | | | |
| Galley proofs..... | | | |
| Page proofs..... | | | |
| Bindery schedule..... | | | |
| Publication date..... | | | |

Summary

Your manuscript record sheet, whether it is shorter or longer than the sample above, also serves as a summary of the various steps between manuscript and finished book. As in other activities, planning ahead is one of the best ways to save time and avoid unnecessary difficulties.

In the development of educational materials, the experienced writer finds out in advance everything possible about the printing methods available, the illustrator or art editor who will handle the design of his book, and any limitations imposed by budget or technical facilities. Not only do printing facilities vary from one country to another, and from one year to another as printing processes are improved, or new methods developed, but each manuscript should be treated as an individual project. The best printing process may not necessarily be the most expensive or the most elaborate. The best for your manuscript is rather the most appropriate among those which are available. And if you are writing to meet a specific publication date, as many textbook writers do, it is especially helpful to explore in advance with

the best publication experts available the various possibilities and problems of production. It is well worth knowing the many factors which may improve, or handicap, your finished book.

Suggested reading

- Emerson, Lynn A. *How to Prepare Training Manuals*. Albany: University of the State of New York, State Education Department, 1952.
- Foster, Joanna. *Pages, Pictures, and Print: A Book in the Making*. New York: Harcourt, Brace & Co., 1958.
- Karch, R. Randolph. *Basic Lessons in Printing Layout*. Milwaukee, Wis.: Bruce Publishing Co., 1952.
- . *Graphic Arts Procedures*. Chicago: American Technical Society, 1957.
- Melcher, Daniel, and Larrick, Nancy. *Printing and Promotion Handbook*. New York: McGraw-Hill Book Co., Inc., 1956.
- U.S. Government Printing Office, Washington, D.C.:
- Specimens of Type Faces in the United States Government Printing Office*. 1951.
 - Theory and Practice of Bookbinding*. 1950.
 - Theory and Practice of Composition*. 1950.
 - Theory and Practice of Presswork*. 1950.
 - Typography and Design*. 1951.
- U.S. Department of the Navy. *Lithographer 3 & 2*, Vol. 1 (NavPers 10452). *Lithographer 3 & 2*, Vol. 2 (NavPers 10453). *Lithographer 1 & C* (NavPers 10454). Navy Training Courses. Washington, D.C.: U.S. Government Printing Office.
- Verry, H. R. *Some Methods of Printing and Reproduction*. Educational Studies and Documents No. XI. Paris: UNESCO, Dec. 1954.

PART 2

Part II

Fitting Materials to the Curriculum

CHAPTER 4

Organization of Time and Material

WHEN does the writer begin to write? Not yet.

Three additional steps which seem essential before beginning to write are: Selection of a specific assignment; research to fill gaps in author's knowledge; organization of material into chapters or units.

Editor-author relationships

Services of a qualified editor or director of publications are a great timesaver in allocating assignments. It seems significant that the New Zealand program¹ mentioned earlier was administered by a group of staff editors—distinct from authors—who supervised the various projects at every stage and coordinated the educational goals with the communication skills of the author and illustrator. These editors were recruited from personnel who had both teaching and writing background and some experience in methods of research.

Enthusiasm among the writers themselves is also important and has been stressed by Mr. C. E. Beeby, who initiated the New Zealand program. At the beginning, he indicates, they tried to gear the school publication program too closely to the day-by-day needs of the department of education. In the end, better results were achieved by giving writers some leeway in producing materials. In his foreword to the UNESCO report, he says, "Lively publications come only from fresh and lively minds and, while creative writers, artists, and editors draw strength from working in their own way within the broad framework of a vigorous educational policy, they become flat and dull if they are expected to work to order on subjects not of their choosing and to a timetable that is not their own. As applied to creative writing, this is a commonplace, but it is often forgotten that writing for schools is, at its best, creative."²

¹ *The New Zealand Schools Publications Branch. Educational Studies and Documents, No. 25. Paris: UNESCO. Nov. 1967.*

² *Ibid.*, p. 6.

In the final choice, due consideration should be given to the capacities and informational background of the available writers as well as to the course of study. "Better a good bulletin on sawmilling," says the New Zealand report, "with a willing writer and illustrator, who knows the country well and who has been among the sawmills, than a bulletin on meteorology written and illustrated like a brochure, solely because of the demands of the syllabus."³

Closely allied to the question of editorial freedom and originality are the problems of special taboos and consideration for regional customs, ideas, and policies. If the author himself tries to anticipate all the various ideas which may be taboo, he may not develop those "fresh and lively materials" which are so vital a part of the school program. But if the writer proceeds within the bounds of commonsense, appreciating that a wise administrator will check his material carefully before it is released, he may be less likely to hamper his own style and spontaneity.

A new assignment

Let us suppose that you are an author who has just received a new assignment. A newcomer to the field of textbook writing will have much to learn about audience, subject, and writing techniques. But it is also true that even the experienced writer has much to learn on each new assignment. One thing is certain: no two assignments are exactly alike.

Steps in research

Even experts in a particular field want to refresh their memories for particular details. They need to fill in gaps in their knowledge, to select and sort the information already available, to find out if there are new methods or new data concerning every new assignment.

Sometimes, one assignment leads to another. The author of a health book for third grade may be asked to follow it with a similar book for fourth grade. The content may be quite familiar but not the grade level. Or suppose someone has written a career book for high school students. Can he adapt some of the background material for a lower

³ Ibid., p. 20.



Slides are a source of information for these two writers in the first Washington workshop for the development of educational materials.

grade? Whatever the assignment, it is not likely that it can be completed without additional research.

Research can be narrow or it can be broad. In a pamphlet on historical research, it has been defined as having six steps:

1. To select an appropriate topic,
2. To track down all relevant evidence,
3. To take notes upon it,
4. To evaluate critically the evidence you have collected,
5. To arrange it in a true and meaningful pattern,
6. To present it in a manner that will command interest and communicate to your readers the fullest possible understanding of your subject.

Types of research

“Research” is a word often loosely used. In its best sense, it includes the search for knowledge through all available oral and written sources. It may include travel to areas mentioned in the

text. It may include practical courses in handicrafts or special skills. It may include interviews with specialists, as well as reading of published materials. Research need not be routine. It depends on imagination to utilize and explore all possible sources of information. The following list includes some main sources available to a writer stationed in a large city:

Library materials: books, periodicals, diaries.

Unpublished research projects.

Letters to local experts, librarians, and Government officials, asking specific questions.

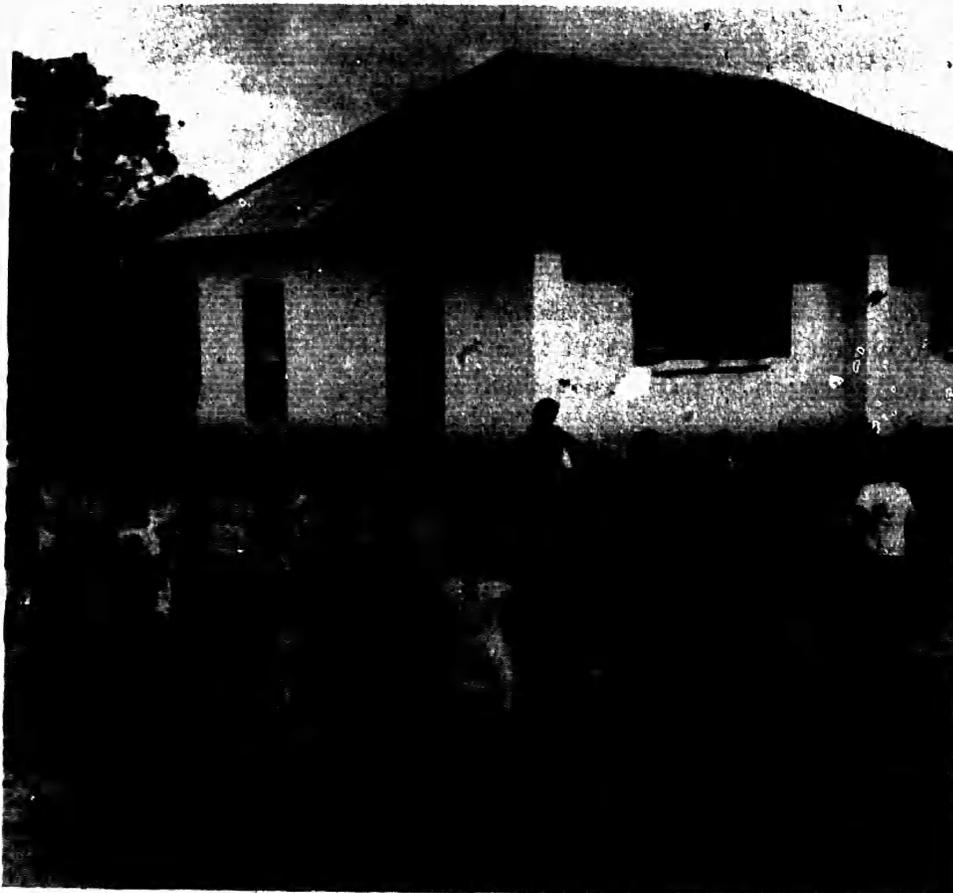
Interviews with specialists.

Visits to museums or field trips.

Visits to schools, embassies, or cultural information bureaus.

Films.

If an author is working in a spot remote from library materials, or needs to supplement gaps in traditional sources, he may find it is



Field trips to schools where books will be used often help both author and illustrator.

useful to turn to resource people in the community. Every community, no matter how small, has people who are a potential source of information. An important step is to find out who these resource people are. The oldest inhabitant, the village storyteller, the editor of the local newspaper, the teacher, and the returned traveler are among the resource people with information for the authors of instructional materials. Hours spent with the potter and the weaver and interviews with the mechanic, the farmer, and the fisherman may turn up interesting facts that appeal to children.

In a talk to the first Washington workshop, Harry Neal listed six main steps in producing the manuscript of his *Careers in Conservation*:

1. Interviews with administrators in the U.S. Department of the Interior in Washington, in order to prepare a personnel organization chart, showing jobs and responsibilities at various levels.
2. A tentative outline (for the publisher and himself) showing title and purpose of each chapter.
3. Interviews with people in many of the conservation jobs listed on his chart. Notes were taken in shorthand, and later transcribed on the typewriter. Marginal headings were added for easy reference later on.
4. Letters to State and private conservation agencies outside of Washington, to explore jobs outside the Federal service.
5. First draft of manuscript, following outline and notes.
6. Second draft of manuscript, revised and retyped with additional carbons, submitted to the experts for correction before sending it to publisher.

Many professional writers would agree with Mr. Neal that from two-thirds to three-quarters of their entire time in fulfilling an assignment may be spent in research. If this time is well spent, and the note taking well organized, time for writing the manuscript itself will be considerably shorter. In any case, this method may avoid extensive rewriting. The importance of a well-thought-out plan or outline, which is continually tested, and revised if necessary, is also emphasized.

Note taking

As you consult books or use the interview technique, it is important to take notes which are properly annotated for source. Direct quotations should always be clearly indicated. The full title of the book, author, and page number should be recorded so that you may refer to it if necessary.

A uniform system will not only save time in handling and space in filing but will make your material more accessible. And it cannot



The Educational Materials Laboratory of the U.S. Office of Education, Washington, D.C., offers research materials on recent developments in the textbook field.

be overemphasized that you should keep your notes long after your manuscript is finished. You may need to refer to the notes when you are reading proof. You may need them in preparing a workbook or manual. You may need them to answer questions from critics after the book is published. You may even find that the notes you didn't use for one assignment will be valuable for another purpose.

Conflicting sources

As an author, it is important that you check and recheck all facts which will be included in your textbook. Note the publication dates of scientific material, the professional status of the author, previous publications of his, and their rating on recommended booklists by accepted professional groups.

In making a wide search for information on any particular subject, you are likely to find conflicting material, so that it is necessary to evaluate sources and doublecheck all information that may be controversial in nature. Consciously or unconsciously, every student has made such judgments many times.

Every time you consult more than one dictionary or encyclopædia, you are comparing sources and evaluating the results. Every time you talk with two experts on the same subject, you may find some difference of opinion. Biographers reading the same diaries and letters will often disagree about motives or interpretation. Astronomers looking through telescopes at the same stars and planets may emphasize different aspects of the same heavenly phenomena. Scientists attempting to simplify information for young readers often disagree about what is essential.

Guideposts for biographers

In choosing a subject for biography and organizing your material you will follow much the same procedure you must follow for other types of nonfiction. Hazel Wilson, author and librarian, who served as consultant to the first Washington workshop for the development of educational materials, prepared this summary for writers of biography:

1. *Choice of subject.*—You have decided to write about somebody's life, a biography. That, of course, is the starting point. Now comes the first step, your choice of subject. It is important to write about a man or woman whose life interests you, and will interest children.

The age of the children for whom you are writing makes some difference in your choice of subject, or, shall we say, hero. Younger children usually prefer to read about men of action, whose lives have been full of adventure and danger. Older children are interested in adventurous heroes, too, yet triumphs in science, medicine, industry, or the arts will interest them. Children of any age will like biography if it is written so that the hero or heroine seems real to them.

2. *Research materials.*—Having chosen your hero, the next step is to become really acquainted with him. Before he can seem real to you, you will need to find out much more about him than you will use in your biography. Now where will you find your material?

If you are fortunate in having access to a large library, you may find books, newspapers, journals, or diaries written while your hero was alive. These are valuable sources.

If you do not have access to such material, you will be dependent on articles in encyclopedias and lives of your hero written by other authors. In the latter case, the reputation of the biographer is important, for you do not want to repeat something which is inaccurate.

3. *Outline.*—Before actually beginning to write a biography, many authors find it helpful to make an outline, even though the outline may be changed as the writing progresses. An outline helps you see the form of your book. While making your outline, you can decide what episodes in your hero's life you wish to emphasize.



An American author discusses the fine points of writing biography with a textbook writer from India.

The life of any man or woman who has achieved greatness has a plot—as much of a plot as fiction. There will usually be something in one's childhood that will show what kind of a person the child will grow to be.

Young readers of biography enjoy reading episodes of a great man's youth which portray his character. Almost any outline of a biography will begin with some episodes of the hero's youth. Next will come episodes picturing the struggle the hero had in achieving his goal. And finally his achievement. Making an outline of your biography before beginning to write is likely to help you gain perspective—to see your hero's life as a whole.

Summary

Finally, you will have followed all the necessary preparatory steps in choosing your assignment, completing your research, and outlining your project. These steps are similar in character whether you are writing fiction or nonfiction, whether you are writing a full-length biography or a primer on seashells. The time spent at each stage will naturally vary with the assignment.

The time spent on research and organization of your material will also depend somewhat on your previous experience in teaching and writing and your previous knowledge of the subject. You may draw up several plans before you and your colleagues decide on the right approach. In some cases, the outline you make at the beginning may remain unchanged until the end. Sometimes, your research will turn up new factors or new material which may involve change and improvement in your outline.

In the following chapters, some typical textbook assignments are examined. Through these examples, you will discover how books have grown out of needs. You will discover how other authors and educators and illustrators have collaborated to provide new educational materials. You will observe steps which seem necessary in order to produce books which will satisfy a variety of teaching situations and interest children of varying abilities and backgrounds.

Suggested reading

- Bowen, Catherine Drinker. *Writing of Biography*. Boston: The Writer, Inc., 1952.
- Ferris, Helen. *Writing Books for Boys and Girls*. New York: Doubleday & Co., 1952.
- Gray, Wood, et al. *The George Washington Key to Historical Research*. Washington, D.C.: The George Washington University, 1956.
- Shores, Louis. *Basic Reference Sources*. Chicago: American Library Association, 1954.
- UNESCO. *The New Zealand School Publications Branch*. Educational Studies and Documents No. 25. Paris, Nov. 1957.

CHAPTER 5

Developing Materials for Language Arts

ANY MATERIALS PROGRAM will set up certain priorities geared to its own basic needs, but since the universal purpose of materials is communication, it is a fair assumption that the language arts will come high on the list.

What is "best" reading method?

The materials needed for language arts will naturally depend on the reading methods in the schools where the books will be used. Recent trends and the results of worldwide research in reading methods are summarized by Dr. William S. Gray in a UNESCO report. He says: "Effective initial progress in reading results from parallel emphasis on both meaning and word recognition One of the most significant recent trends in teaching reading is to combine in a coordinated teaching programme techniques which formerly characterized contrasting methods. The desirability of this trend is emphasized by the results of scientific studies To ensure the best results, the useful elements of the phonetic method should be combined with the high educative value of the global method.¹

Whatever the method, most reading experts would agree with Dr. Gray in his breakdown of reading into four main stages,² for each of which appropriate materials are needed. These four stages are:

- Stage One: Preparing for reading, which includes activities and experiences called reading-readiness.
- Stage Two: Learning to read very simple material, which includes author-prepared and pupil-teacher-prepared materials.
- Stage Three: Promoting rapid progress in mastering basic reading skills.
- Stage Four: Acquiring more mature reading interests and habits.

¹ *Preliminary Survey on Methods of Teaching Reading and Writing*. Educational Studies and Documents, No. 3, Part I. Paris: UNESCO, July 1958, p. 61.

² *The Teaching of Reading and Writing*. Monographs on Fundamental Education, X. Paris: UNESCO, 1956. See ch. VII, p. 117-148, for a discussion of the "Nature and Organization of Reading Programs for Children." See also Dr. Gray's *Methods and Techniques of Teaching Reading*, published by the Cairo Institute of Education, 1950. (Also published in Arabic.)

The examples of language arts materials which follow were planned to meet specific needs in specific countries, but they should also be helpful in planning or developing materials for other countries.

Importance of dictionary

One good place to start a language arts materials program is with a simple wordbook or dictionary. The dictionary is often called the basic language book, and a picture dictionary can be the most useful "first" book for any collection of educational materials.

The child who has access to a picture dictionary finds new freedom in reading. He can use the dictionary in many ways: in reading, writing, spelling, and to help understand pictures. He can consult it when he *hears a new word*, when he *reads a new word*, and when he wants *to write a new word*. It is a flexible tool. He can start anywhere, on any page, wherever his interest or his need takes him.

People who live surrounded by books and other reading materials may sometimes forget how important the dictionary can be to anyone who is learning to read and write. At the second annual conference of the International Reading Association, Dr. Margaret Parke said, "The dictionary is the basic book in any language arts program, an effective tool which unifies instruction in listening, speaking, reading and writing. It can also be used as a key book in social studies, science, and many other fields."*

Dr. Parke pointed out the variety of picture dictionaries and their various uses. All kinds of object books in which names of familiar things are arranged in alphabetical order appeal to the preschool child and assist in reading-readiness. When the child is beginning to read, for the first 3 years, he should have a picture dictionary with the most common words in his own language so that he can find the basic words he uses in reading and writing. When these basic words are mastered, he is ready for a more advanced dictionary to increase his ability to speak, read, write, and spell more effectively.

Some years ago, children in the United States were seldom taught to use the dictionary until the upper elementary school, sometimes even later. Now, the dictionary is one of the most frequently used tools in language teaching at all levels. It is a modern counterpart of the primitive alphabet book, an up-to-date expression of the emphasis on comprehension rather than rote learning.

* Nancy Larrick, ed. "Reading in Action." *International Reading Conference Proceedings*, Vol. 2, 1957, p. 132-134 (distributed by *Scholastic Magazines*).

| | | | | | | |
|---|--------------|-------------|--------|---|---|---|
|  | ala a | a a * | A a | | | |
|  | elote e | e e | E e | | | |
|  | iglesia i | i i | I i | | | |
|  | ojo o | o o | O o | | | |
|  | uña u | u u | U u | | | |
| | | a | e | i | o | u |

The first page of a picture dictionary from Guatemala introduces the vowels.

Types of picture dictionaries

Many important changes in the use and appearance of dictionaries have been made in the last 10 or 15 years. The simplest picture dictionaries contain only nouns and action words, with a picture for every word. They often contain several hundred words, chosen from basic word lists and closely associated with the child's everyday world.

Such books can be used at several levels. In Stage One, for reading readiness, the pictures are all-important. The child will enjoy listening to the short, storylike sentences about each picture, such as:

The apple is good to eat.
The airplane flies in the sky.
A bunny is a baby rabbit.
A ball is round.
The ducks swim on the pond.

For Stage Two, the beginning reader can enjoy a picture dictionary by himself, making a game of matching words and pictures. Using words, pictures, and sentences together will help the child to realize the connection between the printed word and his own everyday environment. When he is faced with longer reading material in conventional primers, he will have the joy of recognizing many familiar words from his first picture dictionary.

Another type of school dictionary is keyed to a single basic textbook series and is intended for use with children in the second semester of the first grade. It can also be used for review purposes at second-grade level and for retarded readers.

A more comprehensive type of dictionary may increase the number of words, including variants of the main entries, plurals of nouns, comparative forms of adjectives, and compound words. Since different languages vary so widely in basic word forms or characters, practices developed in making English-language dictionaries may not be particularly helpful in languages based on other alphabets or word forms.

Grouping by subject

One principle of picture-dictionary making which can be used in many languages is the grouping of related words under basic categories such as actions, animals, foods, machines, family, farm, and house. An entire page devoted to animals, for instance, may carry the caption "Can you name the animals on this page?" so that these cumulative pictures become a sort of word game or picture puzzle.

Grouping of related words is not a new principle; it was used for *The Children's Object Book*, published in London in 1882. This dictionary which groups related words in 14 different categories was found in the rare book collection of the Library of Congress, Washington, D.C., by a language specialist from Israel who had the assignment of preparing a Hebrew picture dictionary.

The aim of the dictionary was to explain common Hebrew words (nouns, verbs, etc.) to children who are newcomers to Israel. A com-

mittee of educators had selected a preliminary list of 600 to 700 frequently used modern Hebrew words, which are presented mainly through pictures and pronounced according to accepted practice in Israel today. Instead of alphabetical order, the words are presented in the framework of their proper environment, since pictures of chairs, tables, flowers, and other familiar objects can readily be associated with the proper Hebrew word in a picture-dictionary format.

Vocational dictionaries

For vocational schools, or literacy programs for adults, the dictionary form is also useful. For instance, in the *Dairy Dictionary* by Joy Rhodes (published at Intermountain Indian School, Brigham City, Utah, 1953) material for boys interested in dairying as a vocation is collected under such general headings as machines, tools, and accessories. Simply illustrated in black and white, it presents basic information in straightforward primer style. There is no attempt to be comprehensive, but the alphabetical arrangement suits the purpose



Grouping of related words is not a new principle, as shown by this farmyard scene from a Children's Object Book published in London in 1882.



Illustration for a Haitian grammar reflects the child's familiar environment.

and provides the necessary information in attractive and convenient form. Obviously, this form could be used effectively for other vocational material, and also for such subjects as health, food, trees, or beekeeping.

A first grammar

An example of another simple language arts book may be found in the grammar textbook prepared by a Haitian teacher for use with second-grade children. This teacher had already helped to prepare a wordbook, based on the actual vocabulary and experience of Haitian children in rural schools.

When the Haitian elementary curriculum was revised, new materials were needed to implement this program. The wordbook was the first step. A grammar was also planned which would be different in the following respects from previous textbooks available in Haiti:

1. It would be based on the principle that language is taught most successfully not only by memorization of rules and principles but by constant use of the language and its correlation with other subjects.
2. The lessons would be presented through continuous conversation based on the child's daily life, at home and at school, and in the community.
3. Illustrations for this grammar would also reflect the child's familiar environment.

Experience charts

Many reading experts believe that there is much value in having children develop their own first reading material. In this way, content has interest and meaning because it is related to the child's world.



Children find subject matter all around them. A Chilean girl writes about fish.

about one of these experience charts for half an hour, when it involves a challenging subject like a local explosion, a visit from a queen, or even a coconut brought in by a child who had been to Florida on a vacation.

Sometimes, a child will make a small picture book, with text and illustrations, as a result of one of these stimulating language arts periods. At the Maury School, one child wrote and illustrated a booklet of two pages called *The Golden Age of Astronomy*. A boy in the second grade of another Richmond school wrote and illustrated the following story called *The Horse Race*. Each page of text was accompanied by a full-page illustration, full of action and movement.

- Page 1. Once on a big farm, there lived six horses.
They ran and ran and had good times together.
- Page 2. One day the horses decided to have a race.
Each thought that he would win.
- Page 3. The horses had to race all over the farm.
Many people came to see the race.
- Page 4. They started at the barn when a man
in a red coat blew the whistle.

- Page 5. They raced over the fields
and jumped over the fences.
- Page 6. The first horse did not jump over the fence
because he got stuck in the mud.
- Page 7. The second horse jumped over the fence
but he went sideways into the river.
- Page 8. The third horse started to chase a rabbit
and forgot all about the race.
- Page 9. The fourth horse saw some green grass
and decided to eat.
- Page 10. The fifth horse got tired
and sat down to rest.
- Page 11. The sixth horse ran and ran
and he won the race.
- Page 12. All the people clapped and clapped
and he was very happy.

Stories as good as this will not be written every day, but it is wise to create the environment for such creative writing and to make the most of the children's own ideas and interests.

Importance of folk tales

Children can help in developing other types of language arts materials, for it must never be forgotten that one of the goals of any language arts program is self-expression and creative writing of all kinds.

What is more natural than to ask children to tell, or to write down, the folk tales which they have heard at home from their parents or grandparents or the visiting storyteller? Such a request can be made informally from time to time, or it can be organized as a contest through the schools on a local or national scale. When the stories have been gathered from the children, a committee of teachers and writers can sort the material and edit or rewrite the best stories for school use.

A contest of this kind was recently conducted in Libya, and an experienced author was assigned to the pleasant task of sorting and rewriting the best of the stories for various grade levels. This method brings in a great deal of interesting and original material, saves the time of staff writers, and is a source of satisfaction to parents when the children's names are acknowledged in the published collection.

Folk tales have survived through oral repetition because they usually have two important assets for the storyteller—humor and action. Also, although cultural patterns vary in different parts of the world, most folk tales are firmly grounded in the triumph of



Children find subject matter all around them. A Chilean girl writes about fish.

about one of these experience charts for half an hour, when it involves a challenging subject like a local explosion, a visit from a queen, or even a coconut brought in by a child who had been to Florida on a vacation.

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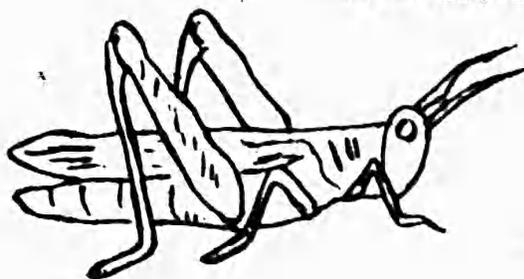
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EL CANTO DEL GRILLO

A. Jácome

Grilli, grilli,
buen grillito,
serruchito
musical.

Trina el trino
cantarino
de tu cuerda
de cristal.



Chirri, chirri,
chirridito
palpitante
de violín.

Tu instrumento
riega el campo
del metálico
aserrín.

Grasshopper poem by a child in Honduras.

right over wrong, the protection of the weak, and the punishment of the cruel and greedy. Morals may not be the only reason for including folk tales in any collection of reading materials, but their usefulness in teaching implicit virtues should not be overlooked.*

Folk characters and plot patterns are extremely useful to the writer who is looking for a fresh approach to realistic materials. The cumulative story offers natural repetition of words and an easy approach to development of a larger reading vocabulary. All these advantages were combined in a supplementary reader written by a teacher from Costa Rica. The plot was based on a real experience, a hen nesting in an old straw hat, but it was developed like a folk tale with simple vocabulary and repetition which would fit naturally into the text. And since a book of this kind should extend learning, counting and days of the week were introduced. The result, in *The Blue Hat of Little Rosafior*,¹⁰ combines literary form, development of reading skills, and a pleasant reading experience.

* Constance Carr. "Folktale Collections" in *Elementary English*, May 1957, pp. 288-292, discusses criteria for evaluating collections of folktales. See also May Hill Arbuthnot, *Children and Books* (Chicago: Scott, Foresman & Co., 1957, pp. 255-261), on value of folk tales.

¹⁰ See *Workshop Sampler*, pp. 10-11.

Poetry for and by children

The rhythmic language of *The Blue Hat* is a reminder of the many uses of poetry in encouraging children to read and write. Traditional nursery rhymes, lullabies, and national songs exist all around the world. In Japan, the legend of Benkei, the boy-giant, was told in ballad form. In Venezuela, the school magazine, *Tricolor*, devotes one page in each issue to poetry. In Honduras, a *Collecion de Poesias*¹¹ for the first and second grades includes short poems about nature, animals, the flag, the church, and the school.

A storyteller from Jordan, who is also a writer and teacher, reports a wide use of poetry in her work with children. She says, "The little poems I have made use of myself seem to include a wide variety of subjects. These subjects include the farmer, the shepherd, the carpenter, the telephone, the radio, the dog, many lullabies, little prayers, and a large collection of national songs. These national songs, some of which are extremely sad, make up nearly half of what is told to our children. In general, they are most loved when they are put to music." Following is the first verse of one of these songs, in Arabic and in English translation :

I Wish I Were a Farmer

I wish I were a farmer plowing the fields,
Planting them and roaming in a land of mine,
Watching them with care as the plants grow high.
I wish I were a farmer planting all the seeds.
I wish I were, I wish I were,
I wish I were a farmer planting all the seeds.

ليشني فلاح

ليشني فلاح افلح الحقول ازرع البذار بارضي اجول
صحبي اراقب اينمو النبات ليشني فلاح ازرع الحبات
ليشني . ليشني . ليشني فلاح ازرع الحبات

¹¹ USOM/Honduras, 1955.

Child development

There is also an important place in the language arts program for books which stress child development and the changes which take place in a child's feelings as he grows up. Themes may include a child's feelings toward other members of the family, his first experiences outside the home, and his experiences with neighbors or school friends.

An author from Thailand developed three small supplementary readers of 32 to 48 pages, based on children's emotional interests. One book is concerned with school friendships; a second combines humor and action with developing responsibility for pets; a third concerns the adjustment of a young boy and a baby sister while their mother goes away for a week.¹² Intended primarily to help Thai children develop reading skills and help them enjoy reading, these small books may also be useful in the social studies program because they include many familiar details of family, school, and community.

My Mountain Home, prepared by a teacher from Laos for use in the intermediate grades, also may be used both for language arts and social studies. Details of food and clothing, and a trip to the city market, fit into the social studies curriculum. The personal side of the story, the warmth and family feeling, the poetic language of the text, all contribute to the language arts program.¹³

Summary

The various projects mentioned in this chapter, and the methods suggested for adapting children's own experiences and writings, are by no means the only methods or subjects suitable for language arts materials. Two principles should be stressed. The first is the close connection between cultural background and language arts and the importance of oral communication in building language. The second is the close relationship between language arts and other areas in the curriculum, and the possibility of using materials in more than one curriculum area.

Suggested reading

Arbuthnot, May Hill. *Children and Books*. Chicago: Scott, Foresman & Co., 1957.

¹² See "Oh, My Hens!" in *Workshop Sampler*, p. 42-43.

¹³ See "My Mountain Home" in *Workshop Sampler*, p. 34-35.

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- . *Language Arts for Today's Children*. New York: Appleton-Century-Crofts, Inc., 1954.
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CHAPTER 6.

Developing Materials in Arithmetic and Science

IF language books come first, arithmetic books often come next in any materials program. Take the case of Iran. Until recently, all school subjects were included in one all-purpose textbook for each grade, containing reading, writing, arithmetic, history, geography, and so on. The first reader, for instance, contained only 22 pages on number work, and this material was scattered through the book, as it might be used in weekly assignments. To correct this situation, one of the first assignments in a new materials program in Iran was a series of graded arithmetic books.

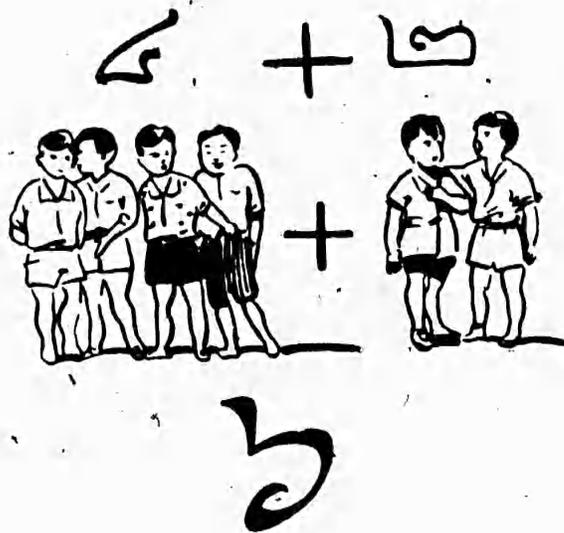
Counting begins at home

Like almost everything else, counting begins at home, with fingers and toes, with sticks and stones, with brothers and sisters and playmates and animals and toys and food and flowers and eventually money. The more complex the world around him, the more the child needs to know how to add and subtract, to multiply and divide.

In arithmetics for the primary grades, the first books will be similar to picture dictionaries, except that numbers take the place of words. In arithmetic workbooks and the more advanced textbooks which follow, it is essential to interpret mathematical terms and formulas within the cultural and geographical patterns of the area for which the books are intended. If the books are to be used in a region with widely varying urban and rural conditions, it may even be necessary to provide alternate material for the same levels. Sometimes, this can be done by looseleaf lesson plans, a method used in a recent American arithmetic series, as well as in a USOM/Ethiopia publication.

Numbers on the farm

A Haitian teacher, assigned to prepare a numbers readiness book for rural schools, decided to use farm animals and objects to illustrate numbers from 1 to 10. Through pictures of familiar things, the child can more easily grasp the concepts of numbers and make immediate use of numbers in counting baby pigs or ducks. Number work based on familiar context not only increases ease and speed of learning but enriches the life of the child in making his new skills of some practical use at home.



Number work based on familiar context increases speed of learning.

Experience teaching

Arithmetic, one of the most practical subjects in the school curriculum, deserves to be offered to children in its most practical aspects. Why write arithmetic problems around the transactions in a department store, if a child's buying experience is limited to barter and exchange in the village market? The rural child will learn the usefulness and meaning of numbers more quickly if they are applied to crops, water supply, or animals. The child of migratory workers may understand wages in different areas and something about comparative standards of living much earlier than the child who has always lived in one place and never had to consider a change in home surroundings.

A group of teachers who worked with migrant children in the Florida Everglades area cooperated in a study of the educational needs of these children and the ways in which teachers could meet these needs. The report, *Working With Migrant Children in Schools*, is based on actual experience over a number of years, and the authors say, "If the reader is inclined to place a high trust in experience, he may be assured that our cumulative experience exceeds 300 years!"¹

The report shows that textbooks and other school materials prepared for general use in other parts of the United States may be of little practical use for these children whose job experiences are beyond their years and whose school experiences are woefully lacking. In teaching such children, the teacher will need to be individually resourceful in adapting standard materials for local use. The fact that children in such situations rarely spend a full year in the same school makes the question of materials and teaching methods particularly crucial.

At the end of the report, numerous appendixes offering sample testing materials in language arts, arithmetic, and social studies at various elementary school levels are helpful in showing simplified methods suited to a situation where the school population is extremely fluid.

Fresh examples needed

As arithmetic skills become more complicated, it is still important to choose problems and examples from material which interests children. One resourceful mathematics teacher who was building a new house used the problems of measurement involved in his house as the background for mathematics teaching in his sixth grade. Similar projects with meaning for children should be selected by writers of mathematics textbooks for the intermediate grades.

From mathematics to science

It is a very short step these days from mathematics to science. As rote learning gives way to "learning by doing" and the "see-for

¹ *Working With Migrant Children in Our Schools*. University of Florida, General Extension Division. Gainesville, Fla.: 88 pp.

yourself" method in education, more and more teachers, more and more children, need materials which will help to answer their scientific questions. Scientific knowledge flourishes in an atmosphere of discovery, and discovery depends on communication of ideas and availability of reliable educational materials to supply answers to a child's questions about the earth, the sky, the sea, and the world of space around us.

During the past quarter century in the United States, science teaching has broadened its scope to keep up with technological developments, and has expanded its age range to include even the preschool child. No longer is the 6-year-old "too young for science." Courses of study from the primary grades up have been constantly revised to include appropriate scientific studies at every level. And wherever and whenever new goals are established in science teaching, new materials are needed.

The new look in science materials

To keep pace with constant revision of curriculum, materials for science teaching in the elementary schools in the United States have developed in two closely related areas: revision of basic texts, and development of a wide range of supplementary science books.

When the Curriculum Foundation Series was published in 1933, *Science Stories*, Book One, was carefully edited with regard to reading difficulties and correlated with vocabularies then in use by first grade readers. Its goals were outlined as follows: "*Science Stories* is more than a nature study text. It is organized with regard to fundamental scientific ideas; supplies a content of authentic information; and introduces the scientist's method of solving problems by observation and experiment."² The illustrations for this new departure in science texts were planned to combine appeal for the child with scientific validity of form and color.

In some cases, supplementary materials for science teaching have served as trial balloons for new methods and new presentation. The procedure is actually similar to tryout editions, except that the trade publisher—and the public—underwrite the expense of a limited edition. When books of this kind prove their worth, the same ideas are often recast and presented in basic textbook form.

The books by Herman and Nina Schneider are typical examples.³

² Wilbur Beauchamp, Gertrude Crampton, and William S. Gray. *Preface to Science Stories*, Book One. Chicago: Scott, Foresman & Co., 1933.

³ Herman and Nina Schneider. *Let's Find Out*, a First Picture Book, and *How Big is Big?* New York: William R. Scott, Inc., 1946. 40 pp. each.

The first books by these coauthors, *Let's Find Out* and *How Big is Big?* appeared in the trade book field. Several years later, the information and principles embodied in these supplementary trade books were expanded and used in developing a complete elementary science textbook series.⁴

The science of weather and climate

Most children are interested in the weather, and it has become one of the most important and easy introductions to science. Weather is important to families everywhere, not just farmers, or airplane pilots, or baseball players. Weather is one of the oldest and most vital concerns of mankind. It should be a challenging subject for textbook writers, with new meaning at every grade level.

For the first grade, there can be stories about the ways in which weather affects our daily lives: the games we play, the food we eat, the houses we live in. Weather rhymes can describe heat and cold, wetness and dryness, and the simplest of seasonal changes.

At the second-grade level, weather units may include material about a child's neighborhood, the trees and plants, the birds and other animals. At the third-grade level, community aspects may be emphasized in relation to occupations, transportation, housing, and clothing.

At the fourth grade, emphasis in many schools shifts to a wider outlook, and may include material on life in other countries. Stories may bring out why desert people use camels and mountain people use donkeys, or the effects of seasons on plants and animals and people. Activities may include simple classroom experiments. The material is increasingly varied, as the child's world expands to include other countries and eventually outer space.

Rain and Shine, by Ardra Wavle,⁵ is based on familiar experiences in snow and rain, indoors and out. With a little imagination, similar books on rain and shine could easily be worked out in Indonesia, or Egypt, or Alaska, although hardly a word or a picture could be translated literally. Even such a universal phenomenon as the weather needs different interpretation for the city and country child, for the child in the tropics or the child who is at home in the mountains, on the desert, or near the sea.

⁴ Herman and Nina Schneider. *Heath Elementary Science. Books I-VI.* Boston: D. C. Heath & Co., 1955.

See also Bertha Parker and Glenn Blough, *Basic Science Education Series.* Evanston, Ill.: Row, Peterson & Co. 36 pp. each.

⁵ Ardra Wavle. *Rain and Shine.* Boston: D. C. Heath & Co., 1942.

Folk tales are useful, too

It is a short step from the science of weather to folk tales which reveal the age-old concern with weather and some of the amusing proverbs and fables with which primitive people attempted to explain good and bad weather. In New England, country folk used to rely on traditional weather signs, such as "Red sky at night, sailors' delight. Red sky in the morning, sailors take warning." Children today who are brought up on more scientific weather forecasts may still take delight in collecting old weather rhymes and proving them false. Sometimes, a familiar fable like the one about the Sun and the Wind will point up in story form an amusing contrast between fact and fiction. Writers of units on weather may find some of these old fables good starting points for articles or stories on modern weather information.

GOOD HEALTH

Hygiene teaches us to be strong and healthy. This little book tells us about the ways in which we can keep our bodies in good health and make our homes and villages happy places. Here are some of the things we will read about.



- 3. FOOD
- 4. SLEEP

- 1. KEEPING CLEAN
- 2. CLOTHING



- 5. SICKNESS
- 6. THE HOUSE AND VILLAGE



The idea that health and happiness go together is stressed throughout *A First Hygiene Book* for village schools in tropical regions.

Hygiene and health

Health and diet practices were among the first considerations of the booklets produced in Carrollton, Ga.,^o with the help of teachers

^o Prepared by Eva Knox Evans, with the cooperation of the Julius Rosenwald Fund, and with the counsel of the students and faculty of West Georgia College, a unit of the University System of Georgia, 1944 (24-48 pp. each).

in the rural elementary schools and the guidance of Eva Knox Evans, an experienced teacher and author. The titles of these books are self-explanatory: *Let's Plant Grass*, *Let's Raise Pigs*, *The Doctor Is Coming*, and *Let's Cook Lunch*. These books, illustrated with black-and-white drawings, were stapled and bound in soft covers. Planned primarily for use in schools, they could also be used by parents in community-education projects.

For village schools in tropical regions, *A First Hygiene Book* by Sheila Jamieson⁷ relies heavily on clear outline drawings which stress the message of the text, that health and happiness go together. Factually, the text covers these areas: Keeping clean, clothing, food, sleep, sickness, the house, and village. Emphasis is on good health habits, rather than on health hazards, although the dangers from germs, dirt, and spoiled food are pointed out. Lists of foods which give energy and those which protect from sickness are chosen from those which are plentiful in the area of publication.

In another tropical country, a simple hygiene book for the child just beginning school was built around the program of a child's day, showing a child washing his face, brushing his teeth, and maintaining good health from dawn to dusk. Best results for younger children are obtained if the content is specific rather than general, practical rather than idealized.

Practical first aid

In order to show the practical application of first aid instructions, the story form is used to advantage in one section of a health reader for Vietnamese children. The story, which also serves to arouse interest, was developed from a local incident concerning a 3-year-old who wandered into the kitchen during the afternoon siesta and cut his finger with a sharp knife. This typical family anecdote, which could be duplicated in many homes, supplies the incentive for introducing basic rules for home accidents. Rules include safeguards and treatment.

Summary

Probably there is no area of the curriculum where content changes are more sweeping than in science, no area where the need to stimulate observation and experiment makes greater demands on the writer and

⁷ Sheila Jamieson. *A First Hygiene Book*. South Pacific Commission Literature Bureau. 32 pp.



Poster on nutrition, USOM/Libya.

teacher. And, as in other subjects, the writer will find it important to keep himself informed through professional means of the current developments in research.

Suggested reading

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CHAPTER 7

Developing Materials for Social Studies

ANOTHER broad and important area of the elementary curriculum, which usually includes geography, history, and civics, is designated by the comprehensive term "social studies."

A typical social studies program

What is social studies? In the United States this term has been described as follows: "A typical social studies program helps the child understand his environment and his relationship to it, from the local surroundings to the universe, both past and present. It focuses attention on the social development of the individual and his environment."¹

On the basis of this definition, a typical elementary course of study may be planned around these widening circles of interest:

- Grade 1. Living in the home and school.
- Grade 2. Living in the neighborhood.
- Grade 3. Living in the community.
- Grade 4. Type lands and peoples.
- Grade 5. Life in one's own country.
- Grade 6. Life in other countries.

Importance of geography

Whether a school curriculum is based on individual subjects, or on the broader interpretation of social studies, geography is so important that it may well come in for early treatment in any revision of textbook materials. Nowadays, in modern schools, the emphasis is on human geography. Instead of memorizing lists of exports and imports, or boundaries and population statistics, the new geography

¹ U.S. Office of Education, "Social Studies in the Elementary Schools," *Education Briefs*, Bulletin 29, Oct. 1954, 7 pp.

textbooks are largely concerned with such questions as: Why do we eat certain foods? Why do we build certain types of houses? Wear the clothes we do? Or earn our living from the sea or the land?

Before a new geography textbook series is started, publishers, editors, and authors usually have a series of meetings to discuss the basic areas to be covered, the sequence by grade level, and the skills which may be involved. Here is an abbreviated outline of the educational objectives of a modern geography series:²

1. To promote an *understanding* of the world through a knowledge of place, patterns, and function.
 - a. A knowledge of place is the foundation of geography. It involves a familiarity with place locations and the development of a sense of space and distance. It seeks the answer to the question—*Where?*
 - b. A knowledge of patterns constitute the *approach* to the study of geography. It involves an understanding of the way in which places of similar environments can be grouped into regions. It seeks the answer to the question—*How?*
 - c. A knowledge of functions represents the *heart* of geography. It involves the comprehension of the relationship between man and his environment. It seeks the answer to the question—*Why?*
2. To promote a better appreciation of the importance of conservation, interdependence, and people.
 - a. Conservation has received so much attention in modern educational thought and literature that it is only necessary to state that this is an important objective of the series.
 - b. Interdependence is a product of our age of specialization. The ideal of a self-sufficient entity, whether an individual or a nation, must yield to the reality of the times.
 - c. People are inherent in human geography. In other words, "People all over the world are more alike than they are different," and "People all over the world have good reasons for living as they do."
3. To promote the acquisition of the *skills* of thinking geographically and the ability to read maps intelligently. Skills are the result of knowledge put into practice.

Research and writing for a major series of this kind may well take several years and the combined efforts of many authors, editors, artists, and publication experts. In the meantime, some of the authors may write several small supplementary books as byproducts of the main project. For instance, an American textbook author wrote small books on deserts, tropical rain forests, and the arctic tundra while her geography textbook was still in preparation. These supplementary books, about half pictures, were published and available for schools and libraries before the textbook itself became available.

² *Lands and Peoples of the World*. Boston: Ginn & Co., 1958.

Supplementary units

Closely related to a basic geography are books on products such as rice, oil, coal, and lumber. In countries where rice is a staple, a booklet on rice would be a natural assignment in which the author might bring together material tested in several classrooms. Local research might be supplemented by a study of staple foods in other regions where rice is important, as well as in regions depending on potatoes, beans, or corn.

HOW TO PREPARE YOUR GARDEN



If your garden is a new one which you have made in big timber country you will not have to dig it.

If it is an old garden or if you have made it in grass country you must dig it, the soil will then be loose and the roots of the paddy will be able to grow well. This will give you strong plants which will have big heads of seeds later on.



If there are trees in your garden you must cut them down or cut away the branches so that they will not make a lot of shade. Paddy likes plenty of sun and it likes the ground to be clean.

Unit texts on rice and other staple products supplement basic geographies. The illustration above is from a pamphlet on rice.

Approaching this subject from a regional viewpoint, one series of supplementary readers offered groups of short stories about coffee plantations, rubber trees, balsa wood, straw hats, bananas, and other products. Each story was preceded by a brief factual introduction explaining the importance of the product. The story itself concerned a boy or girl or a family who were engaged in cutting mahogany or growing and harvesting coffee or some other product.

The editors followed the principle used in New Zealand of starting with selected topics for which experienced writers were available. The small units (48 to 64 pages) made it possible to produce books within a relatively fast time schedule.

Another useful approach for an area with a rich tradition of handicrafts would be to describe samples of native workmanship in jewelry, weaving, or woodcarving. If one province or village is known for its fine baskets or fishing nets or blankets, this is enough to start a writer on a useful assignment. Broadly speaking, the curriculum should be flexible enough to include the best local material available.

In these assignments, it is important not to impose material or attitudes from other cultures. In a highly mechanized community, units may be planned on airplanes, electricity, waterpower, and other aspects of the machine age. In a rural area, emphasis would be shifted to natural resources, minerals, farm products, fishing, waterpower, mining, or native crafts.

Flexible use of unit materials

Units planned on individual subjects can usually be adapted for use at several grade levels. This makes them valuable in school systems where maximum use must be made of limited materials. This consideration was an important one in planning a unit storybook, *The Good Seed*, prepared by a workshop member from Honduras. The book of 36 pages shows how corn is grown and how many uses it has.

Everybody has a home

Homelife is another topic with wide appeal. Suggestions for developing a unit on homelife are outlined by the U.S. Bureau of Indian Affairs, which says: "Home is basic. Most children have roots in a home of some kind, whether it be a tepee, hogan, log cabin, city apartment house, pueblo or camp. Talking about the mother and baby who are at home brings the child closer. It is a 'warming

Oh, My Hens!



This is Kim's house.
 Kim has two hens.
 Kim feeds the hens before he goes
 to school.
 "Gook . . . gook! Gook . . . gook!
 Here is paddy for you.
 Eat, hens. Eat."

It is the time of the rains.
 It rains and rains.
 Every day Kim feeds the hens.
 Before he goes to school.
 Every day the water is rising.
 Water floods the steps.
 Water is higher and higher.

Illustrated by Adnan Cakmakcoglu

Subjects selected should reflect the child's own environment, as in this story of time of the rains in Thailand.

up' topic. From such a beginning, leads may go out to homelife activities. In these homelife activities, we find the basis for the attitudes and learnings which we emphasize in the child's school program."³

Stories of family life can be useful in suggesting desirable attitudes within the family or community as well as transmitting information about food, housing, products, and transportation.

It is not necessary to treat such assignments in a dull, factual way. Lois Lenski's regional stories of the United States are imaginative as

³ U.S. Department of the Interior, Bureau of Indian Affairs. *Minimum Essential Goals for Indian Schools. Beginning Year, Levels One and Two.* Lawrence, Kans: Haskell Institute. 1958. p. 122.

well as informative. In one book, she describes the economic and social adjustment of a family who "strike it rich" when oil companies move into a farming area. In another, she gives a fictionized account of health and rescue work in a small Connecticut community during the floods which followed Hurricane Diane in 1955. In *Little Haymakers*,⁴ Elizabeth Coatsworth picked a typical small farm in Maine as an example of year-round farming activities. First written especially for overseas use in Germany, this book was later published in the United States as well. Other books written about Indian boys and girls in the United States are also helpful in showing how an author can combine factual material with a family story.⁵

Several members of the first Washington workshop for the development of educational materials chose to write family stories which included religious and cultural customs of their respective countries, as well as descriptions of home and school activities. *Festival in the Royal City*⁶ describes the most important national holiday in Laos, the celebration to welcome the New Year, as experienced by a family of city children. The book is intended to preserve information about the old traditions and culture of Laos, as well as to describe modern ways of living, eating, and dressing. From this book, children who live in smaller communities in Laos will learn how the New Year Festival is celebrated in the Royal City.

Two other supplementary books for social studies are *Gashaw, a Village Story*,⁷ from Ethiopia, and *His Best Friend*,⁷ from Vietnam. Both of these emphasize school and the importance of education, as well as friendship between boys with different family backgrounds.

Folk tales—the mirror of a people

Folk tales are valuable not only for language arts but for resource material in social studies. Such tales often reveal important aspects of history, civics, food, climate, and many social and religious customs. Folk tales may not tell how to avoid disease or how to develop any special skill, but they are useful source materials as well as literary material for educational research. Since folk tales reflect in miniature the way people in any culture think, feel, believe, and

⁴ Elizabeth Coatsworth. *Little Haymakers*. New York: The Macmillan Co., 1949.

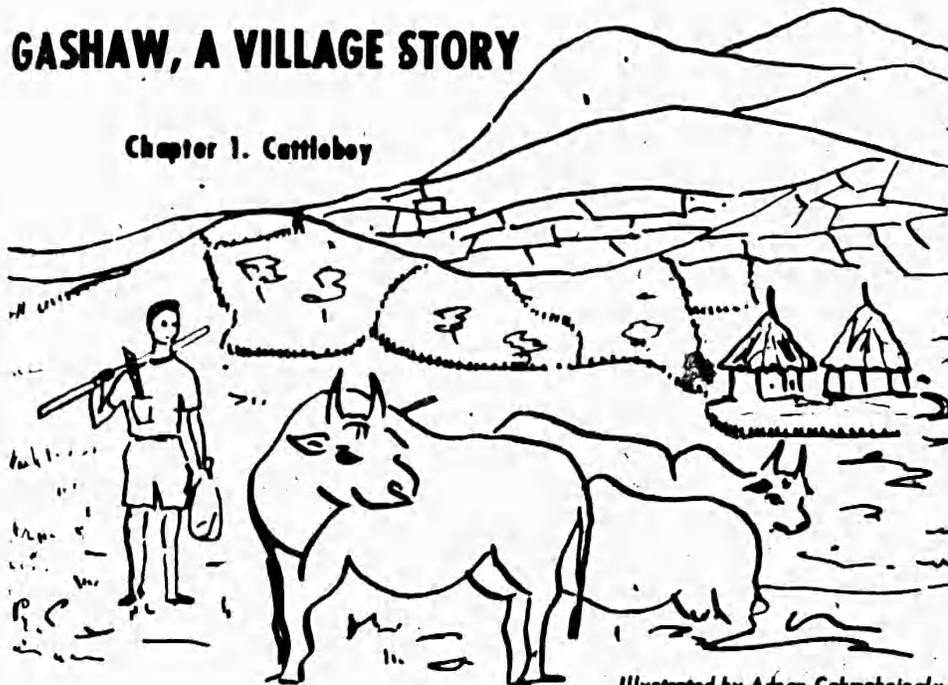
⁵ Ann Nolan Clark. *In My Mother's House*. New York: Viking Press, 1941; Evelyn Lampman. *Navaho Sister*. Garden City, N.Y.: Doubleday & Co., 1956; and Florence Hayes. *Good Luck Feather*. Boston: Houghton Mifflin Co., 1950.

⁶ See *Workshop Sampler*, p. 36-37.

⁷ Excerpts from these two titles may be found in the *Workshop Sampler*.

GASHAW, A VILLAGE STORY

Chapter 1. Cattleboy



Illustrated by Adnan Cakmakcioglu

Far, far in the country, in the small village of Setems, lived a little boy named Gashaw. His parents owned part of the village farm, which extended far and wide in all directions from the village.

Gashaw was the only young boy in the village. He had neither brother, nor sister, playmate nor helper of his own age. He woke up with the early sun, ready to do his share in the village work.

Every morning, Gashaw ran along little alleys, from house to house, and from farm to farm, to gather the farm cattle and to take them to the fields where they would graze during the day. He drove them along the main street which was a continuation of all the alleys. It wound like a king snake crawling uphill, leading to the village grazing field. It also continued, zigzagging and stretching to the main highway ten miles away.

Looking back at his shadow dancing behind him, Gashaw made his way up and down the hills. He held his stick over his right shoulder and his flute stuck out from

his breast pocket, ready for any moment of leisure. His bag of lunch hung from his left hand, and the herd of cattle trotted in front of him like soldiers of war marching before their general.

In the meadow, when the cattle scattered to feed in the tall grass, Gashaw amused himself by running and jumping. He would butt the young spring calves with his head. If the herd scattered too far, he would round them up, running here and there with the speed of a frightened deer, to bring them together again.

When he thought the sun was overhead, he stood erect and proved it by his disappearing shadow. "It is not yet time to eat," he would say if his shadow was still long on the ground.

After lunch, he ran down to the river, and scooped up water to quench his thirst. Then he said his thanks to God, as his father did after every meal: "Thanks be to the Almighty God who created the heavens without a pillar and spread the earth for his creatures to inhabit."

Trees, plants, animals, and food are woven into the story of an Ethiopian village boy.

behave, they have been called the mirror of a people and the cement of society.

Geographical material may often be introduced by the use of folk tales. This was one purpose of a group of Liberian folk tales collected from tribal storytellers and adapted for use with fourth-grade children in Liberian schools. A close study of *Tales of Sunshine and Shadow*⁸ will also reveal many significant facts about Liberian ways of thinking and feeling. This revelation of manners and customs is not only a byproduct of collecting folk tales but an important reason for including them in any materials program.

History and civics

Civic virtues and pride in national tradition must also be considered as a theme for educational materials in any country, new or old. Sometimes, by the chance of location, immediate local history is also significant in a wider sense. Local heroes may have been explorers, generals, or inventors, thus helping to give the child and his environment an identification with history.

More often, it is necessary to seek some simple symbol around which love of country and pride in national traditions may be centered. Sometimes, literature may supply this focus, sometimes history, sometimes the flag or the national anthem. The flag is used as a symbol in Ann Clark's booklet for the American Indian⁹ and also in a Haitian primer, *My Flag*, prepared for use in grades 2 and 3 in Haiti. The Haitian booklet (32 pages) is not narrowly patriotic but includes consideration for other nationalities and other flags. Its purpose is fourfold:

1. To develop in pupils love and respect for the flag.
2. To form in them early the custom of celebrating Flag Day.
3. To develop in them a sympathetic understanding of their flag and all who work for their flag and their country.
4. To help them to recognize and respect the flags of other countries.

Supplementary material prepared by the author of the Haitian booklet suggests activities for the children in celebrating Flag Day.

The brief picture history, which gives an overall view in pictures and text of the outstanding events in a nation's history, is an assignment which attracts many writers. It is unfortunately one of the

⁸ Excerpt in *Workshop Sampler*, p. 88-89.

⁹ U.S. Department of the Interior, Bureau of Indian Affairs. *The Flag of My Country*. Navaho New World Readers, 2. Lawrence, Kana: Haskell Institute, Feb. 1946. 36 pp.

most difficult assignments to carry out, demanding extensive research, both for text and pictures, and careful planning in order to keep major and minor events in balance. It should not ordinarily be attempted except by experienced writers with plenty of time and research materials.

Besides, books of this kind, though brief in text and supported by illustrations, do not have much meaning for children until they already know many of the basic historical events. This drawback is supported by the rules of learning, which remind us that children learn more easily when they progress from the specific to the general.

My Flag

"For the flag
For the country
Let us educate
our children."



Today is May 18.
Today is Flag Day.
This is an important day
for my country.
This is the birthday
of my flag.

In all cities,
in all villages of Haiti,
in my village,
many flags are displayed.

I like my flag.
I like its beautiful colors.
The blue looks like
the pure blue sky of my country.
The red looks like
the royal poinciana blossom.

I like its emblem.
The palm tree looks like
a giant soldier,
ready to defend my flag.

When I see my flag,
I remember my dear mother.
I remember her caresses,
her care for me, and
for Mary, my little sister.

When I see my flag,
I think of my good father.
I think of his work.
He works always
for his children,
for his family,
for his country.

The flag is used as a symbol to teach civics in this Haitian social studies reader.

Young heroes and heroines

In many schools, it has been found more satisfactory to introduce the study of history through stories of important national holidays, which already have some meaning for children, or through true stories of boys and girls who took part in some great events, or later became famous. Even a few stories of this kind, based on fact, will go a long way toward making history seem real to boys and girls of today. In a recent anthology, called *A Cavalcade of Young Americans*,¹⁰ Carl Carmer has assembled 33 true stories of American boys and girls who made some contribution to their country's development while they were still in their teens. Not all of these youngsters achieved lasting fame. Some are well-known names; others are obscure drummer boys or valiant girls who took a minor part in great events.

Short biographical units

Another practical approach to history is through short biographies, like the "Series on Real People," edited by Frances Cavanah.¹¹ These biographies, issued in units of 36 pages, are illustrated booklets, each one describing highlights in the life of an important person, including Indians, pioneers, explorers, and presidents.

Short biographies have many uses in a materials program. They will supplement the history textbooks and provide legitimate materials for developing civic pride and national loyalties.

In selecting heroes and heroines for a series of biographies, care should be taken to select people who represent a cross section of community and national achievement. Folk heroes and religious leaders should be included as well as military and political personalities; women as well as men; poets and artists as well as explorers. If some national leaders or inventors have made a contribution to world history, it is wise to include them.

In a collection of Brazilian heroes, the author included an emperor, a soldier, an industrialist, a composer, a pioneer in aviation who became

¹⁰ Carl Carmer, ed. *A Cavalcade of Young Americans*. New York: Lothrop, Lee & Shepard, 1958.

¹¹ Frances Cavanah, ed. "Series on Real People." Evanston, Ill.: Row, Peterson & Co. The series includes 48 titles, keyed to 5th and 6th grade. Also see Jeanette Eaton, *Leaders in Other Lands, History on the March series, Grade 4*. Boston: D. C. Heath & Co., 1950.

world famous, and a general who protected the Indians from exploitation.

In a similar book about Puerto Rico, the author selected an explorer, a priest, a doctor, and a farmer. Based on old family archives and government documents, each incident concerned a member of a fictitious family descended from one of Ponce de Leon's soldier-settlers.

Another author-educator, from India, planned a series of brief biographies about men and women of importance from different parts of the world. Starting with episodes from the life of Mohandas Gandhi, this author planned to choose other people of worldwide importance.

Lives to remember

Final choice of biographical subjects will depend on national background, age level of the children, and other special considerations. The list of names that follows is only a sampling of the possible interesting men and women who are suitable subjects for textbook writers. Names have been grouped topically, with only a few in each group, so that others can be added to suit the cultural backgrounds of your own country or continent. The inclusion of a few people who are still alive is a conscious attempt to bring history up to date for young readers.

Explorers: Marco Polo, Columbus, Magellan, Humboldt, Livingston, Shackleton, Nansen, Stefansson, Roy Chapman Andrews, William Beebe, Piccard, Tensing.

Political leaders: Cyrus the Great, Pericles, Julius Caesar, Jeanne d'Arc, George Washington, Thomas Jefferson, Napoleon, Queen Victoria, Henri Christophe, Santander, Abraham Lincoln.

Religious leaders: Buddha, Lao-tze, Confucius, Moses, Christ, Mohammed, St. Francis, Martin Luther, William Penn.

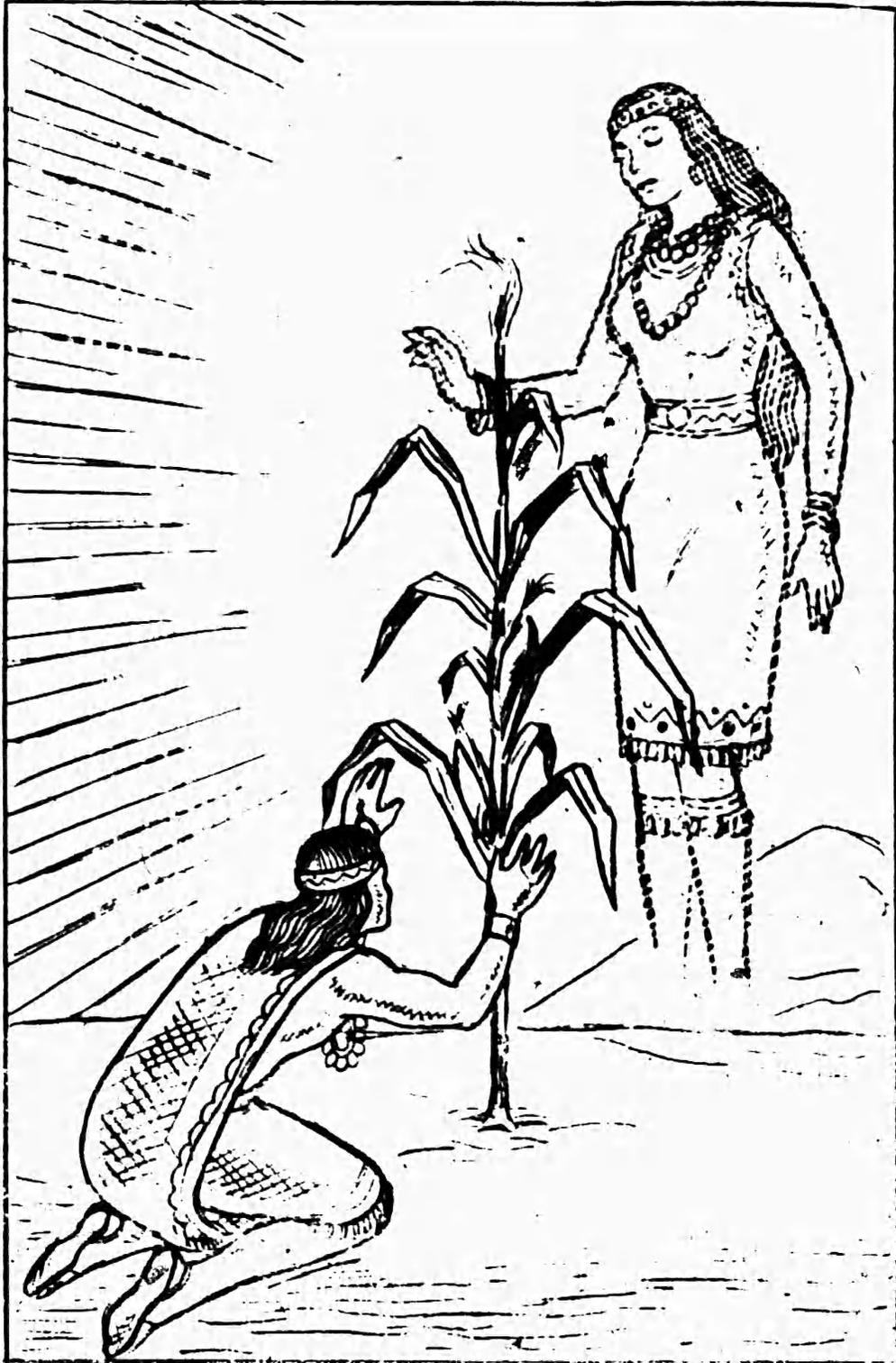
Mathematicians and scientists: Archimedes, Omar Khayyam, Copernicus, Galileo, Newton, Pierre and Marie Curie, Einstein.

Inventors: Gutenberg, James Watt, Franklin, Alexander Bell, Marconi, Edison, Alfred Nobel, Santos Dumont, Orville and Wilbur Wright.

Biologists and natural scientists: Charles Darwin, Louis Pasteur, Luther Burbank, George Washington Carver.

Social service: Clara Barton, Carlos Finlay, Jane Addams, Helen Keller, Albert Schweitzer.

World literature: Homer, Shakespeare, Dumas, Cervantes, Dickens, Stevenson, Mark Twain, Tolstoi, Tagore.



A Bolivian legend emphasizes the importance of corn as a basic food.

Great legends

Closely related to history, and sometimes difficult to separate from it, are the great hero legends or epics. These are not to be confused with the simpler folk tales which reflect the life of the common people, their joys and sorrows, their jokes and their superstitions.

Hero legends are often rooted in history but have been so changed and magnified over the years that it is no longer easy to separate fact from fiction. Almost every country has such hero tales, some well known only to a small national group; some which have been translated into many languages.

Nearly everyone has heard of Homer's Iliad and Odyssey, of Malory's stories of King Arthur and his Knights, and the Ramayana from India. Few people outside Iran know about the great Persian epic, the Shah-Nameh, which recounts the dramatic struggles of early Persian kings. The Persian epic, like so many traditional legends, is a long narrative poem which must be adapted if it is to be used for children. This was done recently by an Iranian author, in Farsi, and a companion edition prepared in English for secondary school students.

Legends of this kind are worth discovering and rewriting for appropriate age levels. They reveal important aspects of social history and can provide effective introduction for children to more advanced study of history and political development.

Summary

The social studies program is so large and so closely linked with other areas of the curriculum that it is hard to develop a well-balanced program for materials production. Special care should be taken to examine the needs of all the grades and all the various possibilities for new materials before selecting those which will have priority.

One practical suggestion might well be applied here. When faced with many choices of subject and grade levels, it is often most satisfactory to start with materials for third and fourth grades, and then expand with books for upper and lower grades. This starting point is practical for two reasons: (1) Because in many cases books for this level are a little easier to write; and (2) because, when finished, they can be used in a limited way both for younger and older children, until the supporting books at other levels are ready.

Suggested reading

- Clark, Ann Nolan, ed. *Teachers Handbook for use by Teachers in Rural Elementary Schools*. Washington, D.C.: Institute of Inter-American Affairs, 1953.
- Michaells, John U. *Social Studies for Children in a Democracy*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1956.
- National Council for the Social Studies. *Science and the Social Studies Twenty-seventh Yearbook*. Washington, D.C.: National Education Association, 1957.
- National Society for the Study of Education. *Social Studies in the Elementary School*. Fifty-sixth Yearbook. Chicago: University of Chicago Press, 1957.
- Nesbitt, Marion. *A Public School for Tomorrow*. New York: Harper & Bros., 1953.
- Preston, Ralph C. *Teaching Social Studies in the Elementary Schools*. New York: Rinehart & Co., Inc., 1958.
- Tooze, Ruth, and Krone, Beatrice Perham. *Literature and Music as Resources for Social Studies*. Englewood Cliffs: Prentice-Hall, Inc., 1955.
- Wesley, Edgar Bruce, and Adams, Mary A. *Teaching Social Studies in Elementary Schools*. Boston: D.C. Heath & Co., 1952.

CHAPTER 8

Manuals and Workbooks: Aids for Teaching and Learning

SUPPOSE NOW that the textbook on which you have spent so much time and effort is finally finished. One of your concerns as you planned and wrote the book was that the teacher would use it as you intended it should be used. To insure this as far as possible, you should prepare a teachers' guide or manual.

What is a teachers' manual?

A teachers' manual has been defined as a publication to take the place of a sympathetic supervisor. Its purpose is to help the teacher use the textbook effectively and to give additional information. Some teachers seldom look at a manual; others are lost without one. The practical approach may lie somewhere between these extremes.

Most series of elementary textbooks in the United States have a teachers' manual to accompany each book. Many tradebooks are also published in text editions which have exercises and suggestions for broadening the use of books in the classroom. Leaflets to guide teachers in their effective use also accompany many school newspapers.

What will your manual contain?

The following paragraph from the letter of an elementary supervisor suggests the need for manuals or guides and what the contents should be:

We believe that a specific guide should be written for use of these books. This guide should indicate when a certain book should be introduced, how to introduce it, what specific abilities should be developed in certain pages and in

certain books, how to study the new words that appear in the different pages, etc. These are just examples of what should appear in the guide, not an exhaustive list.

Background material

A good manual will include material to broaden the teacher's background in the subject, and it will suggest different methods of presenting the material. Usually the manual will describe the series as a whole and state the general objectives. It will describe the organization of each book in the series with a brief description of the content of each, together with the basic skills to be developed. For the book it will accompany, there will be an overview of the program for that year. The manual will give objectives for the year, list the skills to be developed, and suggest classroom procedures, such as exploring children's backgrounds. If the series has new features, these will be described.

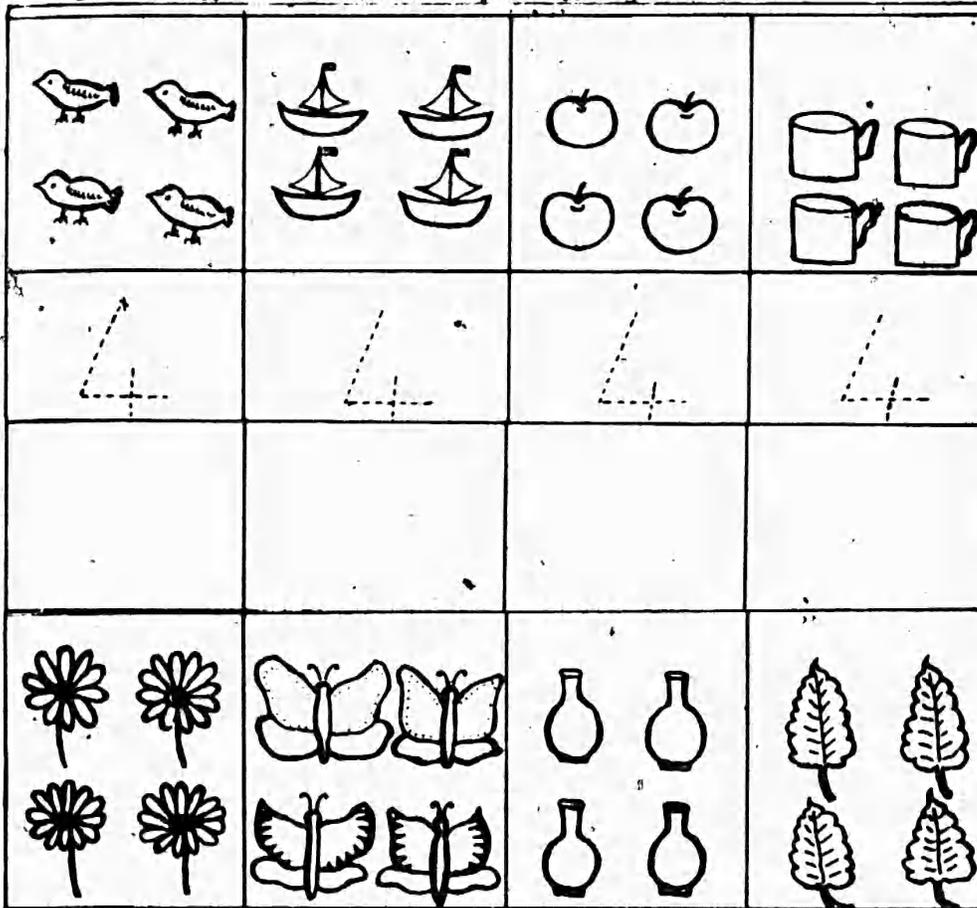
Suggestions for teaching

A useful manual will usually include suggestions for teaching each chapter. It will give the concepts or big ideas which are to be developed in each chapter, and suggest approaches for doing this. For instance, you may feel that it is necessary to suggest different ways a teacher in a city and a teacher in the rural area might handle the material. In your manual, the teacher will find suggestions for the major activities of the unit or chapter. The manual will provide helps for evaluating the material in each chapter. Suggestions for reading maps and interpreting pictures also belong in the manual. The references for the teacher and for the pupils which you include for each chapter are an important and valuable part of the manual.

It is well to include suggestions for the teacher on how to introduce the new book to the children. You cannot assume that everyone will know how to do this effectively and you should therefore give this information in detail, beginning with the table of contents, the organization within the chapters, tables and appendix if there is one, the index, and the glossary.

You may also wish to indicate the sections into which the chapter will be divided and outline plans for these lessons. Such a plan may include drill on unusual words children will meet for the first time, detailed discussion of concepts that are given earlier in the

Additional exercise for writing number 4



Exercises provide opportunity for developing muscular coordination and practice in writing numbers.

overview of the book, drill to develop special skills, and the use of helpful materials such as maps, pamphlets, charts, and similar materials. Your suggestions on how to correlate the subject of your book with other subjects in the school program can make up another valuable section of the manual,

Reference materials

A helpful feature of a manual is a cumulative list of references for the entire book. These references should be divided into those for the teacher and those for the pupils. This section should also contain the information the teacher may need in order to answer or explain the exercises in the text.

Manuals may differ

The preceding section outlines the usual content of a teacher's manual. Certain sections or points may be given greater or less emphasis depending upon the subject, the preparation of the people who will use the manual, and the conditions under which it will be used.

For instance, a member of the 1958 Washington workshop, who wrote a book on teaching arts and crafts in the schools of Thailand, felt it was important to write a very detailed manual. The subject had only recently been added to the curriculum and few teachers had a background for teaching it. In preparing the manual, the author not only included information to give a background on arts and crafts in the curriculum, but added material on child development and what a teacher might expect from children at various stages in their development, and at different grade levels.

In a guide to accompany a number readiness book for children of Haiti, the author also stressed child development as related to number development. Here, too, the book was a new venture and teachers needed guidance in making the best use of it. Detailed suggestions for interpreting pictures and also for developing muscular coordination were given in the manual.

The author-artist of a Bolivian picture dictionary felt that a teachers' guide should accompany it since it was the first picture dictionary for children produced in that country. The following excerpt shows how he presented his guide:

Mi Primer Diccionario, a picture dictionary, will have a final section to provide practical review for the child who still needs a great deal of practice in order to understand and use new words. This section also deals with the environment and interests of Bolivian children. It will help them to interpret what they see. By answering the questions which accompany each group of objects, they will learn to think and exercise judgment rather than merely to memorize words.

The objects in this final pictorial review section are labeled but not defined. The illustrations will be simply done so that the children may easily understand the meaning of each word.

There are pictures of family groups, clothing, food, animals, birds, trees, fruits, flowers, and minerals. The flag and map of Bolivia is included. And to give a beginning in using abstract words, shapes and colors have been added, as well as drawings to represent days, months, and seasons. Questions about these objects are listed below each picture page, such as: How many of these animals can you name? Which of these foods do you eat? Name the days you go to school. In which month is your name day? Can you find the capital of Bolivia on the map?



Learning is serious business for these Bolivian children.

Sample lesson plan

The author of a beginning first reader for the children in Honduras also prepared a teachers' manual to accompany it. Realizing that many teachers in his country were inexperienced in teaching through an activity program, he included a detailed lesson plan suggesting various activities to develop the three general sections—dramatization, analysis, reports—into which his manual was divided.

Let's observe the teacher in the classroom and listen to her teach a sample lesson which might begin like this:

Teacher: Yesterday we saw a picture of the family.

Will you, Peter, give the names of the members of the family?

Peter: In the family, there are Mary, John, Father, Mother, and the dog Palomo.

Teacher: Today we have a new picture, with a little story. Let's see who remembers the name of this girl.

(Children answer.)

You read it, Juana.

Juana: That name is Mary.

Teacher: Now, see what happened to Mary in this picture.

(Children answer.)

- Julio:** She is getting wet. It is raining, and she is running.
Teacher: How can we say that it is raining, using our hands?
Children: Like this (moving their hands to indicate falling rain).

Manual on singing in the curriculum

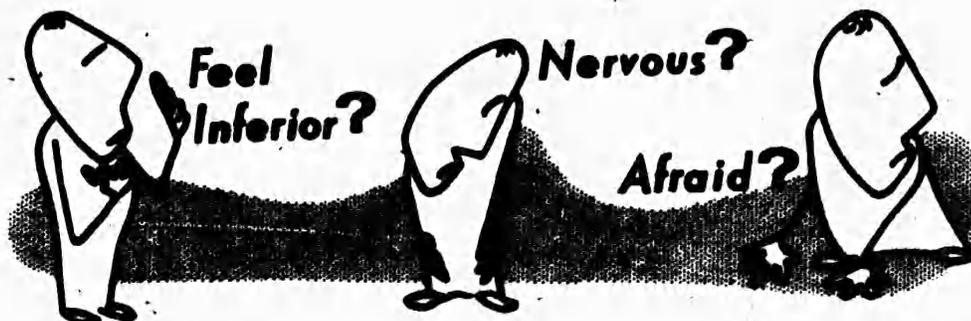
In Haiti, years of experience in using traditional and original songs to fit many curriculum areas finally resulted in a collection of Haitian songs called *Learning by Singing*. The compiler made extensive notes for other teachers, based on his own experience with these songs, showing how to use music in the classroom to best advantage. "Singing," he wrote, "has not only artistic and recreational value, but its educational aspect must also be considered. By songs pupils can learn many important and interesting things with more enthusiasm than by some lessons that may be too dry or by an exercise that is sometimes too tedious. . . . According to my experience, this use of singing will help make easier the teachers' hard task, which is the physical, social, and moral formation of Haitian youth, and the improvement of our rural communities."

More than 50 songs grouped according to the following areas were included in the collection:

- | | |
|--------------------------------|---------------------------------------|
| 1. Songs to our Creator. | 7. Health and play. |
| 2. The family. | 8. The farmer's friends. |
| 3. The school. | 9. Songs to dramatize. |
| 4. Our native land. | 10. Songs for excursions and picnics. |
| 5. Our national flag. | 11. Songs for Christmas. |
| 6. Gardens, trees, and fruits. | 12. Folk songs. |

Guidance for college students

Originality is an asset in writing a manual, as it is in many other types of writing. An interesting presentation of a guide for the



Cartoons help to interpret a guide for student-teachers.

orientation of college students, which made it of value to teachers as well as to students, was used by another member of the first Washington workshop for the development of educational materials.

The author used a direct, informal style in his writing, and added cartoons to catch and hold the attention. One section begins like this:

If you are nervous, if you are scared, if you look like a wreck, do you know why?

Is it because there are so many questions in your mind which you have not had to solve before? Is it because . . .

you think you are alone?

you don't know anybody?

you have a fear of failure?

you are far from your family?

Try to find out the reasons for your troubles. If they come from lack of friends, know that you are not alone. All freshmen feel the same way that you do. If your trouble comes from fear of failure, you may be sure that all freshmen feel the same way. There's no doubt about it. You are at the beginning of a new life. It will help if you make a strong start.

Questions for discussion

Several workshop members who had written supplementary materials for the schools of their countries also prepared brief guides for use with children in primary grades, suggesting puppet plays and topics for discussion. Such helps, they felt, were particularly needed since supplementary materials had not been in general use in their schools.

The author of a life of Gandhi for young people of his country added questions for discussion to accompany each chapter. The questions for the last chapter of his book follow:

1. "As a freedom fighter Gandhi brought victory without a sword." Substantiate this statement.
2. Why is he known as a great soul?
3. Give a brief account of Gandhi's different achievements.
4. What is his life's message?
5. Why was his life full of glory?

Help or hindrance?

Are teachers' manuals a help or hindrance? Manuals, like textbooks, receive their share of criticism. Some critics believe that manuals tend to be used as a crutch rather than an aid. Others believe

that teachers lean upon manuals too long and do not exercise initiative or develop creative teaching. Following a manual, still others maintain, prevents the teacher from taking into consideration individual differences in the class.

Those who favor use of manuals say that the manual, like the text, must be used wisely to be effective. The young teacher who is overwhelmed at being in complete charge of a classroom with its many duties and different subjects will find a manual a real aid. Even the experienced teacher who returns to teaching after many years' absence from the classroom will make good use of a manual to guide her through new activities and new subjects in the curriculum. Even more in need of the help a manual can give is the substitute teacher who needs specific suggestions for the task at hand.

What is a workbook?

Simply stated, a workbook is a book in which the pupil writes.¹ It has taken the place of the slate on which children practiced exercises in penmanship, wrote answers to questions which the teacher placed on the blackboard, and repeated drills in arithmetic and spelling. When the slate was filled, it was erased. When the workbook is filled, it can be discarded. Intelligently used, a good workbook can be an effective aid to learning. But even the best workbook can never substitute for a teacher.

Writing your workbook

The preparation of a good workbook is not a simple writing assignment, and you must have clearly in mind the function you wish the workbook to fulfill. It requires imagination, originality, and creativeness similar to that needed to produce a good textbook. You must plan and prepare your workbook in such a way that it will test the pupil's understanding of the subject, provide an opportunity to apply his newly acquired information, or give additional practice needed to develop skills. With careful preparation, your workbook will supplement the text and provide materials or suggest activities that will stimulate the pupils to learn more about the subject.

¹ E. Quentin Johnson's "The Workbook Story" is a short history of the development of the workbook in the United States. *Publishers' Weekly*, vol. 175, No. 9, Mar. 2, 1959, p. 20-25.

How the pupil uses the workbook

When you have completed your part of the workbook, then it is ready for the pupils. The pupil uses the workbook in various ways. What the pupil writes in the workbook varies with the subject and the skills and attitudes which he is expected to develop. He may write original material or make original sketches to show his interpretation of what he has read in the text. He may gather additional



Un cinco o cinco céntimos.



Un diez o diez céntimos.



+



=



más o menos

*Un diez es..... que un cinco.
Un cinco es..... que un diez.*

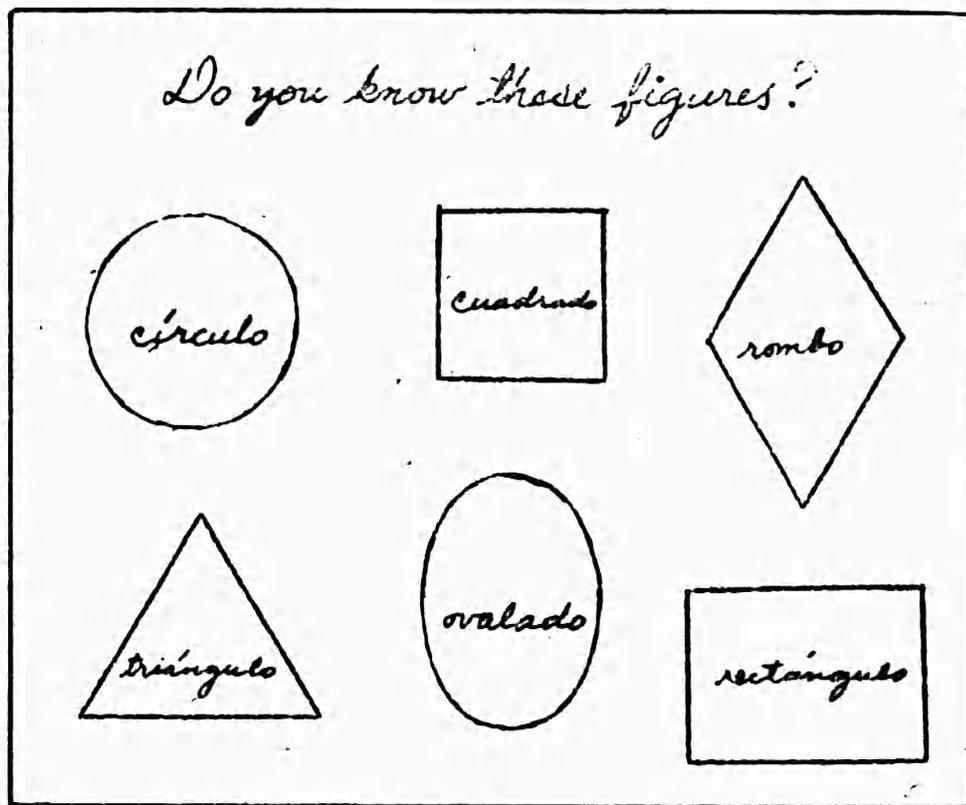
*Mario tiene un diez.
Compra un cinco de naranjas.
Le queda*

A workbook to accompany a first reader for children of Costa Rica includes several types of exercises, based on familiar details.

material and information from sources other than the text, write letters, solve puzzles or riddles based on the subject. He may supply missing words to complete sentences.

A workbook to accompany a first reader for children of Costa Rica had various types of exercises, as shown in the sample page:

The author-artist of a picture dictionary for Bolivia was concerned that children be taught to think and interpret rather than to memorize only. His dictionary, therefore, has a section of exercises for children, including the following on recognizing shapes:



A picture dictionary for Bolivia includes a section to stimulate the child to interpret what he sees, not merely to memorize words.

Another exercise headed "What do you know?" has lists of 20 verbs and nouns, together with questions to test pupils' comprehension.

The following excerpt from a workbook to accompany a fourth-grade geography provides for practice in using an encyclopedia:

An encyclopedia gives information about people, places and things. The facts are under headings arranged in alphabetical order.

1. If you wanted to find out about rice, what volume would you use? Under what letter would you look?

2. If you wanted to read about wheat grown in India in the winter months, what volumes would you use? Under what would you look?
3. If you wanted to know about oil in Saudi Arabia, what two volumes would you use?

Summary

The use of workbooks is a subject on which many teachers and supervisors disagree. Whether they are a help or a hindrance to the learner usually depends upon the workbook and on the way it is used.

In an article on the use of workbooks,² Dr. Richard Madden suggests that teachers judge the value of workbooks by answering the question, "What would pupils be doing if they were not using workbooks? Is the workbook activity worth while, or is it busy work? Do the exercises stimulate the child to think in performing them or do they involve only memorization of facts from the textbook?" Dr. Madden concludes, "The workbook is a tool in education which may be used well or may be used badly. A highly competent teacher may have greater need of it with a class of 40 than with a class of 25. An inexperienced teacher may have more need for its use than he will have after he gains experience. A teacher well prepared in most curriculum areas may profit by use of a workbook in his weaker areas, but he must prevent it from becoming a crutch."

Suggested reading

BOOKS

Burrows, Alvina Trent. *Teaching Children in the Middle Grades*. Boston: D. C. Heath & Co., 1951.

Dale, Edgar. *Audio-Visual Methods in Teaching*. New York: The Dryden Press, 1954.

D'Amico, Victor. *Creative Teaching of Art*. Scranton, Pa.: International Textbook Co., 1953.

Emerson, Lynn A. *How to Prepare Training Manuals*. Albany, N.Y.: University of the State of New York, State Education Department, 1952.

PERIODICALS

Audio-visual communication review.

Department of Audio-Visual Instruction, National Education Association, 1201 16th St. NW., Washington 6, D.C. (Quarterly).

² Richard Madden, "Workbooks! Tool or Crutch?" *NEA Journal*, Feb. 1956.

Childhood education.

Journal of the Association for Childhood Education International, 1200 15th St. NW., Washington 5, D.C. (Monthly: Sept.—May).

Elementary English.

National Council of Teachers of English, 8110 Halsted St., Chicago 20 Ill. (Monthly: Oct.—May).

Junior libraries.

R. R. Bowker, 62 West 45th St., New York 36, N.Y. (Monthly: Sept.—May).

School arts.

Printers Building, 44 Portland St., Worcester 8, Mass. (Monthly: Sept.—June).

Science teacher.

National Science Teachers Association, 1201 16th St. NW., Washington 6, D.C. (Monthly: Feb.—Apr., Sept.—Nov.).

Social education.

National Council for the Social Studies, 1201 16th St., NW., Washington, D.C. (Monthly: Oct.—May).

The Reading Teacher.

International Reading Association, 5835 Kimbark Ave., Chicago 37, Ill. (Quarterly: Oct., Dec., Feb., and May).

CHAPTER 9

Factors in Readability

ONE MAIN OBJECTIVE of every writer is communication. When you have something to say worth saying, you should express it as simply and clearly and interestingly as possible, so that it will reach the maximum number of readers.

Once the organization and approach of a writing project have been settled, the next important step is to explore the use of language as a means of communication. What is it that makes one piece of writing easy to read, and another one difficult? Which is more important—is it the number of words, the order of words, sentence structure, length of sentences, the repetition of familiar words, the length of paragraphs, or the use of adverbs and transitional phrases? Are there other factors? Can it all be reduced to a readability formula?

What is readability?

It would be very convenient if readability were entirely or even largely dependent on the application of a formula. In that case, preparation of textbooks would be easy, and books for every purpose would roll off the presses as neatly and quickly as bicycles from an assembly line. Instead, readability is a combination of factors, some tangible, some intangible. Some factors can be scientifically described; others are as unpredictable as the weather. Dr. Helen Mackintosh¹ has described readability in general terms as "the right book, the right child, the right time." Experienced teachers will recognize the truth of this observation. The question is: How do we attain this ideal? How can books be written and made available so that the teacher will have the right book for the right child at the right time?

In attempting to reach this goal, readability factors may be divided into two groups—the interests of the child, and the difficulty of the

¹Dr. Helen Mackintosh is Chief of Elementary Schools Section, Office of Education, U.S. Department of Health, Education, and Welfare.

text. A writer should never forget that reading is a two-way process, which depends as much on what the child brings to the page as on what the page offers to the child.

What the child brings to the page

First, let us summarize the factors which the child brings to the page. Some of these have already been specifically mentioned. Others have been implied in references to cultural backgrounds and national traditions. The most important of these are:

1. Cultural and environmental factors.
2. Previous learning experiences.
3. Interests of the child at various developmental levels.

It is important for the writer to understand these factors. Some may be matter for special testing or research. Some will require brief local inquiry. Some may be part of universal knowledge which may be applied with discrimination in many learning situations. Let us consider briefly each of these factors.

Cultural and environmental factors.—Educators today are agreed that “the content of reading materials should reflect the culture and environment of those to be taught.” This idea is implicit in the special materials produced by the Bureau of Indian Affairs in the United States and in general patterns of learning accepted by educational psychologists.² There is no quarrel with the self-evident truth of this major premise.

Local conditions of climate, housing, occupations, and food should also be taken into consideration, along with cultural backgrounds, religious concepts, and social customs. If research on these subjects is not available, a beginning can be made by advisory teams who may prepare questionnaires and interview local authorities. This method has been used with success by units dealing with small tribal groups in the United States.

Previous learning experiences.—The nature and character of the learning process must be taken into consideration in shaping material. That children respond differently at different chronological age levels, and also according to their previous school experiences, affects both skills to be taught and the subject matter of the proposed text.

Readability often depends on a child's preschool and out-of-school experiences with language, or numbers, or mechanical processes. If such information is not available in your school area, standardized tests may be given to provide some basis for judgment.

² William S. Gray. *Preliminary Survey on Methods of Teaching Reading and Writing*. Educational Studies and Documents, No. V, Part I. Paris: UNESCO, July 1953, p. 64.



Every textbook must take into account the children's interests. Third-grade children eager to learn.

Children's interests.—The importance of interest qualities for teaching and learning affects all phases of any school system, not only materials, and has been accepted in principle for many years. In practice, the qualities of interest have often been overlooked in the preparation of school texts. Manifestations of children's interests may vary from one culture to another, but educational research indicates certain basic similarities. Care must be taken to interpret these interests in relation to factors of culture and environment.

In discussing children's interests and development, Dr. Paul Witty sounds a useful warning. "Specialists in reading are fully aware that some interests are transitory and some are unworthy of extension." It is the responsibility, especially of the teacher and textbook writer, to extend children's natural interests. Starting from the known, you can advance to the unknown.

Emotional development.—Along with other factors in readability, the importance of the child's emotional development in relation to reading interests needs to be kept in mind. This is often quite as relevant as the more obvious interest levels of different age groups in animals, humor, or adventure.

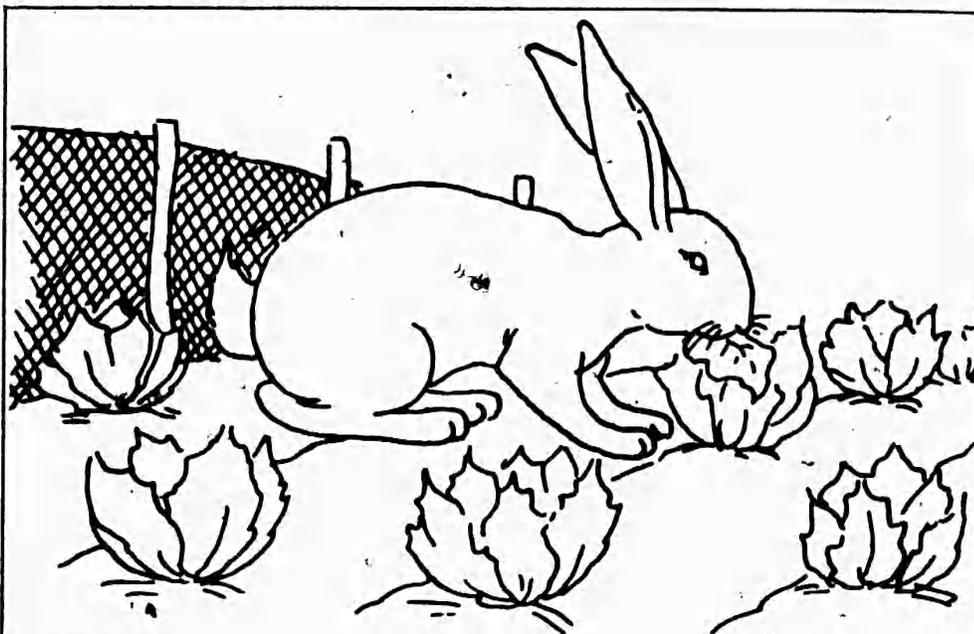
"Among children's emotional needs which may find satisfaction in books and contribute to reading interest and comprehension are:

Need for security—material, emotional, intellectual, and spiritual; need to belong; need to love and be loved; need to achieve; need for change; need for esthetic satisfaction.

What the page offers to the child

So much for the first group of factors in readability, factors which the child brings to the page and which must be kept constantly before you as you write. Hand in hand with these child-centered factors are the book-centered factors which are manifest in the physical appearance of the book and the language structure of the text.

Type and illustrations.—Type and illustrations play their part in determining readability of educational materials. It is particularly



Manchita entra al huerto.
Entra por la cerca.
Manchita come mucho.
Come! Come! Come!
Come la comida verde.

Simple sentences, combined with simple line drawings, are suitable for early reading materials.



Rosa takes the flowers into the house.

She puts them in water in a bowl.

She gives the red flower to Maria.

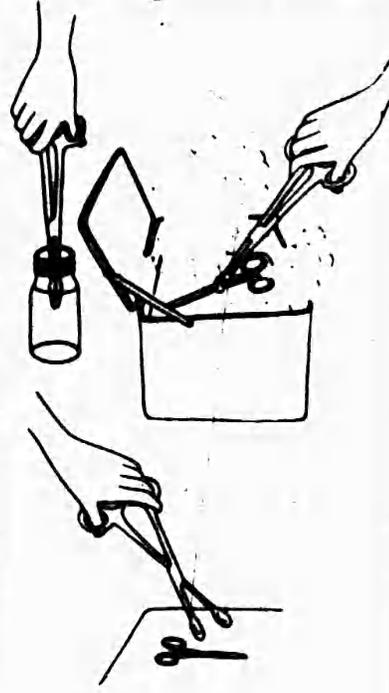
Maria puts it over her ear.

She says, "Thank you, mother."

Black and white drawings make an attractive page in this first reader.

difficult to generalize about type sizes and styles because of different alphabets, but there are a few guiding principles.³ First of all, the type chosen should be simple in form rather than elaborate; second,

³ A discussion of these principles will be found in *Reports and Papers on Mass Communication*, No. 22. Paris: UNESCO, June 1957.

| | |
|---|---|
| <p>A pick-up forceps is shaped somewhat like a pair of pliers or scissors. It is used to handle articles that are sterile (have no live bacteria on them). When not in use, it is kept in a jar or other container with its narrow end (prongs) resting in a solution which keeps that part of the forceps sterile. The only thing which may touch an article that is to be kept sterile is the tip of a STERILE forceps. The forceps you use to take things out of the sterilizer is also used for articles that must be kept sterile. Therefore, YOU MUST USE IT CORRECTLY. This means you will have to practice. REMEMBER: The prongs of the forceps MUST NEVER, at any time, touch ANYTHING except a sterile article and the solution in the container.</p> | <p>CHAPTER 6</p> <p>C</p> <p>USING STERILE PICK-UP FORCEPS</p> |
| <p>WHAT TO DO</p> <p>To take things out of the sterilizer with a sterile pick-up forceps:</p> <ol style="list-style-type: none"> 1 Take the forceps out of the container. Hold the two parts of the handle together so that the prongs are close together. Lift the forceps straight up out of the container, without touching the side or edge of the container. 2 Get a firm hold on one of the sterile articles with the prongs. Put your thumb through one hole in the handle of the forceps, and one of your fingers through the other hole. Spread your hand so that the prongs open. Close the prongs on the article so that you can lift it without dropping it. Test your grip on the article by lifting it an inch or so with the forceps—to be sure it won't drop on the fiber. DON'T LET THE FORCEPS TOUCH THE SURFACE OF THE STERILIZER. 3 Lift the article out with the forceps and put it on the table. BE SURE THE FORCEPS DOESN'T TOUCH THE TABLE. To avoid this, you have to drop most small articles onto the table from about half an inch above the top. |  |

This well-planned page shows how type and illustration can aid readability.

it should conform to the style of handwriting most generally used in your country; third, capital letters should be avoided for solid text.

The size of type is also important but must be judged in relation to length of line, number of letters in the alphabet, and use of white space generally. A common mistake both in books and magazines is the use of too long a line.⁴ Three or four inches, allowing about 40 characters to a line in European alphabets, is a desirable length, with a longer line and smaller type acceptable for more experienced readers.

⁴ Recent research on patterns of eye movements in reading 14 different languages are summarized by William S. Gray in *The Teaching of Reading and Writing. Monographs on Fundamental Education, X.* Paris: UNESCO, 1966. See ch. III, p. 48-60.

Influence of general format.—Illustrations and their placement on the page may be very important in organizing factual material for readability and comprehension. Sometimes, as the illustrator of a factbook develops his illustrations, he discovers that the author has not stated his facts clearly, or has combined ideas which should be presented separately. In this case, the author should rewrite his material clearly before the illustrator proceeds.

The page layout and organization of material in a handbook for nursing aids in hospitals is a good example of the functional use of page layout, together with use of white space, and a second color, to show relationship of material. The arrangement of the page also clarifies ideas and shows steps in using forceps which could not be explained so clearly by words alone.

Increasing attention to good book design, which includes general format, page layout, choice of type and illustrations, suggests a few rules for guidance:

1. Type and illustrations should not overlap. They should occupy separate areas.
2. Color should not be allowed to obscure type.
3. Variations in type may be used for emphasis, but should not be conflicting in design, nor should too many variations in type be used in the same publication.
4. White space is an element in design, which should be used for margins to frame the type, or to set off the illustrations.
5. Illustrations which are planned to clarify or supplement the text should be checked carefully for suitability.

Form and structure of language.—Finally, in determining readability, the form and structure of the language used must be carefully considered. In his recent report on the influence of the type of language on reading programs, Dr. Gray divides the languages of the world into three groups:⁵

1. Word concept characters, or ideographs, as in Chinese.
2. Syllable-sound characters, as in Cherokee Indian or Japanese.
3. Letter-sound characters, as in all alphabetic languages.

Even among alphabetic languages, differences in grammar, vocabulary, or sound patterns make it hazardous to transfer writing techniques which are based on structure from one language to another.

Use of word lists in the United States

In the United States, vocabulary building through wordlists has been used and abused for many years. In *A Basic Vocabulary of Elementary School Children*, Henry Rinsland combined the results of

⁵ *Ibid.*, ch. II.

11 studies of children's vocabularies. Methods used in assembling these lists are described in the introduction to his book.

Although the Rinsland list is based on careful research, any word-list has natural limitations. Every year the child's world expands through increased experience and education. In addition to unavoidable gaps in research, children's vocabulary is constantly changing as new words are added, for instance, in science, television, and other communication media.

Introducing new words

Closely related to the control of vocabulary is the desirable number of new words introduced on a page and the problem of repetition. Here again, arbitrary repetition of new words should be avoided. The text should be so developed that new words can be used with meaning and increased comprehension.

Editors and educators in the United States working on a series of readers have often decided to set up certain rules for introducing new words: how many per page and the desirable rate of repetition. Such rules are based on the principle of learning through repetition. This is a sound principle, but it should be remembered that too much repetition becomes boring and sometimes defeats its own purpose.

Any vocabulary study should make due allowance for technical words or unusual words of local usage which sometimes have more meaning for children than so-called "basic" vocabulary. This factor has become increasingly apparent during recent years when new technology has made children, even young ones, familiar with such words as "sputnik," "atomic," "radar." For most English-speaking second graders, "telephone" and "elephant" have been easier words than "there" or "then" or "where," because their meaning is perfectly clear and their shape is easily identified.

Words, words, words

Some vocabulary specialists argue that long words are harder to read than short words, but this is another rule which must be applied with great discretion. In connection with initial steps in teaching reading, the fact should be emphasized that "it is not the short word that is most easily learned but the one which is a center of keen interest and meaning."⁶

⁶ William S. Gray. *Preliminary Survey on Methods of Teaching Reading and Writing*. Educational Studies and Documents, No. V, Part II. Paris: UNESCO, July 1953, p. 13.

A more likely source of trouble lies in words with dual meanings. Some common English words which appear on basic wordlists have more than one meaning. Words such as "bear," "run," "there," should be used with great care so that the alternate meaning does not add an extra hazard to the readability of the text.

Words with abstract meanings are also a constant hazard to the reader and the writer. Often, an adjective is easier to read than an abstract noun. In English, it often is better to use *clean* instead of *cleanliness*, *happy* instead of *happiness*, *lazy* instead of *laziness*, and so on.

Use of contractions

Another reading problem is sometimes created by the use of contractions. Some American educators and publishers have set up strict rules against the use of contractions in the lower grades. Recently, the changing pattern of language teaching sometimes makes the contracted form preferable to the noncontracted form. Also, examples from the teaching of English are not very helpful in determining practices in Spanish, French, or Amharic. Where expert language guidance is needed, writers should consult the specialists who are responsible for a particular program. The important thing is to follow a consistent usage in any series of books, so that beginning readers in one community or one language area are not confused by lack of uniformity in their instructional materials.

Sentence structure

Research and practices in American schools which show the importance of sentence structure have been summarized by Dr. Arthur E. Traxler.⁷ He sets up a table for the length and complexity of sentences, recommending for preprimers, not more than 4 words; for primers, not more than 5 words; for first readers, not more than 7 words, and so on.

In practice, sentence structure and word order may be more important than the number of words. A short sentence with an inverted or unusual order of words may be more confusing than a longer sentence. And a whole series of short sentences make for bumpy reading.

⁷ Arthur E. Traxler and Agatha Townsend. *Eight More Years of Research in Reading*. New York: Educational Records Bureau, 1948.

Often a short sentence is useful at the beginning of a paragraph and may be followed by a longer one. Here is a good example from *Charlotte's Web*, by E. B. White: *

A spider's web is stronger than it looks. Although it is made of thin, delicate strands, the web is not easily broken.

In another paragraph, several longer sentences are followed by a short one:

The spider ate a small bug that she had been saving.
Then she slept.

Here is another example from Ann Nolan Clark's *Looking for Something*: *

Gray Burro looked around at the banana trees.
There were hundreds and dozens and dozens and hundreds of them.
Gray Burro looked around and about and up and down.
Banana trees. Banana trees. Banana trees.
That was all he saw.
That was all there was to see.

Sequence and transitions

Additional factors in readability are the sequence of sentences, the natural development of paragraphs, the transitions from paragraph to paragraph, and from page to page. Paragraphs are the foothills, which the reader must master before climbing the mountains. And it is wise for the writer to provide natural resting places. That is one reason why materials for younger children should be planned page by page, so that the end of each page is always the end of a paragraph and often the end of an idea.

If there needs to be a natural breathing space between paragraphs, there also needs to be a feeling of continuity, from sentence to sentence and from paragraph to paragraph. This is sometimes called the "echo technique" which links one sentence to the next and keeps the thought flowing smoothly. For example, take this version of the opening sentences of an old Hindu fable, retold by Lillian Quigley.² Arranged according to the echo technique, the story has natural repetition as well.

Long ago in India, six blind men lived together.
Because they lived in India, they often heard about elephants.
But because they were blind, they had never seen an elephant.
The blind men lived near the palace of the Rajah.

* E. B. White. *Charlotte's Web*. New York: Harper & Bros. 1952.

* Ann Nolan Clark. *Looking for Something*. New York: Viking Press. 1952.

² Lillian Quigley. *The Blind Men and the Elephant*. New York: Charles Scribner's Sons. 1959.

The Rajah was the ruler of all the people.
At the palace of the Rajah, there were many elephants.
"Let us go to the palace of the Rajah," said one blind man.
"Yes, let us go," said the others.

Common service words

Another approach to vocabulary control in the United States is based on the nucleus of the 220 most common service words which are a part of all words to be read in school and out. Research has shown that these words make up two-thirds of the running words in primary books and over half the words in other books.¹¹

These common service words in English are the prepositions, conjunctions, verbs, adverbs, adjectives, and pronouns. Nouns are not included on the theory that nouns are not common to all reading matter. Material about a farm uses names of farm animals. Material about the city uses such nouns as "taxi," "skyscraper," "subway." Nouns change as the subject matter changes, but the service words remain the same. These English words are the most difficult to learn but they are vitally important in reading matter.

Using the Dolch list of 220 common service words as her starting point, Ann Nolan Clark has worked out 10 rules to be followed by writers for the Bureau of Indian Affairs in the United States in preparing educational materials:

1. All nouns used may apply to content need.
2. All service words must be checked with Dolch list. (An effort should be made to keep within this list—not always possible.)
3. Vocabulary must be controlled.
4. Never more than three new words to a lesson (one or two better).
5. Words must be repeated at least five times.
6. In doing a series, words should progress.
7. Sentences should be straightforward.
8. Sentences should be active.
9. Sentences should be simple, clear.
10. Never use more than 15 words to a sentence.

Mrs. Clark emphasizes that even this list of simple rules must be used with discretion. It is her practice to write any given assignment first without reference to rules or wordlist. Later, when she is satisfied with the content, she rewrites the material until it meets the requirements of the specific reading level.

This advice is supported by the experience of many other authors. The consensus is: do not keep a vocabulary list constantly in front

¹¹ Edward William Dolch. *Psychology and Teaching of Reading*. Champaign, Ill.: The Garrard Press, 1951.

of you as you write. If you have such a list, read it over often as you plan your book so that you are familiar with its limitations. Next, plan a story that you think will interest a child using these basic words. After you have written the main incidents of your story, or developed it in outline form, go back and check your word-list again.

Gaps in language research

This summary of language research and practices in the United States calls attention to the close connection between language research and the production of educational materials. At the same time, increased interest in raising worldwide educational levels calls attention to gaps in linguistic research. Where regional language studies are not yet available, certain shortcuts may be used until research catches up with educational needs.

A recent article by Dr. Russell Davis, former ICA language specialist, summarizes methods used in Ethiopia to fill in gaps in language research.¹² Dr. Davis was a member of a four-man language research team: two Michigan linguists, a creative writer from Oklahoma, and himself, a Harvard research man. They joined a printing and publications adviser from Yale, an audiovisual expert from Syracuse, and some 20 Ethiopian, European, and Asian writers, artists, calligraphers, editors, and press operators. Their assignment was to produce books for the Ethiopian schools:

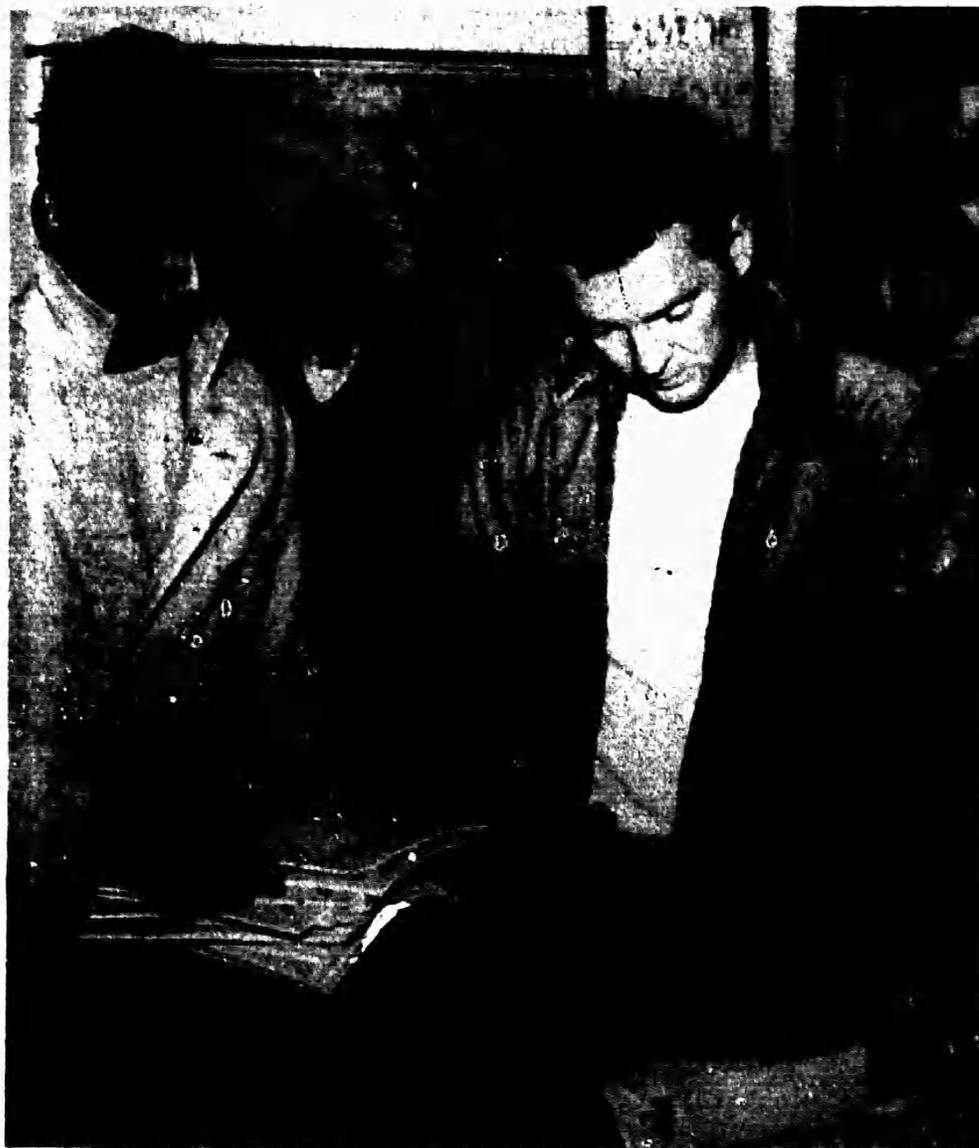
We reviewed all of the books in the Amharic language then in use in the Ethiopian lower schools. It is estimated that more than 50 different languages are spoken in Ethiopia, but Amharic is the tongue of the dominant political group.

There were not many books in the Amharic language then in the schools. There were a number of reading books, one third-grade geography book, one history book, and several books which we couldn't classify because the people who read them couldn't agree about the subjects treated in them. Our survey revealed that the main problem was the Amharic reading books, where we had 56 entries, all bad. One primer for the second grade was a translation from Greek to French to Amharic of Plato's *Republic*.

We set to work revising some experimental books for alphabet learning and simple reading. The Ethiopian alphabet has either 231, 242, 256, or 272 letters. It is a syllabary with seven basic modifications for vowel sounds. We determined that roughly 235 letters were used. This was our first great triumph. ☺

We produced alphabet books according to our count of letters, and then began to write and revise a set of simple primers and readers. We ran into prob-

¹² Russell G. Davis, "Overseas Education," *Bulletin of the Harvard Graduate School of Education*, Vol. II, No. 4, Dec. 1957.



Delivering the first mathematics books in the Amharic language to a principal and a teacher in a southwestern Ethiopian school.

lems of vocabulary control at once. No one could agree on which words were common and known to children in the lower grades. Clearly, research was called for. We devised a scheme for the sampling of the Amharic vocabulary of Ethiopian children in grades 1 to 8. In addition to sampling vocabulary, we also determined the frequency of occurrence of basic morphological units and syntax problems. After our research was completed, we sent samples of written and spoken Amharic to our staff back in Addis where we had trained seven young men for this job (we also used students from the University College of Addis Ababa).

In June of 1967, we published a graded wordlist, which although it was based on an inadequate sample (100,000 running words of Amharic) did provide the first systematic estimate of Amharic word frequencies.

In the same forthright way, the Ethiopian team headed by Dr. Davis "swept the country," traveling 150,000 miles to collect folk tales and other evidence of cultural patterns on which reading books could be based. Despite many obstacles, these energetic workers, both Ethiopian and American, during a period of 27 months produced 12 major research projects, 15 usable school books, and approximately 50 issues of school periodicals.

Each country has its own problems, naturally. Some have a more highly developed textbook stock on hand. Others have lesser language problems or wider range of educational levels. But whatever the problems, the language research specialist can help to analyze them and fill in the gaps as quickly and as accurately as possible. The following summary on research into readability and grade placement was contributed by Dr. Davis.

Summary

Readability, or lack of it, comes from many sources, and language research can only help correct some obvious faults. Readability will depend first of all on the appropriateness of the subject or theme for the ones who are presumed to read it (the grade or age group). Readability will also vary according to the individual interest of any given reader, although there is probably a certain writing style that is generally more interesting, vivid, or attractive. Some children with a high interest in rocketry or chemistry will run through technical articles and books that would defeat many adults.

In language research, readability is usually approached at the vocabulary level with reference to general or technical vocabulary.

General vocabulary.—In English a great deal of information is available in the form of wordbooks and wordlists that will tell the writer roughly what vocabulary is appropriate for what age or grade group. Even in English where Thorndike, Lorge, and others have counted up in the 30 millions of words, lists are never completely adequate, since age and grade groups vary so widely in the range of their vocabulary. Furthermore, words have multiple meanings and the fact that the child can recognize one use of a word does not mean that he can recognize all of its uses.

Again, in vocabulary it is true that each individual has many different kinds of vocabularies. A person may recognize more words in his reading than he can use in his writing; and he may understand some spoken words and yet never speak them. Hence vocabulary estimates vary widely. One researcher may find that seventh-grade students know 15,000 words; another may say 45,000 words; and both

may be right in that one is talking about active vocabulary as opposed to recognition vocabulary.

In many countries large-scale vocabulary research has not been carried on, and the materials production programs must investigate each language to get some estimate of the level of vocabulary. The impressions of educational writers about the appropriate grade placement of any given word are frequently in marked disagreement. In Ethiopia seven authorities on the Amharic language came up with seven different grade placements of the same word. Almost any data on word frequency and vocabulary level is better than mere guess.

In vocabulary research, collection methods must differ for different languages and local conditions. Since the researcher deals with tremendous numbers of words, he must sample, and the design of such



Recording folk tales is one way of gathering information on language and cultural patterns. A Fallasha storyteller in northern Ethiopia records a folktale.

a sampling scheme is often a problem for the educator to work out with a trained statistician.

* For practical purposes a lot can be done merely by counting the words that are most often used in student compositions. The use of certain words in given grades can be determined and lists can be drawn up that give teachers and writers some guidance in the matter of vocabulary selection. The writer should generally use vocabulary a bit in advance of the average for the grade or age group.

Technical vocabulary.—Technical vocabulary is often the greatest problem in materials production programs. In many cases, the educational program is attempting to take a group of children from a folk culture that is rich in many ways (art, literature, dance, music) but which is relatively poor in technical and scientific matters. Education in this setting consists of insuring the best transition from a rich folk culture to a technical culture. Students who live in a non-technical society are expected to learn concepts and terms which are quite familiar to children in more complex societies. This creates great problems in the writing of mathematical, scientific and other technical materials. Often words for scientific and mathematical concepts, even very basic ones, do not exist in a given language. They must be invented, just as they were coined afresh when they first came into languages such as German, English, French, or Spanish. Language research plays a highly significant role in the coinage of new words and the standardization of terms.

Research can investigate whether the terms have already been borrowed from another language, whether the terms in use are obscure or confusing, and in the case where no term or word exists, research can help in coining and circulating suggestions for the term. Many new words just grow and spread in response to need. However, language research can help insure more systematic growth and control of technical vocabulary.

Readability and grammar.—Vocabulary alone does not determine the difficulty level of writing. Grammatical constructions differ markedly in difficulty. In English, for example, complex sentences with subordinate clauses should probably be avoided in materials for children in the early grades. Research in English has determined roughly the kinds of constructions that give students difficulty at various grade levels. This has been done by error counts; i.e., counting the kinds of sentence mistakes that children of various ages and grades make. It can also be done by usage counts; i.e., counting the kinds of constructions that the students can and do use in their writing. Again students can recognize and understand more complicated constructions than they can actually use.

In other countries the morphology and syntax of the language must be investigated. Again no general method can be prescribed. The method will differ according to the language used, the availability of the information, etc. Sometimes written compositions are used, sometimes tape-recorded speech.

Research in stylistics is much the same as research in grammar. In a given sentence many different constructions may be equally acceptable grammatically, and the choice of one is a matter of the writer's style. Information from research in grammar and stylistics can act as a brake on writers who tend to use inappropriate style for a given age or grade group. Research can establish that some constructions are rarely used or used only among certain classes, dialect groups, or at certain intellectual levels.

In conclusion, language research helps to guide materials writers in the choice of appropriate grammar, style, and vocabulary. No set formula is generally applicable.

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CHAPTER 10

Developing Techniques for Writing Nonfiction

THE QUESTION is often asked: Which is easier to write, fiction or nonfiction? A companion question is: Which form is better for children, fiction or nonfiction?

Actually, it is not necessary to assume that one type of writing is "easier" or "better" than the other. This assumption is as misleading as the assumption that there is one "best" method of teaching reading. Therefore, just as it is more accurate to speak of the "appropriate" reading method for a specific situation, it is wise to assume that there is no one "best" way of completing a writing assignment.

Overlapping techniques

In his discussion of reading methods, Dr. William S. Gray points out that the two main schools of thought in teaching reading, word recognition and comprehension, now tend to borrow techniques from each other. The same tendency is true of techniques for writing fiction and nonfiction. It is becoming increasingly difficult to separate the writing techniques used for one form or the other. However, if this overlapping is kept in mind, it will still be helpful to discuss in two separate chapters the writing techniques which are primarily associated with fiction or nonfiction.

To begin with, the early stages of any writing assignment in the textbook field are the same. The various problems of subject and audience, of printing and publishing, of language and research, which are discussed in this handbook are equally vital for the writer of fiction and nonfiction. Factors of readability apply to all kinds of writing, for all ages.

Organization of material is equally important for fiction and nonfiction. In nonfiction, logical development of the material takes the

place of the plot used in fiction. This puts an extra burden of holding the reader's attention on the writer.

Types of organization

The need for simple and logical organization of nonfiction cannot be overemphasized. The plan must not be contrived but must develop naturally from the material. You must fit your plan to your purpose, as people in hot or cold regions fit their houses to the local geography or climate, to the building materials available, and to the economic status of the owner and his family.

Organization of informational material may be obvious or imaginative. One of the simplest and most obvious is the alphabetical arrangement, described earlier, in which common words or information are arranged in sequence, like a dictionary or encyclopedia, for ready reference. This arrangement, however, is limited to use in languages which are alphabetical in form.

Time is another simple basis for organization of material. The younger the child, the shorter the timespan should be. You may find it useful to group a series of experiences around the pattern of a child's day, a holiday trip, or the seasons of the year. The older the child, the longer the timespan may be. Care should be taken that the idea of time should be essential to the material in some way, not used arbitrarily.

If a chronological treatment is suitable, the chronology should be followed logically, without use of flashbacks or abrupt changes of time from the present to the past, or from past to present. With teenage readers and adults, it is sometimes effective to start your book at some dramatic moment, like the eruption of a volcano, or the winning of a prize, and then go back to explain how it occurred. In writing for younger children flashbacks tend to be confusing and misleading.

Another common form of organization for nonfiction is the grouping of related material on a single subject, for a limited age level. Such books often have the simplest of titles, indicating that these are factual books, with no nonsense about them, such as *Turtles*, *Snow*, *Magnets*. If a child is interested in finding out facts about a certain subject, he will often read material above his usual reading level.¹

¹ Phyllis Fenner discusses fact books for children in ch. 12, "Have you a book about the universe?" in *The Proof of the Pudding; What Children Read*. New York: John Day, 1957.



This is a symbol sign.

It means This is Poison.

Poison can harm us.

Sometimes this sign is on a bottle.

Sometimes this sign is on a box.

When we see this sign it means:

Do not drink what is in this bottle.

Do not eat what is in this box.

Do not touch it.

Keep it away from children.

Information can often be handled very simply, if the facts are all closely related, as in this booklet on Signs.

Organization of nonfiction may take the form of a very simple pattern of words and pictures organized around a dominant interest of a particular age level. It may be the idea of a child growing up, growing bigger and bigger. It may contrast the behavior of a good child or animal and a bad one. It may develop some essential element of the mother-child relationship, the security of the home, or

some other characteristic pattern of the child's own limited experience.²

Starting with the child himself, the child's world and his special interests may serve as a thread of organization, to which members of his family, his toys, his friends, and his trips may gradually be added.

Simplifying facts

Sometimes, an author has a particularly difficult assignment in presenting complicated scientific material to a young audience. Rose Wyler, author of many science books for intermediate grades, describes her experiences in writing *Exploring Space* for primary grades.³

The idea of the book was first suggested to her by a 6-year-old neighbor who brought her a transparent model he had made himself of a dog in a satellite. Then he asked, "Now would you tell me all you know about the dog that was in the sky? Or maybe you could read me a book about satellites." When Mrs. Wyler explained that she didn't have a book about satellites which he would understand, Jay—who knew she wrote books—said, "Then would you write one? Put in it why satellites stay up and things like that."

Librarians and teachers at professional meetings had been suggesting the same thing, so Mrs. Wyler set up a folder marked "Space—Young" and began filling it with clippings, charts, and photographs while she was doing research for an astronomy book for older children. The folder was bulging with notes by the time her publisher suggested she write a Little Golden Book about space travel. This is what happened next:

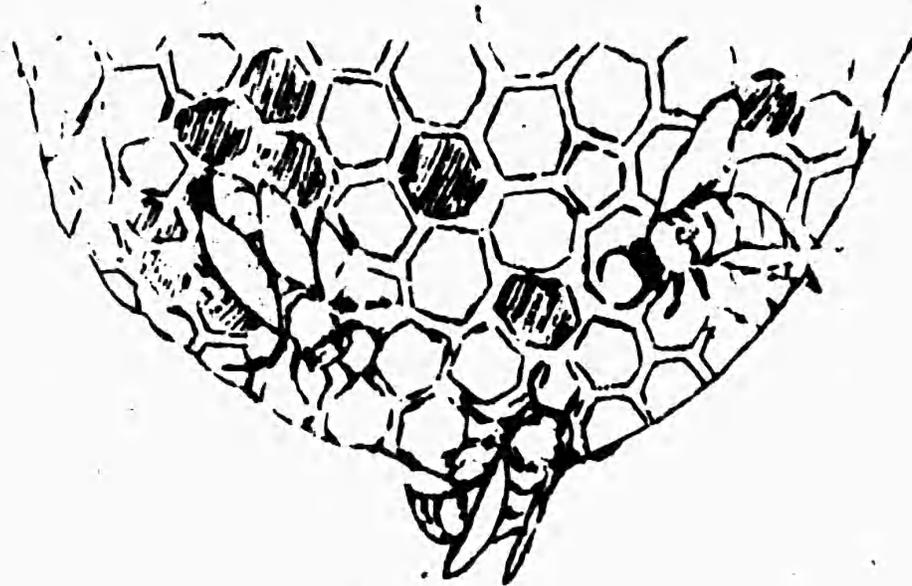
I sat down with a scratch dummy—an empty book of the right format and length—and tried planning text and pictures, page by page. I had a vague idea of an approach; higher and higher and faster and faster. But I needed a lead. Most of the ones I thought of were overgraded or too dull. I asked myself, what do rockets look like—sound like—what do the children on the block say when they play spacemen? At last I had it. "Rockets away! Zoom, boom"! I wrote on the opening page. As I sketched in a rocket belching fire, I felt I was blasting off.

I zipped to the next page, only to find its blankness appalling. Grounded, I began chewing my pencil. That didn't help, so I tried to recall children's

² For further discussion of the form or pattern in books for young children, see "Some Notes on Picture Books" by William E. Scott, *Elementary English*, Feb. 1957, and "Children's Books, Form or Formula," by James Steel Smith, *Elementary English*, Feb. 1958.

³ Rose Wyler, "Writing a Fact Book," *Junior Libraries*, Oct. 1958.

HONEYBEES LIVE IN A HOUSE



The house is called a "hive".

The house has many rooms.

The rooms are called "cells".

The rooms have six walls.

The house is built by the bees.

Some honeybees build their houses in places fixed by man.

Some honeybees build their houses in hollow trees, logs,
and rocks of mountains.

The facts are presented in simple, straightforward sentences in this booklet on *Bees*.

how-and-why questions on space—the questions our sons and daughter and their friends had asked and the questions of the children I had known as an elementary science teacher.

Eventually ideas started to flow. I jotted down the best ones, illustrating them in my crude fashion. When I'd get stuck, I'd dip into the file for more ideas, until finally there was something on every page of the dummy.

The first projection didn't pan out. But the seventh one did, I thought. It had an opening that capitalized on children's interests and a narrative line that led toward the understanding of some basic science concepts.⁴

⁴ *Ibid.*, p. 128.

The opening sentence and idea

You will note that Mrs. Wyler spent considerable time and thought on her opening sentence and ideas, and that she considered this one of her major problems. It is a problem which plagues every writer, of fact or fiction, for whatever audience. Perhaps it is a greater problem in nonfiction writing than in fiction; a greater problem for younger readers than for older ones; a greater problem for school texts than for recreational reading.

So you may well start thinking about the opening sentence and idea long before you begin to write. First, you must think of the content of that paragraph; then you must think of its form. If the first sentence or paragraph does not catch the reader's attention, or if he finds it dull or confusing, he is not likely to continue reading. The first sentence should be interesting, easy to read, understandable, and challenging. Like a newspaper article, it should tell *who*, *what*, and *where*. *Why* and *when* should not be far behind.

Here is the beginning for a section on migration from a book called *Animals Around the Year*: "Ten birds, twenty birds, thirty, forty, fifty birds were all flying together. 'Quack! Quack!' they called. They were ducks flying south."⁵

Or take this opening paragraph from a biography of Columbus by Alice Dalgliesh: "Once there was a boy who loved the sea. He lived in the town of Genoa in Italy and his name was Christopher Columbus."⁶ The first sentence not only arouses interest but serves as a "theme of interest" throughout the book, much as a musical theme may be repeated in an opera or symphony.

Finding the right beginning will probably take a great deal of trial and error. Sometimes, it helps to write it in several ways. Sometimes, the idea for the right beginning develops as you write later sections of the manuscript. Sometimes, the idea for the beginning is crystal clear in your mind as soon as you begin an assignment, but this is rare.

Take the following example written by an author-educator from India. His first draft of a biography of Gandhi began like this:

"Why did my teacher not believe me? Did I not tell him truthfully that my father was bedridden and that I had gone home to attend him?" These words were ringing in the heart of a young boy of 18 like a big question mark.

This paragraph is interesting and challenging in content, but it fails to identify the speaker and the reason for the boy's questions.

⁵ Glenn O. Blough. *Animals Around the Year*. Evanston, Ill.: Row, Peterson & Co.

⁶ Alice Dalgliesh. *The Columbus Story*. New York: Charles Scribner's Sons, 1955.

Also, in order to explain the sense of this paragraph, it is necessary to jump back and forth in time, thus causing confusion for the reader. With these problems in mind, the author revised his opening paragraph as follows:

"Hurry up, hurry up!" The school bell seemed to be calling the boy, Mohandas Gandhi, as he hurried back to school, but his thin legs did not carry him fast enough. By the time he got there, his gymnasium class was over. What a pity! Yet surely his teacher would understand when he explained that he had gone home to nurse his bedridden father.

In the revision the author has added the *who*, the *when*, and the *why*, and now the reader is prepared to understand the background for the boy's inner questions.¹

Use of dialog

You will notice the use of dialog in this excerpt about Gandhi. Dialog is used increasingly by modern authors in biography and other nonfiction to make their material more readable. Great care should be taken, however, that the dialog is based on sound research. This does not mean that you have to find the exact words quoted in a document. Sometimes, ideas expressed in letters and diaries can be adapted to conversation.

Dialog can be useful as a technique to avoid generalizations. Generalizations in any field tend to be dull. Take this example from the first draft of a biography for young children written by an American author-artist, Janice Holland.

George Washington was the first president of the United States. He led the Armies which made our country free. He helped to make the laws which have kept our land safe and peaceful. He was one of the wisest and best men who ever led a nation.

Anyone who knows children will see instantly that although these statements are true enough, they do not carry much meaning for the young child. The author soon realized that her approach needed to be more specific and, after trying out the manuscript with a group of second graders, she revised the opening page as follows:

A thin sheet of ice covered the Potomac River one February morning long ago in Virginia. On the river's bank, a curl of smoke rose from the chimney of a snug brick house.

Inside the house was a baby, newly born. The baby's parents, Augustine and Mary Washington, smiled. "Hello, George!" said Augustine to his new son, "Hello, George Washington!"²

¹ See *Workshop Sampler*, p. 26; for the rest of the chapter.

² Janice Holland. *Hello, George Washington!* Nashville, Tenn.: Abingdon Press, 1958.

The dialog is imaginary but the general outlines of the incident are true to fact, and the use of conversation helps the young reader to understand the facts.

The right title

Finding the right title is as important as finding the right opening sentence. In general, titles should suggest the scope of the subject, the approach, the age of the reader, and they should arouse interest. Often two words are enough because the reader already has association with the words or the ideas concerned. Such titles as *Exploring Mars* or *Exploring the Himalayas* make a direct approach to the interests of the boy or girl with an interest in space or mountain climbing. Biographies which are called *The Story of . . .* suggest a fictional approach rather than straight facts. *The First Book of Stones* implies that it is intended as an introduction to the study of stones, and that's correct.

The title is not always the author's responsibility; sometimes, the editor or publisher has the title in mind and the author writes to fit the title. Sometimes, a change in title helps to identify one book with several others in a series. This happened when that excellent survey of man and mathematics, originally titled *A Man Must Measure*, was changed to *The Wonderful World of Mathematics*, making it a natural companion to *The Wonderful World of Archeology*, *The Wonderful World of the Sea*, *The Wonderful World of Music*.

Dramatizing technical information

When technical material must be adapted for a young age group, many writing techniques or principles must be kept in mind, such as the specific approach, the right title, the right beginning, the use of dialog. How to apply these principles is well explained in a booklet called *Is Your Wisdom Wasted?*⁹ This booklet tells how material on combating hookworm in Alabama was rewritten to meet the interests and reading ability of upper elementary boys and girls.

The information as first presented was too technical. Not only was the vocabulary too difficult for the upper elementary age group, but it contained such statements as: "Though anyone may acquire hookworm, agriculturists and inhabitants of rural communities who do not

⁹*Is Your Wisdom Wasted?* Extension Division Bulletin, No. 131. New Dominion Series. Charlottesville, Va.: University of Virginia, Jan. 1961. 8 p.

have sanitary facilities and who, as children or adults, go barefoot are particularly susceptible. When exposure to infection is continuous, the number of hookworms the individual harbors increases constantly."

In the revision of this material, dangers from hookworm and the methods of combating it are presented as a struggle between two characters: a hookworm named Hubert and a boy named Tommy. The title itself was planned to attract boys and girls from fourth grade up. It was *Hubert Hookworm and Tommy*. As finally revised, the title page carried these interest-catching sentences:

HUBERT was only a little worm but he looked big to Tommy.

TOMMY found out how Hubert keeps boys and girls from growing strong and well.

THIS STORY tells you how TOMMY LICKED HUBERT.

The first paragraph fulfills the promise of the title and the summary on the title page. It is simple and direct:

Hubert Hookworm was hungry. He wanted blood—the blood of a boy or a girl. Hubert was lucky. Tommy was going fishing. He liked to walk barefooted on the warm ground. He did not know about Hubert. That was what Hubert had been waiting for. He stuck to Tommy's bare foot. Tommy didn't even know he was there. Hubert dug and bored and hunted. Sure enough he found the food he liked best—blood."

This is technical information well adapted to the reader, accurate, and interesting. It is not surprising that a followup on Hubert's story shows that this booklet was read in 85 percent of all school-connected homes. Older children and parents enjoyed the story, for it was not condescending in style even though it was written at a simple vocabulary level.

Using fictional characters

The use of specific fictional characters has justified itself again and again in books of information. This does not mean the use of fictional characters who talk about the subject, but the creation of imaginary episodes like the one in *Hubert Hookworm and Tommy*.

The story approach is also recommended in a bulletin on writing for new literates, "if you have a lesson to teach, a moral to bring out, or some significant facts."¹¹ The characters of the story may be fictional and the circumstances made up by the writer, but their problems and their solutions must be true to life and accurate in every detail.

¹⁰ *Ibid.*, p. 4.

¹¹ *Reports and Papers on Mass Communication*. No. 22. Paris: UNESCO, June 1957, p. 11.

The story helps the reader see himself in similar circumstances and will help him remember the facts more quickly than if they had been presented without the story.

Dramatizing a theme

However, it is not always practical to organize the raw material of a book around human characters. Perhaps an animal will suit the subject better, or even some inanimate object, such as a doll or a toy. Care should be taken to choose an object which is naturally associated with the subject. If you are writing about machines, the information may be conveyed through the story of an old automobile which is about to be discarded, or through the story of a horse which is being replaced by machines in farming.

In *The Tree on the Road to Turntown*,¹² Glenn Blough dramatizes important information about trees in general by focusing on the story of one particular tree. The objectives of this book were to develop an interest in trees, to show the cycle of the seasons, to show the value of trees, and to promote habits of scientific observation.

Since the book was intended for an audience of 7- through 10-year-olds, it was adapted to their age, interests, and abilities. The tree chosen was an oak tree, a common species in most parts of the United States, with an easily identified seed, the acorn. Since it is important that the material of the text be interesting and appropriate for the chosen audience, the author does not begin with a general statement about acorns, but imagines an episode in which a dog chases a squirrel who drops an acorn which is squashed into the ground by a boy's foot. This episode is both probable and possible, emphasizing that the writer of informational material must use his imagination within natural limits.

Once the reader's interest is caught, the focus shifts to the tree itself, which grows, changes, and survives various threats to its existence. These threats constitute the "plot" of nonfiction, as the life of the tree is threatened by hungry rabbits, by insects, and by fire. As the story develops, the original child characters and the locale become secondary in importance.

It is significant that this book, which covers a long timespan, is told in natural chronological sequence. The technique of flashback, of jumping back and forth in time, is avoided, because it is confusing and unsuitable for children under 10.

¹² Glenn O. Blough. *The Tree on the Road to Turntown*. New York: McGraw-Hill Book Co., Inc., 1953.

Personal vs. impersonal approach

The personal approach used by many experienced authors is recommended for readers in the elementary school. Children in these age groups need more emphasis on pictorial images, both with text and illustrations. They need to be able to identify themselves in some way with the content of the story or article. They have less background in experience and need more help in visualizing and understanding the material. Their attention span is shorter, and they need to be exposed to material in smaller units.

The following examples are taken from material prepared for the New Zealand schools. The subject was the same: sheep farming. Both examples are clearly and simply written. The first is for children between 9 and 13; the second for older children.

For younger readers:

... Wille stood staring at them (snow-covered mountains) as the light grew stronger. All the men and dogs had disappeared, and the snow began to turn faintly pink with the rising sun before he realized that he was freezing, and crawled back into bed. He hadn't long to sleep though. Loud voices roused him at half-past six, and before seven-thirty all hands were in the woolshed. ... Wille had never seen a woolshed before. It seemed a huge building, all hot and smelly with hundreds of sheep which had been standing in the pens since yesterday morning when the rain came on. ...

Here is quite a different treatment, more intellectual, more impersonal, more suitable for older children:

... Shearing goes on till the end of February. The hours are long, usually eight a day, and the breaks for tea and meals are more than welcome. A good man will shear one hundred sheep in a day. This tally may seem small when you remember records made in North Island shearing sheds, where machines are used, but shearing in the high country is by blade shears. The reason for doing it by hand is that high country sheep must not be shorn too closely. If they were, a sudden spell of cold or snowy weather after shearing might kill many of them. ...

Originality in approach

From these examples, it seems obvious that imagination and originality make an important contribution in the organization of informational materials. In fact, imagination may be as important in writing science texts as in writing fiction. Without imagination, the scientists themselves would be unable to discover the secrets of the

¹¹ *The New Zealand School Publications Branch. Educational Studies and Documents, No. 25. Paris: UNESCO, 1957, pp. 19-20.*



THE MAGIC POT

Lahara is the name of the North-West Wind. He comes between November and April, and normally he is a very kind fellow, bringing with him rain for the gardens, and taking the lakatoi or other canoes safely home. But he is very quick-tempered, and when something angers him, he knows how to make a lot of trouble; then he will frighten the pigs and make them squeal; he makes the village people stay inside their houses, and the sailors put hurriedly to shore; sometimes he blows down the coconuts, and sends down torrents of rain.

3

The wind is personified and becomes a storyteller in this legendary history of the Motu people.

future and of outer space. Without imagination plus facts, a writer cannot do justice to the wide range of informational material of interest to children.

Sometimes, you may be discouraged because you do not have enough confidence in your originality. Sometimes, you may be afraid to use in print methods or ideas which you have used successfully in the classroom. Yet these same original and exciting new ideas are often most valuable when embodied in book form for wider use and appreciation.

In educational materials, the key to a child's interest often lies in a new way of looking at an old subject. Anne Guy has used a new approach to familiar animals in her *Book of Tails*. As an experienced second-grade teacher, she knows the details which will have most meaning for American children and describes the animals in terms of the children's own experience. For instance, she shows the usefulness of the kangaroo's tail in these words:

Jump, jump, jump!
Here comes Mother Kangaroo.
What big jumps she takes,
Her tail helps her jump.
Then she and her baby sit down to rest.
Her tail is a chair."

In an article for the *American Junior Red Cross News*, March 1958, called "What are Tongues Good For?" Anne Guy wrote about common birds, insects, and small animals in terms that young children would understand. Of the common fly, she wrote:

How would you like to have your lips and tongue standing out from your face on the end of a tube a foot long? Wouldn't you look queer?

Some insects have tongues like that. One of them may get into your house. But you don't like to have him come near you. His name is Flitter Fly.

Flitter Fly's tongue is folded under his chin when he is not using it. But when he sees some sugar, out comes the long tube that is his tongue. A bubble on the end of Flitter's tongue makes the sugar melt.

Flitter Fly sucks the sugar through the tube of his tongue, just as you suck lemonade through a straw. But his tongue is not clean. It is covered with germs. We do not like to eat things that Flitter Fly has touched with his tongue. They can make us sick.

Summary

Not all of the principles and techniques discussed in this chapter will apply to a specific writing project. Many of these techniques

" Anne Guy. *Book of Tails*. Austin, Tex.: The Steck Co., 1957.

apply more forcefully at certain age levels. Others are general enough to be useful for fiction as well as nonfiction. The best way will be to consider the following suggestions and their application carefully in relation to your own assignment:

1. Organization must be simple and logical. Choose the one which develops most naturally from the content of your material and your objective.
2. Avoid use of flashbacks or abrupt changes in time sequence.
3. Keep the reader and his interests continually in mind.
4. The first sentence should be interesting, easy to read, and challenging.
5. The first paragraph should usually tell who, what, where; sometimes when and why.
6. Dialog is useful but must be based on sound research.
7. Be specific, not general. Generalizations tend to be dull.
8. The right title will attract interest and clarify your theme.
9. Technical information often needs to be dramatized for the young reader by means of fictional characters and situations.
10. Originality in approach or grouping of familiar facts often supplies the needed interest factor.

Suggested reading

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University of Virginia, Extension Division. *Is Your Wisdom Wasted?* Bulletin No. 121. Charlottesville, Va.: University of Virginia, Jan. 1951.

CHAPTER 11

Developing Techniques for Writing Fiction

FICTION is a flexible tool. It may be combined with nonfiction for assignments in geography, biography, and science. It will naturally be used constantly in language arts and in retelling of folk stories and legends. It should not be overlooked in the presentation of many topics assigned for supplementary materials in social studies. There is a flexibility in fiction which makes it increasingly popular for all types of reading materials.

Fiction needs a strong sense of organization just as much as nonfiction. And like the plan of nonfiction, the plan of fiction should be a natural form growing out of the material. Sometimes, the plot is ready-made for the writer, as in the case of an old folk tale which has developed a definite form in the process of many tellings and retellings. Sometimes, even an old folk tale has lost its natural form and must be rearranged and adapted in order to present an interesting and logical sequence.

What is plot?

Plot is usually defined as an attempt or a series of attempts to overcome some obstacle or reach some goal. The obstacle may be physical or emotional, economic or social. The plot may include outward physical struggles against time or hunger or disease or people or animals. Or the plot may center around inner conflict, such as a boy's fear of the sea or a girl's struggle to control her temper.

The important thing to remember is that the plot should be suited to the nature of the material and the interests of the children for whom it is written. The plot may be very simple.

Suppose your assignment is a market story. Avoid, if possible, the device of a guided tour, during which an adult asks foolish questions which are answered by a bright child. Sometimes, the situation is reversed and it is the child who asks foolish questions

and an adult who appears unnaturally well informed. In either case, the reader is likely to become bored.

Some writers, in an effort to get away from this unnatural pattern, have turned to melodrama and invented improbable plots about buried treasure or rich relatives. Neither of these extremes is desirable or necessary in developing educational materials for children. With a little imagination and thought, you can find some strong natural plot interest in almost every real-life situation. You can often find a single incident with dramatic possibilities, as Ellis Credle did in *Down, Down the Mountain*,¹ first published as a picture book, and reprinted many times in school readers.

Down, Down the Mountain is the story of two barefoot children whose dearest wish is to own a pair of squeaky shoes. In a natural sequence of words and pictures, the author-artist tells how Hetty and Hank plant turnip seeds, weed and water them, take the turnips to town, and finally buy the coveted shoes. The obstacles which they overcome provide constant suspense and a sigh of relief when the story ends happily. At the same time, the reader learns how mountain children live. The story carries the information naturally, in a way which can be appreciated by other barefoot children or by those whose experiences are limited to city streets.

Relation of reading to experience

A point should be made here to clarify the relation of reading to experience. Several times in this handbook, you are advised to examine closely a child's interests and environment in order to use this background in your writing. It should be remembered that children also need reading materials which enlarge their experience.

Dr. Leland Jacobs, reading specialist at Teachers College, Columbia University, emphasizes that "the same book may be a confirmation of experience for one child, an extension of experience for another."² In a lecture at the Second International Reading Association Conference in New York City, he used the example of two groups who had read Hildegard Swift's story of *The Little Red Lighthouse and the Great Grey Bridge*. The first group of children lived in New York City. After reading the book, one of the children said: "I have seen this same bridge and lighthouse many times, but it will never be the same again."

¹ Ellis Credle. *Down, Down the Mountain*. New York: Thomas Nelson & Sons, 1934.

² Nancy Larrick, ed. *Reading in Action*. International Reading Association Conference Proceedings. Vol. 2. New York: Scholastic Magazines, 1957., p. 22.

The second group of children lived in the Middle West. They had never been to New York City. They had never seen the lighthouse and the bridge. But after they read the book, they could hardly wait to visit New York and see whether the bridge and the lighthouse were really there. This is the best type of regional story in which not only the outward facts are authentic, but the incidents are true to life and so convincing and plausible that the reader easily identifies himself with them.

Emotional development and reading interests

In developing plots for school texts and supplementary readers, you should also keep in mind the importance of the child's emotional development in relation to reading interests.³ You should be aware of the many plot possibilities built around such universal themes as love, fear, curiosity, surprise, luck, laziness, unselfishness, courage, greediness, and need for security. Morals and social attitudes may enter into this type of story but should not be allowed to dominate.

Need for security

For instance, consider the story possibilities in a child's need for security. Family love and security are important to a child and are the basis of plot in many children's classics, like *Cinderella* and *Little Tom Thumb*. Sometimes, the chief character is an animal instead of a child, but the young reader easily identifies himself with the rabbit or the kitten who is the main character.

The child's need for security begins with himself and his family. As he grows older, his world widens to include other people, too. "He is moved by stories of parents' self-sacrifice for their children, a boy's struggle for an education, or a nation's desire for independence. Through his own experience and through his reading of good books covering experiences broader than his own can possibly be, a child—and adults, too—will finally realize that there can be no security for any one unless there is security for all."⁴

Closely allied to the need for security is the need to belong to a group. It may be the family group, the school group, the community group, or an even wider association of people, regardless of race or

³ For a more detailed treatment of this subject, see May Hill Arbuthnot, *Children and Books*. Chicago: Scott, Foresman & Co., 1957, pp. 3-4.

⁴ *Ibid.*, p. 5.

national interests. Stories of this kind can help to build good civic or international relationships, as well as satisfy emotional needs.

Need to achieve

The need to achieve is another emotional need which is as important in books as it is in real life situations. Not only biography meets this need, but also success stories of fictional heroes. In this same group may be considered some of the tall tales, in which men like Paul Bunyan or Ulysses accomplish superhuman tasks. The child may also admire a hero handicapped by poverty or social position, like so many of the "youngest of three sons" in European folk tales. Another hero may achieve in spite of a physical handicap, like lameness, or blindness.

Even at the youngest level, stories or informational books may dramatize achievement in terms of the child's world. Even simple incidents are satisfying—guessing the right answer to a riddle, hitting a mark, going somewhere and back, being big enough to ride a horse, or swim across a river.

Need for humor

Play, or the need for relaxation, is served by the story or books which bring laughter and nonsense into young lives. Even primitive people knew the value of laughter, reflected in the broad humor of many folk tales. Sitting around the glowing hearth in the winter-time, or meeting under a shady tree in summer, storytellers passed along by word of mouth many tales of foolish men and beasts. Aesop collected animal fables in which humor was balanced by moral, and Mother Goose brought together rhymes of sheer nonsense as well as witty commentaries on historical events and human mistakes.

Young and old together laugh at Humpty Dumpty, the too proud, fat man, falling off the wall. They laugh at Jack falling down and spilling the pail of water, at the cow jumping over the moon.

The importance of humor should be emphasized, even in textbooks of the simplest kind. Anyone working in this field must constantly be aware of its appeal and its uses. Sometimes, it is the reluctant reader who must be tempted by provocative pictures to read about *Curious George*⁵ the little monkey who was so curious that he often

⁵ H. A. Rey. *Curious George*. Boston: Houghton Mifflin Co., 1941.

poked his nose into trouble. His curiosity is the kind that children will share and enjoy.⁶

But the reluctant reader is not the only one who needs humor. Stories with the right combination of the natural and the unexpected catch the attention of most readers. American children like to read about Henry Huggins, who manages to get into humorous situations while having his hair cut, delivering the afternoon paper, or keeping his dog out of the neighbor's garden.

Robert McCloskey is an American author-artist who has been successful in combining humor and suspense in real-life episodes. In *Make Way for Ducklings*⁷ he tells how a family of ducklings interrupt the orderly flow of traffic in Boston. Isn't there a similar story in any big city in the world, or any small village, in which some unlikely animals—or people—interrupt the usual order of things? Ducks in traffic might be commonplace in a small village in Austria, but an ostrich would be a strange sight indeed.

Stories like these usually cannot be translated directly into another language, but they do point up the need for similar stories in every culture. You will need to study the patterns of life in your community very carefully, and from these patterns amusing real-life adventures may be developed.

As you observe children in their natural surroundings, listen to them, and talk to them, it should be possible to find out what makes them laugh, what brings that twinkle of surprise to their solemn eyes, what produces that suppressed or hidden smile. The right stories will release that laughter and develop new reading incentives.

Make the setting authentic

In writing fiction for children, authentic details will help make your setting vivid. These details may be based on firsthand experience, interviews, or research. Avoid generalities in describing a scene. Make your reader see the particular mountain or boat or train or horse. Be sure that the people and places you describe are true to life. Sometimes, you may be able to re-create some scene from your own childhood. Sometimes, you may need to refresh your memory or draw on the experience of others. Adapting stories from one culture to another must be thoughtfully done. It is not enough to change houses to tents. Food, games, clothing, and many other details of community life may differ so much that it is better to make a completely fresh start. An Indian child would not push a doll and a kitten in a baby carriage. She would carry baby sister on her back.

⁶ Margot Dukler. "Five Popular Children's Authors," *Elementary English*, Jan. 1958.

⁷ Robert McCloskey. *Make Way for Ducklings*. New York: Viking Press, 1941.

Language of the senses

Words which describe the five senses, the language of sensory perception, are particularly useful in making your story vivid. Children like to read about the taste of cold milk, the smell of ripe fruit, the tickle of an animal's fur, the cheerful sound of bells, the twinkle of a distant star.

Margaret Wise Brown's *Noisy Book* started a procession of imitators, all eager to catch in words the memory of sensory images from a child's viewpoint. In the *Seashore Noisy Book*,⁹ she wrote:

Muffin was a little dog with sharp ears.
 There was nothing he didn't hear.
 He could even hear the rain falling.
 Muffin had heard the trucks roaring through the city
 and the birds whistling in the country.
 He thought he had heard everything.
 But he had never heard the sea.

Other writers trained in the Writers' Workshop of the Bank Street School of Education can be easily recognized by their reliance on the language of children themselves, on the revealing flashes of poetic imagery which show how children think and feel.⁹

If you want to improve your style as a writer, listen to children's speech and notice how simply and vividly they describe sights and sounds. For instance, after hearing a jetplane roar overhead, one boy said, "That sound is like the ripping of a giant piece of canvas. I've always wondered if it leaves the blanket of air torn and jagged."

After study of trees in the city, a girl in the same group told her teacher, "When we were driving home through the country last night, I saw a tree standing against the sky. The stars were out and it looked as if they were growing from the limbs of the tree."¹⁰

Later that week, the same girl placed on the teacher's desk a second version of her impressions about the tree in the country:

The old gray tree
 Upon the hill
 By day stands lone and bare.
 At night it harbors baby stars.
 I saw them resting there."¹¹

More and more, the poetic use of words continue to creep into our textbooks as well as into other books. In addition, occasional exaggerations and absurdities may add zest and interest to children's

⁹ Margaret Wise Brown. *The Seashore Noisy Book*. New York: Harper & Bros., 1941.

¹⁰ Lucy Sprague Mitchell. *Here and Now Story Book*. New York: E. P. Dutton, 1948.

¹¹ Lois V. Johnson and Mary Bany, "Changing Attitudes toward Writing Activities," *Elementary English*, Jan. 1956.

¹² *Ibid.*

The Blue Hat of Little Rosaflor



Away on the wind it flew,
the blue, blue hat
of little Rosaflor.

Said the hen to the wind,
the hen named Koko,
"Wind, give me the hat
of little Rosaflor."

The wind gave her the hat,
and the hen made a nest
in the blue, blue hat
of little Rosaflor.

Monday she laid an egg,
the little hen Koko,
a little white egg
in the blue, blue hat,
blue as the sky,
of little Rosaflor.

The little hen Koko
spread out her two wings,
and sat one day,
and another day,
and many more days
to warm the eggs
the seven white eggs,
in the blue hat,

The natural rhythm of the words is apparent both in Spanish and English.

reading. Children like the name of the man who had no nose: Ebenezer-Never-Could-Sneezer. They like Snipp-Snapp-Snurr. They like Humpty-Dumpty and the Jumblies. They like Hurryscurry the Squirrel. They like Caroline Emerson's Little Old Country Car who was always grumbling, "By my gears and gasoline!"

Rhythm and readability

Rhythm is another interest factor which contributes to style and readability at the same time. Rhythm is present in the earliest nurs-

ery tales and folk stories and should be used consciously in writing both fiction and nonfiction for younger children.

Wanda Gag used rhythm effectively in "Hundreds of cats, thousands of cats, millions and billions and trillions of cats."¹² Margaret Wise Brown's books are full of rhythm and repetition. In *Where Have You Been?*¹³ she wrote about squirrels and whales, birds, and bees, in a simple singsong:

Little Old Cat
Little Old Cat
Where have you been?
To see this and that
Said the Little Old Cat
That's where I've been.

Little Old Frog
Little Old Frog
Where have you been?
I've been sitting on a log
Said the Little Old Frog
That's where I've been.

Like the refrains of the old ballads, the repetition comes naturally and offers the young reader natural—not forced—repetition of key-words.

Rhythm and repetition are combined effectively in the text of a supplementary reader prepared in the 1958 Washington workshop by a teacher from Costa Rica. The author, who had already written a basic primer, wanted to write a simple everyday story which would appeal to children's love of rhythm and color. The plot was natural, not contrived. The rhythmic style is most apparent in the Spanish but it also carries over into the English version.

1

En el viento va volando,
viento, viento, ventarrón,
el sombrero azul
de la niña Rosafior.

Away on the wind it flew
the blue, blue hat
of little Rosafior.

2

Dijo la gallinita,
la gallinita Kokó:
—Dame, viento, el sombrero
de la niña Rosafior.

Said the hen to the wind,
the hen named Kokó,
"Wind, give me the hat
of little Rosafior."

Creating characters

Characters in fiction for children should be real to the author and to the reader. It helps to write about the kind of people you know best and to have them clearly in mind before you start. Write down a list of the people who will appear in your story, as if you were choosing actors to appear in a play. In a way, that is just what you are doing. And, like the dramatist, you do not want too many characters on stage.

¹² Wanda Gag. *Millions of Cats*. New York: Coward, McCann, Inc., 1928.

¹³ Margaret Wise Brown. *Where Have You Been?* New York: Thomas Y. Crowell, 1952.

at once, unless you are producing a mob scene where individuals don't count.

A few characters will often make a more successful story than a large number. Sometimes, two is enough: A boy and his dog; a girl and her job; a cat and her kittens. Family stories are not as easy as they sound. It takes a skillful writer to make each child an individual. Nor is it a good idea to start with two children, just a boy and a girl, or a brother and sister—twins perhaps—as the main characters. Children of different ages may lend themselves more easily to individual treatment.

Names of characters should be chosen carefully. If you use names like Billy and Betty, Minnie and Winnie, you may make it hard for the reader to tell them apart. If you are writing about a foreign country, your readers may find it difficult to remember the names, if you choose ones which are too unusual or hard to pronounce.

For younger readers, it is not always necessary to name a character. In many folk tales, simplicity is achieved by calling the chief characters a little old woman, a goose, a princess, a witch, and so on. In the *Just-So Stories* by Rudyard Kipling, names are not needed to identify the elephant's child, or the cat who walked by himself. Occasionally, an inanimate object such as a steam shovel, a lighthouse, an airplane, becomes a character without a name.

But if you are writing about individual boy and girl characters, you must do your best to make them seem like real boys and girls. Their characters may even change during the course of the story if it is a biography or a junior novel. Even in books of travel and humor, the characters should be human, capable of making mistakes and getting into mischief.

Viewpoint

You need also to decide from what viewpoint you wish to tell a story. Is your material to be treated objectively or subjectively? Are you an impersonal storyteller, describing how Robin Hood escaped death, or are you planning to tell your story from the "inside-out" so that the reader identifies himself with the feeling and emotions of the chief character?

Either method is possible, but one may be better suited to the material than the other. The chief danger is in shifting viewpoint after you have started to write. A new writer often does this. With the facility of a magician, he skips from one character to another, first telling what Billy is doing, then about Betty, then what Mother or Uncle Jim thinks. The reader is soon as confused as the small child

in a crowd who cannot see what is going on. To avoid this confusion, it is well to decide at the beginning on a single viewpoint and then hold to it. You may use an objective viewpoint if that suits your material best, or you may use a subjective viewpoint. Whichever you choose, tell your story consistently from that viewpoint.

As in nonfiction, the fewer changes in time and place, the less confusion for the reader. Every change is an added complication for you and for the child who reads your book. But if you must change the time and place from one chapter to another, make your change as clearly as you can. Say, "a week later, Jimmy . . ." It isn't necessary to tell what Jimmy did during the week. Just be sure that the reader knows *where* and *when* the next scene takes place.



HERDING

Today I go with my mother.
I go with her to drive the sheep
for I must learn to tend
the flock.

It is my work.
The way is long.
The sand is hot.
The arroyos are deep.

It takes many steps
to keep up with my mother.

It takes many steps
to keep up with the sheep.

My mother waits for me.

My mother takes my hand.

She calls me
Little Herder of the Sheep.

The use of first person helps the child identify with the character in the book.

Using the first person

First person, or "I" stories, are difficult to write, but they are a popular form and have some positive advantages. Many English and American classics have been written in the first person. *Treasure Island* and *Black Beauty* are both successful examples. With Jim Hawkins' first words, the reader shudders at the threat of pirates. After reading *Black Beauty*, a 12-year-old said: "I like *Black Beauty* because it tells just how a horse thinks."

The first-person viewpoint is often used for mystery and adventure stories in order to keep the reader as well as the hero guessing about some details of the plot. However, this method also means that you are limited to what the main character sees and hears. You cannot describe what some other important character is doing, nor anything that is going on out of sight or hearing of your narrator.

The advantages of first person may outweigh the disadvantages if you wish to describe a trip to an airport or down into a coal mine. Use of the first person increases the sense of participation in two booklets on food prepared for a second-grade reader in Jordan. The first booklet, *I Like Lentils*, tells how to plant lentils, water them, watch them grow, gather them, get mother to cook them, eat them, and say at the end with appreciation: "I like lentils."

Ann Nolan Clark has been writing first person stories for younger children for a long time. *In My Mother's House* was told in the first person, and so was *Little Navajo Herder*, prepared for use in Indian schools.

A writer from Laos used the first person technique to tell the story of a little mountain girl and her family. The style permits her to include many small, intimate details of family relationships. For instance:

My name is Chanty, but people call me Thy.

I live with my parents in a mountain village in the land of Luang-prabang.

Our house is on the hill, a bit away from the village street.

Here I was born, and here in the old house we all live, I and my family and my pets.

Its walls are made with bamboo braid and so is its roof.

Beside our house is the hen-house where my sister and I pick up the white eggs every morning.

Using dialog

Good lively dialog is a useful technique in developing plot and character, but it is not easy to write, and sometimes a story can be told

as well in direct narrative. In fact, dialog sometimes slows up a story although it can also be used to indicate a climax, as it does in the following selection from *Little House on the Prairie*, by Laura Ingalls Wilder. In the prairie book, she explained exactly how "Pa" laid the puncheon floor, smoothing the flat side of the logs, and fitting the edges close together. You can feel Pa's pride when the job was finished and he ran his hand over the smoothness: "Not a splinter," he said. "That'll be all right for bare feet to run over."¹⁴ That's the way dialog should be used to indicate a climax.

Dialog should not be used to relay information which can be told more simply by direct description or implied through a child's reactions. If you want to tell the reader that Thursday was market day in your story, you might say, "Thursday was market day." Do not have the mother say in conversation with a member of the family or friend, "Thursday is market day," because this is a self-evident fact which everyone knows.¹⁵

It is also wise to remember that in a book, as in real life, different characters speak in different ways. As a writer becomes more skilled in writing, the dialog written will have the individual flavor of the different speakers. Parents will talk like parents; little children will talk one way; older boys and girls will talk another way. The selfish child may complain. The bold child will show his true colors in dialog as much as in his actions.

The ending

Just as dialog helps to emphasize the small climaxes throughout a story, so the ending should be a matter for emphasis. It should be planned so that readers feel satisfied. Sometimes, this requires merely a sentence, sometimes a final paragraph. Sometimes, conversation can be used effectively to sum up the success of the chief character, or an important idea or theme of the book may be repeated for emphasis.

Occasionally, in fables and other similar material, there is a moral at the end. This device is used in Aesop's fables to emphasize the point of the story. However, it is often more effective to let the reader understand the moral by implication rather than overemphasize it by repetition.

¹⁴ Laura Ingalls Wilder. *Little House on the Prairie*. New York: Harper & Bros. (rev. ed.), 1953, p. 129.

¹⁵ Erick Berry and Herbert Best. *Writing for Children*. New York: Viking Press. 1947.

Writing and rewriting

It may take a long time to write a short book. It probably will. Sometimes, a single page must be written many times. It is not uncommon for an experienced author to write 10 pages before he is satisfied with 1, for the illustrator to make 10 sketches before he gets the composition and the effect he wants.

Sometimes, it helps to read a manuscript aloud. Its weaknesses and ambiguities jump out as if enlarged on a projection screen. Or it may be helpful to put a manuscript out of sight for a day or a week. Even a few hours will sometimes help to show up its faults. If the intervening time is spent in some favorite relaxation, it is surprising how often the rewriting of a difficult passage is subconsciously solved.

One experience will probably be common to all. Writing is work. It is slow work. It is exhausting and often discouraging. But like all creative work, fulfillment also brings great satisfaction.

Summary

Now that you are a writer, you may find it useful to be more critical when you read. After you have read a book, or a story, or an article for its own sake, read it again critically, observing the first paragraph and the last, the use of dialog and description. Ask yourself if you could have improved on the author's treatment. The following are some suggested points for consideration:

1. The plot should be suited to the material.
2. Every book or story should satisfy some interest common to children: to himself, his family, his friends. Material should occasionally extend interests and experience.
3. Stories should also appeal to a child's emotions, such as curiosity, sympathy, love, admiration. The reader should be able to take sides.
4. Humor is important, too, and a sense of surprise.
5. Make your setting vivid by including authentic details. This background may be based on firsthand experience, interviews, or research.
6. Make your style vivid by using the language of the five senses. Insofar as possible tell how things look, feel, smell, taste, or sound.
7. Use rhythm and repetition to help readability.
8. Your characters should be real to you and your readers. It helps to write about the kind of people you know best. Choose one character and tell the story from one viewpoint.
9. Dialog should be used for emphasis, to reveal character, and to advance the action of the story.

10. When you reach the climax of your story, stop. The ending should be as carefully planned as the beginning.

Suggested reading

- Berry, Erick, and Best, Herbert. *Writing for Children*. New York: The Viking Press, 1947.
- Jersild, Arthur. *Child Development and the Curriculum*. New York: Teachers College, Columbia University, 1946.
- Lewis, Claudia. *Writing for Young Children*. New York: Simon & Schuster, 1954.
- Mitchell, Lucy Sprague (ed.). *Know Your Children in School*. New York: Macmillan Co., 1954.
- Robinson, Mabel. *Writing for Young People*. New York: Thomas Nelson & Sons, 1950.
- Whitney, Phyllis. *Writing Juvenile Fiction*. Boston: The Writer, Inc., 1947.

CHAPTER 12

Developing Illustrations

AN ILLUSTRATED BOOK is much more than spoken words, much more than written words. First the words are reproduced in type. Next, the type is assembled in page units, and the pages are illustrated. Finally, the illustrated pages are reproduced in multiple units; they are folded and bound into books.

When a child takes a finished book in his hands, it has a character of its own. Quite apart from the meaning of the printed page, the outward appearance of a book may repel or attract. Does the glue in the binding smell bad? Are the colors ugly? Is the type crowded or blurred? Above all, do the illustrations make the book more readable, more informative, more attractive?

Functions of illustrations

First, what are the main functions of illustrations? Why is it important to have them? In order to know why it is important, it is helpful to know how illustrations can serve to make a book more readable, more informative, more attractive. Illustrations may be of many types: drawings and paintings, diagrams, maps, photographs. For convenience, the three main functions of illustrations have already been listed, in chapter 3, as follows:

1. To decorate the page.
2. To interpret or explain the text.
3. To supplement the text.

In planning the illustrations for a particular book, it is important to decide which of these functions are appropriate to the manuscript. Sometimes, more than one type of illustration is called for; more often, the content or subject matter determines whether the illustrations should primarily serve the purpose of decoration, interpretation, or supplementation. If an art editor is available, he will usually

consult with the educational advisor and the author to determine the needs of the manuscript and the best choice of illustrations.

Illustrations as decorations

When should decorations be used? Decorations are often appropriate for folk tales, where the imagination of the illustrator can enrich the text and stimulate the reader's imagination. Decorations can be used with poetry to harmonize with the mood of the poems without spoiling the imagery of the poet. Decorations can be used to emphasize symbolic rather than literal treatment of a subject. A pattern of Christmas trees or stars might be used with a Christmas story to suggest the Christmas idea and keep it universal rather than particular.

Decorations are used more often for library books than for textbooks, but should not be overlooked in all types of educational materials for their interest value, their artistic value, and their contribution in stimulating a child's imagination. Decorations can add to the overall attractiveness of a book and, as such, are a part of good book design.

Illustrations as interpretation

Illustrations may be used to interpret the text in many ways: To replace words in picture books; to explain the text in technical books; to demonstrate activities in how-to-do-it manuals; and for many other useful purposes.

Planning the illustrations for a primer or preprimer requires close cooperation of author and illustrator, for the author often depends on the pictures to provide the key word recognition. Pictures which serve this purpose are sometimes called "picture clues." They may take the place of nouns which might provide reading difficulty. Sometimes, pictures take the place of action words. Whatever purpose they serve, pictures should be planned at the same time that the text is written, preferably with the illustrator close at hand.

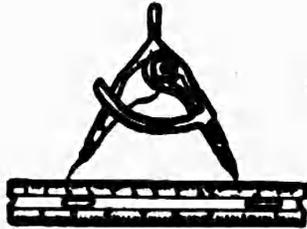
The illustrator can also help the author by making sure that each page of a preprimer has one new idea to illustrate. The child who is learning to read needs a new idea on each page to match the new words. And the new idea must be capable of interpretation in pictures. A picture can show a boy running, falling down, dancing. It is not easy to show, for instance, that a girl is now 6 years old.

Illustrator and author should work together also to make sure that

each page of text for a beginning reader has one idea for a picture, but not more than one. If there are two ideas in the text, and only one picture, the reader may be confused and associate the picture with the wrong word.

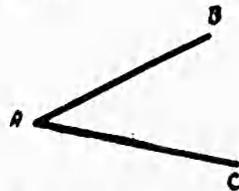
At all levels, illustrations and diagrams perform an essential service to explain technical material. They are extremely useful in how-to-do-it books for explaining successive steps as in building a house or milking a cow. They are frequently used as a substitute for technical terms which the reader would not recognize and does not need to know in order to understand the subject.

A Suggestion for Writing Geometry



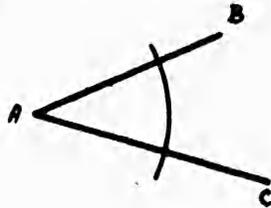
Bisecting Angles

Problem: We have an angle as BAC. We want to bisect it by compass and straight-edge.

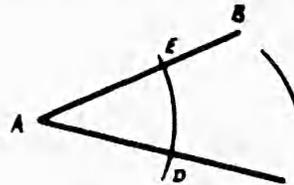


Method of bisecting: Follow these steps:

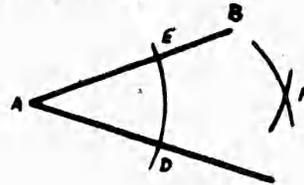
Step 1. Place the steel point of the compass at the vertex of the angle (marked A). Draw an arc crossing the two sides of the angle. (AB at D and AC at E).



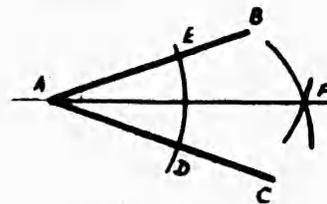
Step 2. Set the steel point of the compass at D and open it more than half of DE and draw an arc inside the angle.



Step 3. Place the steel point of the compass at E and draw an arc inside the angle so that it crosses the arc drawn in Step 2 at point F.



Step 4. Connect the point F to the point A. The line AF is the bisector of the angle ABC.



Technical material often depends for clarity on diagrams.

A mathematics teacher from Iran was so sure that the teaching of geometry could be much improved by the addition of more figures in the writing of geometry problems that he recommended that there should be a distinctive figure for each separate step in a geometry problem, instead of using only one figure to represent several steps. This technique makes the teaching of geometry easier for the inexperienced teacher, for the teacher with a large number of students, and for the student who is working alone.

Illustrations to supplement the text

Illustrations are also useful to supplement the text, especially for historical or regional material which is unfamiliar to the child. For all ages, descriptive illustrations are useful in extending a child's experience. They can bring into the classroom such unfamiliar objects or animals as a lion, a koala bear, or a skyscraper. They can show the interior of a medieval castle or changing scenes of desert and forest.

Illustrations can also add substance and interest in materials for the reader who has an understanding level and a speaking vocabulary much above his reading level. Illustrations can add emotional emphasis by supplementing the text with visual images which have power to attract and stimulate the reader's interest.

Use of photographs

When informative illustrations are needed, photographs can be used if they are not cluttered with unimportant detail. In science and factual books, a series of clear photographs can be the springboard for animal stories, geography readers, and many kinds of social studies material. Since the procession of the seasons is a constant delight to children and closely linked to studies of their environment, photographs showing the changes of the seasons can be attractively arranged and supplemented by text to suit different localities.

The use of color photographs is recommended by Katheryne Whittemore, author of a fifth-grade geography book, in situations where black-and-white photographs or drawings would not have as much authenticity. Although color photographs should not be used if costs are out of proportion, she points out some instances where color photographs would be particularly valuable.

Juan vió a un hombre.
Era como éste.



El le dijo a Juan:
—Cambiaré mi carga con usted,
¿quiere usted cambiar conmigo,
en este largo camino
del mercado?

Illustrations add interest as well as interpretation to the text.

For instance, color photographs would be valuable for landscapes showing soil color, because readers tend to interpret pictures of trees, crops, and houses in terms of their own environment. In cases like this, a black-and-white photograph may be misleading, and a drawing in color may lack the authenticity of a photograph.

In a geography book, color photos can also be used with maximum effect for landscapes showing the changing aspects of the seasons, for airviews showing contrast in color between desert and the irrigated land, and for portraits of people.

Artist or illustrator?

Discussion of the functions of illustration and the needs of a particular manuscript may go on intermittently while a book is in the process of planning and writing. Before a final choice is made, everyone concerned should be aware of the distinction between an artist and an illustrator. These words are often used interchangeably, but there are some important distinctions. These distinctions are outlined in the following quotation from Mrs. Dagmar Wilson, artist, illustrator, and book designer, one of the consultants to the first Washington workshop for the development of educational materials. She says:

An illustrator is an artist, but not every artist is an illustrator. An illustrator is able to express himself by interpreting and clarifying the words of the writer. An illustrator is skilled in the use of media and techniques which are suitable for reproduction. He is familiar with, or must familiarize himself with, printing methods. He must know how to prepare his artwork so that it can be reproduced by the printer in the most economical way.

He should be familiar with all forms of graphic art, including the designing of a book which means arranging the text and pictures in a pleasing and understandable, logical way. He should know how to select suitable type if this has not already been done by the art director.

Choosing the illustrator

Under ideal conditions, an experienced art director will be available to choose the right illustrator for a particular assignment. Sometimes, more than one illustrator will be asked to submit sketches, or one illustrator may submit several sketches for the same story.

Choice of the right illustrator will take into account the content of the manuscript. Some illustrators have training and experience in handling scientific material. Others specialize in historical subjects. Others excel in drawing children or animals. Another may have traveled widely and be able to use firsthand experiences to fill in details not so easily found in libraries or museums.

Choice of the right illustrator will also depend on the media and techniques required for the assignment. Some illustrators have a wider range of practical experience than others. Some are more skillful in line drawings; others in flat color or crayon. A few may know how to make their own color separations.

In addition to content and techniques, the right illustrator, like the right author, will have sympathy for his subject. If the manuscript does not arouse his own interest, curiosity, or emotions, it is

unlikely that he can interpret these qualities in his artwork, no matter how fine a craftsman he may be.

Illustrator-author-editor

In carrying out an assignment, the illustrator needs to work closely with the author, and the editorial staff, not only in picture books and primers but in books for all levels. The illustrator needs to know the educational goals of the book or series, and the learning processes and skills which are implicit in the text. Again and again, this knowledge helps the illustrator to make an important contribution to the success of the book as a teaching tool.

Sometimes, the illustrator will add something which is not even suggested by the text, but which will add to the child's interest. This has been done in informational books by adding a child or children in the illustrations, although no child is mentioned in the text. In this way, the material becomes more personal and interesting to the reader.

Sometimes, although the text may be straightforward and factual, as in a handbook on manners or safety or health, the illustrator may interpret the text by cartoons. This treatment is used by Munro Leaf in his series, *Safety Can Be Fun*, *Health Can Be Fun*, and others on manners, geography, and science.¹

Basic principles

When the illustrator prepares his first sketches, are there some basic principles which he should keep in mind, as there are some guiding principles for authors? It is only fair to say that there is no one "best illustration" for children of different ages. There isn't even a "best illustration" for a 5-year-old or a 9-year-old; no "best illustration" for a fairy tale or a family story. Different subjects present different problems and different illustrators will solve these problems differently, depending on their ability and the techniques at their disposal.

However, there are some basic principles which have been worked out by experience and research which will help the less experienced illustrator. These suggestions have been summarized by Dr. Seth Spaulding,² senior adviser to the Burma Translation Society, who

¹ Munro Leaf. *Safety Can Be Fun*. New York: Lippincott, 1938.

² Seth Spaulding, "Communication Potential of Pictorial Illustrations," *Audio-Visual Communication Review*, winter 1956.

has conducted a series of tests, using controlled illustrations, in an attempt to formulate some basic principles of good illustration. His recommendations follow:

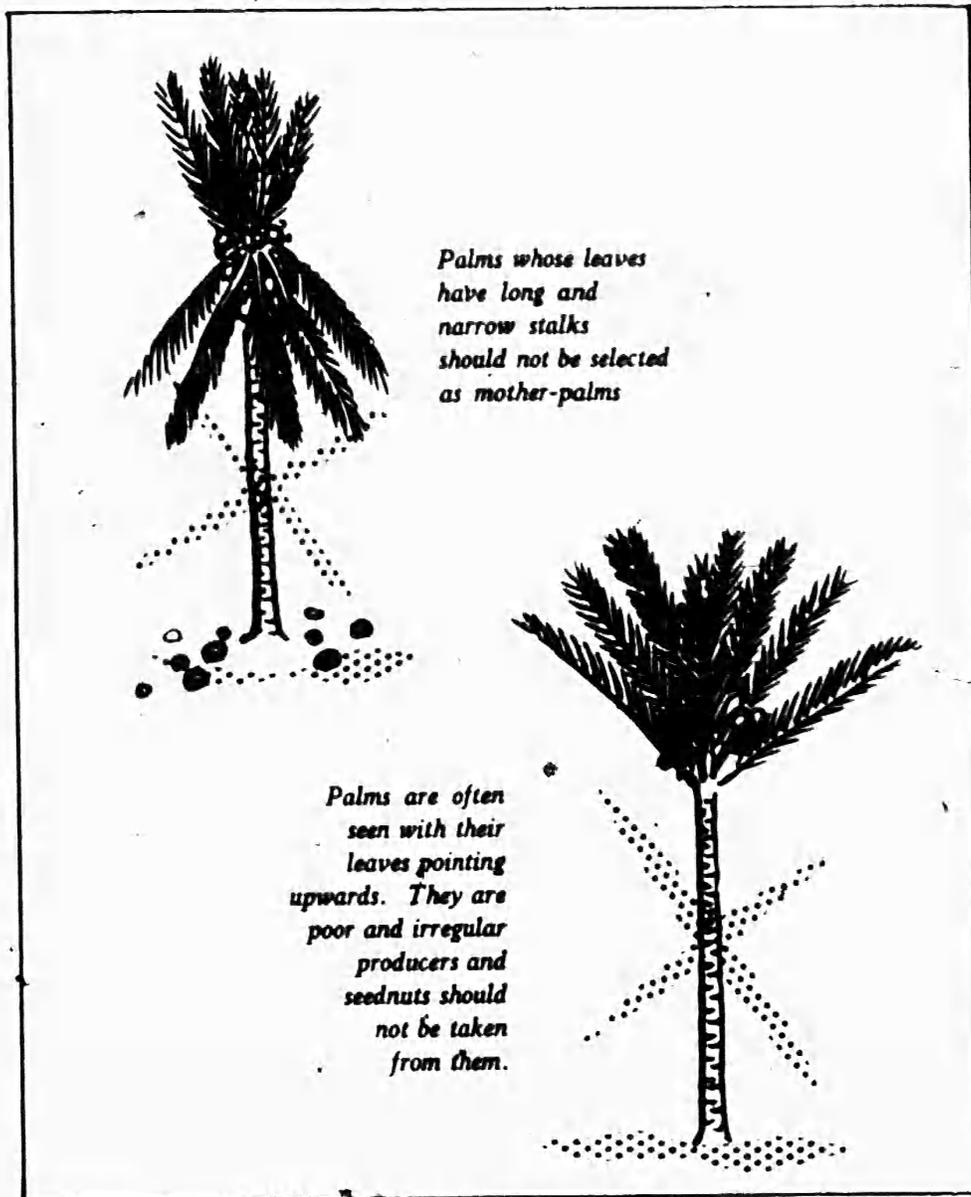
1. An illustration as such has no educative value, and may even be a detracting influence, if the drawing content has not been presented in terms of the past experience of the intended audience. When preparing material for children, the artist must attempt to construct the pictorial image in terms of an audience whose background of experience is much more limited or situated in a different cultural setting than his own.
2. Illustrations that are intended to communicate specific ideas will be most effective if—
 - a. The number of objects that must be seen to interpret the illustration correctly should be kept to a minimum.
 - b. The separate actions necessary to interpret the basic message correctly should be kept to a minimum.
 - c. All objects and inferred actions are realistically portrayed and not open to dual interpretation or secondary inference.
3. Color in illustrative material adds to the interest potential of the drawings. However, unless used realistically, color may detract from the communication potential of the drawings.
4. Captions, in general, usually serve to add information which is difficult to depict pictorially. Captions, however, should usually not be used to explain the illustration, but rather to generalize, modify, relate, and extend the meaning of the illustration.

On the basis of these general recommendations, it is possible to suggest specific ways in which they may be applied.

For instance, the first principle mentioned by Dr. Spaulding concerns the audience. With this in mind, the illustrator should be aware of the age and developmental levels of the child for whom the book is intended. Environment and experience must be taken into account in the pictures as well as the text.

The second principle emphasizes the importance of simplicity and warns against irrelevant and confusing detail. Learning to "read" pictures is a skill which must be taught along with learning to read words. Small children are often confused by perspective, changes in scale of drawings from one page to the next, and incomplete figures. There is no definite age level at which the child suddenly learns to understand these details, but the illustrator of materials for children under 8, or for any child unaccustomed to printed materials, should be self-critical with respect to these matters.

The third principle, concerning the use of color, should be kept in mind also, especially with younger children who do not easily accept blue grass, or a shift from black and white to color, from one page to the next, when the same subject is being illustrated. When color is limited for technical or economic reasons, it is often better to use it for design or decoration, rather than realistically.



Explanatory captions on this page from *Wealth of the Coconut* emphasize the characteristics of unhealthy coconut palms.

The fourth principle, the use of captions, is of most importance in materials for informational texts and books for older readers. Captions should avoid exact repetition of the text, but should not refer to information or details not included in the picture. Descriptive captions are essential in informative texts in order to identify maps or diagrams.

Sometimes, a caption may be written in question form to stimulate interest and critical study. For instance, in a geography text, one author suggests that the following caption: "Plowing in Persia. The

plow is drawn by eight buffaloes." should be changed to "Why are so many animals used to prepare the field?" This question makes the child count the number of animals and study field, crop, soil, etc., to relate the right animals to the crude plow and field.

Storytelling captions may be used in narrative material to emphasize the key situations or dramatic incidents. Both in fact and fiction, captions serve to stimulate interest in the text by arousing curiosity and providing clues to the interpretation of the illustrations.

To all of these principles and their application, one general rule should be added: accuracy is necessary. Accuracy may be of two kinds: *absolute* accuracy of known facts and *relative* accuracy of matching pictures and text. If the child is 6 years old in the text, he should look 6 years old in the pictures. If he is standing, or sitting, or running, or jumping, in the text, the pictures should show him doing the same thing.

Space for illustrations

It may seem unnecessary to point out that there are still a few people here and there who have not fully accepted the idea of the illustrated textbook. In these cases, local studies may be needed to convince the authorities that illustrations often increase comprehension, even when they slow down the speed of reading. In general, however, the introduction of illustrations in textbooks, where they were previously unknown, has proved so worth while that pictures are now supposed to be indispensable. The chief problems are concerned with number and type of illustrations and the general proportion of text and illustrations.

There is no magic formula to measure the maximum or minimum amount of space which should be allowed, other than the assumption that pictures make a definite contribution to the communication potential of written materials. Overall recommendations indicate a somewhat general agreement with respect to these three factors:

1. *Age of reader.*—More space should be allowed for pictures in materials for beginning readers than for older readers. Some primers and preprimers allow three-quarters of a page for illustration, only one-quarter for text.
2. *Nature of material.*—In factual material, it is often necessary to allow one-third to one-half of the total space for illustration.
3. *Economic factors.*—Printing costs and other economic factors should be interpreted in terms of the book as a whole. In other words, the illustrations are an essential part of the work, not a luxury item, and should not be sacrificed more readily than any other part of the total book.

Summary

From this brief discussion of factors in developing illustrations for educational materials, it can be recognized that the planning of appropriate illustrations is an essential and important step to be considered by the author, the educator, and the publisher.

Variations in human nature and in text materials call for different types of illustrations, but research and experience both support the desirability of illustrations to arouse and hold children's interests and to extend their experience and understanding in matters beyond the limits of their classroom, their home, or their community.

Not all of these factors will have to be considered for every assignment. But the responsible educators, printing experts, and the author will want to review the illustration problems of an arithmetic, geography, history, or language arts manuscript with full appreciation of the importance of illustrations to a successful textbook.

Suggested reading

Arbuthnot, May Hill. *Children and Books*. Chicago: Scott, Foresman & Co., 1957. p. 17-33.

Emerson, Lynn. *How to Prepare Training Manuals*. Albany: University of the State of New York, State Education Department, 1952. Ch. 8.

Mahony, Bertha E., Latimer, Louise Payson, and Folmsbee, Beulah (compilers). *Illustrators of Children's Books, 1744-1945*. Boston: The Horn Book, Inc., 1947.

Miller, Bertha Mahony, and Field, Elinor Whitney (eds.). *Caldecott Medal Books: 1938-1957*. Boston: The Horn Book, Inc., 1957.

Viguliers, Ruth Hill, Dalphin, Marcia, and Miller, Bertha Mahony. *Illustrations of Children's Books, 1946-56*. Boston: The Horn Book, Inc., 1958.

UNESCO. *Publishing for the New Reading Audience*. A Report of the Burma Committee of the UNESCO Regional Seminar on the Production of Reading Material for New Literates, Rangoon, Burma, Oct. 28-Nov. 30, 1957. Rangoon: Burma Translation Society, 1958.

CHAPTER 13

Tryouts and Evaluation

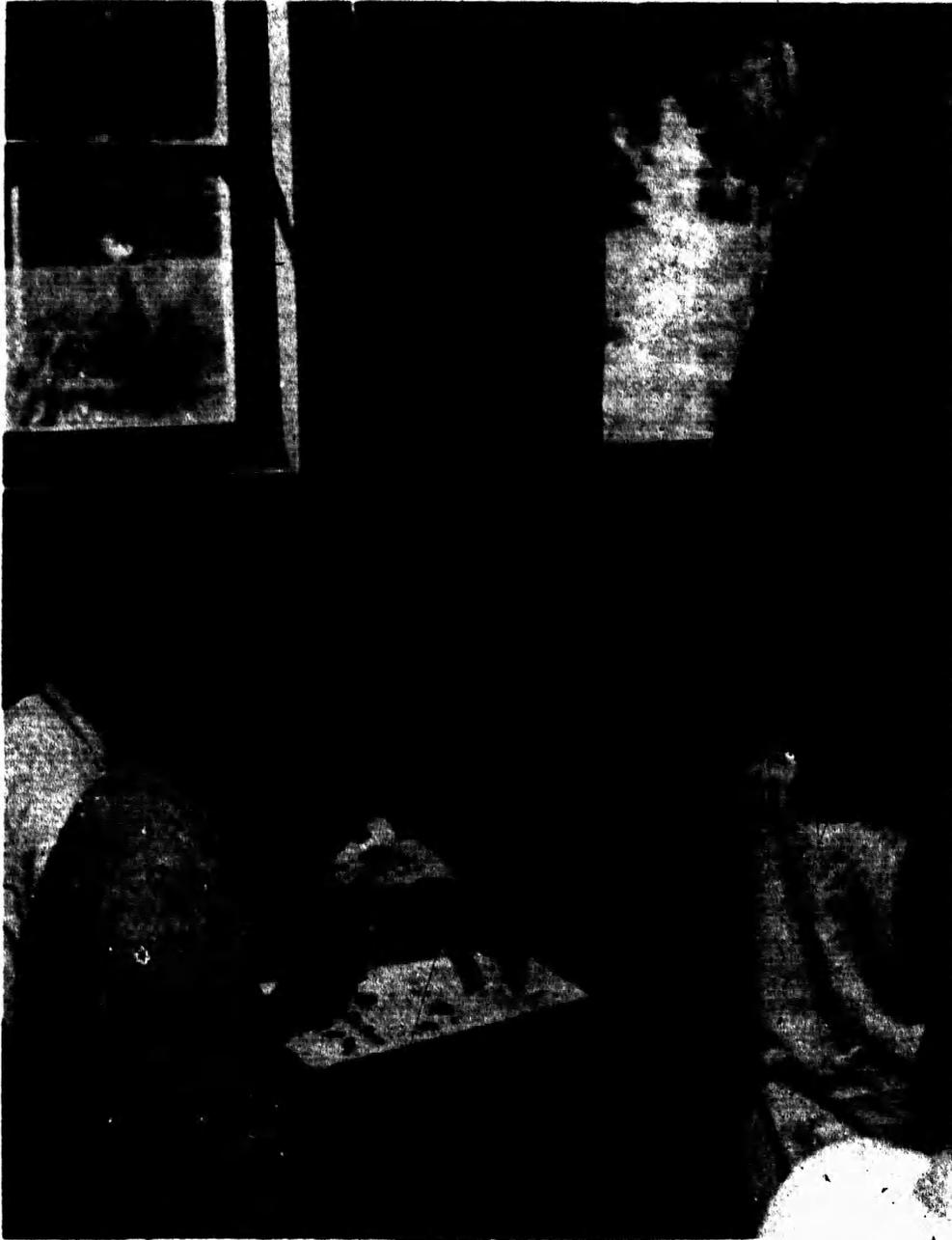
TEXTBOOKS and other educational materials are judged on how well they help teachers and pupils reach the aims, objectives, and needs of a specific school system. To insure that they are suitable both in content and format, they must be tried out before they are printed. Usually, after manuscripts have reached a form which satisfies the author and the educational consultants, they will be mimeographed or dittoed in tryout editions. Wherever possible, these tryout editions will have sample sketches or illustrations.

In making tryouts of manuscripts, it is important that the tryouts be conducted by trained teachers who know the course of study, in the grades or groups for which the books were written, and under the conditions in which they will be used. Tryouts are standard practice of American textbook publishers, as well as of some trade book publishers, in order to avoid mistakes in the final printings.

Need for tryouts

Tryouts are time consuming and may be expensive, but in the long run they are a good insurance of top quality in a book. The satisfaction of placing books in the hands of children who have not had a book of their own, or the desire to show quick results, may cause such tryouts to be omitted. But in the long run it will be seen that tryouts are an important part of textbook production. Pretesting, as well as posttesting, was found to be valuable in preparation of materials for the new reading audience by the Burma Translation Society.

The opportunity for evaluating textbooks comes in various ways. Experimentation with the materials is one of the most common means. Some schools cooperate with textbook writers in trying out the manuscript as it is being prepared. For such evaluation, members of the staff undertaking this task usually, though not always, follow certain criteria set up by the supervisor, experts in the field, or those responsible for selection of materials.



The educational measurements adviser watches as Ethiopian students try their skill at a new kind of vocabulary test.

Sample questionnaire

Persons evaluating mimeographed manuscripts for a third reader used the following form for their comments, with questions emphasizing reading difficulty:

Comments on Material for Third Reader

Title of story _____ Date _____
 Name of teacher _____ Grade _____ School _____
 School address _____

TEACHER'S VIEWS:

1. How would you rank this story with respect to the following points? (Fill in blanks with Superior, Average, or Inferior.)

Children's interests? _____

Relation to school curriculum? _____ Style? _____

2. Have you any suggestions for improvement? _____

3. Is the vocabulary suitable, easy, or difficult for the following groups? (Fill in blanks with S, E, or D.)

Low _____ Middle _____ High _____

4. At the level designated what words, if any, seemed difficult? _____

5. Is the sentence structure suitable, easy, or difficult for the following groups? (Fill in blanks with S, E, or D.)

Low _____ Middle _____ High _____

6. What constructions, if any, seemed difficult? _____

CHILDREN'S VIEWS:

Age range _____

1. Did the children enjoy reading the story? _____

2. What changes, if any, did they suggest? _____

(Please use the back of this sheet for your additional comments, or for spontaneous remarks made by children.)

Evaluation of science materials

In an article, "Science Without Tears,"¹ the authors outline many classroom methods and a useful list of questions for evaluation of a science lesson. These questions are also useful in evaluating written materials:

1. Did the subject matter matter?
2. Could the children state the problem?
3. Did the children arrive at the conclusion themselves?
4. Was it an honest conclusion?
5. Did the lesson begin and end in the real world?

¹ "Science Without Tears," by Herman and Nina Schneider in *The Packet*, D. C. Heath & Co., Vol. 12, No. 1, spring 1957, p. 17.

6. Where did you go?
7. How did you get there?
8. Did you let yourself go?

In a letter addressed to school supervisors, the New York State Department of Education suggested things to look for in evaluating books and materials for use in the school.

The following excerpt is a useful checkup for authors preparing such material:

How good is the author's teaching program? Are the things he expects the children to do from day to day practical? Are his directions clear and concise? Will they work with *your* children, with the age level you have in mind? You can judge of such things only by actually using one or two sections of the book as the author expects the pupil to use it. You must imagine that you are one of the children in your own class.

Again, how practical does the author make your job as a teacher? Will the class activities suggested or implicit in his program work? How good is his sense of time and timing? Such things you can judge only as a teacher. Most important of all, is the author's program in each one of its details getting where you want to go? Is each item, each step, each page, section or unit really *driving toward the accomplishments of the purpose that you and the author have set for yourselves?*

As you read the textbook, remember what you are reading is the author's instructional talking to the children in your class. How well has he guessed their background of experience as he goes along? Is he using language—both vocabulary and manner of putting things—which your children would readily understand if you were to say the same things to them in the same way? Has he made good guesses about their reactions to what he is saying? How good a job has he done in "personalizing" the program, that is, in making each member of your class feel that what he is saying is important for him, that it really makes a difference? What about the use of visual aids—pictures, cartoons, diagrams, maps, pictorial graphs, charts? Do they really teach? Are they and the text doing the job together as you would do it if you were talking to your class and had pictures to make clear certain of the ideas that you wanted to give them—or are these graphic materials just "added" to impress you?

Does the author recognize the fact that in good teaching you can do only so much talking before you give pupils a breathing space—a chance to check up on themselves? Does he recognize the importance of frequent class discussions in which boys and girls exchange ideas, clear up misunderstandings, and get the many other advantages of group study and learning? And what about his proposals for activities that will take the class outside the textbook—his suggestions for other reading, for projects, research experiments, excursions, reports, dramatizations, cooperative planning, what not? Are they really practical for you and your pupils? If they are practical, do they promote the ends that you are trying to achieve?*

* Lee C. Deighton. *Bases for the Selection and Publication of School Tests*. Document prepared for the Inter-American Seminar on Over-All Planning for Education, UNESCO/Organization of American States, Pan American Union, Washington, D.C., June 1958.

Tryouts for teacher education

A materials production staff working on the preparation of new materials for the Sudan put great stress on tryouts, not only to see that the materials suited the children for whom they were intended but also that the teachers understood how to teach from them. Since the headquarters of the staff was at the Institute of Bakht-er-Ruda, a school for training elementary teachers, there was a good opportunity to bring teachers in and explain the work as it was developed. Another advantage was that the writers could go to the schools and check the effectiveness of their work and correct any weaknesses.

As soon as the books came from the press, education officers in the provinces wanted them distributed immediately to all the teachers. Instead, as a matter of policy, the new textbooks were only sent to teachers who had attended refresher courses at the institute and had the new materials and their use explained to them. This briefing, it was felt, was necessary in order that the book would be used intelligently—that the emphasis would be placed correctly, that the activities would be followed, and that the exercises and other aids would be used as the authors had intended they should be used.

Tryouts for comprehension

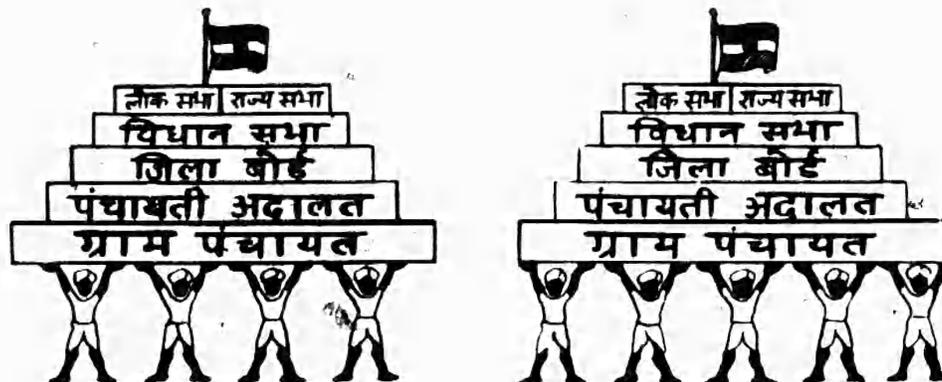
Materials prepared for schoolchildren of the Australian Bush were also carefully tried out in first draft in the schools for Bush children. As each book was completed, groups of children were given a carefully prepared word recognition and comprehension text. Teachers completed a questionnaire which gave information on the time taken to complete the book, difficult words and phrases, and faults in the illustrations. They also commented on the difficulty and appropriate age level of each book. This information was then used in revisions, which included redrawing illustrations and reproducing half of them in color.³

Tryouts of illustrations

Children are alert to pick up mistakes, as any author of children's books knows. A child's check over illustrations has saved author and

³ *Education News*. Vol. 5, No. 2, April 1965. Published bimonthly by the Commonwealth of Education, Sydney, Australia.

publisher the embarrassment of having the milkmaid on the wrong side of the cow, the flute player holding his instrument as if it were a clarinet, and a man facing the wrong way when mounting a horse. Children are also quick to catch contradictions in a book, to check distances that they doubt, and do a great deal of research to find an author in error.



Villagers criticized the first cover design for a booklet on citizenship because "the only thing four men carry is a corpse." The corrected cover added a fifth man.

Criticizing cultural details

Tryouts of materials to be used with adults are as important as those of materials for children. What happened in Ethiopia in preparing materials shows again the need for testing. A problem to show profit and loss was written about a man who bought three goats for \$3 each in January and sold them for \$2 in February. The villagers took the problem in stride but were scornful of anyone so stupid as to sell his goats in the middle of Lent, when Ethiopians do not eat meat.

The value of tryouts was also revealed in India in connection with a book on citizenship. Educators had commented favorably on a booklet, *We the Government*, prepared for a village program for adults. But a villager looked at the cover design which showed a picture of the legislative departments of the Government being held up by four men, shook his head and pronounced it a bad book because it predicted the downfall of his country. For, he said, "The only thing four men carry is a corpse." Only a tradition-conscious villager would have thought of this. The illustration was corrected by adding a fifth man.⁴

⁴ *Periodicals for New Literates: Seven Case Histories. Reports and Papers on Mass Communication. No. 24. Paris: UNESCO, Nov. 1957. 56 pp.*

Rewriting

When the tryouts are complete and the results available, the author has the final problem of rewriting. In some cases, changes may be small but very important. If the material is too difficult, perhaps it can be shifted to another grade level. If it is inaccurate, it must be rewritten. If the units are too long, they must be shortened or rearranged.

Sometimes, further tryouts are necessary after revision. Whatever the problem, no matter how much delay is involved, it is better to revise and rewrite, and try out again and again, than to print materials which have not been thoroughly tested.

After you have made the book as accurate and interesting and usable as you possibly can, you may still find that it falls short of your ideal. When the book has been a year or two in actual use, you will want to start planning a revised edition. Revising and rewriting every 5 or 10 years is routine for standard texts.

Summary

Tryouts serve many purposes. They will test the accomplishment of the author in many ways. They can also be used to test illustrations. The main questions which may be answered through tryouts cover the whole range of topics in this handbook, such as:

1. National goals.
2. Specific goals.
3. Language difficulties.
4. Teaching methods.
5. Problems of comprehension.
6. Problems of environment.
7. Age levels.
8. Suitability of illustrations.

Tryout results will be most helpful if they are made under adequate supervision. Tryouts with a few controlled groups, under a teacher who understands the problem, will be much more useful than a larger number of tryouts without supervision or with groups which are not picked for this particular purpose.

Suggested reading

Deighton, Lee C. *Bases for the Selection and Publication of School Texts.*

Document prepared for the Inter-American Seminar on Over-All Planning for Education, UNESCO/Organization of American States. Washington, D.C.: Pan American Union, June 1958.

Griffiths, Vincent L. *An Experiment in Education.* London: Longmans, Green & Co., 1958.

CHAPTER 14

Developing a Writers' Workshop

GREAT LITERATURE—novels, poems, and other classics—is usually the result of a single creative mind. Textbooks, on the other hand, by their very nature are more often the works of many minds. It takes many experts to gather the research data needed. It takes writers and illustrators, teachers and printers, all working together with a common purpose, to produce even the simplest textbook, word by word, line by line, page by page.

The workshop method

Since so many different talents and skills are needed, one of the most satisfactory methods for training new people in textbook preparation is the writers' workshop. Workshops may be large if the group has a common language and cultural background; or small if the group includes several language groups. Although regional workshops for people using a common language are more easily and economically handled, workshops for the exchange of ideas and practices between different language groups have additional long-range and far-reaching values.

There are many benefits in the workshop method. Exchange of knowledge and information saves time. Members become better acquainted with methods used elsewhere. Technical information can be summarized and presented for group discussion and appraisal. Writers are stimulated and encouraged by contact with others facing similar problems.

Workshop resources

The resources of the workshop group will be much more than the sum total of all its parts. Classroom teachers will contribute out of

the richness of their experiences. Library materials, professional books, encyclopedias, and other reference tools can be pooled for greater usefulness. Field trips to fill in gaps in geographical or cultural information can be planned to benefit several members of the workshop. Community gatherings are a rich source of material: picnics and holiday celebrations, harvest festivals, weddings, funerals.

Since the expense of collecting material in some countries is very large, and always time taking, language research can often be carried on at the same time as research into resources, subjects, and themes. In many countries folk stories, legends and songs have existed in oral form for long years before the establishment of schools. These are truly treasure houses for educational materials writers. Research can be so designed that stories, songs, and legends can be collected in spoken or written forms, and then serve as the basis for language research, as well as resource material furnishing plots, themes, settings, characterizations, and the like.

Workshop members

Recruiting members for a well-rounded materials workshop calls for imagination and skill. At least one representative from each of these groups should be included: editors, curriculum experts, classroom teachers, writers, illustrators, printers. If the workshop is small, one person may represent several fields. If the group is large, there may be several educators, writers, illustrators, and teachers at various levels.

For instance, in the first Washington workshop for the development of educational materials, a poll of 20 participants from 13 countries revealed an interesting overlap of experience and technical training. Almost all members had some writing experience; 16 had been classroom teachers; 13 were subject specialists; 10 had been editors; 9 had some training in printing or graphic arts; 3 were supervisors of teacher-training; 2 were poets; 1 was a trained illustrator; 3 were artists by avocation; 1 was a songwriter. Consultants attached to this workshop brought additional experience in writing, teaching, editing, publishing, illustrating, language research, and graphic arts.

The classroom teacher

The core of any writers' workshop for the production of educational materials will probably always be the classroom teacher. But the best teacher is not always the best writer, although time and again teachers have learned to adapt their classroom techniques to the medi-

um of the printed page. However, it is seldom that a teacher with little writing experience can immediately undertake the planning and writing for a basic textbook series, even on the subject nearest his heart, and for the group of children he knows best. More often, he has to serve a period of apprenticeship. During this learning period, the teacher who has been successful in making geography or grammar exciting and interesting in the classroom can contribute a great deal to any writers' workshop.

In the United States, when a new textbook series is launched, it is seldom a question of choosing from a long list of experienced writers. As changes are made in the curriculum, and as new methods of teaching language or mathematics are developed, it is necessary to develop writers who can interpret these materials in terms of classroom experience and needs.

Twenty-five years ago, the teaching of science in our elementary schools was undergoing a massive upheaval. As "learning by doing" methods were accepted in the elementary science field, materials to match were needed. Gradually, science-trained teachers with ability to write emerged from the classrooms and divided their time between teacher-training and textbook writing.

The writer

What about the professional writers, the storyteller, playwright, or poet? Does he also have a place in textbook preparation? The answer is yes, definitely yes. In every country, it is important to seek out these gifted writers. Sometimes it is easier and quicker to have the gifted writer work with an educator than it is to teach the classroom expert what he needs to know about writing.

Also, in every country, there are talented men and women with creative ability waiting for encouragement and guidance. Again and again, the flow of talent from one creative field to another has been noted.

Encouragement of local authorship is one of the stated aims of regional literacy bureaus and projects for the preparation of educational material. Speaking at the Latin American Conference in Education held in Panama City in 1956, Dr. Kenneth Ray, Chief of Education of the International Cooperation Administration, said, "Our programs of technical assistance must inspire the individuals with whom we work with a belief that there is a dream, a hope, and a way of life which they can attain by their own disciplined, inspired effort."

Sometimes, it takes a great deal of ingenuity to discover these potential writers. Many creative people are essentially shy. They do not trust their own abilities. They need encouragement to get started, a combination of morale, motivation, and faith. Sometimes, they can be discovered through prizes and competitions. Sometimes, their work may be hidden in little-known journals. Sometimes, an alert "scout" will sense the possibilities in a village storyteller, an alert grandmother, a dancer, a priest, a social worker, or a traveling salesman. Radio scriptwriters and playwrights also occasionally make the transfer from one field of writing to another.

Sometimes, a novelist or short-story writer who is interested in family life or community patterns of living will also make a good textbook writer. Poets often make successful writers for children because they are emotionally sensitive and able to express themselves briefly and vividly. Such a person can take the most ordinary subject—homelife or earning a living—and present it so that it not only meets a specific educational need but also has a literary quality.

In the informational field, some journalists have proved themselves adaptable, because their newswriting has taught them to collect facts, analyze their relative importance, and present them simply and logically.



Workshop members plan layout and illustrations for Workshop Sampler.



An illustrator and an author discuss choice of type for a picture dictionary.

The illustrator

Another important member of any workshop is the illustrator. As already pointed out, illustrations should be planned as an integral part of the text in materials for the beginning reader. In some cases the pictorial plan precedes the planning of the text. In all cases, best results are obtained if pictures and text are planned together before a single word is written. Whatever the age level, and whatever the subject, the importance of pictures in relation to reading material cannot be overemphasized. Some American authors of historical and biographical material plan the illustrations and the text of their books at the same time.⁹

There will be real gains if the illustrator is brought into the discussion of materials during workshop discussions. Like the author, the illustrator must have a clear-cut idea of what the educators have in mind. He must know how the material will be used and what it is supposed to accomplish. He must know who will use the material.

⁹ Alice Dalgliesh; *The Columbus Story*, and Genevieve Foster, *George Washington's World*. Both published by Charles Scribner's Sons, New York.

The illustrator will carry out his assignment more effectively if he has an opportunity to develop a feeling for the material that comes from having lived with it and seen it in various stages. Field trips, or other observation trips which the author finds it necessary to take, will also be valuable to the illustrator.

The editor

Sometimes, one writer can help another. Sometimes, an experienced editor is needed to guide beginners through the pitfalls of writing craftsmanship. In an article on textbook production, Mr. Ross Kepler said that editors need editorial flair, suitable temperament, education, and experience. In more detail, he said, "Editorial flair is an indefinable essence. In general, it is an aptitude for improving the writing of others, an ability to see pattern and order in written material, and an instinctive sense of identification with the author. An editor with these qualities can do such a thorough improving job that authors are sometimes astonished at the improvements which have been made in their manuscripts, even though the editor may know very little about the subject matter of the book itself."⁷

Workshop members soon learn to absorb group criticism and learn rapidly from their own and each other's mistakes. The editor or director of the workshop evaluates criticism and gives individual guidance and help. Group approval and sympathy can be a powerful stimulant. Many writers, both experienced and amateur, profit enormously from contact with fellow writers. Too much collaboration may produce a mediocre product without character or flavor, but the writer of textbooks should be able to accept criticism and still retain his own essential originality.

Variety of experience

Writers' workshops have included teachers, parents, artists, journalists, librarians, and Government clerks with varying degrees of skill and experience. It does not matter that participants of such groups are seldom equally well qualified, if they have this one thing in common: they should all have something to say and sincerely want help in saying it. Professional or amateur, experienced writers or raw

⁷ "Training College Textbook Editors," *Publishers Weekly*, Apr. 1, 1957, pp. 25-26.

recruits, they must all have a strong faith in their ability to express their ideas.

Variety of procedures

When you have gathered a group of people for a writers' workshop, all interested in some phase of writing, illustrating, or producing educational materials, you will want to choose a method or procedure which fits your group. Some of these methods have already been touched on in discussing the development of new materials for new educational goals in various parts of the world.

Some workshops are limited to one subject area or grade level. Some are based on group writing and discussion. Some use small groups. Some use large numbers. It may be helpful to summarize a few different procedures, each one adapted to its particular group.

Indian Bureau workshops

The U.S. Bureau of Indian Affairs has been preparing specialized educational materials for tribal groups in the United States for over 30 years. During this period they have developed materials for adults and for children by means of a trained staff of writers and production specialists, and have set down certain rules and procedures.⁶

So many of the Indian tribal groups are small pockets of culture that the Indian Bureau often uses the technique of the regional workshop to develop materials for—let us say—a group of 7 Choctaw schools or a group of 22 Navaho schools. These workshops are often held during vacation periods, usually for a period of 3 weeks, 7 hours a day. The teachers who attend the workshop all share the same language and community problems.

On the first day of the workshop, the whole group meets together and, utilizing results of an earlier survey, discusses possible subject matter. Topics are listed on a blackboard, and teachers volunteer for assignments, according to their own experience and interests.

As a second step, the teachers are encouraged to jot down in random notes everything important about their assigned topic and the needs of the children before they attempt to organize the material. The

⁶ Aph Nolan Clark, "Preparation of Teaching Materials" in *Education for Better Living, 1957 Yearbook on Education Around the World*. Washington, D.C.: Government Printing Office, 1957, pp. 248-257.

third step is organization into chapters. The fourth is a first draft, written without thought of vocabulary control. Vocabulary control is usually postponed until the second or third draft of a manuscript.

Manuscripts are usually illustrated and tried out in chart form before they are printed. Tryouts are planned not only to check reader interest and comprehension but to make sure that the teacher is trained to use them. In preparation of materials, the Indian Bureau stresses three factors which the writer must constantly keep in mind: needs, interest, and achievement level.

Philippine workshop

Group writing by teachers of similar language backgrounds for similar age levels is an outstanding feature of the workshops conducted by Dr. Bernice Leary in the Philippines and other places in Southeast Asia.⁹ Over a period of years and in countries which have posed varying educational problems, she has developed certain procedures which she finds successful.

In a recent report, Dr. Leary summarized her workshop practices as applied to a vernacular group in the Philippines. The purpose of the workshop was to prepare texts of primers and preprimers. Writing teams were made up of teachers of grades 1 and 2, selected by the district superintendent to represent different parts of the area. After a few days of general orientation, the delegates were divided on the basis of interest and ability into three working groups. One group was assigned to develop story plots. A second group was assigned to write the text. A third group was chosen to make the word accounting.

Guidance in writing techniques was provided by a consultant as the texts were developed. The groups worked at their joint tasks for a period of 2 weeks, with consultants moving freely from group to group, giving help where needed. Criticism was friendly and cooperation was stressed, rather than personal preference or interest.

UNESCO seminar

Writing teams made up of a cross section of talents were characteristic of the UNESCO Regional Seminar on materials for the new

⁹ Bernice Leary, "Producing Instructional Materials in Thailand" in *Education for Better Living*, 1967, Yearbook on Education Around the World. Op. cit., pp. 240-247.

reading public, held in Rangoon in October–November 1957, under the direction of Dr. Seth Spaulding. Each team included an author, an editor, an illustrator, and a publisher. One team, assigned to produce a booklet on the treatment of leprosy, was assisted by a health educator responsible for the content of the book.

In 5 days, this team developed both text and pictures for a 32-page book which they called *New Life*. This is a group product, but each member made a specialized contribution. The book was developed in the following stages:

1. A meeting was held with a health educator to outline the technical information for the book. A "key-step" method of listing what the villager should know, think, and do was used.
2. The story was discussed by a project team and written by the author, using a page-by-page presentation. The text was then pasted on "page cards" and clipped onto a "story board" which allowed the group to visualize the entire story at a glance.
3. The artist added sketches to each page card to complete the picture book story board.
4. The story was then translated into Burmese and the story board taken to a village north of Rangoon where villagers were interviewed to discover what they know, think, feel, and do about leprosy. The story board cards were read by the villagers. The project team then discussed the story and illustrations with them.
5. The story board (with both text and illustrations) was revised by the project team based on the information gathered from the interviews.

Typography, size of page, number of lines to a page, and other details of book making had been worked out in advance by the printing specialist, so that, as soon as the final text and illustrations were approved, the manuscript was put into production. Finished copies were ready for distribution about 6 months later.¹⁰

First Washington Workshop, 1958

Methods and procedures used by the first Washington workshop for the development of educational materials differed from those described above partly because the group was drawn from 13 countries instead of 1 locality, and partly because in the Washington workshop the emphasis was on development of individual talents and the production of individual manuscripts, rather than a group product.

¹⁰ A full report of the proceedings of this seminar is given in *Publicizing for the New Reading Audience, a Report on the UNESCO Regional Seminar, Oct. 28–Nov. 30, 1957: Rangoon: Burma Translation Society, 1958.*



Workshop members discuss ideas informally in the Educational Materials Laboratory.

Emphasis on individual training

During the introductory sessions of the workshop, in which the whole group participated in field trips and lectures concerned with writing and publishing techniques, each member also outlined and

discussed with the group his plans for a textbook, handbook, or supplementary reader. When needed, the directors provided guidance or suggested research materials which would supplement the author's own experience and background. Sometimes, other workshop members were helpful in citing materials or methods used in their countries to meet similar problems. One member might be more skilled as a linguist, another in teacher-training, another in rural schools, still another in folk culture.

The final months of the Washington workshop were spent in writing and criticism. Whatever the subject, each manuscript was usually prepared in two languages—in English so that the directors and other members of the workshop could criticize it, and in the language of the writer. Some wrote first in their own language, then translated into English; others preferred to write first in English. There was always, of course, the search for the elusive word or phrase for which there was no exact translation in another language.

As a preliminary to group discussion, first drafts of manuscripts were discussed in individual conferences with consultants, once or twice a week. This method helped to encourage shy or inexperienced writers and also saved time, so that manuscripts were revised at least once before they were submitted to a workshop group for comment. When manuscripts were considered ready for group discussion, they were duplicated and distributed to other workshop members of the workshop for reading and analysis. Meetings for discussion were scheduled in groups of 5 to 10, made up of those interested in similar subject matter or grade level. Discussions were channeled along productive lines by consideration of such basic questions as—

What educational goal is this material planned to meet?

How well does it meet it?

Is the material developed logically?

Is it interesting?

Is it factually correct?

Is it adapted to a specific age group?

How can the whole manuscript be improved?

The ability to analyze a manuscript and offer constructive criticism for its improvement is an important step in learning to write. More than one member of the workshop expressed doubt that others would accept criticism from their fellow workers. As one after another discovered the advantages of this method, skepticism turned to surprise and satisfaction.

Although many were inexperienced in textbook writing, their maturity and educational experience enabled them to profit quickly from fresh ideas and a new approach. They were encouraged to reach

down into their own teaching experience, their personal hobbies, and their own national culture for those colorful details which can enliven the most factual textbook. Again and again, the workshop directors had the satisfaction of seeing a hesitating author develop a sense of accomplishment.

Workshop sampler

During the final sessions, one of the unique and valuable experiences of the Washington workshop was the production of the *Workshop Sampler*. This is a 48-page booklet, designed to give all members of the workshop practical experience in preparing final copy for printing, fitting material to space, and supervising illustrations.

Selections for the *Sampler* were made before workshop assignments were completed, but all members had enough finished manuscript to allow some choice in selecting the most appropriate sample to fill the two pages assigned each member. Some had several projects from which to choose. This brought up the possibility of selecting material from different curriculum areas and for representative grade levels—a very practical editorial experience for all concerned.

Next came the question of length. How much copy would fit five columns of type? How much space should be left for illustration? Layout sheets were mimeographed, showing width of columns, number of lines, and the character count of typewritten copy so that the right amount of manuscript could be measured off to make a readable unit. Manuscripts had to be retyped and measured again to make sure that there was neither too much nor too little material to fill the space.

Preparing the final copy for each of these samples was a matter for additional conferences between the authors and the directors of the workshop; conferences which served to illustrate the fine points of editor-author relationships and the techniques of preparing manuscript for publication.

Limitations of budget necessitated one of the less expensive printing processes: Varitype. Drawings had to be made exact size. Copy had to be fitted to space, word by word, line by line.

Along with final editing of copy came the closely allied problem of layout and illustration. Facilities were far from ideal, but the workshop boasted one professional illustrator and several artists by avocation who welcomed the chance to experiment with illustrating assignments. Sessions with a consultant in illustration and layout determined the choice of illustration for each assignment: pictorial,

art, diagram, map, or photo. In one case, a musician was called in to transcribe an original song. Choices were in most cases a compromise with time and facilities, but the practical experience of fitting art to copy rounded out the experience of fitting copy to space. Authors assumed the responsibility of checking illustrations for accuracy, and some artwork had to be redrawn several times in order to fit the text or the space.

The cover design was the result of much trial and error. The first sketches were discarded as too trite. Then someone suggested a panel of autographs. One idea led to another. Titles of projects in English were tried out on the typewriter, different kinds of type were sketched, and finally the choice was made, of handwritten titles and autographs, each in his own language, fitted between ruled lines and then reversed for more decorative effect.

In finished form, the *Workshop Sampler* was printed and bound just in time for the last meeting of the Washington workshop. For some members, it was the first time they had seen their own words in prints. For everyone there was the special thrill of seeing tangible evidence of their own creative talents and the talents of the group. The *Sampler* was substantial proof of 6 months hard work, exchange of ideas, and sharing of problems.

Best of all, as a result of the Washington workshop, individual members discovered within themselves talents and abilities they had not known they possessed. They discovered the truth of the old proverb: He that would take home the wealth of the Indies must also carry the wealth of the Indies with him.

Useful Publications

Other Publications Consulted by Members of the First Washington Workshop for the Development of Educational Materials

Encyclopedias, dictionaries, and atlases

- Columbia Encyclopedia.* (1 vol.)
New York: Columbia University Press, 1956.
- Compton's Pictured Encyclopedia.*
(15 vol.) Chicago: F. E. Compton & Co., 1959.
- Encyclopedia Britannica.* (24 vol.)
Chicago: Encyclopedia Britannica, 1958.
- Hammond's Ambassador World Atlas.*
Maplewood, N.J.: C. S. Hammond & Co., 1957.
- Rand McNally Cosmopolitan World Atlas.* Chicago: Rand McNally & Co., 1958.
- Webster's New International Dictionary, Unabridged.* (1 vol.) Springfield, Mass.: G. & C. Merriam & Co., 1955.
- World Book Encyclopedia.* (18 vol. and Reading Study Guide.)
Chicago: Field Enterprises, Inc., 1959.

Periodicals

- American Education Publications, 356 Washington St., Middletown, Conn.
My Weekly Reader (elementary).
Our Times (high school).
Every Week (high school).
Current Events (high school).
- American Junior Red Cross News. American National Red Cross, Washington, D.C. (Monthly: Oct.-May, except Jan.)
- Civic Education Service, Ins., 1733 K St. NW., Washington, D.C. :
The Young Citizen (grade 5, 6).
American Observer (high school).
Junior Review (grades 7, 8).
Weekly News Review (high school).
- Scholastic Magazines, 33 West 42d St., New York :
Explorer (grade 4).
Newstime (grade 5).

- Junior Scholastic* (grades 6, 7, 8).
Senior Scholastic (grades 10, 11, 12).
Practical English (grades 9-12).
Literary Cavalcade (grades 10, 11, 12).
Co-Ed (grades 7-12).
Science World. (The science magazine for high school students.) 304 East 45th St., New York. (Biweekly during school year.)
The Science Teacher. Journal of the National Science Teachers Association, 1201 16th St., NW., Washington, D.C. (February, March, April, September, October, and November.)

Books for children

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 BURTON, VIRGINIA LEE. *The Little House*. Boston: Houghton Mifflin Co., 1942.
 CAVANAUGH, FRANCES. Series on Real People. Evanston, Ill.: Row, Peterson & Co., 1950-1953.
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 CLEARY, BEVERLY. *Henry and Ribsy*. New York: William Morrow & Co., 1954.
 COATSWORTH, ELIZABETH. *Little Haymakers*. New York: Macmillan & Co., 1949.
 COMMAGER, HENRY STEELE. *The First Book of American History*. New York: Franklin Watts, Inc., 1957.
 CORMACK, MARIBELLE. *The First Book of Stones*. New York: Franklin Watts, Inc., 1950.
 CREDLE, ELLIS. *Down, Down the Mountain*. New York: Thomas Nelson & Sons, 1934.
 DALGLIESH, ALICE. *The Columbus Story*. New York: Charles Scribner's Sons, 1955.
 DEJONG, MEINDERT. *The Wheel on the School*. New York: Harper & Bros., 1954.
 EATON, JEANETTE. *Leaders in Other Lands*. Boston: D. C. Heath & Co., 1950.
 ETS, MARIE HALL. *Play With Me*. New York: The Viking Press, 1955.

- FOSTER, GENEVIEVE. *George Washington's World*. New York: Charles Scribner's Sons, 1941.
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PS-50-59

U. S. GOVERNMENT PRINTING OFFICE : 1959 O-302518