COMMUNICATION SKILLS FOR VISUALLY IMPAIRED LEARNERS

About the Authors

Randall K. Harley, professor emeritus of Vanderbilt University, was 29 years at George Peabody College of Vanderbilt University as teacher trainer in education of children with visual impairments. Before that he was teacher and principal in the North Carolina School for the Blind and teacher and principal in the Davidson County Schools in Nashville, Tennessee.

Mila Truan, reading specialist at the Tennessee School for the Blind, has taught communication skills to students with visual impairments from kindergarten through high school, specializing in teaching children who also have learning problems. She has written numerous articles related to the teaching of communication skills, and she has trained university students as teachers of children with visual impairments.

LaRhea Sanford, Special Education Coordinator for the Metropolitan Nashville Public School System, has worked with children who have visual impairments in both public schools and residential schools. She has served as adjunct faculty in the Program for Visual Disabilities at Peabody College of Vanderbilt University and has coauthored numerous works, including New Programmed Instruction in Braille and Functional Vision and Media Assessment for students with visual impairments.

Second Edition

COMMUNICATION SKILLS FOR VISUALLY IMPAIRED LEARNERS

Braille, Print, and Listening Skills for Students Who Are Visually Impaired

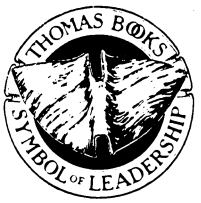
By

RANDALL K. HARLEY, PH.D.
Professor Emeritus, Special Education
George Peabody College for Teachers
of Vanderbilt University
Nashville, Tennessee

MILA B. TRUAN, ED.D.
Reading Specialist
Tennessee School for the Blind
Nashville, Tennessee

and

LARHEA D. SANFORD, ED.D.
Special Education Coordinator
Metropolitan Nashville Public School System
Nashville, Tennessee



CHARLES C THOMAS • PUBLISHER, LTD.
Springfield • Illinois • U.S.A.

Published and Distributed Throughout the World by

CHARLES C THOMAS • PUBLISHER, LTD.
2600 South First Street
Springfield, Illinois 62794-9265

ISBN 0-398-06692-2 (cloth)
ISBN 0-398-06693-0 (paper)

Library of Congress Catalog Card Number: 96-41713

First Edition, 1988
Second Edition, 1997

With THOMAS BOOKS *careful attention is given to all details of manufacturing and design. It is the Publisher's desire to present books that are satisfactory as to their physical qualities and artistic possibilities and appropriate for their particular use.* THOMAS BOOKS *will be true to those laws of quality that assure a good name and good will.*

Printed in the United States of America
SC-R-3

Library of Congress Cataloging-in-Publication Data

Harley, Randall K.
Communication skills for visually impaired learners : Braille, print, and listening skills for students who are visually impaired / by Randall K. Harley, Mila B. Truan, LaRhea D. Sanford. — 2nd ed.
p. cm.
Includes bibliographical references and indexes.
ISBN 0-398-06692-2 (cloth). — ISBN 0-398-06693-0
1. Visually handicapped—Means of communication. 2. Visually handicapped—Education—Language arts. 3. Visually handicapped—Education—Reading. I. Truan, Mila B. II. Sanford, LaRhea. III. Title.
HV1631.5.H37 1997
371.91'1—dc20 96-41713
CIP

We dedicate this book to Freda Henderson, former teacher and elementary supervisor at the Tennessee School for the Blind, who helped train teachers of children with visual impairments at George Peabody College for Teachers. Her enthusiasm in the teaching of braille reading has inspired her many students to become better readers and her many teacher trainees to enjoy and appreciate the teaching of reading to their own students.

PREFACE

This book is a thorough revision of our earlier edition *Communication Skills For Visually Impaired Learners.* However, we have made a significant effort to produce a book that is both practical to teachers and current with research findings. We also endeavored to make use of the latest thinking regarding teaching methods with sighted pupils as found in the literature.

As in the earlier edition, we have expanded the scope of communication skills to include teaching print students who are visually impaired; we continue to place a heavy emphasis on the teaching of braille reading and writing as in our book *The Teaching of Braille Reading,* by the authors and Freda Henderson. We have also integrated "technology," which was a chapter in our previous edition into the other eleven chapters of this book.

Chapter 1 provides the historical perspectives of communication skills for students who are visually impaired, including braille and print reading, handwriting, listening, and advances in technology which have improved access to materials. Chapter 2 describes the unique characteristics of emergent literacy as related to the teaching of children who are visually impaired. It shows how parents and teachers must work together in order to provide children with readiness skills necessary for a foundation for literacy.

The purpose of Chapter 3 is to provide the vision specialist with a framework for selecting the most appropriate approach and materials format for teaching reading to each student with a visual impairment. Approaches for reading instruction for students with visual impairments are presented in the context of the three alternative methods: whole-word, phonemic awareness, and whole language. An overview is presented of various materials formats in which any or all of these methods may be a part: basal readers, language experience, individualized literature, and programmed materials. The methods and the materials formats together constitute alternative reading approaches.

Chapter 4 provides information to the vision specialist who will teach word identification skills to students with limited vision regarding the unique characteristics of braille and print. Four strategies for word identification are discussed: whole word recognition, phonics, structural analysis, and context clues. A list of specific instructional objectives is provided for each of the four strategies to help the vision teacher deal with the manner in which these basic reading skills function in a unique way for the student who is visually impaired.

In Chapter 5, the authors relate the uniqueness of assessment of reading skills of children who are visually impaired. They discuss the factors to include in the assessment, the reading skills to be assessed, and the selection of tests and assessment techniques using formal and informal procedures. The use of the results in planning a systematic plan of instruction is also discussed.

The purpose of Chapter 6 is to describe the characteristics of students with visual impairments who are having difficulty meeting their potential in reading and writing due to additional learning problems and to suggest teaching techniques found to be effective in helping these students achieve.

In Chapter 7, five specific areas are identified in which students who are visually impaired may have problems with learning. Each of these areas: memory, organization, perseveration and fixation, generalization, and language, is part of the essential mechanism by which new learning is acquired. The description of each of the five learning problems is followed immediately with specific recommendations for methods and materials which have been successful in teaching students who were visually impaired with these difficulties.

Children who are visually impaired like other children enjoy reading and having others read materials which they have written themselves. Chapter 8 is designed to discuss aspects of writing that are unique to learners who are visually impaired, such as handwriting for low vision students, signature writing for blind students, braille writing, and typing skills.

Listening has become a very important communication skill for children who are visually impaired. Increased numbers of children who are visually impaired are now using listening as their primary means of gaining information from academic materials in school. In Chapter 9, emergent literacy for listening, measurement of listening ability, teach-

ing of listening skills, and sources of listening materials are discussed. In Chapter 10, the use of braille reading with late starters who are visually impaired is discussed. These communication skills in braille reading may begin with practical skills such as reading watches, signs, playing cards, and labels. Unique alternative systems with older persons are discussed, such as the use of jumbo braille for persons with decreased tactual sensitivity.

Chapter 11 provides guidelines for selecting appropriate educational materials which can help the teacher plan and program to meet the needs of children who are visually impaired. A number of games and independent activities are described which can help reinforce basic reading skills.

A number of definitions of visual impairment are currently in use by federal, state, and educational agencies. In order to clarify the terms used by the authors of this book, the following definitions are used:

- A person who is visually impaired is a person who possesses an impairment which after correction adversely affects the person's educational performance.
- A person who is blind is a person whose visual impairment is so severe that senses other than vision must be used to function adequately. Braille and/or auditory media are needed in reading.
- A person who is low vision is a person whose visual impairment is such that vision can still be used as a primary sense to function adequately. Print materials can be used in reading through the use of large print, optical aids, and environmental adaptations.

The content of the book is based upon many years of experience by the authors in the actual teaching of students who are visually impaired in regular classes or in special remedial programs. It is hoped that the beginning teacher, as well as the experienced teacher, will find material and ideas in this book which can be helpful in the designing of communication skills instruction, and that all children and adults with visual impairments can have a successful and happy experience in the development of communication skills.

The authors wish to express their appreciation to several people who contributed to the preparation of this text. Special recognition is extended to Freda Henderson who was a major contributor to *The Teaching of Braille Reading* on which the last edition of this book was based.

We also wish to thank Jayne Harley and Marvin Sanford for their contributions in typing and photography. To the students with visual impairments who appear in the photographs illustrating the use of instructional materials, we express our sincere appreciation.

Randall K. Harley
Mila B. Truan
LaRhea D. Sanford

CONTENTS

Preface viii

Chapter

1. Historical Perspective 3
2. Emergent Literacy 18
3. Approaches to Reading Instruction 43
4. Word Identification Strategies 67
5. Assessment of Literacy Skills: Factors to Consider in Assessment 109
6. Students Who Are Visually Impaired with Learning Problems: Identification and Teaching Techniques 138
7. Areas of Learning Problems 165
8. Developing Writing Skills 193
9. Developing Listening Skills 217
10. Instruction for Late Starters in Braille Literacy 234
11. Instructional Materials and Games 249

References 267

Appendices:

A. Writing Tips for Reporting an Educational Assessment 281
B. Mechanics of Braille Reading Checklist 284
C. Written Language Objectives 289
D. Resources 292

Author Index 295

Subject Index 301

COMMUNICATION SKILLS FOR VISUALLY IMPAIRED LEARNERS

Chapter 1

HISTORICAL PERSPECTIVES

The formal instruction of communication skills for persons with visual impairments was initiated in 1784 when Valentine Hauy established the first school for the blind in Paris. Before Hauy, the learning of communication skills was largely a matter of learning to use listening skills or self-instruction using a tactual code devised by the blind person, himself. A brief history of the development of communication skills among blind persons can be divided into four areas: embossed reading, print reading, handwriting, and listening. Of these four areas, the literature on embossed reading is by far the most extensive.

EMBOSSED READING

Didymus of Alexandria is the first important recorded example of a blind person using a tactual reading form (French, 1932). Didymus won some reputation as a theologian and teacher during the fourth century. Although he obtained most of his material through listening and used many readers to read material to him, he was known to have used an alphabet carved in wood to learn to read.

In the early sixteenth century, Francisco Luces of Laragossa, Spain developed a set of letters carved on thin tablets of wood (Best, 1919). In 1651, George Harsdorffer of Nurenburg, Germany recommended cutting letters with a stylus on wax-coated tablets (Best, 1919). Blind Jacob of Netra, a village of Hesse in Germany, lived about the middle of the eighteenth century (French, 1932). He used a communication system of notches cut with his knife in small sticks. Jacob accumulated a small library of books consisting of bundles of notched sticks.

In "An Essay on Blindness" written prior to 1773, M. Diderot related a visit to a blind man. He said, "It was about five in the afternoon when we came to the blind man's house, where we found him hearing his blind son read with raised characters" (Illingworth, 1910, p. 4). Maria Theresia von Pardis, born in 1759, was known for marking her playing cards with

pinpricks, tangible in relief (French, 1932). She also represented letters by sticking pins in a large pincushion. Other blind persons devised their own kinds of tactual systems to record material that they may have felt would be hard to memorize. Among these earlier systems of communication were the following: (1) knots on a string, (2) cut paper letters on threads in the form of words, (3) carved wooden letters, (4) movable letters cast in lead or tin, (5) letters marked with a blunt instrument on wax-coated tablets, (6) letters cut out of cardboard, (7) pin-pricked letters on paper, and (8) embossed print letters on paper.

Valentine Hauy secured information on reading and writing from Maria von Paradis on a visit to Paris about 1784 (French, 1932). He began teaching his first pupil, Francois Lesueur, to read letters of the alphabet which were carved on thin wooden tablets (Lowenfeld, 1975). In 1786, Lesueur first detected the outlines of a letter that had been strongly impressed in a print funeral notice. In fact, it was the "0" in the funeral notice that caught his attention (Best, 1919). In his early experiments with teaching blind persons, Hauy noticed that he could teach Lesueur to read letters that had been embossed on wet paper through a printing press. He soon taught this young blind man to read embossed letters, and embossed letters became the mode of the day for blind students learning to read.

Hauy employed a line italic type letter that was very large (Illingworth, 1910). In fact, it took 365 characters for 50 square inches. In comparison with Hauy's letter, James Gall of Edinburgh could emboss 526 characters in a space of the same size. Samual Gridley Howe's first Boston line letter was small enough so that 702, and later, 1,067 characters could fit into a 50 inch square (Best, 1919).

The raised line systems soon had competition from raised dot systems of communication. In 1808, a Frenchman, Charles Barbier, contributed a paper entitled "Ecriture Nocturne" to the French Academy of Sciences (French, 1932). Barbier, an officer in Napoleon's army, was attempting to develop a method of sending coded military messages that could be read "under cover of darkness." Barbier developed a 2×6 dot cell which could be embossed in a metal writing frame which is a forerunner of the modern slate and stylus. Barbier's system was exhibited in 1820 at the School for the Blind in Paris. Louis Braille, a pupil at the school, liked the dot system much better than the raised line letters, but Louis felt that the elongated cell was too long to fit under the fingertips, and he devised a 6-dot 3×2 cell which was more suitable for the finger.

He devised a braille music notations system before designing a braille alphabet. In 1829, Louis Braille published his dot code which is very much like the highly organized and systematic arrangement of the braille code that is in use today (French, 1932). The upper cell configuration used in the first 10 letters of the alphabet is repeated in systematic fashion for the other letters of the braille alphabet, as noted in Figure 1-1.

The first slate or writing frame for embossing dots was designed by Charles Barbier with a 12-dot cell. Louis Braille used the Barbier slate for his 6-dot cell by covering up six of the lower dots. Barbier's writing frame consisted of two parts between which the paper was placed (French, 1932). Depressions for the dots were indented in a wooden board. A wood or metal guide was placed over the wooden board and paper was perforated with a blunt-pointed steel instrument.

In the meantime, the raised line letter introduced by Valentine Hauy had been introduced in schools for the blind in other European countries. In 1822, Edmond Fry of London offered a prize for the best line letter system. In 1827, James Gall of Edinburgh (Best, 1919) issued his first book for teaching the art of reading to the blind. In this book he used a raised print character for a regular Roman alphabet, using triangular or angular letters of lower case forms. In 1832, Samuel Gridley Howe used raised line letters at Perkins Institute for the Blind in Watertown, Massachusetts. He later became known as the developer of the Boston Line Type which was used in several American schools for the blind. Dr. Howe's letters consisted entirely of lower case letters of angular type. In 1833, The Gospel of Mark was embossed in raised print at the Pennsylvania Institute for the Instruction of the Blind in Philadelphia (Best, 1919). This gospel was the first book for the blind embossed in America. In 1835, Howe printed the Book of Acts and in 1936 the entire New Testament. The Boston Line Type was approved and recommended for use in schools for the blind by the American Association of Instructors of the Blind in 1853 (American Association of Instructors for the Blind, 1875).

In 1837, J. H. Frere of Black Heath, London used a phonetic system of stenographic and angular forms which were sharply defined for touch (Best, 1919). This raised line letter system became popular in Great Britain. In 1847, Dr. William Moon of Brighton, England devised a modified form of Frere's system based on regular type (Best, 1919). Some of his forms were outlines of letters and some consisted of angles, half

ENGLISH BRAILLE CHARACTERS

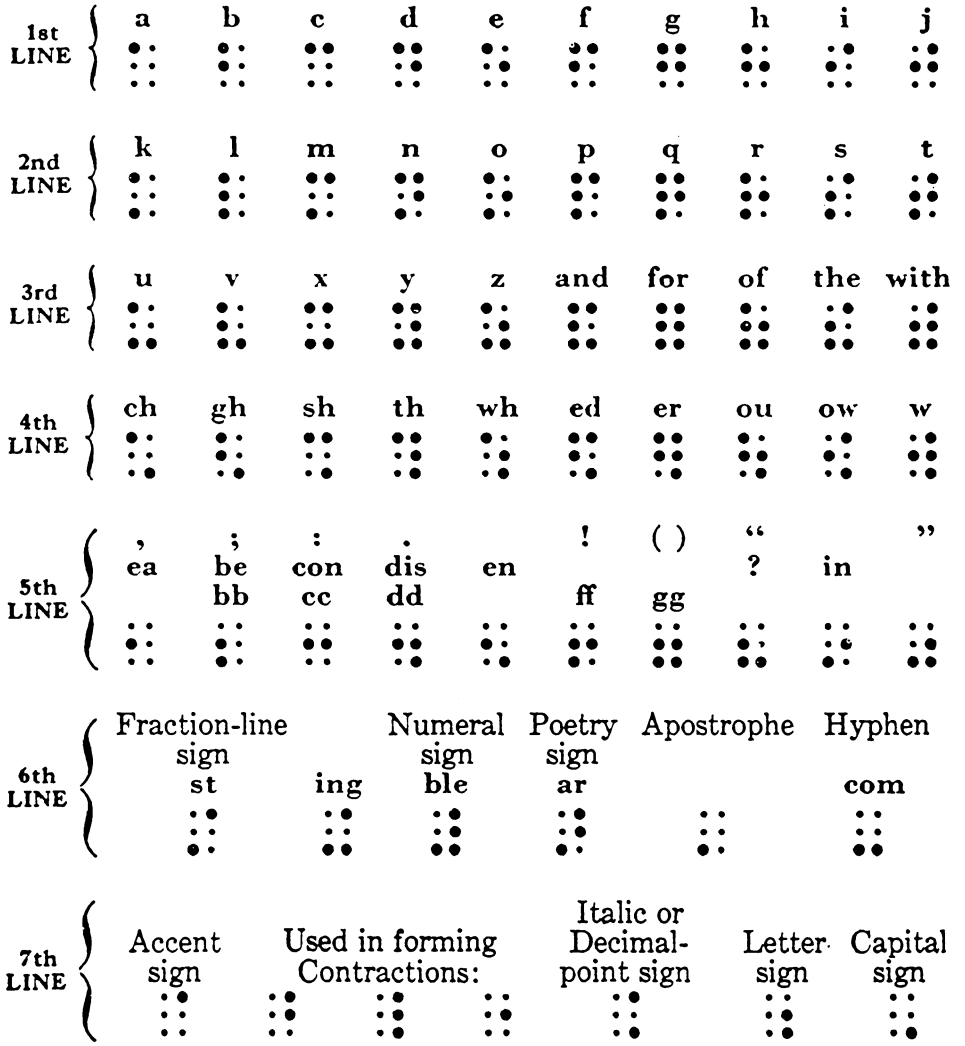


Figure 1-1. Standard English Braille, Grade 2.

circles, and straight lines. Both Frere and Moon used return line reading, that is, one line was read left to right and the next line right to left. Frere revised his characters in the return line but Moon did not use reversals (Illingworth, 1910).

The Moon system which became very popular for late-blinded adults is still used today, largely in Great Britain. This form is the only