

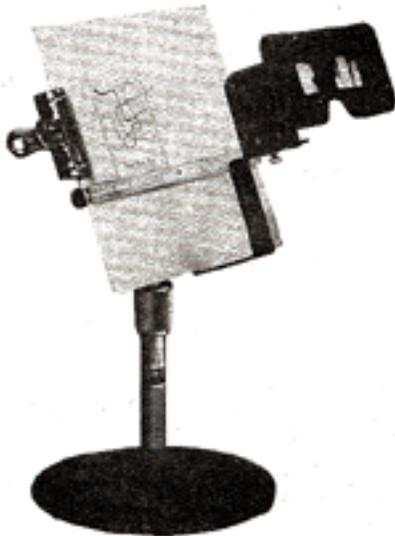
ZWEIG-BRUNO PERCEPTUAL
DEVELOPMENT SERIES

Instruction Manual

KEYSTONE
VIEW COMPANY

The Zweig-Bruno Perceptual Development

The Zweig-Bruno Perceptual Development Series has been designed for use with the Keystone Stereo-Reader. Equipment necessary to conduct this series includes: The Keystone Stereo-Reader, a pad of exercise sheets, this manual of instruction, and several pencils or pens.



***NOTE:** When used by a right-handed subject, this drawing is pulled to the right half of the field of vision so that the left eye cannot see any part of the same.

Keystone Stereo-Reader Assembled for Exercises
for Left-Hand Subject

The Stereo-Reader in Use as a Hand-Eye-Coordinator

The Stereo-Reader is a chiroscopic type of instrument. In chiroscopic drawing, however, one eye looking through the stereoscope sees the drawing directly, while the other eye sees a projected image of the drawing on its side of the field so that when one apparently traces before the off-pictures eye he is really drawing a separate picture in a different position. Each of these two eyes is apparently seeing a different picture, which indicates that the performance is essentially binocular. In using the Stereo-Reader, an actual tracing over the drawing in view of one eye is made while the other eye is projecting the drawing on its side of the area and, therefore, participating in a regular binocular manner.

Before starting this exercises, adjust the supporting legs on the back of the Stereo-Reader to a position comfortable for the subject's use. When an individual is using the right eye and right hand in coordination, the design to be copied or traced should be placed in the right half of the field of vision so that the left eye cannot see any part of the design. The stereoscope should be adjusted for clear vision. In order to stimulate left-hand, left-eye coordination, the design should be pulled to the left to a point at which the right eye cannot see any part of the design.

Materials to be used

The material contained in these pads of drawings is designed to be used in conjunction with the Hand-Eye-Coordinator, and as an interim series between the Leavell Language Development Service and the Delacato Stereo-Reader Service. It is designed for adjunctive use with remedial reading programs where testing indicates the presence of perceptual difficulties.

***(Zweig-Bruno Perceptual Development Series exercise pads can be used on the Keystone Hand-Eye Coordinator or Keystone Correct-Eye-Scope also.)**

Material comprise six sets of designs in numbered series, a, b, c, 1, 2, and 3. Pads a, b, and c consist of two copies each of eight different designs, numbered a-1 through a-8, b-1 through b-8, etc. Pads 1, 2, and 3 consists of two copies each of 11 different designs, numbered 1-1 through 1-11, and so on.

The teacher, upon finding visual perception problems, should test for auditory perceptual difficulties as well. Where auditory problems of perception and/or reversals occur, verbal activities in whisper will help in training. Whispering eliminates tone, which is located in the non-dominant cerebral hemisphere, and thereby strengthens hand-eye-ear-coordination. (See Zweig, R.L., and Bruno, M.E. *Teachers Instructional Manual for Remedial Reading Laboratory*. 1966: Reading Guidance Center, Inc., Garden Grove, California.)

How to Use the Materials

The basic lines, curves, and design of this series of targets proceed from gross muscular movements to fine-point hand-eye writing skills. In each case arrows are used to show the student in which direction the lines should be drawn—either from left or right or top to bottom, and to insure the proper completion of each line or series of lines. The code number shows the top of the design and prevents targets from being placed upside down.

For the right-handed child the target should be placed on the right side of the septum, so that it is visible to the right eye alone. The opposite side of the septum is for placement of the target for the left-handed students.

It is recommended that the child be provided with either multi-colored pens or pencils, or two or three different colored pencils. This will provide the opportunity to trace and retrace the same targets, and permits the opportunity to stay closer to the lines on the second and third trials with the same targets. It also helps to conserve the number of targets used during the tracing period, and saves the number of pages that the teacher must examine.

The Function of the Material

These materials have been developed over a five-year period, and are the results of reading clinic need. The Leavell material represents a good beginning, and the Delacato materials represent excellent developmental activity at a later stage.

The emphasis in this series is not only hand-eye-coordination, but directionality as well. All lines should be drawn from top to bottom or from left to right. Circles or curves should be drawn counterclockwise, as in manuscript or cursive writing. The series proceed from straight lines and simple design through the more complex design, circles, arcs, curves, and finally into cursive writing.

The latest research in Europe and the major university centers in the United States indicates that at a primary level, cursive writing is best for training, even though the pupil may not learn cursive for a year or more. The continuity of the lines is more conducive to the establishment of proper directionality and helps to eliminate reversal of such letters as b-d-p-q. The child may **write** manuscript, even though he traces cursive. Later in the series, the targets include training for other perceptual errors such as m-n-h and wh-th substitution and in-word reversal such as no-on, was-saw, left-felt, etc.

Research these materials over the last four-year in public school settings has resulted in great gains on the part of perceptually involved students. These targets, coupled with auditory training devices, have produced results in daily one-hour lessons as follows: 6.5 months mean gain in a two month period, and 10.5 months mean gain in a four month period. Testing was done with the Stanford Achievement Test, Advanced Form J, K, and L. Students in 7th and 8th grades in intermediate schools in Orange County, California, were the subjects of the study.