

Program credentials in more detail

Project Light's programs are based on extensive research and validation. Here are the details of each program.

Zero-To-Five

Overview & History

- **Development** - Developing basic language and reading skills for students through systematic programmed instruction was the ultimate goal when the Zero-to-Five program was designed. The National Foundation for the Improvement of Education, (a non-profit corporation created by the National Education Association), and the U.S. Office of Education Bureau of Education for the Handicapped, all partnered to become the formidable force that backed and designed the Zero-to-Five content, to overcome reading and language deficits.
- **Inception** - Zero-to-Five has been structured so that it is a developmental reading program when used in its entirety but may also be used as a remedial program when used in a diagnostic prescriptive manner. The program is a totally integrated approach to carry a student through acceptable skill levels, while assuming no prior reading skills. The sequential nature of the program ensures that each step is the logical progression of all that has gone on before, yet maintains the flexibility to allow elimination of unnecessary elements in both individual and group instruction. The testing section of the program allows for diagnosis of the individual student's needs, post-testing for mastery evaluation, and periodic review of previously learned language concepts. The result is a systematic approach to help the pupil acquire a functional language system. Motivation has been built within the program by colorful and meaningful visuals, a high probability of successful performance, and unique manner of responding via the computer.
- **Foundation** - Zero-to-Five began to be formulated with research in the School of Education at Columbia University during the years 1923-1927. The ultimate founder of Zero-to-Five, Dr. Harley Wooden, conceived the rationale and scope of a comprehensive language project during the ensuing 35 years prior to the time in 1963 when he submitted a proposal and received federal funds for the project. Initial planning and research centered on ways to improve language development and reading of children. In designing the program the objectives were to: Emphasize concept development; Introduce new words in a systematic sequence designed to make maximum utilization of them for acquiring understandings of subsequent instruction; Devise materials and an

interface between the child and the materials to increase the language exposures to the maximum practicable; Devise ways for making those exposures much more meaningful than most traditional instruction, including well-illustrated or dramatized material for easier and quicker learning; Give special attention to function words, pronouns, adverbs, and various kinds of abstractions; Provide adequate concentration on words and concepts essential for comparing, contrasting, describing, and inquiring proceeding thoroughly with the instruction of the lexical, structural and other types of meanings; Gradually expand sentence complexity through structural grammar principles; Reduce the confusions that arise from multiple meaning words and expressions; Provide adequate opportunities to develop receptive printed language skills through interesting story booklets and through other forms of instructional media, as rapidly as new vocabulary and language structures are learned.

- **Characteristics Of The Zero-to-Five Program** - Some of the specific characteristics of Zero-To-Five include:
 - Provides for Individualized Instruction
 - Specific Behavioral Objectives
 - Carefully Sequenced
 - Student Self-Pacing
 - Intrinsically Motivating
 - Hierarchically Structured
 - Student Centered
 - Visually Oriented
 - Functional and Meaningful
 - Immediate Feedback to Learner
 - Error Accountability
 - Carefully Tested
 - Small, Sequential Learning Steps
 - Active Student Participation
 - Student is Carefully Guided
 - Intriguing and Flexible
- **Evaluation and Validation** - Prior to Project Light acquiring the Zero-to-Five content and developing it for use on the computer, the Zero-to-Five content was validated by the U.S. Department of Education and various partner entities in a comprehensive network of over 100 field test centers located in twenty-six states, the Trust Territories of the Pacific, the District of Columbia, and a Canadian Province. No fewer than 40,000 teaching materials were distributed to the centers for research and evaluation. More than 40 Zero-to-Five related and university based research investigations were initiated or completed. Other formal and informal investigations were completed at non-university locations including residential institutions for handicapped and non-handicapped

students, various kinds of day programs, clinics, hospitals, and homes. Since 1980 Project Light has continued to add to the validation established by the US Department of Education through hundreds of thousands of students that have successfully used this program in Learning Centers established by Project Light around the world.

The Learner population for whom the Zero-to-Five program was developed and validated includes:

1. Normal (5 - 16 yrs)
 2. Bilingual - English as a second language (4 - 10 years)
 3. Bilingual - English as a second language (11 - adult)
 4. Illiterate Adult (over age 18)
 5. Reading Disability (8 - 18 yrs)
 6. Hearing Impaired (4 - 13 years; and adult)
 7. Emotionally Disturbed (7 - 15 yrs)
 8. Educable Mentally Retarded (6 yrs - adult)
 9. Learning Disability: all ages
 10. Brain Injured (all ages)

Major Content Areas - Reading Readiness

Perceptual Training (Visual)

The Zero-to-Five Perceptual Training is based upon hundreds of research investigations which pinpointed particular areas of perceptual processing (visual) which have been found to be closely related to the skill of reading graphic symbols (words). Deficient or inadequate sensory experiences in these skill areas have been found to contribute to perceptual deprivation and, subsequently, reading retardation.

There are several visual skills which appear to be closely related to success in reading. These skills include the perceptual areas of discrimination of forms, configurations, colors, letters, substitutions, deletions, spatial orientation, shape, size, and figure-ground. All of these are covered in the Zero-to-Five Perceptual Training Series.

Specifically, the Zero-to-Five perceptual materials are designed to assist the student in the development of perceptual abilities in vision. The two visual perceptual processes involved are association tasks (matching one item to another) and discrimination tasks (choosing which item is different from a series of items).

In the Zero-to-Five Program, perceptual training does not call for symbolic responses such as naming, acting, interpreting or the like. It represents, rather, the ability of the student to see differences and similarities in various perceptual skill areas.

Perceptual training is directed toward the development of perceptual efficiency and perceptual constancy in each student. In our physical environment, Perception is not an isolated process but generally occurs simultaneously with, and dependent upon, language and thinking. It is the process, which gives consistent meaning to that which is observed and those stimuli impinging on the sense organ.

The Project Light Perceptual Training Program is intended to ensure that each student will have the necessary visual perceptual prerequisites required to experience success in reading.

The lack of these skills has been found to be closely related to many different types of reading difficulties.

Perceptual Thinking (Comprehension)

The Zero-to-Five Perceptual Thinking is designed to bridge the gap between the Perceptual Training Series and the Language/Reading Series.

The basic purpose of the Perceptual Thinking is to provide the student with multiple relevant opportunities to practice the various intellectual tasks which contribute to the normal development of cognition, memory, convergent thinking, and evaluation. Some of the subtasks programmed within the series include: memory, sequencing, classification, evaluation, transformation, association, maze tracing, visual/conceptual closure, analogies, relationships, and inferences.

Within each of the classifications listed above, there are frequently several subdivisions. For example, the area of memory is divided into the tasks of memory for color, pictures, objects, figures, position, letters, numbers, words, directions, and signs, among others. Furthermore, each of these subdivisions are programmed at different levels of complexity.

Perceptual Thinking skills are those cognitive activities deemed essential to the development of reasoning and critical thinking while at the same time being fundamental to the total learning of the student. There appears to be a universal recognition that in this period of rapid change (i.e., situations, task requirements, subject matters, technology, social relationships), the human thinking requirements remain relatively the same and vary only marginally within certain parameters. Intelligent human behavior requires scores of different cognitive skills and/or competencies.

Among others, critical thinking requires the abilities to recognize relationships among objects or events; store information and recall it; recognize logical order; evaluate materials and information for quality, adequacy, and suitability; do original thinking; adapt known problem solutions to new situations; do trial-and-error thinking; acquire an understanding of various kinds of concepts.

The acquisition of abilities such as these depends on the cognitive learning process. Cognition, as a learning process, may be viewed as a variety of learning abilities, which range from simple memory through convergent and divergent thinking to the highest levels of evaluation and judgment. As a student grows, he becomes increasingly able to handle these intellectual requirements, dealing with them first as units and classes, and progressively later as relations, systems, transformations, and implications.

Language/Reading Series

The Zero-to-Five Language/Reading Series is a comprehensive group of programmed lessons designed to take the students from an initial reading point with minimal linguistic understanding to an ever-broadening scope of vocabulary, grammatical awareness, and linguistic competencies. The developmental design was based upon scores of elementary school curricula, various word lists, and consultative input. The sequential development of materials begins with nouns, then adds verbs, then a combination of nouns and verbs into a sentence structure, and then gradually introduces other linguistic components.

There are seventeen Developmental Considerations for the Language/Reading Series:

1. **Vocabulary** - The vocabulary selection and expansion was based upon known appropriate materials, school curricula, anticipated student needs, and student interests. The vocabulary expansion was based upon the same factors, as well as student's word lists.
2. **Sentence Length** - As each new linguistic element was added, the sentence length generally expanded. This gradual expansion of sentence length along with the sequential development of vocabulary provided for a gradual increase in reading grade levels.
3. **Percentage of Different Words** - As the percentage of different words increases in a given reading passage, the reading grade level generally increases correspondingly. This factor was taken into careful consideration by Zero-to-Five in the development of the lesson, a set of lessons, and of the language/reading levels. For example; in the first lesson of Unit 01, only five words were used. In the second lesson, three additional words were added to the five words from the previous lesson, making a total of eight words. This same gradual expansion continues throughout the Program.
4. **Sentence Structure** - The complexity of sentences and the degree of linguistic pattern difficulty were carefully taken into consideration. As the materials were developed at each higher language level, the sentence

structures became more complex and the linguistic patterns more difficult. This led to an ever expanding integration of simple, compound, and complex sentences.

5. **Personal References** - The number of pronouns and/or personal references were used more frequently in the lower levels since research has shown these to be used more frequently by young students. Gradually, in the upper levels, fewer such references are made.
6. **Pictorial Assistance** - In the early lessons, the pictorial assistance was great but there was a gradual phasing down of such aids with each subsequent level.
7. **Affixes** - With each subsequent set and language level, additional affixes are added and used in conjunction with those previously taught.
8. **Prepositional Phrases** - Prepositional phrases were not introduced until the end of Language/Reading Level and were subsequently gradually expanded in number and complexity.
9. **Factual Information** - The amount and familiarity of factual information were developmental considerations. The early materials related only to the direct experience of the learner. In the higher levels, the degree of content familiarity tended to decrease.
10. **Comprehension Accountability** - With each succeeding level, the student is held more and more accountable for retention of information.
11. **Frame Design** - In the early programs, the frames were designed in a manner that called for an elementary type of cognitive decision and response. In later levels, more independent decisions and inferences were required.
12. **Level of Illustrations/Vocabulary** - The illustrations and vocabulary level were selected to be at the lower elementary level with the early materials. There was a gradual expansion of these factors in subsequent levels.

13. **Terminal Behavior Desired** - The behavioral objectives became increasingly more sophisticated and the desired outcomes indicative of higher educational levels with each subsequent set of materials.
14. **Abstractness** - At the higher levels, the degree of abstractness or concept load was greater.
15. **Organization** - Since the Zero-to-Five materials are programmed, the programmatic organization varied from level to level. The main consideration was the "step size" from frame to frame, lesson to lesson, unit to unit, and level to level. Also taken into consideration was the number of repetitions provided prior to introducing a new concept.
16. **Format** - The production format, including print size and the amount of information on a frame, was taken into consideration. For example, as the materials progress into higher levels, there are more variations in format and also the print size is reduced to provide for more information per frame.
17. **Concept Interrelationship** - A final basic developmental consideration was the interrelationship of ideas, concepts, and instructional principles. In the early lessons, only one basic idea, concept, or principle was used at a time. At higher levels, the student is required to see more interrelationships of ideas and to determine themes within a lesson.

Additional Lessons

The Zero-to-Five Reading Readiness section includes other lessons designed to complement the Perceptual Training/Perceptual Thinking. They are programmed to be used in conjunction with and immediately following each level.

- Holidays I lessons are at an interest and reading level of a student in the first grade and to be used with Language/Reading Level I.
- Holidays II is programmed to be used in conjunction with or immediately following Language/Reading Level II. These informative lessons are designed to be used after the students have mastered the basic vocabulary and sentence structure in Level II and they are written at approximately the second grade reading level.
- Holidays III is programmed at the third to fourth grade reading level.

Levels 1 through 5

After the Reading Readiness sections, the Zero-to-Five program has 5 levels, each comprised of 8 Units, with each level averaging 75 lessons. These levels correspond to reading levels for grades 1 through 5. Many of the Units include Pre-tests, Short Stories and Post Tests. This is designed to take a student up to a fifth grade reading level.

Summary of Zero-to-Five

The primary goal of the Zero-to-Five Program is the development of language - both receptive and expressive. In order to accomplish this objective, a number of integrated core and support components have been developed. The beginning materials have been built around basic vocabulary and sentence structures that the student will find immediately functional.

An ever-expanding functional vocabulary is programmed in a linguistic milieu, beginning with very simple sentence patterns and spiraling upward to include more sophisticated language structures. Each language set focuses on a general topical theme. The theme of the beginning sets include: self, animals, food, playthings, activities, clothing and shelter. The theme of later sets include: history, travel, conservation of energy, and pollution control.

All instructional components of the Program are designed and developed with purpose statements and behavioral objective statements. A test lesson, provided with each set, is designed to measure the degree to which the behavioral objectives are met. The test can also be used as a pretest (diagnostic), post-test, or for review purposes. If used as a pretest, the tutor is provided with information whereby the student may by-pass information already in his repertoire.

The TutorSystems GED Software Program

Project Light has partnered with BLS, Inc. since 1980 to distribute TutorSystems GED educational software.

Overview

Throughout its history, BLS has remained committed to the tutorial design on which all TutorSystems software is based. "TutorSystems" educational software helps seventh grade through adult students master basic skills in reading, grammar, and mathematics through this simple four-step process:

1. TutorSystems software Tests students to determine basic skills deficiencies
2. Prescribes lessons to remedy the deficiencies
3. Teaches students the required basic skills
4. Tests again to ensure skill mastery.

Basic Skills Series

1. A comprehensive development system which can be used for those in junior high, high school, or even adult students.
2. There are 134 lessons which encompass 200 hours of "targeted" instruction to provide rapid remediation from a 4th grade prerequisite reading level to GED competency in reading, mathematics, and grammar.
3. Using 359 instructional objectives Basic Skills Series covers: word analysis, vocabulary, comprehension, inferential comprehension, critical expression and usage, sentence structure, paragraph development, mathematical computation, concepts and applications, and study skills.

Career English Series

1. Builds on the skills developed by the Basic Skills Series
2. Quickly as well as effectively improves communication skills, emphasizing written communication skills.
3. The Series was designed to be used by working adults, high school and college students.
4. 100 hours of targeted instruction are found in 70 lessons which present "the fundamentals" of English grammar and punctuation in a manner suited for independent study.
5. The series can be introduced into a pre-existing English curriculum as both a means of review and to expand the current curriculum.