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ABSTRACT

Ten assumptions are suggested as being fundamental to working toward developing effective and realistic reading programs for the educable mentally retarded. They are designed to eliminate many problems about how teachers must learn to effectively use a scientific approach to education. The author focuses upon an operational definition of reading behaviors, based on Gibson's definition; reviews some selected literature on reading for the mentally retarded; and offers the G-SOME System as a type of paradigm for use by the special class teacher as a manager of her reading program. This system is a logic system for use by the teacher as a thinking and creative person; it allows him to plan educational objectives and to make educational decisions. It is comprised of five major sequenced components that require the use of both vertical and horizontal feedback loops. Descriptive figures and references are included. (Author/NH)

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READING PROGRAMS AND MATERIALS FOR THE
EDUCABLE MENTALLY RETARDED -- A POINT OF VIEW

By

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INTRODUCTION:

History shows that whenever older methods prove their inefficiency new methods are produced which tend to meet the new conditions more effectively. But the difficulties involved must first be clearly formulated before methods and techniques can be devised with which we can deal with them more successfully. (Korzybski, 1948)

It would appear that if those of us involved in special education programs for the educable mentally retarded would only heed this sagacious observation presented by Korzybski, we might be able to provide a more effective instructional program for the youngsters we attempt to serve, and this is especially true in the area of reading. If we are to minimize the nature and degree of difficulties, it might be appropriate to propose several assumptions that we might accept as fundamental in our work toward developing effective and realistic reading programs for the educable mentally retarded. These critical assumptions are as follows:

1. that all methods and techniques are relative in time and space, and are only a means to an end.
2. that the heterogeneous nature and range of abilities found in youngsters identified and placed in special classes for the educable mentally retarded will necessitate array of methods and techniques using a variety of materials.
3. that the teacher must realize when progress is slow or ineffective, the cause of this might not be centered in the child but rather in the teachers failure to control and manipulate critical variables in the learning situation.
4. that the special class teacher be able to differentiate between individual attention and individualized instruction.
5. that the teacher assume the role as a manager of learning and approach education as a science rather than an art.
6. that the teacher develop a paradigm or model that would facilitate understanding, input, and control of various variables operating in the learning situation.

7. that feedback and various forms and kinds of evaluation are essential as part of a unified and systematic way for developing the reading curriculum and program.
8. that the teacher must evolve a systems approach that will allow for scope and sequencing of knowledges, skills, value development, both upon part of the students and teacher.
9. that the teacher employ behavioral objectives as part of the daily learning plan.
10. that the special class teacher assume accountability for the production of learning as demonstrated by performance objectives.

It is the view of this writer, that the above assumptions are essential as part of the routine modus operandi of a scientific teacher. This will be of even more significance with the growth in human knowledge in the years ahead, expanding technology, and mounting demand for teacher and administrator accountability as the cost of education increases.

WHAT IS READING BEHAVIOR?

The purpose of this paper will be to focus upon an operational definition of reading behavior, review some selected literature on reading for the mentally retarded, and finally offer G-SOME System as a type of paradigm for use by the special class teacher as a manager of her reading program.

Reading behavior, according to Gibson (1965) consists of (a) receiving communication, (b) making discriminative responses to graphic symbols, (c) decoding graphic symbols into speech, and (d) getting meaning from the printed page. The first requirement for learning this behavior sequence is the ability to talk and to understand the talk of others. The child must be able to speak and understand his own language in a fairly complex way, emphasizing units of language organized in a hierarchy and with a grammatical structure. After the child has achieved this mastery, he goes on to discriminate the graphic symbols of his language and later learns the spoken responses to graphic symbols.

Gibson has demonstrated that the reading process is exceedingly complex, requiring a series of skills to be mastered such as adequate reception, discrimination between sounds and symbols, visual and auditory input, sequence, and finally expression of ideas in the form of meaningful communication with significant others in the learning situation. Thus, the child first learns to read, afterwards he reads to learn.

Many studies have been conducted concerning the mentally retarded and reading. Furthermore, the research has been grouped under the following headings: (a) reading capacity and achievement, (b) comparative studies of the mentally retarded, normal, and gifted, (c) mental age and beginning reading, and (d) factors relating to the process of reading by the mentally retarded. (Kirk, 1964) Kirk in his comprehensive review concludes the following generalizations for each of the four areas:

READING CAPACITY AND ACHIEVEMENT:

It was reported that over a dozen or so studies found that the mentally retarded in special classes read below mental age expectancy level, whereas three studies found the retarded group to read at, or above expectancy level. It was suggested that in cases where special attention is given to reading, it might be expected to attain reading ages up to or slightly beyond the mental age.

COMPARISON OF RETARDED, NORMAL, AND GIFTED CHILDREN:

The conclusion cited in the previous section indicated that mentally retarded children in general read below their mental-age-reading grade expectancy. In contrast, we might ask whether normal or superior children read up to, in excess of, or below their mental ages. The results of some six studies indicated that when mental age is controlled, retarded children tend to be closer to their mental ages than do superior children. Kirk (1964) asserts that the retarded child who can learn to read is under pressure to achieve because, on the basis of his CA, he is retarded; whereas, the gifted child, in contrast is not under the same pressure to achieve, since, on the basis of his CA, he is accelerated.

MENTAL AGE AND BEGINNING READING:

This becomes a serious problem for some teachers at the primary level when they attempt to make a child with a CA of six begin reading, while the

child's MA might be five or four. Yet, if instruction in reading were delayed until they are mentally 6 or 6½ years of age, they would be nine or ten years of age and would have been attending school from two to four years. Several studies attempting to stress what was called pre-academic programs, found no significant differences between control and experimental groups.

RATE OF PROGRESS IN READING:

The studies on the rate of reading gain revealed conflicting findings.

Dunn (1956) concluded:

It is probable that under average conditions the increase in reading age parallels the increase in mental age. However, when the mentally retarded children who are reading considerably below their expectancy level are given intensive remedial instruction, gains may, at first be quite rapid. This pattern probably ceases as reading age begins to exceed mental age.
p. 24-29.

GOALS AT VARIOUS LEVELS:

Kolstoe (1970) outlines and identifies the following expected outcomes for reading at various school levels:

A. PREPRIMARY LEVEL:

1. Has good skills of listening, such as auditory discrimination, memory, and closure.
2. Has good skills of visual discrimination, memory, sequence, and closure.
3. Recognizes meaningful configurations -- i.e. signs STOP, WARNING, DANGER.
4. Can read the letters of the alphabet.

B. PRIMARY LEVEL:

1. Knows consonant sounds and blends.
2. Knows vowel sounds.
3. Knows beginning and ending sounds.
4. Recognizes word families.
5. "Reads" experience charts.
6. "Reads" work sheets.

C. INTERMEDIATE LEVEL:

1. Has a 220 word sight vocabulary.
2. Uses phonics to attack new words.
3. Uses context clues.
4. Uses prefixes, suffixes, and root words.
5. Can develop and read experience charts.
6. Achieves a 2.5 grade level on reading achievement tests.
7. Has an elementary grasp of newspaper readings.

D. PREVOCAATIONAL LEVEL:

1. Shows some interest in pleasure reading.
2. Can read a newspaper to obtain information.
3. Can develop and read detailed experience charts.
4. Can use reading to get information.
5. Understands and can use the dictionary.

E. VOCATIONAL LEVEL:

1. Can read and understand crucial materials pertaining to bills and statements.
2. Can read and understand simple sales contracts.
3. Can read and use simple reference material.
4. Enjoys human-interests magazines, i.e., Life and Look.

In contrast to the long list by Kolstoe, Smith (1968) offers the following four specific objectives or goals:

- A. Development of a basic sight vocabulary with elaboration on the existing speaking and listening vocabulary.
- B. Development of a consistent method for word attack which is appropriate for each child and based on his idiosyncratic strengths and weaknesses.
- C. Development of skill in and a desire to read independently for information, pleasure, and personal satisfaction.
- D. Development of an adequate level of reading competence to allow for effective social and vocational participation in society.

These lists are presented for the readers information and critical evaluation as to how valuable are they to a teacher? What is really needed for teacher usage would be a detailed taxonomy such as the one developed by Barrett for the cognitive and affective dimensions of reading comprehension. (Clymer, 1968)

VIEWPOINTS PAST AND PRESENT:

Johnson (1962) after making a study of the various special class efficacy studies concluded that mentally retarded children in special classes achieved significantly less than comparable children who remained in regular grades, despite small class enrollments, high educational costs, and specially trained teachers. He also concluded that any advantage in personal and social development which might be found in

the special class groups appears "slight and probably not particularly meaningful." He attributed the negative findings of the efficacy studies primarily to teacher education programs which stress both the inability of the retarded and the need for establishing good mental health hygiene program.

Blackman and Heintz (1966) offer a different position:

Research in the special education of the mentally retarded appears to be standing on the brink of a new era. The era we are about to leave is cluttered with the disappointments of studies that have attempted to demonstrate the value of special classes for the mentally retarded vis-a-vis regular class placement for these children. It is becoming more evident that profitable research in this area will take the form of developing and evaluating specific instructional systems which are derived from increasingly sophisticated psychological theory and to which the most appropriate components of an emerging educational technology have been applied. Special educators and educational psychologists will fulfill their promise to the mentally retarded when they begin to employ the rigor and controls currently at their disposal to achieve a better understanding of the psychological properties of school tasks as they interrelate with the abilities and disabilities of individual learners.
(p. 15-16)

NEEDED: A SYSTEM FOR ORGANIZATION AND FUNCTION BY THE SPECIAL CLASS TEACHER

The rapid growth in educational technology and the vast sums of money being generated by both government and private industry in the areas of materials, diagnosis, learning research, and new training programs for young children, dropouts, and the handicapped creates a serious problem for the individual special class teacher. Basically, this new difficulty or problem is how to assimilate and accommodate this rapid growth in knowledge, methods, and materials as part of one's teaching schema if we use these basic Piaget concepts. In addition, this growth phenomena has now offered the teacher the best opportunity yet for the individualization of instruction based upon the learning rate, interest, motivational, and modality input of each particular child.

Special education requires more than a tickering job with the numerous fractional practices that are advocated by innovators of new methods, techniques, materials, based upon limited or specific educational ends. (Lazar, 1969a). To assist with this problem to some degree, Lazar (1969b) has

advocated the establishment of logistical control efforts for both teachers and administrators:

It is no small wonder that we find teachers using materials and methods not of their own choosing, but which have been administratively imposed because of fiscal policies that influence the operation of the special classroom. One can imagine the emotional impact upon the teacher desiring some specific materials, say for reading, only to be told that she must wait until next year to put it on the requisition.

If we expect the effective teachers in special education to provide realistic and individualized programs based upon prescriptive teaching approaches, efforts must be made to develop logistical guidelines for the procurement of materials when needed.

How do we begin to resolve are growing problems in this area? The problem is to create unified systems that will facilitate communication, classification, and research and utilization of new methods and materials in a realistic, effective, and sane manner. We need to start developing systems. The purpose of the system is realized through processes in which the interacting components of the system engage in order to produce a predetermined output. Purpose determines the process required, and the process will imply the kinds of components that will make up the system. (Banathy, 1968) Thus, a system then has purpose, processes, and components. These three aspects, purpose, process, and components, furnish us with perspectives from which one can analyze and describe any existing system, or use feedback to reconstruct a better one by changing the components (sub-systems).

G-SOME SYSTEM FOR READING REMEDIATION:

The purpose of the G-SOME System for reading remediation or instruction in reading per se, is to provide the special class teacher with a logic system for planning educational objectives and making educational decisions. The G-SOME System is a logical model that is comprised of five major sequenced components that requires the use of both vertical and horizontal feedback loops. In Figure 1 below, we are provided with an overview of the G-SOME System:

FIGURE 1
THE G-SOME SYSTEM'S COMPONENTS

G	S	O	M	E
Variables	Variables	Variables	Variables	Variables

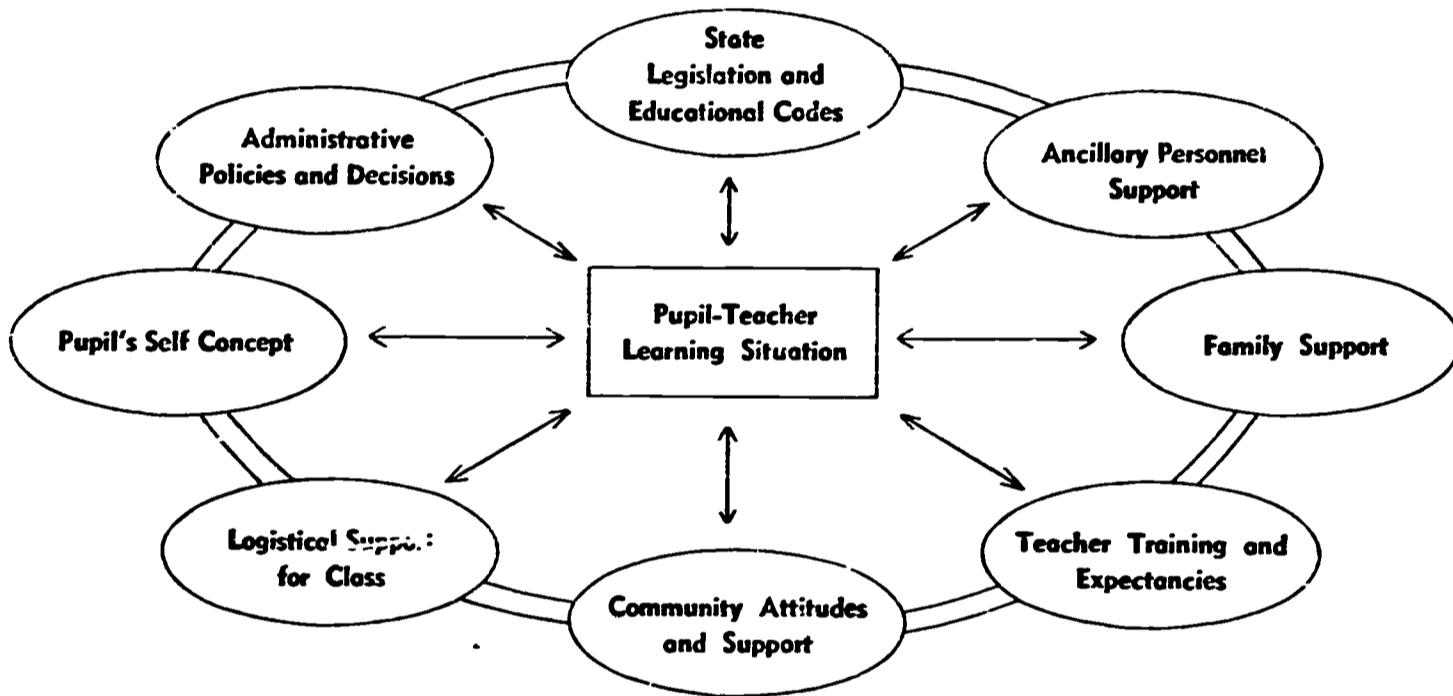
Within each of the five major components are a series of variables that provide the need for task analysis action organization in helping the teacher make a series of decisions in a scope and sequenced manner. One of the major problems of teachers lacking a system has been to make such decision in a disjointed manner that would not allow for scope and sequencing nor feedback for change and evaluation. Thus, the G-SOME System requires a thinking and creative type individual as the teacher capable of making many critical decisions during a days work. This view differs from some thinkers in education that would reduce the teacher to being a doer without thinking because they would employ a prefabricated curriculum and minimize or reduce greatly teacher decision making.

A. G Factors. - There are eight factors or sub-systems that need to be considered by the new teacher during her initial planning, and for periodic review by the experienced teacher who already has an on going program and has completed her initial study of these eight factors. This component contains many significant social attitudes that can serve as intervening variables to influence the reading program and remediation effort. As it is well known, attitudes incorporate both feelings and beliefs and evaluation of objects and events on both an emotional and cognitive level. Knowledge of these factors offer the teacher a preventive program against taking actions and making decisions that would violate educational codes and policies, but also offer ideas where influence and change needs to be made in the program to gain community support. Since an entire paper can be devoted to the discussion of these variables, no further effort will be made at this time to discuss them.

FIGURE 2. G VARIABLES

SOME CRITICAL FACTORS THAT INFLUENCE THE NATURE AND THE DEGREE OF INSTRUCTIONAL EFFECTIVENESS AND PUPIL-TEACHER INTERACTION DURING THE LEARNING SITUATION

(Reprinted with Permission of Love Publications, (Lazar, 1969a).)



FLOW CHART OF THE SOME COMPONENTS REQUIRING CONTINUOUS TASK ANALYSIS ACTION UPON PART OF THE SPECIAL TEACHER

S Variables
O Variables
Multi M Variables
E Variables

SURVEY
OBJECTIVES
PROGRAM VARIABLES
EVALUATION



1. Survey of specific student needs, strengths, and deficits:
 - a. formal reading test
 - b. informal testing by teacher
 2. Assessment information gathered by teacher from all possible sources
 3. Develop individual profile of demonstrated skills and knowledge. Translate into class matrix
 4. Profile and matrix give individual and class variability
 5. Initial logistical and administrative support estimates are made
- Vertical Feedback Loop
6. * Write explicit instructional objectives
 7. Start daily learning plan formulation:
 - a. cognitive objectives
 - b. affective objectives
 - c. motoric objectives
 8. Determine, how, when, and where instruction will take place. Also criterion measure for objective success.
 9. Review objectives in terms of space and time
 - a. daily - immediate
 - b. weekly - intermediate
 - c. weeks - long range
 10. Scope and sequence objectives in learning plans for individuals or groups
 11. ** Determine child's modality input:
 - a. auditory
 - b. visual
 - c. tactical
 - d. other
 12. Determine motivational levels:
 - a. intrinsic
 - b. extrinsic
 13. Methods to be used:
 - a. individualized
 - b. small group
 - c. total group
 - d. modality
 - e. mode of presentation and rate of learning required
 14. Select materials:
 - a. books
 - l. film strips
 - c. listening posts
 - d. teaching machines
 15. Mode of Learning:
 - a. S-R
 - b. operant
 - c. chaining
 - d. verbal
 - e. discrimination
 - f. problem solving
 16. Evaluation based on objective attainment:
 - a. self-evaluation (1) pupil (2) teacher
 - b. joint evaluation
 - c. impartial or audit by a significant other
 17. If criterion met, go to next objective and sequence learning plan
- If not met, use feedback loops to check all subsystems to make change to enhance success on next attempt

*See Bloom's Taxonomy
Piaget's Work
Guilford's SI
Gagne's 8 types of learning

**Works of Bateman, Kirk, Frostig, Wepman, etc.

In Figure 3, a flow chart showing some 17 basic actions that might be taken by the teacher in developing a logic system for making educational plans and decision when individualizing her reading program. Furthermore, it can serve as a method for the assimilation and accommodation of new ideas, materials, theories, into her teaching schema. The G-SOME System is a tentative model that can be adjusted and adapted to meet new requirements or the particular modus operandi of each teacher. If you have not developed a systems approach for yourself, this might start you out in developing your own logical system for problem solving in planning and meeting the reading needs of your pupils.

SUMMARY:

Ten basic assumptions were presented at the start that would assure the elimination of many of our communications problems about how teachers must learn to operate today if they are to become effective managers of learning using a scientific approach to education.

Reading behavior was defined based upon Gibsons definition. A review of select research on reading was made, but especially that reported by Kirk and Dunn in their major reviews of the literature. The interested reader is directed to their views for a most informative treatment.

Finally, a brief discussion was provided on systems approaches, but especially the G-SOME System. The G-SOME System was presented as a logic system for use by the teacher as a thinking and creative person. Under the G-SOME System, the teacher becomes one of the most important persons in the educative process, if not the most, along with the children. The day of systems is here, and teachers, psychologists, and administrators must begin retooling their thinking to fit the new technology and communications systems that are being developed, lest public education die from total obsolescence. Finally, the G-SOME System helps control "verbal pollution"* as we attempt to protect one of our major natural resources, the human brain. (Bontrager, 1970)

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