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ABSTRACT
        This paper presented at the International Reading
Association in Denver defines a basal reader series as an
interrelated set of materials for teaching fundamental reading skills
and attitudes, including not only traditional eclectic basal readers
but also linguistic, phonic, and programed series. As new
developments come to the fore in reading instruction, authors,
editors, and publishers of basal readers prepare new or revised
series incorporating those trends which they consider worthwhile.
Currently important trends which are likely to appear in basal
readers of the near future include behavioral objectives,
criterion-based mastery and diagnostic tests, and prescribed
individualized practice based on analysis of pupil needs, some of it
audio-visual or multi-sensory. As these trends develop, the
differences between systems approaches and basal reader approaches
will diminish. Much will depend on the ability of ordinary teachers
to manage a complicated system. (Author/WR)

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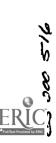## Approaches to Teaching Reading: The Systems Approach

Versus the Basal Reader Approach

International Reading Association Convention, May 4, 1973

Before any comparisons can be drawn between a systems approach and

a basal reader approach, it is necessary to define terms. Basal readers

have been defined as "an interrelated set of materials for teaching

fundamental reading skills. At a minimum, such a set requires a sequence

of reading materials for the learners, graded in difficulty, and guides

or manuals on how to teach with these materials. Many different kinds

of supplements and accessories to this basic minimum are now

available"(Harris, 1972). Defined in this way the term includes not

only the traditional eclectic series, but also phonic, linguistic,

and programmed series.

A recent paper issued by the ERIC Clearinghouse on Media and Technology

is a helpful source of information about systems approaches (Twelker,

Urbach & Buck, 1972). According to that paper, "there is general

agreement that the 'systems approach to instruction' is a systematic

was of identifying, developing and evaluating a set of materials and

strategies aimed at accomplishing a particular educational goal."

A systems approach is a set of management techniques for seeking

solutions to educational problems and includes defining, planning,

developing, evaluating, and feeding back information for the improvement

of the end result. As defined in this way, a systems approach is essentially a process for developing a combination of methods and materials, rather than a particular kind of outcome.

The main applications of a systems approach in reading instruction so far have been the development of computer-assisted reading instruction and Individually Prescribed Instruction (IPI). The Wisconsin Design for Reading Skill Development and the PLAN System are others. Diagnostic teaching, described in some recent books on reading, hardly seems to exist at present outside of corrective and remedial reading programs. The term "diagnostic and prescriptive instruction" is used in the research literature to describe applications of reinforcement theory to the changing of classroom behavior rather than to academic learning. It would be tempting to compare these one by one with the basal reader approach, but that is not the purpose of this paper. Rather, this paper will attempt to compare the common features of systems approaches with the common features of basal reader approaches, to discover similarities as well as differences, and to offer some guesses about trends in the near future.

The nine main features of systems approaches identified by Twelker, Urbach and Buck provide the framework for these comparisons. Their first main heading, problem identification and organization, has three subheadings: identification of the problem, analysis of the setting, and organization of management. These steps are just as important in the preparation or revision of a basal reader series as in systems development. In identification of the problem, decisions have to be made about the target population -- the ages or grades for which it is

intended, whether to aim for the general population or for a special group

such as inner-city minority group children, and so forth. In analysis

of setting, the increasing use of non-graded sequential levels rather than

grade levels tends to make basal series independent of the specifics of

school organization. It is generally assumed, however, that the basal

materials should be teachable by one teacher per classroom to a sizeable

class of children who show wide variation in reading skills as well as

in other significant characteristics. By organization of management

the systems analyst refers to the need to have a staff for the preparation

of the system, whose duties are allocated in clear-cut fashion. The basal

reader publisher does the same when he assembles a group of authors and an

editorial staff, and spells out in detail who is responsible for what.

Thus in problem identification and organization there is little real

difference between systems procedures and basal reader procedures.

Their second main heading, systems analysis and development, has three

subheadings: identification of objectives, specification of methods, and

construction of prototypes. The systems people and the advocates of

programmed instruction have made quite an impact on educators by stressing

the importance of stating objectives so that their attainment can be

objectively determined. Behavioral or performance objectives are stated

in terms of what the learner should be able to do, rather than in terms

of what the teacher does. Within the past three years one can observe a

shift in some basal reader series toward reformulating their objectives

in behavioral or performance terms. In doing this, the very important

areas of reading interests, tastes, and attitudes must not be overlooked.

The next subheading is specification of methods. Systems people
tend to be strongly influenced by the methodology of programmed
instruction and to aim for a very highly individualized methodology,
while the producers of basal readers are primarily concerned with group
instructional procedures. Some systems people seem to assume that a
non-individualized system is a contradiction in terms. With both a
systems approach and a basal reader approach, decisions are made in advance
about the scope, type of content, and methodology, mainly on the basis
of the developers' preconceived ideas about what ought to work best.
The ERIC paper points out that in choosing the method and format of
instruction the development team cannot be sure of success the first time,
but must depend on tryouts and revisions to refine the system. However,
almost always tryouts provide minor refinements and corrections, but
rarely do they result in a major change in methodology.

The next subheading is construction of prototypes. A prototype is
simply a rough first draft of something; in this case, of a teaching
program. In the systems approach this usually follows a sequence of
pretest, teach, and retest, with one child at a time. In computer-
assisted instruction the format is like that of programmed instruction,
with a combination of visual displays on a screen and taped vocal
instructions and comments. The child responds by pointing with a
light pen at a specific point on the screen, or by tapping out an
answer on a special typewriter. The computer keeps track of the learner's
progress, and when he makes errors, can branch him to more practice, or
a different kind of practice, on the skill not mastered. In Individually
Prescribed Instruction a computer scores tests, interprets the results,

and indicates what learning material the pupil should use next
(Duda, 1970; Richardson, 1969). Alternatively, the test scoring can
be done by test scoring machine, or by teacher aides. There seems to
be a fairly general agreement that the testing burden is too heavy for a
teacher to handle unaided.

Basal readers, on the other hand, are planned to be used primarily
in group instruction. Most basal readers employ an instructional pattern
involving preparation for reading the selection, guided reading and
discussion, skills practice, and enrichment activities. Much is left
to the teacher's judgment: the size and composition of the group, the
pace of instruction, the amount of instructional time, when parts of the
teaching plan can be omitted for fast learners or need amplification
for slower learners, the identification of individual needs and making
provisions for them.

In a systems approach it may seem that the role of the teacher is
reduced as much as possible; the goal has sometimes been expressed as
an intention to produce a teacher-proof system. The more central role
of the teacher in basal reader instruction is reflected in the well
established finding that differences in teacher competence among teachers
using the same reader series are more significant than differences
attributable to the use of different basal reader series.

The third major phase of systems procedure is evaluation. Its three
subdivisions are the testing of the prototype, analysis of results, and
either finalization of the program or recycling. Recycling means making
some changes in the prototype and trying it out again.

Usually the first step in refining a prototype is critical review by
a group of judges. The material is carefully read and it may be accepted
as it is, revised, or rejected. This is true with both systems material and
basal reader materials. After revision or replacement, systems material is
usually tried out with a few children and then may be revised again; this
process can be repeated until the developers are satisfied with it. Basal
reader publishers tend to field test samples rather than the entire program,
to do it with a inexpensive format such as photocopied typescript, and to
do it on a small scale.

Application of a readability ^formula^ is another form of evaluation usually
employed with basal reader material. If a selection is found to be too
difficult, the vocabulary and sentence structure may be further simplified,
or the selection may be moved to a more advanced place in the series.

Both systems materials and basal readers include a series of tests in
the total plan. In systems materials the emphasis tends to be on short,
criterion-referenced tests, each keyed to a specific objective. Basal
reader mastery tests tend to be more comprehensive and to be given at longer
intervals. Usually there is a mastery test to be given at the completion
of each instructional level, with sections covering new vocabulary,
decoding skills, and comprehension skills taught at that level. A series
of placement tests may also be provided. It is possible to use each work-
book exercise as a criterion-referenced test of the skills involved, but
relatively few teachers do so. The development and use of specific
criterion-referenced tests based on performance objectives may be a trend
in the basal readers of the next few years.

Most projects applying the systems approach to reading have had the

benefit of generous funding for developmental research, and so are able to continue to test outcomes and revise the system over a period of years. A commercial publisher of basal readers improves his product as much as possible before it is finalized in printed books, but the heavy costs of illustrations, printing, and binding do not allow revisions at short intervals. Thus the results of mastery tests, collected from schools using a particular basal reader series, tend to influence a revised edition that is published a few years later. In between, supplementary materials are developed to round out the series.

Probable Trends

As new developments come to the fore in reading instruction, the publishers, authors and editors of basal readers prepare new or revised series which incorporate those new trends which they consider worthwhile.

One of the trends likely to appear in basal readers of the future is the use of behavioral or performance objectives. This in turn leads to the development of criterion-referenced tests, one for each objective. If one uses a criterion-referenced test, one should have available some extra practice material for those who fail a particular test. This should be as self-administering as possible. One form of self-administered material can be a self-correcting workbook or practice pad. Chemical treatment of the page can provide ways of indicating right or wrong answers which become visible only after the pupil has entered an answer. Another form of self-administering practice utilizes a cassette tape to provide oral instructions before a child does an exercise, and then tells and explains the correct answers after he has completed the exercise. Basal reader supplements of these kinds are already

monitoring this practice and its results, massive resistance from teachers seems a very real possibility. They will demand evidence that the system is manageable by most teachers, and they will require expert instruction in the details of operating it.

The cost factor is another consideration. Computer-assisted instruction, which is a supplement to and not a replacement of classroom instruction, has been estimated to cost about $70 per pupil per year, not counting installation costs and assuming that the computer is within local telephone distance from the computer (Atkinson & Fletcher, 1972). The results look promising; the cost is, for the present at least, prohibitive for most school systems. In individually prescribed instruction, the cost of scoring and recording the frequent tests is high, whether done by a computer, by a test scoring machine, or by a teacher aide. For the present at least, most systems approaches in reading are considerably more costly to operate than conventional basal reader instruction. For school systems that do not have access to special funding for participation in systems development projects, and which cannot supply a wealth of aides and volunteers to supplement the teachers' efforts, a true systems approach does not seem feasible as yet.

For the near future, therefore, it seems likely that most school systems will continue to center their reading instruction around basal readers. The basal readers will slowly and cautiously adopt certain features of the systems approach, making sure that they are manageable by ordinary teachers under typical school conditions, and moving toward an effective combination of group and individualized procedures.

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