Objectives and Methods for Secondary Teaching

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To our wives, Pam and Ellen, whose patience is infinite

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Preface

Many educators have come to realize that a potential solution to several pervasive needs in education today can be found in competency-based education. In their attempts to make the transition from the traditional approaches commonly used in teacher education to those used in competency-based education, teacher educators and students often find themselves attempting to use a basic secondary-education methods text that emphasizes the teaching *process* with a supplementary paperback that focuses on the teaching *product*.

This text is designed to include the elements commonly found in secondary methods texts, but it is written with an internal consistency that agrees with and actively incorporates fundamental principles espoused by the competency-based education movement. It therefore includes such things as sample precise instructional objectives for the users of this book at the beginning of each chapter (other objectives can be built by the reader as his or her needs dictate), model self-instructional packages, and a basic schematic model for understanding competency-based education as it influences the practicing teacher. In addition, practical matters, such as the

teacher's role in discipline and an approach to continuous self-improvement, are included, with emphasis on aspects relating to competency-based education.

Another unique feature of this book is a new approach to classifying objectives in the affective domain, which is useful in a practical approach because it assists in solving the teacher's often-felt dilemma when dealing with affective domain objectives. The relationship between the cognitive domain and affective domain is discussed in a way so as to make affective domain objectives more useful.

This book was made possible through the assistance of many people. Specifically, we wish to thank Dr. Charles Gray for his efforts with the affective domain chapter; Dr. Leo Eastman, who foresaw the development of competency-based education and proceeded in that direction early in the movement; and Dr. Albert Upton, whose patience in explaining what should be obvious is limitless. Finally, we thank the Professional Sequence staff at Illinois State University for their many ideas and contributions.

W.D.P. / M.A.L.

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A Theoretical Foundation For Instruction

Among the most intriguing questions confronting the educator bent upon improvement is where to start. One could focus first on the processes within the classroom and the transactions between pupil and teacher, or on the rationale behind any particular educational endeavor. After careful consideration of various starting points, however, it becomes apparent that the components of any logical instructional process are intwined and inseparable. Hence, one starting point that makes good sense is to attempt to conceptualize a complete process initially and subsequently to examine its parts in relation to the whole.

The procedure most often used in this regard is to focus initial and continued attention on the activities involved in teaching-learning situations. Concern about instructional activities not only dominates most texts dealing with education, it frequently dominates everyday discussions among teachers. It is not uncommon, for example, for students to hear one teacher ask another, "What are you doing in class today?" The question seems perfectly appropriate to students because when they get home and their parents inquire about school, their parents are likely to approach the matter in exactly the same way, i.e.; "What did you do in school today?"

A more appropriate question, however, would be, "What will your students be able to do after instruction that they were unable to do prior to instruction?" But this question is not usually addressed. Many students and teachers seem to accept the idea that activities such as talking about the economy or going on a field trip are of prime importance in and of themselves. The fact that they are vehicles by which skills and information are acquired is usually overlooked. This is not to say that instructional activities are not important; a major portion of this book is devoted to helping teachers improve learning activities. What is even more important, however, is understanding how to select particular activities and how the activities can be made into an effective instructional program. This understanding can be facilitated by an exploration of a theoretical foundation for instruction, and it is the function of this chapter to provide an overview of the theoretical model discussed in the remaining chapters of this text.

OBJECTIVES

The student will:

1. When given a blank schematic of the Logical Instructional Model, label each stage in writing and without error. (Knowledge)
2. Explain orally the function of each stage of the Logical Instructional Model and its relationship to the other stages. (Comprehension)
3. Observe a one-hour lesson and specify, in writing, which stages of the Logical Instructional Model were manifested in the lesson and which specific activities support those assessments. (Analysis)
4. Design a unique schematic that depicts the educational process and defend the logic of the model by explaining, in less than three pages, the interrelationships of its stages. (Synthesis)

FOUR-STAGE MODELS OF INSTRUCTION

In recent years a number of educators have developed models of instruction that consist of four basic elements: (1) preparation of precise instructional objectives: (2) preassessment of students to determine their abilities relative to the objectives: (3) instructional activities to insure achievement of the objectives: and (4) evaluation to determine whether students are able to achieve the objectives.

In 1970 Popham and Baker in *Systematic Instruction*,[1] and Kibler, Barker, and Miles, in *Behavioral Objectives and Instruction*,[2] depicted these

[1]James Popham and Eva Baker, *Systematic Instruction* (Englewood Cliffs, N.J.: Prentice-Hall, 1970), pp. 13 and 18.

[2]Robert J. Kibler, Larry L. Barker, and David T. Miles, *Behavioral Objectives and Instruction* (Boston: Allyn & Bacon, 1970), p.3.

four stages in schematic diagrams. Popham and Baker used the diagram in Figure 1 to show the model and its self-correcting features.

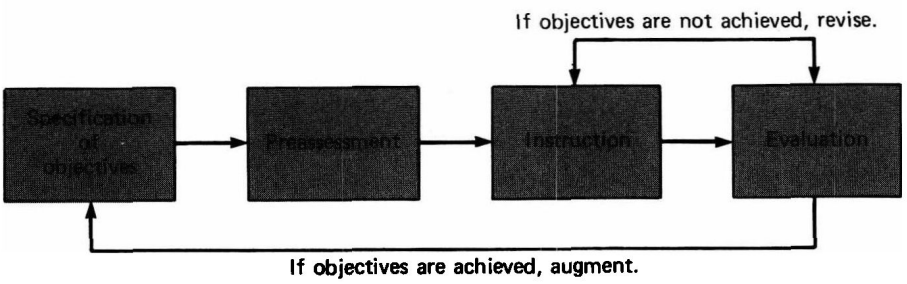

FIGURE 1 A Goal-referenced Instructional Model with Courses of Action Dictated by Evaluation of Results

The diagram by Kibler, Barker, and Miles is very similar. Using the title "General Model of Instruction" and somewhat different labels, they included a "Feedback Loop" to examine the first three stages when such an examination was indicated by the results of the evaluation. The "General Model of Instruction" is diagrammed in Figure 2.

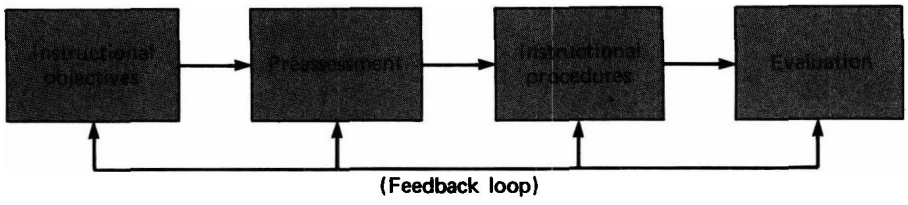

FIGURE 2 A General Model of Instruction

As basic and revealing as they are, both schematics leave a number of questions unanswered. Both, for example, imply that instruction must follow preassessment. This ignores those instances in which preassessment indicates that students already possess the competencies sought. In the model diagrammed in Figure 1 it is assumed that if the objectives are not achieved the fault lies in the instruction. Although this point is taken up in accompanying materials, the model itself could be interpreted as not considering those instances in which students enter the class without the beginning competencies necessary for success. The model diagrammed in Figure 2 carries a number of implications in the "Feedback Loop," but if students are unable to achieve the objectives no specific course of action is implied other than a

general reassessment of each and every stage of the model. A more precise and detailed model might be even more helpful.

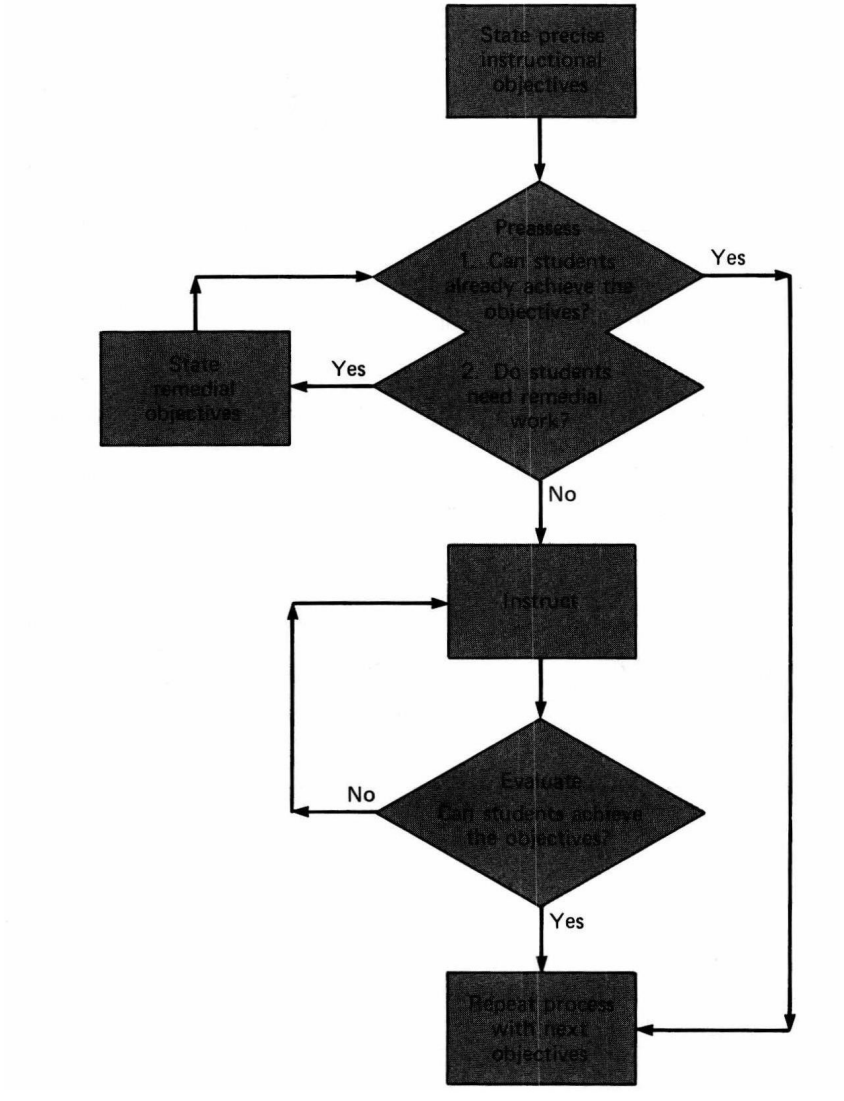

FIGURE 3 The Logical Instructional Model

A LOGICAL INSTRUCTIONAL MODEL (LIM)

The Logical Instructional Model, diagrammed in Figure 3, builds upon the excellent work already done by Popham and Baker, and by Kibler, Barker,

and Miles. It is an attempt to diagram schematically a theoretical foundation for the instructional process that is more complete and more self-explanatory than preceding models. The remainder of this chapter is devoted to providing an overview of this model, and the following chapters are largely devoted to building the understandings and skills necessary to making the model a viable and sound basis for instruction.

State Precise Instructional Objectives

Although it may sound like a contradiction in terms, the place to begin planning an instructional procedure is with the instructional results. The first and most important point to be considered is *what students should be able to do after instruction.* Making this decision is the single most complex and difficult step in planning for instruction.

In every community there are political, sociological, psychological, practical, and subject-matter considerations that must be taken into account when curricula are being built and objectives decided upon. What individual teachers must do is sort out the various factors, classify them into a priority (or pressure) order, and use them to assist in the selection or writing of precise instructional objectives that will satisfy students, parents, administrators, boards of education, and themselves. This is no simple task, especially considering that most teachers have had little, if any, formal training in the writing of precise instructional objectives.

School systems throughout the country are going about the task of acquiring precise instructional objectives in a variety of ways. Some, for example, are purchasing compilations of objectives and asking their teachers to choose and alter objectives rather than write them originally. Other school systems are asking teachers to write objectives for their own classes, while still others are organizing teachers according to subject matter or grade levels and asking them to write objectives on a collective basis.

Below are specific, but typical, kinds of questions teachers must ask themselves as they begin to focus on their objectives.

1. Will the objectives assist in satisfying student needs?
2. Can the students attain the objectives?
3. Are the objectives worthy of attainment?
4. Do the objectives lead to a series of increasingly more important objectives?
5. Are the objectives compatible with the overall goals of the community and school?
6. Are the objectives relevant and reflective of social and cultural realities?
7. Are the necessary human, physical, and financial resources available?
8. Have ideas for objectives been considered from sources such as students and parents?

In addition to being able to justify the inclusion of each objective, the teacher must phrase each so that it conveys the exact instructional intent. At

the very least, each objective should specify exactly what each student is to be able to do at the end of the instruction, and how well he or she must do it. In addition, most objectives will need some clarification of the exact conditions under which the specific competency will be demonstrated.

Obviously the stating of precise instructional objectives is a thought-provoking and time-consuming task, but since every other part of the instructional process depends directly on the objectives, they are all-important. If the objectives are poor the rest of the instructional process is likely to be poor also, but if the objectives are well stated, include an observable behavior, and are measurable, then the instructional process is more likely to be equally strong.

Preassess

Once the precise instructional objectives have been explained to the students, the teacher's next step should be to preassess students' abilities. Since the teacher is seeking to compare the abilities students possess prior to instruction with those they will need in order to demonstrate the specified competencies, the preassessment often consists of an equivalent form of the final evaluation instrument. Properly conducted preassessments can yield a great deal of valuable information, but they primarily provide data related to two specific questions.

The first question is: "Do students already possess the specified competencies?" In some instances it might happen that students already possess the skills and /or information necessary to demonstrate the stated competencies. In these cases it would be pointless to proceed with the planned instruction because it is not needed and would only bore the students. Once the determination is made that students can, in fact, perform as required, they may immediately move to new objectives.

The second question is: "Do students need remedial work?" In some instances preassessment might reveal that students lack the basic skills and /or information they need to begin working toward achievement of the stated objectives. The objectives, for example, might call for students to utilize the multiplication tables, but this skill might not be among the students' current abilities. In these cases the teacher has no logical alternative but to state remedial objectives that will provide students with the background necessary for further progress, and to go through the instructional model with these alternate objectives as the starting point. Students are then more likely to profit from instruction relating to the original objectives.

It is unfortunate when students need remediation because less time is then available for work toward the original objectives. In most cases, however, students will have the background necessary for further instruc-

tion and the teacher may need to provide only a brief review of background material. It is obviously crucial to determine, as accurately as possible, if students do need remediation.

The facts preassessing reveals about students may indicate that a teacher must go back and provide instruction other than that for which he or she is specifically responsible, or that the teacher must skip over instruction that has been carefully and painstakingly planned. This may explain why many teachers simply do not preassess their students; which, in turn, may account for a good deal of the frustration and boredom of which many students complain.

Instruct

By and large, teachers are paid to instruct students. The skill with which instruction is carried out depends largely on the abilities of the teacher, but there are innumerable procedures for improving instruction. Some procedures concern themselves with specific kinds of instructional activities and ways of making them more interesting and therefore more effective. Other procedures focus on basic principles of learning. In this text, specific activities and principles are both explored, and it is at the risk of redundancy (but with the hope that if they are reviewed they may be seen in a new perspective) that a few basic principles are included here. Other collections of such principles can be found in a wide variety of sources from Kibler, Barker, and Miles,[3] to the Wisconsin State Department of Public Instruction.[4]

1. *Students differ in ability and rate of learning just as they differ in more observable characteristics such as height, weight, and appearance.* Not only must teachers be aware of such differences, they must make each student aware of his or her own learning characteristics.

Teachers need to help individual students overcome their weaknesses and increase their self-esteem by emphasizing their strengths. Because the weaknesses are so obvious and easy to pinpoint, many times teachers forget about the need to emphasize strengths, and they are thus less successful than they might be. Students will not respond as fully if they feel their weaknesses will continually be exposed. Provisions for fast learners to remain interested and occupied with enrichment material, and for slow learners to obtain the help they need to continue learning are necessary, although sometimes difficult to achieve in every classroom.

[3]Kibler, Barker, and Miles, *Behavioral Objectives*, pp. 7-9.

[4]See "Learning Principles, Wisconsin State Department of Public Instruction" in Leonard Clark, ed., *Strategies and Tactics in Secondary School Teaching* (Toronto: Macmillan, 1968), pp. 100-107.