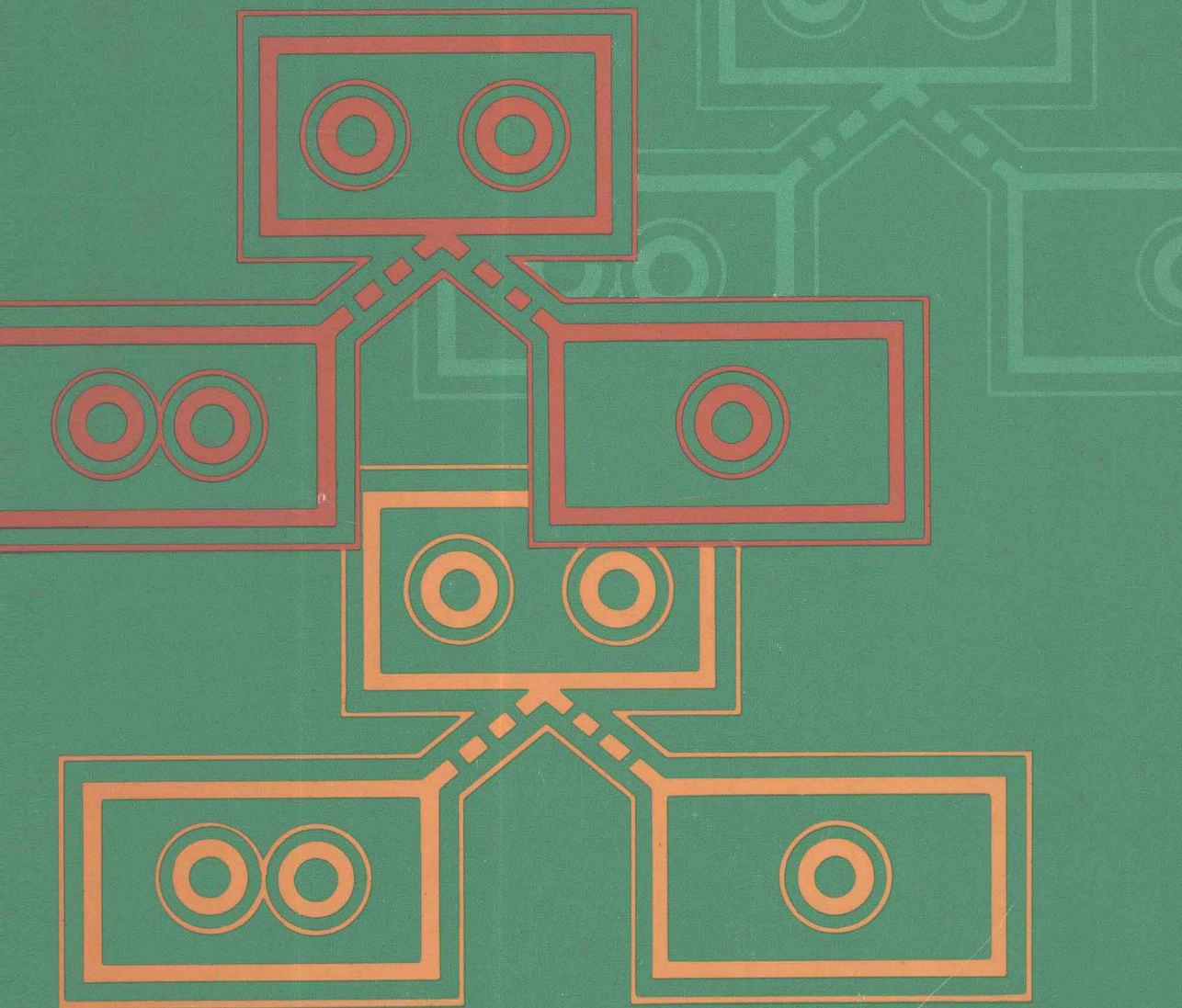


CLINICAL EDUCATION FOR THE ALLIED HEALTH PROFESSIONS

Edited by
CHARLES W. FORD



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CHARLES W. FORD, Ph.D.

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FOREWORD

From the perspective of time, the literature for allied health education can trace its expansion and growth to the passage of the Allied Health Education Act of 1966. The development of new colleges, schools, and divisions for these health professions, defined as “allied” by that legislation, became one of the most important educational administrative innovations in academic health centers, universities, and community colleges throughout the United States. Although many speakers were expounding on allied health philosophy and potential, educators in the departments and administrative offices of these new programs found a void in written communication concerning some of the real challenges in allied health education. Thus, it is encouraging to note that within the past few years this literature is beginning to develop through both texts and a quarterly journal; the “ballpark” for such educational literature for these health professions is now responding to some of the problems and issues in education in these fields.

I believe that this book should prove to be a hallmark among the new writings for these health professions, for it speaks directly to the area of clinical education, one of the most complex and important components of allied health education programs. This text also removes the stigma of on-the-job training in hospital settings and adds the responsibility of improving the clinical experience, supervised by the personnel in the educational settings

working in harmony with clinical practitioners.

With major emphasis being placed on a more refined curricula for many of these fields and with new thrusts in clinical education based upon changes in health care delivery patterns, it is propitious to have this new text that will assist allied health educators learn how to plan, develop, and evaluate clinical education programs.

Historically, allied health education has made the transition from total emphasis on hospital-based settings to emphasis on academic settings—sometimes without regard to the health care settings. We now realize that one cannot separate didactic instruction from clinical instruction as though they were two distinct entities. We must concentrate on partnership program development with integration of components as the key. Although this book focuses on the issues of clinical education, it is in the context of total program improvement.

The editor of this text has had rich experience in participating in a unique allied health clinical education consortium; this gave him a breadth of practical experience with many fields at various educational levels. His former experience in an allied health instructional program has helped him develop the conceptual framework to clinical education. That is evident in both *Teaching in the Health Professions* and this text. It is little wonder, then, that he has become a sought-after educational

consultant for allied health educational pursuits.

Faculty and administrative personnel who have had clinical education responsibilities and those who are now taking on new clinical education assignments will appreciate the comprehensive Table of Contents of this text. Here one finds a large number of competent, experienced educators who share their specialized expertise in discussing the various components of clinical education. Although some of the individual health fields have a rich history of experience in clinical education, this new text presents a special approach to the problems involved in the selection, development, and evaluation of clinical education programs. In fact, perhaps the most signifi-

cant contribution of this text may be found in the fact that each chapter deals with an aspect of clinical education in such a way that faculty members and others now have an opportunity to evaluate existing programs in line with the ideas and concepts presented.

Hopefully, this author and others will focus their attention on other important aspects of allied health education and treat each topic in the comprehensive nature of this text. As activities such as these occur we will move further away from those days when we stressed manpower development and magnitude of programs to this imminently superior time when the quality aspects of each curriculum can now be given priority attention.

J. Warren Perry

PREFACE

To study the phenomenon of disease without books
is to sail an uncharted sea, while to study books without patients
is not to go to sea at all.

SIR WILLIAM OSLER

In a review of the book *Teaching in the Health Professions*, edited by Margaret K. Morgan of the University of Florida and myself, Bella J. May suggested that the book provided a needed tool for the health professions. She further suggested that the editors “might try to expand each of the sections into a book of its own.” Dr. Morgan and Dr. Irby of the University of Washington have produced a textbook that explores assessment more fully: *Evaluating Clinical Competence in the Health Professions*. During the same period of time I have busied myself developing a book dealing with another aspect of *Teaching in the Health Professions*, namely clinical education.

This book on clinical education has evolved out of my work on a Division of Associated Health Professions contract. The contract called for the development of an allied health clinical education consortium model. In developing this model, I was forced to look and look again at the characteristics of clinical education in nearly twenty allied health professions.

The diversity of these clinical experiences ranged from hospital-based experiences controlled almost entirely by the health care facility to those set in the offices of private dentists and physicians as well as to clinical experi-

ences occurring almost wholly on the campus of an educational facility. The extremes of these experiences suggested that commonalities would be scarce. However, as I continued to examine the clinical experiences, and methods to improve them, I soon discovered that there in fact were common problems and common solutions—if not in the specific, at least in the general.

Furthermore, I realized that many of the points that Dr. Morgan and I were trying to make in *Teaching in the Health Professions* were relevant to the clinical experience. This idea was crystallized when I attended a workshop on clinical education models at the University of Connecticut. After general workshop sessions with the faculty and participants, I discussed my hypothesis with Polly Fitz, workshop leader and Dean of the College of Allied Health. She agreed with some of my premises and gave me further suggestions, particularly from her experiences as a registered dietitian. With these ideas beginning to make sense, I worked up an outline embodying many of the concepts of a systems approach to clinical education. During this time, Shirley Weaver, my colleague in the consortium, provided some thoughtful input. The remainder is unimportant history.

What is important is for the reader to un-

derstand that there is a design to the book. In accord with a systems approach to instruction, this book states the belief that establishing goals, objectives, and policies must be the first decision point. The go-no-go decision should result from information at this early stage. The first position that needs assessment holds in this book reinforces this belief. If the needs cannot be clearly established, then what is the point of clinical experience?

The remainder of the chapters in Part I emphasize some of the important issues concerning the establishment of policies and procedures. As is the case with the entire book *some* of the issues, not *all* of them, are explored. The choice of content was a matter of setting content priorities and identifying persons capable of addressing each issue.

Part II parallels the second part of the suggested system, identifying student characteristics by focusing on identification of the kind of plans needed to match program intent.

Part III of the textbook parallels the idea that the instructor must facilitate learning by choosing among several alternatives. So, too, in clinical education must the faculty, both clinical and academic, choose the most cost efficient and effective means of reaching the objectives established for the program.

Part IV of this text directly parallels the evaluation stage of the systems model. A system is not complete until suggestions are made to help determine whether the objectives have been met. In this section I suggest the clinical education guide, which I have found to make a considerable difference in student and faculty attitudes and experiences during clinical education. Although not an assessment tool in itself, it is a tool for improving the assessment process. Other chapters in this

section provide additional concrete suggestions.

This book neither addresses all the issues of clinical education nor attempts to deal with highly specialized and sophisticated issues that are more unusual than common. It does, however, address the issues that are most relevant and common for the greatest number of allied health practitioners and educators, particularly those new to allied health education.

My thanks go to a number of persons. I have already suggested two: Polly Fitz for helping me to see the problem of clinical education in a Gestalt, and Shirley Weaver for her constant, sometimes irritating questions that I had to answer—at least to my own satisfaction if not to hers.

I also owe thanks:

To Aaron Andrews and John Brady for allowing me to pursue a personal goal in the context of an assignment that dovetailed and integrated with it.

To Dolores Filson for serving as my second pair of eyes in the editing process as she made sure that all manuscripts were consistent and complete.

To Chris Clark and Helen Shively for typing the correspondence with the contributors.

To Sandy McCoy for typing the final copy that was ultimately set in type.

To Carol Elkins and Donna Watson for arranging for my participation in “practice” workshops.

And finally to many workshop participants who sat through sessions listening to ideas that germinated into this effort.

Charles W. Ford

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prologue **A PLACE TO BEGIN**

A SYSTEMS APPROACH TO CLINICAL EDUCATION

Charles W. Ford

Show a child a toy pyramid tower made of various sized, doughnut-shaped plastic rings and a center post. Take the tower apart, give it to the child, and what results? The child will soon place the rings on the upright post to begin to form the tower. Initially, the child will not always place the largest rings at the base and proceed to construct the pyramid tower with a series of smaller rings; the child will make mistakes. With some guidance and a period of trial and error, the child will soon learn to construct the tower quickly, efficiently, and correctly. In simple terms, the child can be said to have become competent in building the pyramid tower.

This prologue addresses issues of competency in the context of a systems approach to instruction. The reasons are many. First, introduction of competency-based education requires an institutional commitment that demands a departure from traditional education. Clinical education for the allied health professions requires articulation among several institutions, with heavy dependence on health care institutions. Radical educational change might be possible within one educational institution, but it is less likely to be coordinated among several institutions, especially those that have a secondary commitment to education, a primary one to health care. Second, the present state of clinical education can benefit from focusing on a systems approach to instruction and from moving from a traditional approach toward competency-based education, particularly in the didactic portion of curricula. Third, the clinical portion of curricula can be improved by utilizing concepts and principles of a systems approach to instruction. Since the most difficult task in clinical education is evaluation, utilizing a system based upon competency will ensure improved instruction and evaluation.

There is little question that in the health professions competency has always been a central focus for the preparation of practitioners. I believe that a systems approach to instruction can provide a foundation that will enable faculty to introduce competency-based education into their own programs in an incremental fashion.

TERMINOLOGY

The English language provides an array of synonyms, while it preserves subtle distinctions among them that suggest specific nuances. The specialized language of education, on the other hand, often uses one word that is differently defined by each author. This chapter defines each word in a manner consistent with those definitions generally accepted by educators. New terminology is not introduced, for the language of education is already sufficiently complete. For example, *competency* is defined in this chapter as it is in the literature—as the ability to carry out a specific task within given parameters of control. Thus competency-based education is the designing of a course, program, or curriculum on the basis of what the student is supposed to learn to do.

Another term that frequently appears in the literature is *performance-based education*. Other authors attempt to differentiate the terms *competency* and *performance*:

Objectives describing a behavior, but without additional criteria, lead to performance-based education, while behavioral objectives with performance criteria lead to competency-based education (p. 89).³

Although some authors differentiate between the terms, this text concurs with Houston and Howsam:

Some see this [competency] as the more comprehensive of the alternative terms and hence as the more capable of including the wide range of types of objectives and of abilities to perform. At best, however, the choice must be recognized as an arbitrary one made in the interests of uniformity. The two terms remain synonymous and hence subject to personal choice (p. viii).⁷

Roueche, in the companion chapter to this one in *Teaching in the Health Professions*, also equates the terms:

In all definitions of learning, a basic condition associated with learning is changed behavior. *Competency- or performance-based* instruction implies that learning produces a change in the learner's behavior (p. 2).¹¹

A straightforward comparison of a competency-based and a conventional educational system seems in order. Young and Van Mondfrans¹⁵ have developed a table (see Table 1) that provides insight into the *pure* attributes of competency-based education in comparison with conventional education. The word *pure* is italicized with purpose. Broski and his colleagues at Ohio State University began their first published report on competency-based curriculum design with these words:

A competency-based curriculum, like a core curriculum, is often discussed, rarely defined, and seldom operationalized. In its pure, theoretical form, it probably has not been implemented anywhere—ever.²

The description of the competency-based system in Table 1 is approximated in application; perhaps it has not been implemented anywhere in a pure form. The reader must determine to what extent the principles in Table 1 can be applied to the clinical setting.

Fig. 1 is a model for systematic instruction. It includes concepts introduced by Tyler¹⁴ and is integrated with the teaching model of DeCecco⁴ (as adapted by Ford and Morgan). This eclectic systems model can be put into practice in a variety of ways. In this book, it is applied to clinical education.

Table 1

A comparison of competency-based and conventional systems of instruction

| Issues | Competency-based | Conventional |
|--|--|---|
| 1. Who sets the goals and objectives of instruction? | Both the teacher and student are usually involved. When the teacher sets the goals and objectives, the student is told what they are and often is allowed some choice of objective or goal. | The teacher usually sets the goals and objectives. Often they are not clearly defined. Students are usually not told what they are. Students usually do not have a choice. |
| 2. Who decides on the means and procedures of instruction? | Students often have a choice of alternative routes, experiences, and materials to use in pursuing a given goal or objective. The student controls the amount of time spent on the goal or objective. | The teacher usually controls the situation and presents all students with the same materials and experiences for the same amount of time. |
| 3. What is learned? | Students usually learn how to do something. | Students may learn about something. |
| 4. Who decides on the evaluation procedures? | The teacher ensures that the evaluation procedures are consistent with the objectives. Often students have a choice of ways to demonstrate that they can perform as expected. | The teacher usually gives a test of his or her own design. Students often don't know what is expected of them. Testing procedures tend to be paper-and-pencil tests. |
| 5. When does evaluation take place? | When the student indicates readiness. | When the teacher is through teaching a unit of instruction. |
| 6. When does the student move on to the next set of learning goals and objectives? | When the student has mastered the last set of objectives and goals. The student continues working on a set of goals or objectives until mastery is achieved. | When the last unit has been taught and the evaluation of students is completed. Students may have "failed" or "passed" the last unit at various levels of proficiency. Nevertheless, all students move on to new content. |

Adapted from Young, J. I., and Von Mondfroms, A. P.: Psychological implications of competency-based education. In Burns, R. W., and Klingstedt, J. L., editors: Competency-based education, Englewood Cliffs, N.J., 1973, Educational Technology Publications, Inc.

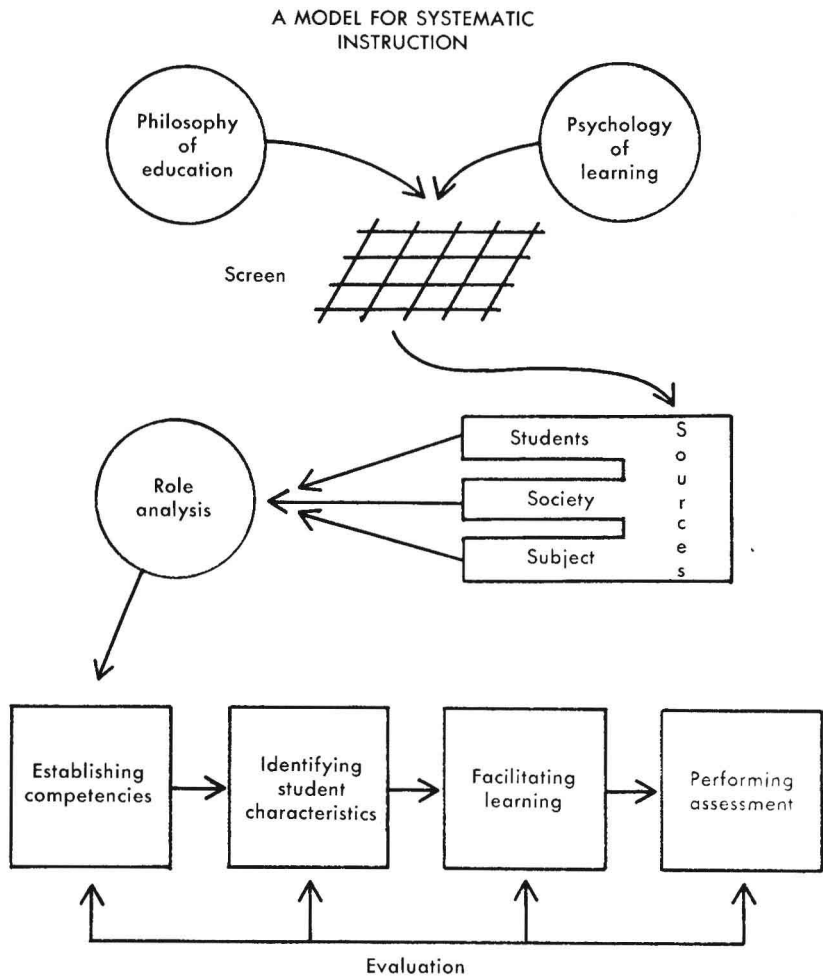


Fig. 1
A paradigm of the basic steps in a systems approach to instruction.

Although clinical education in most cases occurs within a wider context that includes both didactic and clinical education, the issues of clinical education are specific enough to demand individual attention. Neither this chapter nor any other chapter in this book presents an argument for this premise; it is an assumption that is accepted as a given.

THE MODEL

Fig. 1 is a simplified paradigm of the basic steps in a systematic approach to clinical education. The graphic is linear; other models exist in the literature that are circular. Whether the model is linear or circular, the *process* is the focus of attention. And the process is always in a state of becoming more than it already is; always developing; always being reconsidered; stable but not inflexible; flexible but not without form. To make sense out of some of the more prominent characteristics, the reader must examine the model in closer detail.

Philosophy of education

Curriculum designing occurs within the context of what the designer believes about education. *For whom?* and *for what?* are central questions. “Everyone should have the same opportunity” is not congruent with “only those with exceptional ability should have the opportunity.” The former is democratic; the latter, elitist. These statements deal with the *for whom* of education.

The *for what* answer depends on the designer’s view of man. Do human beings control the environment or does the environment control humans? Answers to these questions will lead to various emphases in the design of a curriculum and in the subsequent design of clinical experiences.

Any philosophical position of education for the health professions must define the relationship of education to patient care or, more appropriately, within the context of patient care. Is education mainly for preparing to live a life or preparing for a career? Is education to be technical or theoretical? What constraints or compromises must exist within the health professions if patients are to receive first priority?

Psychology of learning

What one believes about *how* students learn also has implications for curriculum design. For example, modeling is important in the health professions. Where is modeling most effective? To what extent should it be utilized? Is learning by social imitation really useful in preparing practitioners for new roles in a changing health care delivery system? Or is it more important to provide students with the thought processes necessary to put content and experience into an organized whole (Gestalt field theory)? Or is learning a result of providing the right stimulus in order to generate the correct response?²⁵

Whether or not these questions are considered, the impact of learning theory on curriculum design is apparent as clinical experiences are designed. Several chapters in this book address the design of clinical experiences from different vantage points. Each reflects a theory of learning: Agriesti-Johnson, as she addresses early exposure and its limitations and implications; Kingston, as he discusses various approaches to graduate level experiences; Hoban and Casbergue, as they suggest ways to use simulation. These chapters and other emphasize that what one believes about learning should be reflected in the structures of the learning experiences.

Screen

The ideal should always be considered when dealing with the level of abstraction demanded in examining a philosophy of education and a psychology of learning. If the ideal is not considered at this juncture, it most likely will never be considered. Too often the ideal is prematurely dismissed as being unworkable. Once the ideal is considered and developed, then and only then should restraints and constraints serve to screen out the portion of the ideal that is unworkable.*

Sources

How does one determine what is to be taught? The answer is by examining the three major sources of available information. *Students* can provide a great deal of

*The original Tyler model suggests that screens should follow the generation of tentative general objectives. Popham and Baker¹⁰ report that Tyler has more recently suggested using screens earlier.