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ABSTRACT

          Six workshops, composed of 799 participants
representing 429 agencies in the North Atlantic, Midwest, Southern,
and Western regions, were conducted during September-November 1969 by
the Council of Diploma Programs of the National League for Nursing.
At each workshop a nurse educator gave a presentation to familiarize
the participants with the utilization of objectives in planning and
developing the curriculum, determining levels of progression in the
curriculum, and identifying objectives for these levels. Group work
and discussion sessions followed. Presentations on "Level Objectives:
Development and Use in the Curriculum," were made by Eleanor W.
Treece, Nan B. Dunn, Marion Ruidl, Dolores Milton, Mary McShain, and
Hilda Reynolds. (SB)

LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Report of the 1969 Regional Workshops
of the Council of Diploma Programs

CONTENTS

INTRODUCTION

The 1969 series of regional workshops was planned by the Program Committee of the Council of Diploma Programs in support of a priority established by the Executive Committee of the Council--namely,"improving the educational preparation, both formal and informal, of all faculty members." Before developing the specific plans for the workshops, the Program Committee agreed upon two guidelines for itself: (1) the workshops must focus on needs of instructional personnel of the faculty and (2) the plans must be such that these persons would become directly involved in the activities of a workshop. The Committee also developed a definition of a workshop and guidelines for both group behavior and group leaders (Appendix A).

The overall objective for the six workshops was to familiarize the participants with the utilization of objectives in the planning and development of the curriculum, in the determination of levels of progression in the curriculum, and in the identification of some objectives for these levels.

The general plan was the same for each workshop and included a presentation by a nurse educator, work sessions, a summary by a panel of listeners, and opportunities for the sharing of ideas in general discussion sessions. (See Appendix B for details of general program.)

Each member of the Program Committee assumed responsibility for one workshop-- which included securing the principal speaker and the members of the listening panel-- and presiding at the workshop. In order to ensure accomplishment of the objectives of the workshops, the committee identified certain preparatory activities to be carried out by each registrant before coming to the workshop. The assignments were as follows.

1. Become familiar with the following publications and bring them to the workshop:
   a. Mager, Robert F. Preparing Objectives for Programmed Instruction. San Francisco, Fearon Publishers, 1962.
   b. National League for Nursing. Aspects of Curriculum Development. New York, NLN, 1962.
   c. National League for Nursing. Toward Excellence in Nursing Education. New York, NLN, 1964.

2. Identify in writing the kind of information you expect to gain from the workshop.

3. Ask the faculty what they expect of you when you return from the workshop.

During the first morning session, each registrant was asked to complete a form asking the following questions: What expectations do I have? What questions do I have about objectives and levels? What resources or publications did I find helpful?

At the start of the work sessions, the individual responses of the members of each group were summarized by the group as a whole on a form titled "Group Inventory for Achieving Workshop Goals." A review of the summaries indicated that in general, the expectations of the participants regarding the workshops were (1) to develop objectives that indicated behavioral outcomes, that were realistic, and that could be measured and (2) to determine criteria that could be used in establishing levels within the curriculum and in identifying objectives for these levels. The questions raised by the

participants about objectives related to the stating of objectives in behavioral terms and their specificity. The questions raised about levels pertained to the characteristics of levels and the rationale for developing a curriculum by means of this approach.

The Program Committee's scheme for the group work sessions was that each group was to act as a curriculum committee for the mythical WENS School of Nursing. Four basic guidelines that the curriculum committee was to use during the work sessions were established by the Program Committee.

1. The state board of nursing requirements are flexible and the faculty has the freedom to work within this policy.

2. The graduates of WENS School of Nursing are prepared to function as general duty nurses in hospitals and similar institutions in the care of medical, surgical, maternity, pediatric, and psychiatric patients.

3. The courses included in the curriculum plans contain basic content and experiences that are characteristic of the length of the program. The approach to fundamentals of nursing includes content and experiences related to the basic needs of people and the fundamental skills needed by the nurse to meet these needs. The medical-surgical nursing courses increase in complexity of problems with the number of the courses and include content and experiences related to the nursing problems of patients with medical-surgical conditions. The pediatric, psychiatric, and obstetric nursing courses are planned to meet the nursing problems of patients in these particular clinical areas.

4. Content from pharmacology, diet therapy, growth and development, community resources, teaching, and rehabilitation is integrated throughout all courses in nursing.

In addition, two curriculum plans were developed by the Committee (Appendix C). These plans were to serve only for discussion purposes and were not to be interpreted as typical plans for adoption by diploma schools of nursing.

The tasks assigned to each group serving as a curriculum committee were as follows:

1. Identify the major levels within the curriculum plans in which the behavior of the student changes significantly as a result of the placement of courses within each level.

2. Write objectives for the identified levels that show the differences in behavior of the student in relation to the following curriculum objectives:
   a. Provides nursing care for individual patients based on their needs.
   b. Teaches patients and their families principles of health care according to their needs.
   c. Implements the nursing care plans for a group of patients.

At the end of the group work sessions, a second set of questions was answered by each individual, and a composite of the responses was put together by each group on a form titled "Group Plans for Moving Ahead." The questions on this form were: What have we learned? What were the sources of learning? How do we plan to use the learning? When do we plan to use the learning? Whom do we plan to involve?

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A review of the summaries revealed considerable unity in the thinking of the individual participants and in the collective thinking of the groups. In respect to what learning had been gained, the general consensus was: knowledge of resources that proved helpful in writing objectives; discovery of new ways in which meaningful objectives could be written in behavioral terms; acquaintance with a new approach to planning curriculum through the identification of levels and level objectives; realization of the significance this approach has for the placement of courses within the curriculum plan.

The sources of learning identified by the participants were the discussions and the work sessions, the references studied prior to the workshop, and the paper presented at the workshop.

The plans for using the knowledge and skills gained included such activities as planning an inservice program in which the total faculty would be involved, utilizing an approach similar to that used at the workshop; sharing experiences with the curriculum committee; and recommending that present objectives and levels in use at the school be evaluated in relation to their effectiveness.

The responses to the last two questions indicated that the general feeling was that these activities should be undertaken as soon as possible and that the director, the faculty, and the curriculum committee should be fully involved and students, guidance counselors, librarians, and appropriate nursing service personnel should be involved as necessary.

The Program Committee made a change in the plan that had been followed in prior workshops sponsored by the Council of Diploma Programs. This consisted in restricting attendance at each workshop to a maximum number established by the Committee, which required the honoring of agencies' choices of meetings on a first-come, first-served basis.

The Committee also recommended to the agency members that instructional personnel attend the workshop.

The regions, places, and dates of the six workshops and the names and positions of the Program Committee members who presided, the principal speakers, and other contributors to the programs follow.

NORTH ATLANTIC A: Rochester, New York, September 25-26.
  Presiding: Mary E. Mullen, Director, School of Nursing and Nursing Service, Kings County Hospital Center, Brooklyn, New York.
  Principal Speaker: Mary McShain, Director, School of Nursing, United Hospital, Port Chester, New York.
  Other Contributors: Judith R. Dincher, Instructor, Medical-Surgical Nursing, Arnot-Ogden Memorial Hospital School of Nursing, Elmira, New York; Patricia Szczech, Instructor, Medical-Surgical Nursing, Stamford Hospital School of Nursing, Stamford, Connecticut.

NORTH ATLANTIC B: Pittsburgh, Pennsylvania, October 13-14.
  Presiding: Frederick H. Wescoe, Director of Nursing, Capital City School of Nursing, District of Columbia General Hospital, Washington, D.C.
  Principal Speaker: Nan Dunn, Director, School of Nursing, Washington, Hospital Center, Washington, D.C.
  Other Contributors: Hester Johnson, Associate Director, St. Luke's Hospital School of Nursing, Bethlehem, Pennsylvania; Cathleen McCormack,

Associate Director, Charles E. Gregory School of Nursing, Perth Amboy General Hospital, Perth Amboy, New Jersey.

MIDWEST A: Omaha, Nebraska, November 6-7.
Presiding: Nellie Osterlund, Director of Nursing, Iowa Lutheran Hospital, Des Moines, Iowa.
Principal Speaker: Eleanor W. Treece, Ph.D., Curriculum Coordinator and Instructor, Arthur B. Ancker Memorial School of Nursing, St. Paul-Ramsey Hospital, St. Paul, Minnesota.
Other Contributors: Charlotte Schultz, Director of Student Personnel Services, Nebraska Methodist Hospital School of Nursing, Omaha, Nebraska; Lorraine Sherk, Associate Director, St. Luke's Hospital School of Nursing, St. Louis, Missouri.

MIDWEST B: Chicago, Illinois, November 10-11.
Presiding: Wanda Quay, Director, School of Nursing, Riverside Hospital, Toledo, Ohio.
Principal Speaker: Sister Marion Ruidl, Associate Director, Holy Cross Hospital, Salt Lake City, Utah.
Other Contributors: Emily Boling, Instructor, Maternity Nursing, St. Anthony Hospital School of Nursing, Terre Haute, Indiana; Leah Hughes, Senior Instructor, Chicago Wesley Memorial Hospital School of Nursing, Chicago, Illinois.

SOUTHERN: Atlanta, Georgia, October 27-28.
Presiding: Mary Catherine King, Director, School of Nursing, St. Vincent's Hospital, Birmingham, Alabama.
Principal Speaker: Hilda Reynolds, Director, School of Nursing, Mobile Infirmary, Mobile, Alabama.
Other Contributors: Marilyn Dyer, Director of Nursing Education, Northwest Texas Hospital, Amarillo, Texas; Sylvia Rayfield, Assistant Director, Georgia Baptist Hospital School of Nursing, Atlanta, Georgia.

WESTERN: Salt Lake City, Utah, October 6-7.
Presiding: Dorothy D. Rademacher, Clinical Instructor in Surgical Nursing, Emanuel Hospital School of Nursing, Portland, Oregon.
Principal Speaker: Dolores Milton, Assistant Director in Curriculum, Queen of Angels School of Nursing, Los Angeles, California.
Other Contributors: Gwen H. Dodge, Instructor in Nursing, Mercy Hospital School of Nursing, Denver, Colorado; Jane B. Hubert, Instructor, St. Patrick School of Nursing, Missoula, Montana.

The table below shows the number of agency members represented and the number of registrants at the six workshops.

Workshop	Agencies	Registrants	
		Representatives	Guests
North Atlantic A	91	173	1
North Atlantic B	103	193	1
Midwest A	61	104	3
Midwest B	90	164	5
Southern	61	116	2
Western	23	49	3
Total	429	799	15

The 429 agency members represented at the workshops constituted 70 percent of the total membership of the Council.

In addition to the registrants, 22 program participants, including the 6 chairmen of the workshops, and 7 consultants (2 serving at each workshop) from the Department of Health, Education, and Welfare attended the workshops. The total attendance, exclusive of staff of the Department of Diploma Programs, was 843.

LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Presentation by Eleanor W. Treece

Introduction

It is assumed that the student is able to give more complex nursing care and acquires greater understanding as he progresses in a program, but systematic study of student achievement along the continuum of education is often lacking. Each nursing instructor assumes that the course she teaches is an important segment of the student's total nursing program; she identifies her students as freshmen, juniors, or seniors or, perhaps, first- , second- , or third-year students. But time periods alone do not indicate the accomplishment of the enrollee at each step on the academic ladder. Planning should play a vital role in "getting to where we are going."

Nursing education changed, we all recognize, after emphasis had been placed on the education of the student rather than on service to the hospital. The feeling of competition through increase in the number of college and university nursing programs and the rise in junior and community college associate degree nursing programs is, possibly, the major reason why diploma programs have made such rapid advances educationally in less than two decades. But, I believe, nursing faculty who were aware of educational trends in the United States would certainly have made innovations and upgraded their programs regardless of external pressures as they themselves became better prepared academically. They would have taken advantage of educational research, with its development of newer teaching methods, and the variety of teaching aids resulting from technological advances when they learned about them. They would have wanted to adapt the teaching media and techniques to nursing when they saw merit and usefulness in them.

To try new techniques for the sake of innovation alone, however, is not enough. There must be a solid foundation at the base of an educational program if it is to stand the test of time. Planning must precede the building process if the final product is to be symmetrical or of graceful design.

So it is with nursing education. First, there should be a systematic study of the knowledges, skills, abilities, attitudes, and characteristics the nurse of today is expected to have. This study, against the background of past trends and along with an awareness of the explosion of knowledge and its effect on the future, will add balance and solidarity to what might otherwise be a weak and biased educational offering.

The day will come when we are referred to as the ones responsible for having fashioned the nurse of tomorrow. The effectiveness of his or her performance will be in proportion to the depth of the foresight and insight we apply in the nurse's educational preparation.

In this paper, we will consider one approach to the development and the use of level objectives in the curriculum, and the principles and techniques involved.

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Definition of "School"

An applicant enrolls in a "school" of nursing. The definition of school that I have selected from the Dictionary of Education is "an organized group of pupils (or learners) pursuing defined studies at defined levels and receiving instruction from one or more teachers, frequently with the addition of other employees or officers . . . ; usually housed in a single building or a group of buildings."

This definition agrees with Webster's definition of school, which is "a collective body of teachers and learners."

Regardless of the physical facilities used, the length of the course of study, the academic preparation of the faculty, or the type of sponsorship, the graduate of a school is prepared to function according to the purpose for which the school was established.

The individuals involved, their interrelationships, and the teaching-learning process constitute the core of the educational program. Techniques and motivating stimuli may vary from time to time as efforts are made to enhance the amount of learning taking place, but there will always be the interaction of at least two people, the teacher and the student, for the purpose of developing the latter. More specifically, a school of nursing is, then, an organized group of learners pursuing defined studies at defined levels and receiving instruction from teachers and other employees and officers for the specified purpose of preparing the learner to become a registered nurse.

Development of Statements of Beliefs and School
Objectives and Utilization of the Statements as the
Foundation and Framework of the School

A sense of need determines the purpose of a school. This sense of need may result from community awareness, insight, technological change, observation, and educational accumulation. The development of the purpose of a school will proceed according to the extent to which those individuals who determine the school's purpose have developed a philosophy of life through their relationship to God, sensitivity to man, cultural background, and life experiences. The teacher, then, brings to the school his interpretation of what the purpose and aims of the school should be, based on his philosophy of life.

A statement of beliefs should be developed as the foundation upon which the entire school program is to rest. If this statement is contrary to the belief of the faculty personally, there will be little enthusiasm to support it and a lack of confidence in its success.

Whereas it cannot be expected that all teachers will agree in all respects in their personal philosophies of life, it is essential that they agree at least in the areas pertinent to the statement of beliefs upon which the school is founded. These areas include descriptive statements concerning the discipline or vocation, what education is, and more precisely, what nursing education is. Other questions to be answered include: What is learning and under what conditions does it take place? What are the means by which learning is assessed? What should be the relationship of student and teacher? What is the role of each? and What are the responsibilities of the faculty?

After the answers to these questions are collectively determined, it is the task of the faculty to identify the goals, or objectives, of the school. These evolve directly from the statements of belief and should, therefore, be in full accord with them.

On the basis of these beliefs, the school objectives are later determined. What does the educational program purport to provide for its students and what will be the result of the student's experiences in the school? Spelling out in precise terms what is to be

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accomplished by the program and by what means provides the framework upon which all learning activities are to be based.

In review, the foundation of the school of nursing is, then, the faculty's collective statement of a philosophy of education, which ultimately is based on their philosophies of life. This statement of philosophy supports the objectives of the particular school, which, collectively, serve as the framework for the completion of the educational structure or building. The foundation and framework are to serve as guidelines as well as support for the structure, and are not to be set aside as construction of the building proceeds. Otherwise, the result might easily turn out to be like a dormitory I once lived in for a year.

The college where I was a student had purchased a nearby home that it used as a freshman dorm for girls. Upon approaching the building, one immediately noticed that the outside of the brick structure lacked symmetry and upon entering the front door, one soon discovered that the arrangement of the rooms somewhat resembled a maze. We were told that the original owner had continued to add a room here and a room there after the initial construction had been completed, in any fashion that suited his whim. For this reason, it was easier to walk through a fairly long, narrow closet to get to our room in the back of the building than go there through the lounge.

General Characteristics of Behavioral Objectives

The planned learning experiences offered by a school should be in agreement with its stated goals. It is necessary, therefore, that an overview of the entire program be made if there is to be assurance that all aspects of the educational program are included in the plan.

The extent to which explicit statements concerning the competencies and traits of the student should be developed is a current issue among educators--and, more particularly, among curriculum workers. It is because some educators are questioning the helpfulness of educational objectives defined in behavioral terms that I believe it is appropriate that I address myself to this topic more fully than is, perhaps, expected.

We tend to jump onto the bandwagon and accept the popular way of doing things without giving much thought to the other side of the coin at times. And it is both sides of the problem that must be studied if unbiased judgments are to be made. I believe that the whole problem of educational objectives must be considered if their characteristics and usefulness are to be truly understood. For this reason, I believe it is important that I bring the historical background and current issues regarding behavioral objectives to your attention, rather than just present a one-sided argument for the use of educational objectives as though no one is in opposition to them.

The so-called faculty psychologists believed that the brain had a variety of intellectual faculties. These intellectual faculties could be strengthened by exercising the mind through the study of certain subject matters. The result of such exercise would be that the individual could apply the ability developed in any area of human activity. The school would then be able to expect a student who rated generally intellectually excellent. Eventually, however, the work of Thorndike, Judd, Watson, and others showed that transfer occurred only when similarity was involved. General transfer did not result as supposed.

Franklin Bobbitt, often called the father of curriculum theory, argued, in 1918, that curriculum theory was logically derivable from educational theory. Six years later, he

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concretized his theoretical assertions and showed how educational objectives were formulated. In his book, How to Make a Curriculum, Bobbitt specified nine areas in which educational objectives should be listed; in these nine areas, he included 160 major educational objectives. Pendleton listed 1,581 social objectives for English, Guiler listed more than 300 for arithmetic in grades 1-6, and Billings prescribed 888 generalizations that were important for social studies. Highly specified objectives could not be handled by teachers and, by the early 1930's, the movement collapsed.(4)

In the meantime, the child was beginning to be looked upon as a growing organism who ought to participate in his own educational program. But eventually, by the middle of the century, the progressive movement had not only declined but, as a formal organization, was dead.

During the period of progressive education's decline, curriculum specialists began once again to raise the banner of specific educational objectives. Able people such as Ralph Tyler and Virgil Herrick provided rationales for constructing curricula. Barton, Bloom, Krathwohl, and others gave further impetus to the use of educational objectives by identifying philosophical domains and building a taxonomy of educational objectives in the cognitive domain and the affective domain, respectively. More recently, Simpson built a taxonomy in the psychomotor domain. The time and effort of so many experts have resulted in a general acceptance of the statement that "Educational objectives should be stated in behavioral terms."(4)

Let us now consider some of the arguments opposing educational objectives. Eisner (4) suggests four limitations.

First, educational objectives are, typically, derived from curriculum theory, which assumes that it is possible to predict fairly accurately what the outcomes of instruction will be. He concedes that this is generally possible, but "the dynamics and complex process of instruction yield outcomes far too numerous to be specified in behavioral and content terms in advance."

Secondly, there is failure to recognize the constraints various subject matters place upon objectives. Areas such as the arts do not always lend themselves desirably to prediction and specification of educational objectives. Neither do the social sciences, which are becoming a vital part of the nursing curriculum.

Thirdly, the assumption that objectives can be used as standards by which to measure achievement fails to distinguish adequately between the application of a standard and the making of a judgment. Fields of activity that are qualitative in character are less amenable to quantitative assessment. "Here it is that evaluation must be made, not primarily by applying a socially defined standard, but by making a qualitative judgment." The degree to which a student achieves interpersonal relationships with his peers, co-workers, the patient (and his family), can hardly be assessed accurately by the instructor.

Finally, Eisner points out that "while the procedure of first identifying objectives before proceeding to identify activities is logically defensible, it is not necessarily the most psychologically efficient way to proceed." The means through which imaginative curriculums are developed should be as limitless as the means through which scientific and artistic inventions are produced. Perhaps Eisner's greatest challenge concerning educational objectives is this statement: "We do not have much in the way of empirical evidence to demonstrate that they make an important difference in teaching, learning, or curriculum construction."

Robert Ebel comments on Eisner's point of view: "If one tried to state all of them /objectives/ explicitly in advance he could easily spend all his time writing objectives and have none left for actually teaching." He asks, "Is it really necessary to state objectives specifically and in minute detail? Are there not a few general, overriding purposes of education that can serve even better than a host of particulars to direct teaching and testing?" Again, "In how much detail can the behavior of free men be prescribed and predetermined?"(3)

In a panel discussion at the American Educational Research Association Annual Meeting in Chicago in February, 1968, James Raths (6) conceded that there is a great deal of logic to support the idea of writing specific objectives, but the degree of specificity now being demanded of curriculum workers and teachers in the writing of goals is impeding curriculum reform. He argued for a compromise that would allow teachers to write objectives in a way that is more specific than at present and yet in a manner congruent with their values. He saw the specificity now demanded as runn'ng counter to the values of humanism and intellectualism.

Another panelist, Myron Atkin (1), cautioned, "When any piece of curriculum is used with real people, there are important learning outcomes that cannot have been anticipated when the objectives were formulated. And of the relatively few outcomes that can be identified at all, a smaller number still are translatable readily in terms of student behavior. There is a possibility the cumulative side effects are at least as important as the intended main effects." He went on to point out that early articulation of behavioral objectives hampers and frustrates certain types of innovation, since it tends to limit the range of exploration. The context for appropriate learnings cannot always be planned, but the teacher should "capitalize on the opportune moment for effectively teaching one idea or another." Finally, he pointed out that the behavioral analyst seems to assume that for an objective to be worthwhile, we must have methods of observing progress. But worthwhile goals come first, not our methods for assessing progress toward those goals. Goals are derived from our needs and philosophies, not primarily from our measures.

The use of behavioral objectives for curriculum design is thus coming under close scrutiny by a number of educators as they attempt to encourage discourse by asking questions that must be answered if teachers are to have and use educational objectives. As we continue our consideration of the subject, let us keep in mind the problems and questions that demand solutions.

It has already been suggested that an objective is a statement that gives a description of the competencies and the traits that a program purports to develop in students. (2) This desired outcome may or may not be identical with the actual outcome, but it is hoped that there will be a definite similarity. All objectives are not of equal importance, but the most important ones should be emphasized in the pursuit of the intended goals. At the same time, the objectives of lesser importance will also be effected.

By stating objectives in behavioral terms, it becomes easier to determine whether or not an individual has learned. If learning may be identified as a change in overt behavior, then assessment may be made within any learning area, be it classroom or laboratory. After the student's progress is determined, he may ultimately receive an appropriate grade.

Because it takes much time and effort to develop instructional objectives, the Instructional Objectives Exchange, conceived in 1968 by Dr. James Popham, now its director, and developed by him later that year in collaboration with Rodney W. Skager, has been

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established at the UCLA Center for the Study of Evaluation. The Exchange serves as a depository for and a disseminator of instructional objectives and related evaluation measures. This central clearinghouse will provide sets of instructional objectives, stated operationally, and evaluation measures, including both test items and diverse types of learner performance measures, based on the operationally stated objectives. It is intended that teachers and all those involved in the daily work of education will be saved from the burdensome task of personally developing written objectives and evaluation measures. (Perhaps nurse educators should consider replicating this project.)

If we believe that objectives are important, then students should be familiar with them so that they may know what achievements are expected of them. The usefulness of educational objectives should not be limited to those who write them, but should be extended to those we hope to influence. The student may then assess his assignments and educational experiences and, at the same time, have direction for his study efforts.

The number of sources from which educational objectives are derived is limited to three, according to Dressel. (2) There are, first of all, the needs of society; secondly, the needs of the individual, and thirdly, the authoritative statements of individuals, conferences, and professional organizations and their committees. He warns that all too often, the textbook becomes the sole determiner of both content and objectives.

A well-written behavioral objective has a number of characteristics that serve as guidelines in developing the educational program of the school.

1. It spells out explicitly what a student is able to do if he has mastered the objective. What will be the process through which his mind will solve problems? What actions will demonstrate that he has acquired the skills, understandings, knowledges, and judgments the faculty has been trying to teach?

2. It tells under what conditions the student is able to accomplish the objective.

3. It identifies the extent to which the student is able to carry out the objective. The learner can show understanding at different levels, from expressing concepts in his own words to applying his information to new situations about which he has not been taught.

4. It will suggest how its accomplishment can be measured. By not listing specific methods or materials, the teacher has freedom to use a variety of procedures.

5. It is so stated as to permit flexibility on the part of the teacher and the student.

6. It facilitates the selection of content to be learned.

7. It makes possible the evaluation of the outcomes of the educational program.

8. It is consistent with the educational philosophy and aims of the school.

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9. It provides the planned learning experiences of students with direction, motivation, and continuity.

10. It is practical, thus attainable for the student.

Taken as a whole, objectives are of a reasonable number, consistent with each other, of the same level of specificity, and distinctive while not completely independent. If behavioral objectives are carefully written, much of the ambiguity or lack of clarity in student assignments and responsibilities will be eliminated.

Definition of Curriculum

We turn now to the curriculum, which provides for the learning activities directed toward student achievement. An acceptable definition of the term "curriculum," I believe, is the following, which is given in the Dictionary of Education: "A general over-all plan of the content or specific materials of instruction that the school should offer the student by way of qualifying him for graduation or certification or for entrance into a professional or a vocational field."

Concerning professional nursing, the curriculum includes all the planned subject matter, in nursing and in related fields. Emphasis, however, is on courses that provide principles that serve as a foundation for nursing courses and the subject matter and learning activities planned by the faculty for the purpose of carrying out the aim and objectives of the school.

I suspect that we all too often view courses in the physical, biological, and social sciences from the standpoint of their contribution as foundational courses for nursing, whereas, actually, they also add to the breadth of general knowledge that the student can draw from in later years as an educated individual.

Drawing from the foundational courses, the specialized courses provide opportunity for the student to gain the knowledge, skills, judgments, values, and attitudes necessary to function as a modern professional nurse in a democratic society.

Principles of Curriculum Development

The learning opportunities offered to students are influenced by a number of factors: philosophy, research, students themselves, alumni, current social pressures, socio-economic trends, and life activities. But they do not control the learning experiences of the student. Faculty identify the educational results desired and by means of the guidelines, or objectives, arrange the learning experiences into a meaningful pattern. The end is thus seen from the beginning and subject matter content is arranged in the manner in which learning takes place in the student.

Interest in the development of theories or models for curriculum development has increased in recent years. So, too, has interest in research related to curriculum development. Phipps and Evans (5) report in their survey that since 1962, more attention has been given to the theoretical base and the designs of research.

Learning theories should be familiar to all members of the faculty, not just to those individuals directly involved in the development of the curriculum. The answer to such questions as, How do students learn? Why do people forget? What factors contribute toward the learning process? are of concern to the teacher in her day-to-day teaching activities.

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For education to be meaningful, theory and practice must be interlaced. One may start with a problem or a principle, develop generalizations or make an analysis of it, as the case may be, and then carry through with some applications. This sequence must be recognized and planned for in the development of the curriculum.

There is no "one best method" for developing a curriculum. Neither is the final product exactly as it was first conceived. It will grow and change and perhaps even lose some of its original form. Compromise may occur so that both format and subject content meet the approval of the majority of the faculty.

It is important that the procedure used for developing the curriculum be "comfortable" and "natural" for the developers. Working step by step in a preset pattern may lead to tension and frustration, whereas allowance for flexibility permits creativity and innovation on the part of the designers.

Two stages of planning have already been identified: first, developing the philosophy of the school, then making statements of its aim and objectives. It is the curriculum that provides the details of the over-all plan. At least three additional stages need to be identified before the curriculum plan can be fully developed. They are, first, the concepts and, second, the threads, or elements, that contribute toward unity in the educational program. A third stage to be considered is the development of the curriculum objectives.

There are several concepts that must be considered in order to attain curriculum balance. These include breadth, depth, prerequisites, sequence, and integration. (2)

It may be assumed that breadth cannot be insured in a diploma program because liberal arts subjects are not included in the curriculum. Since nursing students are brought into contact with different cultures and value systems, let us take advantage of these situations for reflection and critical examination on the part of the student. Class assignments would be more meaningful and challenging if our bibliographies included some books and periodicals in fields related, or even unrelated, to nursing but of interest to the student. Why do we isolate our students from other disciplines and the enrichment they could provide and then expect the graduate to be a well-rounded individual capable of making a definite contribution to society as a whole?

Depth may be provided through repetition of a problem or area, each time in greater depth, through independent study, or through specialization, though limited, within some clinical area of the basic program.

Prerequisites should be determined on the basis of necessary competencies, not of specific courses. There is no justification for requiring specific courses to be taken as prerequisites for the sake of tradition alone. Sequences and prerequisites both imply the building of one course on another, but whereas a prerequisite course implies preparatory work that is to serve as a foundation for a second course, sequence implies the expansion of ideas, concepts, or principles in the second course. Prerequisities and sequences make for rigidity in the educational plan and should come under critical examination.

The final concept, integration, implies an interrelationship of the disciplines or the course offerings. Dressel states that the "goal is an integrative mind which continually seeks knowledge and continually gains new insights into previous knowledge and into problems and experience arising in all phases of /one's/ existence."(2) I believe that innovation is often hampered because we try to do all the integrating for the student and he has little opportunity to discover new relationships for himself.

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In addition to balance in the curriculum, threads, or elements, necessary for the achievement of the school's goals must be considered. The point in time at which a thread begins and the extent to which its value is, hopefully, internalized by the learner will need to be determined. Some of the most common threads currently being used include the nursing care plan, patient teaching, mental health, and the patient in the community.

Let us now turn our attention to some of the ideas I have already mentioned briefly, plus some additional ones, and list them more explicitly so that we can see more clearly what is needed in the development of an effective nursing curriculum. The principles pertain specifically to the three-year hospital school of nursing but may be modified slightly to meet the requirements of other types of nursing programs.

1. The number of hours of class and laboratory per week should total 16 to 18 unit hours, with 3 hours of laboratory equivalent to 1 unit, or credit, hour.

2. The objectives or levels of competency required for satisfactory completion of each course and clinical area should be clearly defined for proper placement or granting of credit for achievement, however attained.

3. Laboratory requirements in all courses should be carefully defined, so that a minimum of time will be necessary to meet objectives and provide the learning experiences necessary for meeting them.

4. Provision ought to be made for an integrative senior seminar.

5. Provision should be made for advanced work in one or more of the so-called foundational courses (courses in the physical, biological, and social sciences) in the senior year in order to enrich the curriculum and encourage greater depth of understanding as the student matures.

6. Essential learning experience should be organized into broad areas of learning that in turn are identifiably related to the final educational result.

7. Courses should be so planned that opportunity is provided for individual differences. Students of all levels of ability should be challenged to the extent of that ability.

8. There must be continuity in the organization of the courses, with learning experiences cumulative in character.

9. Courses should be grouped into fewer and larger units in order to achieve greater breadth and depth.

10. Clinical laboratory requirements should be similar to, and should coincide with, clinical class requirements to insure integration.

11. Unifying elements should be identifiable.

12. Some sequential characteristics should be identifiable in order to achieve a measure of depth.

13. Provision should be made in the curriculum for both short- and long-range educational goals.

14. All members of the faculty should be involved in curriculum development, although the major responsibility lies with the curriculum committee, with one individual ultimately responsible.

15. Membership in small ad hoc committees should represent more than one clinical area.

16. Some arbitrary decisions are necessary in the placement of clinical rotations, but these decisions should be justifiable.

17. Faculty Organization meetings should be called as frequently as necessary in order to promote the progress of curriculum development. As soon as the curriculum committee has completed work on some aspect of curriculum development, the entire faculty must make its decision on the proposal so that steady movement ahead is assured.

18. A thorough self-evaluation should precede a curriculum revision. Out of the identification of weaknesses and strengths of the present curriculum come improvements in the next one.

19. When a revision of the curriculum is in order, opportunity should be provided for student representatives to present suggestions for curriculum changes.

Specific Use of Curriculum Objectives in the Development of Curriculum Levels, Level Objectives, and Course Objectives

The usefulness of curriculum objectives does not end with the development of the curriculum, for they serve to clarify the logical points for measuring competencies along the continuum of educational development and to direct the aims of each course.

Levels of education most frequently alluded to in the United States are the elementary, secondary, and higher education levels. The academic--or school--year, usually nine months in length, marks off units, or "sublevels," within the larger divisions. These sublevels, though treated separately in the report of grades and courses completed, may also be grouped according to the length of time deemed necessary to complete the program offered by various schools, institutes, colleges, and universities. Thus in education beyond high school, a variety of levels have been identified and we speak of undergraduate and graduate work; lower- and upper-division courses; junior and senior colleges; associate, baccalaureate, masters, and doctoral degrees. Institutions granting no degree, such as business schools, technical institutes, and area vocational schools, offer programs of varying lengths, and these, too, commonly identify points on the total curricular calendar when reports of progress are made.

In higher education, of which nursing education is a part, the student is given a different title for his new status at the beginning of each academic year or when he has successfully completed a specified number of courses. These titles are usually freshman, sophomore, junior, and senior, with one or both of the in-between ones eliminated if the program is less than four years in length. Generally, the student's achievement is not so much measured comprehensively at the end of each year as it is measured by the successful completion of individual courses taken during the year. Thus, curriculum objectives that might be met only after three or four quarters or semesters conceivably may be lost in the process. On the other hand, if short-term objectives can be achieved

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in less than a year, it might be advisable to identify an additional level in order to report achievement of those objectives.

Whether or not the end of the traditional school year is the correct time for a measuring point, or level, in student achievement must be determined by the faculty before individual courses are finally placed in the curriculum schedule.

The curriculum objectives should be reviewed thoroughly before final decisions are made regarding levels of learning. Which objectives should be met early in the program? Which ones should be met later on? And which ones, if any, could possibly be met at either of two times without making any difference in the student's preparation?

By the time the faculty is ready to decide on level and course objectives, it is a welcome relief to know that the school and curriculum objectives have already spelled out what the student's competencies should be by the end of the program. The final level is identified first, rather than last.

Since course objectives identify in detail the aims sought in each course, it may be more "natural" for faculty study groups (subcommittees) to consider level objectives in greater refinement than actually necessary, just to clarify their thinking. Although level objectives are written in more general terms than course objectives, when one knows specifically where his plan of action is taking him, it is easier to pull the ideas together in broad but inclusive statements. For this reason, I believe the faculty should be free to develop level objectives and course objectives in whichever order is most comfortable for them as long as all objectives are specified in each set and both sets are in agreement. Faculty members can then recheck or review each other's work and reassign placement of objectives as necessary.

Having identified the knowledges, skills, attitudes, and judgments needed by the nurse in order to function effectively in her profession and as an individual, the faculty must then determine the amount of each, in general terms, that can be expected by the completion of each level of learning. Objectives for each level serve as guidelines for determining both course content and course sequence. They serve, too, as a valuable tool for evaluating student achievement at specified points. Let us look at a diagram on the screen that will help to clarify several points I have been making. (See appendix to this paper for diagram flashed on the screen.)

Lest it sound as though the instructor will be hampered by rules and regulations as she considers all the kinds of objectives that have been discussed, let me remind you that objectives serve only as goals, as guidelines for direction. Let the teacher always have academic freedom to be true to her own values and insights while utilizing her special teaching skills and talents for helping the student in his learning.

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LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM
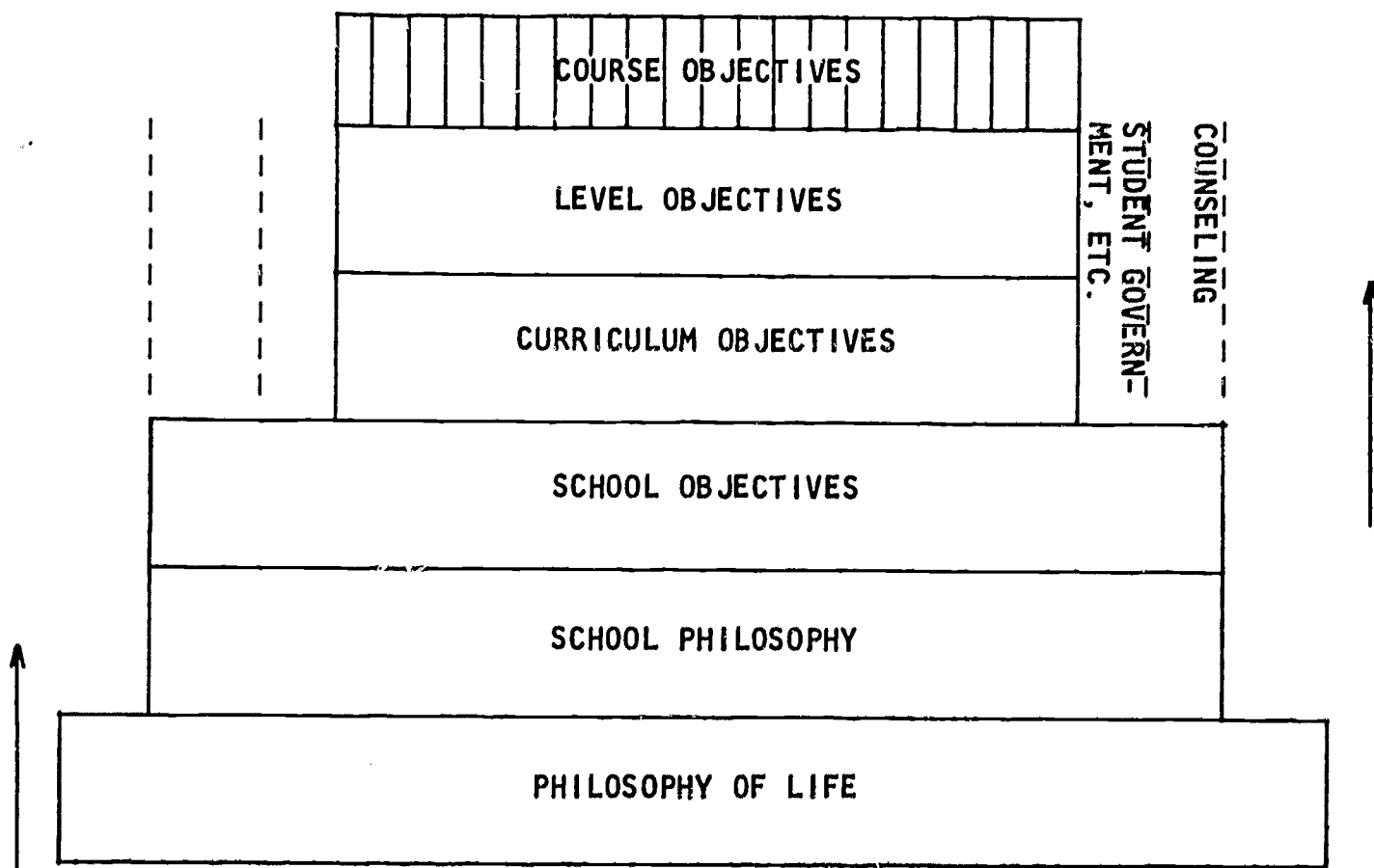
LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Presentation by Nan B. Dunn

Just about a year ago, during one of our professional meetings, Fred Wescoe cornered me in the lobby of the Shoreham Hotel in Washington, D.C., with the blunt statement that he needed me. With that, he disappeared.

A few hours later, I ran into him in the coffee shop of the same hotel and by this time I was bursting with curiosity. What did he want? Why did he need me? How could I find the answers to these questions and at the same time appear very casual and disinterested? As it turned out, I couldn't! We talked about several other things over a cup of coffee until I could no longer restrain myself. I simply had to ask him what he wanted. "Oh yes," he answered, "I would like you to be a speaker at the Regional Workshop next year." Naturally, I was flattered, but I hastened to tell him that there must be others better prepared than I to undertake such a task. He assured me that this was not true. "They say that you are an authority," he said. Well, being a woman, that was all I needed, so I agreed. I think I was so flattered that I don't know whether I asked him what I was supposed to be an authority on.

I point this out because, in retrospect, it became apparent to me that Fred is the authority. Suppose we analyze this little "happening." I am sure you will then agree that Fred proved himself very capable of developing objectives and providing learning experiences to achieve objectives, and with hardly more effort than it took me simply to "catch on." I remain only a pawn whose behavior changed as a result of Fred's effective application of educational principles to me. Let me explain.

Fred was given the task of obtaining a speaker for this Workshop. His objective thus became: to motivate an individual to volunteer to speak. He knew that in order to bring about this change in behavior (attitude), he had to develop an approach in stages (steps or levels) and to provide experiences that would, hopefully, bring about a change in thinking from negative to positive.

From the objective he was saddled with, he created a terminal behavior objective for his learner (namely, me) that read: "Desire to be a speaker at the Regional Workshop on Level Objectives." Then using the law of readiness and the law of motivation, he developed two intermediate behavioral objectives: (1) interest in the project and (2) conviction that one is really needed as a speaker.

He utilized the law of readiness by stimulating my curiosity to the point that I had to know what he wanted to see me about ("interest in the project") and I was ready to learn all about it. His next step was to motivate me to think that I was really needed, and this he did by flattery.

So there you have it! As you can see, Fred is really the authority on the subject of level objectives. Therefore, I suggest that you direct all of your questions to him and get him "on the level." Well, enough said about Fred and his virtues.

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I understand that our concern during the next two days is to address ourselves to the task of identifying curricular levels and developing level objectives for the hypothetical school of nursing described by the program committee.

Why should we be concerned at this late date with curricular objectives in general and level objectives in particular? I ask this question of myself and you because we are all associated with diploma schools of nursing, which are long established and possess well-formulated statements of beliefs and goals. The fact is, however, that in order to continue to produce high-quality practitioners, faculties must continuously evaluate and revise educational offerings in accordance with the needs of the students and the community. Among the eight facets of an educational institution recommended for appraisal by the National Commission on Accrediting, objectives were listed first. (1, p. 24)

It is doubtful whether anyone would argue with the statement that sound educational programs can only be developed from well-stated and clearly defined aims and objectives. Nevertheless, faculties have been known to develop educational goals that are much too vague to be useful and consequently are relegated to a neat space in the file drawer and produced only on "state occasions." I do not mean to imply that this behavior is characteristic of nursing school faculties exclusively. On the contrary, if anything, school of nursing faculties perhaps have been more than conscientious in their attempt to evaluate, revise, and improve educational offerings--which, of course, include objectives on all levels.

The obvious reasons for clearly defining objectives can be found in any book devoted to the principles of curriculum development. Among the reasons is that objectives provide (1) directional information, so that faculties and students know where they are going and from whence they came, (2) guiding principles by which the framework of the curriculum can be developed, and (3) guidelines for evaluation.

There are, however, additional reasons why school of nursing faculties need to be constantly alert to the need for developing and clearly defining educational objectives. The first reason is related to the critical shortage of nurses. This problem makes it imperative that nurse educators explore various methods of and approaches to solving the problem of high attrition among nursing students. Conceivably, clearly defined objectives on all levels, if made known to the students, may possibly lessen attrition. When students are informed of well-constructed behavior objectives, their learning experiences become more meaningful (relevant, if you will) and an unhappy, frustrated student becomes a rare exception.

The second reason why school of nursing faculties need to concern themselves with clearly defined objectives has to do with the enrollment of transfer students. For some years, schools of nursing have been criticized for making it well-nigh impossible for students to transfer from one school to another. Many schools simply would not consider transfer students. The excuse given was that all schools were so different that it would be impossible for a student to move from one program to another without losing a great deal of time. Therefore, she might just as well begin again. Such an excuse can no longer be justified. Nurses are needed to meet the needs of the growing population. The nursing profession cannot afford to lose even one student simply because she moves out of town for personal reasons. Clearly defined educational objectives should facilitate transfers and result in a minimum loss of time by the student.

And finally, in this era of knowledge explosion, it becomes more and more apparent that we cannot teach everything (if we ever could). Clearly defined specific objectives,

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if properly used, enable faculties to confine learning experiences to relevant, pertinent areas and to motivate students to become increasingly curious intellectually, thus saving valuable time and effort for both student and teacher.

Basic to the development of any curriculum as well as to the identification of objectives is the formulation of a philosophy of nursing education or a statement of belief. Authorities in the field of education remind us that the development or revision of a philosophy requires extensive exploration of selected factors by faculty groups. These areas of study include (1) the needs of the student, (2) the needs of society, (3) the meaning of nursing, (4) the meaning of education, (5) theories of learning, (6) available resources for learning experiences, and (7) values relative to (a) a democratic society, (b) a "good" person versus a "bad" person, (c) spiritual versus materialistic aspects, and (d) adjusting to society as opposed to improving the existing social order.

The majority of faculties in colleges and universities as well as in nursing schools will vehemently proclaim that their schools' philosophies have been evaluated and revised many times over by just such a procedure. Yet throughout the academic community, students are protesting the type of education they are receiving. They criticize "the Establishment" for overlooking both the needs of the student and the needs of society. They maintain that since democratic principles are not implemented by the Establishment, materialism is the foundation for a school's philosophy and improvement of the existing social order is impossible. What is wrong? Is there a discrepancy between philosophies, goals, and objectives? Does the philosophy consist of a group of meaningless words? Was the philosophy never used in the development of the educational program? Or did the students come to school with preconceived ideas of higher education that were never very realistic? I do not know the answers to these questions, but it behooves faculties to look at themselves and their programs very carefully in response to student rebellion. Schools of nursing have been very fortunate in that they have successfully escaped serious student unrest. This may be a credit to us--it may mean that we do a better job than other schools of developing meaningful educational programs. On the other hand, it may be that nursing students do not have time to demonstrably express their dissatisfaction, or, perhaps, their type of temperament is such that they do not cry out to be heard. In any case, our constantly changing, complex society demands a careful evaluation of all aspects of currently existing statements of beliefs in nursing education in order to adequately provide the type of education that will meet the needs of the nursing student and produce a practitioner who can give safe nursing care.

As you know, it is possible to read many good reference books on curriculum construction to learn more of the details involved in the development or revision of a statement of belief. Since I am certain you have all, at one time or another, been involved in philosophy development and are well aware of the factors to be studied and the problems one can encounter, we may at this time defer further consideration of the matter and move along.

Equally as important as a statement of philosophy by a faculty group is a uniform concept of the principles and theories of learning. When a faculty is aware of the factors that influence and promote learning, it is better able to plan a curriculum that will enable students to proceed more readily from simple to complex experiences culminating in total integration.

To refresh your memory, I offer you nine principles of learning as defined by Ole Sand. (2, pp. 54-61) I have taken the liberty of presenting them in related groups wherever possible to demonstrate their application to reality. The first group is

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concerned with readiness, motivation, and satisfaction. I quote:

> Learning takes place more effectively when a student is ready to learn.
>
> Motivation is essential for learning.
>
> Learning takes place more effectively in situations where the student derives feelings of satisfaction.

An example of the application of these principles follows. Barbara Jones, a student nurse, feels certain that she will never be able to administer an injection because she does not like to hurt anyone. She is neither <u>motivated</u> to learn to give an injection nor is she <u>ready</u> to learn.

As time goes on, Barbara witnesses her classmates learning to perform this nursing function as she stands on the sidelines. One day, her patient, who has severe pain, asks Barbara for medication to relieve his discomfort. Barbara, eager to oblige, hurries out to check her patient's chart only to realize that the drug that will ease her patient's pain must be given by injection. Barbara must step aside and allow someone else to administer to her patient. She is chagrined, and now realizes that if she is going to learn to give complete nursing care she must develop skill in performing various nursing functions, including parenteral therapy. She is now adequately <u>motivated</u> and <u>ready</u> to learn. As a result, she acquires this skill with ease and administers her first injection with such success that she is nominated by her classmates as the "expert."

The same example can be used to illustrate the next two principles, which involve individual differences and perception.

> Individual differences must be considered if effective learning is to take place.
>
> What the student learns in any given situation depends upon what she perceives. (2, pp. 54-61)

The teacher realized that Barbara's mental block in relation to injections was her own personal "hang-up." Taking into consideration this individual difference, she provided Barbara with a situation that would create both <u>motivation</u> and <u>readiness</u> to learn. That a student "learns what she perceives" is illustrated by the fact that Barbara perceived that the injection relieved the patient's pain and she learned that she was not really hurting the patient by giving it.

The next principle, "a student learns what she actually uses," (2, p. 57) or "one learns to do by doing," can be illustrated by the fact that a student can be told that one of her responsibilities is teaching, but until she is required to teach, she may not learn to do so. This, of course, is true of any skill.

"Recognition of similarities and dissimilarities between past experience and present situation facilitates the transfer of learning" is another principle identified by Ole Sand. (2, p. 58) In other words, it becomes the responsibility of the teacher to identify for the student (if she is unable to do so herself) the commonalities and differences in the care of a patient with, say, a myocardial infarction that the student cared for last week and that of a patient with congestive heart failure that she is currently learning to care for.

Now we come to a principle of learning that needs little explanation: "Interpersonal relationships are important in motivation and in determining the kind of social, emotional and intellectual behavior which emerges from the learning situation." (2, p. 59)

In other words, satisfactory rapport between student and teacher is necessary for effective learning to take place.

The last principle is also self-explanatory: "Evaluation by both the student and the teacher is essential for determining whether desirable changes in behavior are actually taking place."

Depending upon its source of information and its creative thinking, a faculty may elect to identify additional principles of learning.

From a well-formulated and readily understood statement of beliefs and clearly delineated principles of learning, a faculty derives its school objectives, curriculum objectives, level objectives, and course objectives.

School objectives represent the aims of the school. They are comprehensive, broad objectives. From them stem all the learning experiences and services provided by the school to assist the student to achieve her ultimate goal. They are not behavior-oriented, but must be readily converted into behavior outcomes. Let us take as an example the hypothetical WENS School of Nursing, which aims to prepare individuals to function, upon graduation, as general duty nurses in the care of medical, surgical, maternity, pediatric, and psychiatric patients in hospitals and similar institutions.

This, then, as stated, is a goal of the WENS School of Nursing. However, for this objective to be meaningful, it needs to be converted into behavioral outcomes. For example, immediately following the statement of the school's aim, could be added: "This implies that the nurse is able to /here the faculty states the behavioral outcomes/ (1) use the problem-solving approach and develop and implement a nursing care plan for patients with varying complexities of nursing problems, (2) identify pertinent principles from the physical, biological, and social sciences and apply these in the care of patients, (3) develop and implement nursing care plans for a group of patients by working with, guiding, and supervising other members of the nursing team." These represent only a few samples of behavioral outcomes emanating from one school objective.

Out of the school objectives grow the curricular objectives, the level objectives, the sequence and placement of courses, and the course objectives.

To better understand this evolvement, we might digress a bit now and discuss the characteristics and classification of behavior objectives.

It is interesting to note that the use of behavioral objectives was advocated as early as 1930 by Ralph Tyler. He maintained that one could determine if a student attained the objectives of a course only when the objectives were clearly stated in terms of behaviors and the student demonstrated those behaviors after he had completed the course. (3, p.3)

The fact that behavioral objectives date back to the 1930's may or may not be a startling revelation. What is interesting, however, is that this seemingly obvious logic has been greatly overlooked by a large number of educators. Only recently, I had the opportunity, in casual conversation, to inquire of four teachers--two in secondary schools and two in colleges--what they thought of course objectives. Each instructor admitted that he recognized the value of course objectives but indicated at the same time that he had nothing clearly stated to guide him or his students.

Be that as it may, it is incumbent upon us, as educators in diploma schools of nursing, to help our students to know where they have been, where they are, and where they are expected to go.

According to Mager, a behavior objective "is an intent communicated by a statement describing a proposed change in a learner--a statement of what the learner is to be like

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when he has successfully completed a learning experience. It is a description of a pattern of behavior we want the learner to be able to demonstrate." (4, p.3) If at the end of a specific nursing course we expect a student to be able to teach a patient crutch-walking, it should be so stated as a behavior objective.

There are several advantages to stating objectives in behavioral terms. A clearly stated behavioral objective provides a guideline whereby the selection of content, planning related learning experiences, and identifying and utilizing methods of teaching and evaluation can be accomplished with greater efficiency, accuracy, and ease. If it is expected that a student be capable of teaching a patient crutch-walking, the curricular offerings become obvious. For example:

1. Content must consist of principles of learning and teaching as well as principles of locomotion and crutch-walking.

2. Related learning experiences must include crutch-walking by the student as well as the opportunity to teach the activity to a patient.

3. Since an individual learns what he perceives, demonstration of crutch-walking becomes an important adjunct to the content.

4. A student knows what is expected of him before beginning the course. It is therefore incumbent upon the faculty to provide him with a yardstick for measuring his own achievement.

Although authorities agree that well-stated behavioral objectives ease the process of curriculum development and student learning, they do not hesitate to add that some degree of difficulty is involved in their construction. There are five characteristics of meaningfully stated objectives. These are clarity, behavior, content, constraints or conditions, and criterion. A few words of explanation:

1. Clarity: Mager maintains that "a meaningfully stated objective is one that succeeds in communicating your intent." (4, p.10) An objective should be free of ambiguity and vagueness.

2. Behavior: According to Lindvall, "statements of specific objectives must include the exact behavior that the pupil is to be expected to exhibit." (3, p.4)

3. Content: Tyler maintains that this is an area that has not received enough attention. He states that "to specify the kind of behavior to be developed is not enough to guide the selection of learning experiences and the appraisal of results. We must also specify the kinds of content involved." (3, p.78)

4. Constraints or conditions: By specifying conditions under which the behavior is to occur, it is possible for the objective to be more readily understood and more easily attainable. (4, p.44)

5. Criterion: Mager maintains that an objective should indicate how well a learner is to perform or behave. In other words, each objective should describe what the acceptable performance will be. (4, p.44)

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Mager maintains that not all objectives necessarily need to include all of these factors. I feel that many do, however, and have chosen this one as an example:

"Within twenty minutes prior to a patient's admission to surgery, prepare him physically for a hernia repair, using the pre-op checklist as a guide." Now let us dissect this objective and determine how many of the characteristics of a well-stated objective we can identify.

1. Clarity: Others who have read the objective have indicated that the intent has been communicated.

2. Behavior (Performance): This is stated in the phrase "prepare him physically."

3. Content: Content is identified by the phrase "for a hernia repair."

4. Constraint (Condition): This is included in the phrase "using the pre-op checklist."

5. Criterion: Minimal acceptable performance (criterion) is specified by "within twenty minutes."

Incidentally, this objective presupposes a certain degree of "entering behavior." Entering behavior, or behavior that is a prerequisite for striving for the current objective, is represented by a previous attainment by the student or a skill he has previously acquired. Since the O.R. checklist includes the administration of an injection, the entering behavior that must be demonstrated by the student in this situation is the ability to safely administer an I. M. injection.

A faculty may find the following suggestions helpful in writing behavior objectives. First, only verbs that are unambiguous and the interpretation of which is limited should be used. Some examples are write, recite, select, name, define, identify, differentiate, solve, construct, list, compare, contrast, demonstrate, and describe. Second, in describing "constraints" or "conditions," make use of phrases such as given a problem of the following class . . ., given a list of . . ., given a standard set of . . ., given any reference of the learner's choice . . ., without the aid of references . . ., and with the aid of references . . . .(4, p.26) And finally, including the criterion within an objective may be facilitated for you if you think in terms of the excellence of the performance anticipated--perhaps in terms of numbers, time, percentage, et cetera.

For all of this information to be useful in curriculum planning, it would seem necessary to give some attention to the classification of the behavioral aspect of objectives. Benjamin Bloom, David Krathwohl, and their colleagues became concerned with the problem of defining levels of behavior according to complexity and formed a committee to study it. (5, p.51) They devoted considerable time and effort to breaking down behaviors into three main classifications and further subdividing them into a hierarchy, or taxonomy, according to their degree of complexity. (6 and 7) Behaviors were divided into three domains:

1. Cognitive: referring to intellectual abilities--thinking, knowing, and problem-solving.

2. Affective: referring to attitudes, values, interests, and appreciation.

3. Psychomotor: referring to manual or motor skills. (5, p.51)

Within each domain, behaviors are further categorized and arranged into a hierarchy, from simple to more complex behavior and from concrete to more abstract. For example, in the cognitive domain the major behaviors range from knowledge, which engages the lowest level of the intellect, to evaluation, which engages the highest. This range--from simple to complex--includes (1) knowledge, (2) comprehension (ability to restate knowledge in new words), (3) application (understanding knowledge well enough to apply it), (4) analysis (understanding knowledge well enough to break it up into its parts and make the relations among the ideas explicit), (5) synthesis (the ability to produce wholes from parts, to produce a plan of operation, and to derive a set of abstract relations), and (6) evaluation (the ability to judge the value of material for given purposes). (3, p. 21)

The affective domain was not nearly so easily divided into categories. The committee concluded that

> . . . after trying a number of schemes and organizing principles, the one which appeared best to account for the affective phenomena and which best described the process of learning and growth in the affective field was the process of internalization.
>   The term internalization refers to the inner growth that occurs as the individual becomes aware of and then adapts the attitudes, principles, codes and sanctions that become a part of him in forming value judgments and in guiding his conduct.
> (3, p. 29)

The affective domain is therefore divided into the following categories: (1) receiving (consists of awareness, willingness to receive, controlled attention), (2) responding (refers to acquiescence, willingness, and satisfaction in response), and (3) value (includes acceptance of a value, preference for a value, and commitment to a value). (3, pp. 29-32)

Hierarchal classification within the psychomotor domain has not yet been finalized. Since the psychomotor domain refers to overt behavior, presumably it will not be quite as difficult to complete. Terms that describe psychomotor skills are assemble, construct, administer, mix, prepare, push, pull, lift, distribute, et cetera.

It is not enough to simply assign educational objectives to a hierarchy of categories. One must ask, Of what value is this? A classification of objectives ranging from simple to complex, normal to abnormal, or overt to covert should make it easier for a faculty to plan educational experiences in accordance with sound principles of curriculum construction. Krathwohl further elaborates upon this concept by stating that the use of the "taxonomy suggests a readiness relationship that exists between those objectives lower in the hierarchy and those higher in it." (3, p. 34)

What does all of this have to do with level objectives? Only that these preliminary considerations are prerequisites for the construction of sound level objectives and curriculum planning.

What is meant by a level objective? Level objectives, as I use the term in this paper, are terminal objectives for a specific level. Terminal objectives, as described by Mager, represent behavior that is expected at the completion of a course, a term, or a program. (4, pp. 13-15) Therefore, level objectives should state performance that can be expected at the end of a term, semester, year, or upon graduation. Each

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objective at each level represents a step toward the next level.

When a student attains a level objective, he demonstrates "entering behavior" for the next level. Since certain knowledge and skills are prerequisites for the next sequence of learning experiences, a specific entering behavior is required. Attainment of first-level objectives assures adequate entering behavior for the second level.

Since various authorities have differing concepts of the term "level objective," it behooves us to stop and ask ourselves the value of level objectives as described here. First, level objectives can serve as guides to logical curricular development, facilitating utilization of the principles of curriculum construction--continuity, sequence, and integration. Second, level objectives can provide one means of ensuring correlation and relevancy of educational offerings. Third, they offer intermediate goals for the student to achieve, which in turn provide him with periodic feelings of achievement and satisfaction.

To determine levels and level objectives, one may start with curriculum objectives. Now, in our hypothetical school of nursing, WENS, we identified three behavorial outcomes that are curricular objectives or terminal objectives or, if you will, final-level objectives. To refresh your memory, I will restate these outcomes:

1. Use the problem-solving approach and develop and implement a nursing care plan for patients with varying complexities of nursing problems.

2. Identify pertinent principles from physical, biological, and social sciences and apply these in the care of patients.

3. Develop and implement nursing care plans for a group of patients, working with, guiding, and supervising other members of the nursing team.

The next concern involves identifying steps that one must take to attain these objectives or, in other words, specifying intermediate objectives. These intermediate objectives become first- , second- , and third- or higher-level objectives. Once the objectives are stated, the learning experiences can be planned and the time limit determined. Let's take the second objective as an example. "Identify pertinent principles from physical, biological, and social sciences and apply these in the care of patients." The behavior aspect of this objective consists of two parts--identify and apply. The content aspect is concerned with three sciences.

With this information in mind, it might be possible to construct a first-level objective by limiting it to "identifying principles from the sciences." The second-level objective might be limited to identifying and applying principles in the care of select patients with simple nursing problems. And the third-level, or final, objective might be all-encompassing or include identifying and applying principles in the care of patients with complex nursing needs. These represent steps. There are numerous intermediate objectives contributing to each level.

When each level objective is identified, learning experiences can be planned to assist the student to attain each level. The time limit is then determined in accordance with sound planning.

Another approach to defining level objectives involves analyzing curricular objectives to identify common elements that manifest themselves in varying degrees of complexity throughout the entire program of studies--for example, health, communication, problem-solving, group work, and basic needs. Using these elements as a basis

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of achievement, develop final, or terminal, objectives. Determine the evolution of steps necessary to achieve the terminal objectives, from simple to complex, from overt to covert, from normal to abnormal. Or use the taxonomy suggested by Bloom and his colleagues as a guide in determining levels. These steps become the intermediate objectives, or first-, second-, and third- or higher-level objectives.

And finally, decide the sequence and arrangement of course content, planned learning experiences, and the time element involved.

Summary and Conclusion

In summary, may I enumerate in brief the things you should bear in mind in your future planning.

1. The five characteristics of a meaningfully stated objective--clarity, behavior, content, conditions or constraints, and criterion.

2. The taxonomy, or hierarchal classification, of objectives as stated by Bloom and his colleagues for each of these three domains: cognitive, affective, and psychomotor.

3. The concept of a level objective as used here--a step toward the next level or a behavioral outcome for a specific level.

4. Last but not least, letting your students always know what objectives they are expected to attain.

In conclusion, I leave you with this thought, so well expressed by Mager: (8, p. vii)

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        There once was a teacher
        Whose principal feature
        Was hidden in quite an odd way
            Students by millions
            Or possibly zillions
            Surrounded him all of the day.

        When finally seen
        By his scholarly dean
        And asked how he managed the deed,
            He lifted three fingers
            And said, "All you swingers
            Need only to follow my lead.

        "To rise from a zero
        To Big Campus Hero,
        To answer these questions you'll strive:
            Where am I going
            How shall I get there, and
            How will I know I've arrived?"
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LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Presentation by Sister Marion Ruidl

Introduction

The task assigned to all of us at this workshop is to be "on the level with objectives." Perhaps many of you are already on the level with them, but probably most of us need to continue to read, listen, explore, and exchange materials so that we can improve and elevate ourselves to a higher level of performance in our own specific situations.

All of us possess some preparation and experience because of the fact that we are all involved in education in diploma schools. But I have been requested to include in my presentation specific information that can serve as a background for our discussion and meet the objective of this workshop.

The purpose, or objective, of this workshop is to show through discussion how the philosophy and objectives of a school of nursing are utilized in identifying levels of progression and developing level objectives and how, if meaningfully developed, its philosophy and objectives can be utilized in planning, implementing, and evaluating the curriculum and the services the school offers.

Definitions

The guidelines for this presentation include several definitions. The first is the definition of school. It was difficult to find a satisfactory definition of school or, more specifically, school of nursing. After a considerable search for a meaningful definition, it was decided to formulate a definition based on the very nature of a school. Such a definition is as follows: A school is "an institution whose purpose is the education of individuals by qualified faculty, under some control, with time for achievement and in a place with equipment and supplies to achieve the purpose." You, however, may have a better definition and you have the freedom to use it. But it would seem important that all of us accept the common basic elements of our definition because it will help us to stay in focus and on the level.

The second definition to be included in this discussion is that of curriculum. Again, we take the liberty of formulating it, but you may use a definition of your own that you have found serves you best. Curriculum may be defined as "the organized learning experiences that provide meaningful opportunities for the learner to change in thinking, doing, and feeling." That the experiences be organized is the key to our topic, because what we are trying to do is to show how we as faculty can participate in the organizational plan of the curriculum and, more specifically, how we can develop levels of progression within the framework of the philosophy and the objectives of our schools.

Steps in Developing Levels of Progression

There are probably many unique ways of developing levels of progression. The task of telling you how to develop them was assigned to me because of my experience in working with a faculty group under the leadership of the curriculum committee and together with a special consultant in general education. We spent several years in developing what we presently have, and it is my intention to show how we arrived at it.

I shall speak about four levels of progression, the number developed by our faculty. For the sake of clarity, I shall also refer to the steps the faculty took to arrive at them. There were ten steps. Bear in mind, then, that I shall speak about four levels and ten steps.

One of the first steps in developing levels of progression is to look at the philosophy of the school of nursing. The term philosophy is of Greek origin and means "love of wisdom or learning." From history, we know that all advanced studies were philosophical in nature, and today, likewise, we refer to advanced studies in various fields as philosophy. It is not the intention of this paper to explain in depth how a philosophy of a school of nursing is developed, but it does seem appropriate to review some elements one must consider in writing, reviewing, or evaluating such a philosophy.

The philosophy of a school of nursing is developed, reviewed, or evaluated by the faculty only after considering the influences of the past and of the present, and of the projections for the future; the faculty must also consider a philosophy of life, a philosophy of general education, a philosophy of nursing, the social philosophy of society and the philosophy of health accepted by that society. The faculty must keep in mind that nursing education includes experiences with patients, that it is concerned with the preparation of a safe practitioner for service to society, and that there is a code of ethics that serves as a guide for professional conduct.

It is very important that we continue to examine and evaluate the basic assumptions from which curriculum patterns result. As we study our curriculum, it must always be done with our philosophy as a guide, and any changes we make should reflect the faculty's system of values and the goals they seek. Tom C. Venable, in his Philosophical Foundations of the Curriculum, says:

> Philosophy is, in the long run, an individual matter. School
> staffs and committees may meet and make declarations of purposes
> or of school policy, but it is in each individual's own thinking
> that philosophy is born and developed. Each of us must examine
> and re-examine his beliefs and attitudes; add to and discard
> from his compilation of ideas; emotionally accept and reject new
> doctrines; and from the hard stuff of his own thought and experi-
> ence build his philosophy. Such a course is at once a challenge
> and an opportunity, and each of us must decide for himself whether
> he will meet or avoid this challenge and opportunity.[1]

We can say, then, that the philosophy of a school is so important because it expresses the basic principles that are necessary and useful in making decisions about curriculum. It will serve as a guide for selecting educational objectives and as a criterion for making value judgments about behavior. We might say, then, that the philosophy is the starting point from which we take off to develop curriculum and to which we return to determine whether our activities in curriculum development are in accord with the accepted philosophy of the school of nursing. Emily Holmquist, in Steps in Curriculum Planning, a

League Exchange publication, has enumerated the values in studying educational philosophies and in formulating an educational philosophy. She says:

A. An educational philosophy provides opportunity for greater understanding of the meanings behind the educational process and the source of educational practice.

B. It serves as one source for deriving principles for curriculum development and for implementing these principles in practice.

   1. A philosophy of education indicates the direction for classroom practices, but it does not determine it, since knowledge of underlying principles does not necessarily mean that an individual (the teacher) implements these principles in practice.

   2. Philosophy may give direction to behavior. It may also reflect human experience and behavior. Thus, a philosophy may emerge which explains human behavior and experience or which provides a systematic framework for explaining human behavior and experience.

C. It enables one to see relationships or to see the educational process in terms of its relation to other aspects of living. Thus, it assists in placing a portion of living (education) in perspective with the whole of living. A philosophy of nursing education should assist one to view nursing in its relation to all the health professions and groups concerned with the health of people.

D. It reveals inconsistencies in the theory and practice of education.

E. It suggests new directions for educational research, development, and action.

F. It raises questions for further exploration.[2]

After taking all these points into consideration, the faculty should make the philosophy of its school of nursing express its own beliefs about education, nursing, and the responsibility of the school to the student.

Besides a philosophy, Tyler points out, it is necessary to use a psychology of learning in selecting objectives. After the faculty commits itself to a philosophy, the question might be asked, "How will a psychology of learning serve us in developing and selecting objectives?" Tyler says it will serve as the criterion for the educational objectives. "Educational objectives are educational ends, they are results to be achieved from learning. Unless these ends are in conformity with conditions intrinsic in learning, they are worthless goals."[3] A knowledge, then, of the psychology of learning will assist you as it assisted us, as faculty, in selecting objectives; this referring to the psychology of learning was our second step in developing levels of progression.

Let us look for a few moments at the psychology of learning. We can expect some people to change as a result of learning; others will not. Some behavioral changes are simply results of normal growth and development. Because human beings are capable of achieving certain goals at particular age levels, objectives will differ for different age groups. An example of this might be in the area of personality. After a certain

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point in maturity, it is very difficult to expect any major changes in personality. Some goals will take a long time, whereas others are achieved at a much earlier age.

Certain conditions affect the learner and his learning. If the student is provided with an opportunity to apply knowledge, retention of the knowledge is enhanced. Here is where nursing has an advantage, because so many learning experiences include the actual application of knowledge soon after it is acquired.

Time is always an important consideration with regard to learning. A student needs time to change an attitude and sometimes it is necessary that the learner have time for reinforcement before the desired change in behavior occurs.

Robert Mager wrote this in his work Developing Attitude Toward Learning:

> Learning is for the future; that is, the object of instruction is to facilitate some form of behavior at a point after the instruction has been completed.

> The likelihood of the student putting his knowledge to use is influenced by his attitude for or against the subject; things disliked have a way of being forgotten.

> People influence people. Teachers, and others, do influence attitudes toward subject matter--and toward learning itself.

> One objective toward which to strive is that of having the student leave your influence with as favorable an attitude toward the subject as possible. In this way you will help to maximize the possibility that he will remember what he has been taught, and will willingly learn more about what he has been taught.[4]

Over and above the basic characteristics of learning, faculty in nursing must be knowledgeable about the complex behaviors that are needed in the practice of nursing--skills and problem-solving. As instructors in nursing, we should expect a certain level of performance in nursing skills. J. Charles Jones, in his work Learning, says: " . . . while most people are not likely to become skilled at everything they try, most of them are capable of developing a satisfying level of competence in one or more skills--provided, of course, that their potentials are assessed accurately and that they receive instruction based on their abilities and a careful analysis of the skills they are trying to learn."[5] Since a certain amount of skill is expected of the nurse, we as faculty will need to provide appropriate instruction so that the student will learn the skills of a nurse practitioner.

Problem-solving must also be considered in learning for the practice of nursing. The activity required of the learner is cognitive activity, and as instructors we must realize that teaching students to solve problems is an important objective of nursing education.

At this point, we are ready to consider objectives that will serve us in developing levels, course objectives, and evaluative tools and in evaluation of our programs. This is the third step we took in developing levels of progression. One of the clearest and most valuable sources for formulating objectives is Robert Mager's book Preparing Instructional Objectives. Mager says:

> An objective is an intent communicated by a statement describing a proposed change in a learner--a statement of what the learner is to be like when he has successfully completed a learning experience.[6]

To help us learn this definition, let us apply it immediately. In applying the definition of objective--that is, "what the learner is to be like when he has successfully completed a learning experience" (and for us in schools of nursing, this means when the student completes the nursing program), we must identify the behavioral changes, or what our nursing student should be like after successfully completing the program. If the behaviors are identified and if our learner can demonstrate them, then she has achieved the goal, or objectives, of the program. In other words, when a faculty has identified the behavioral changes that are expected to have occurred in the student at the time of graduation, the faculty has also identified the objectives of the school as well as the final level of the program.

Now for some other definitions by Mager: "Behavior," he says, "refers to any visible activity displayed by a learner (student); terminal behavior refers to the behavior you would like your learner to be able to demonstrate at the time your influence over him ends; criterion is a standard or test by which terminal behavior is evaluated."[6] We see, then, that terminal behavior is what we should find in our learner (the nursing student) at the completion of the program.

Meaningful objectives, then, are absolutely essential. They must be statements that will tell anyone who might read them exactly what the learner is able to do at the completion of a course or at the completion of a program. In writing meaningful objectives, we must remember that we need to identify specifically what the learner is like after having completed a program in nursing; we must also identify all the behaviors the learner must demonstrate at the end of every experience that leads up to the terminal behavior. (See Exhibit 1.)

Mager gives a method for writing objectives.

> First identify the terminal behavior by name; you can specify
> the kind of behavior that will be accepted as evidence that the
> learner has achieved the objective. Second, try to define the
> desired behavior further by describing the important conditions
> under which the behavior will be expected to occur. Third,
> specify the criteria of acceptable performance by describing
> how well the learner must perform to be considered acceptable.[7]

Mager says one does not need to include all three of these factors in each objective, but one must keep stating the objective until all the intended outcomes are described.

To review what has been discussed: We have said that as faculty we must develop a philosophy; we must consider a psychology of learning; we must use the philosophy and the psychology of learning as a screen for selecting objectives; and finally, we must state objectives in such a way that they describe what the learner is like when she has completed a course, a learning experience, or a program of nursing. (See Exhibit 2.)

As was pointed out earlier, when a school of nursing has identified the terminal behavior, or what the learner should be like at the time of graduation, it has also identified the final level of the program and the objectives of the school. But again, we ask questions. Where and how do we go from here? If one looks at the kind of person desired at the end of a program, one can use what one sees as a guide in selecting the learner. Since most applicants in our diploma schools of nursing are high school graduates, we have a starting point for our first level. It is important to keep in mind when identifying levels that we want to know what the learner can do at the completion of each level.

In considering the beginning learner and what we expected of the student at the time of graduation, the faculty with whom I worked on developing levels confirmed the need to offer a basic foundation for nursing that included the physical, biological, and behavioral sciences. When evaluating the courses in these sciences, the faculty were able to identify specific behaviors they could expect would occur as a result of the learning experiences. At the same time, they were also developing basic information that could be used in delineating objectives for Level I. The faculty again turned to Mager's method of writing objectives and asked themselves specific questions. These questions were (1) What kind of behavior would be accepted as evidence that our student has achieved the objective of each course in the program of studies? (2) What content and learning experiences would need to be offered in each course to bring about changes in behavior? (3) Under what conditions would the faculty expect the behavior to occur? (4) What would be the criteria for acceptable performance?

In order to adequately answer all these questions, the faculty found it was necessary to take a fifth step. This fifth step was to revise all course outlines. To assure everyone that all faculty would participate in the revision, a standard format for all course outlines was adopted. The format was such that in following it, faculty had to identify every behavior they expected to occur as a result of experiences in the classroom, the classroom laboratory, the clinical laboratory, and clinical conferences.

It was also necessary to select content and experiences needed to bring about the desired behavior. At the same time, the faculty had to keep in mind the conditions under which they could expect the learner to perform. Finally, they had to set up criteria for acceptable performance, describing how well the learner must perform to be considered acceptable.

Our sixth step in developing the levels of progression was to study the central objective for each course in the program of studies. The behaviors included in the central objective were, in actual practice, the terminal behaviors that we expected at the completion of each course. We were ready now for step seven, which was analyzing terminal behavior for each course. We found that certain courses had a common bond and therefore could be grouped together. For example, the physical and biological sciences (Anatomy and Physiology, Chemistry, Microbiology, and Nutrition), the social sciences (Sociology and Psychology), and Fundamentals of Nursing were found to be related to man and his environment. These were taught to beginning learners, so, naturally, they formed Level I.

In order to have a better understanding of Level I, the faculty developed a description of each level. The title given to Level I was "Man and His Environment," and the description of it was as follows:

> At Level I, the courses may be divided into three general categories: (1) study of natural and biological sciences; (2) study of social and behavioral sciences; (3) study of basic nursing principles, terminology, selected skills, and orientation to nursing. The study at this level is designed to introduce the nursing student to the basic terminology and concepts relating to man from the reasonably diverse fields which underlie the professional practice of nursing, and to suggest the operational difference between professional skill and professional decision-making. The emphasis was placed on examining and understanding the interrelatedness of the concepts of these several fields with nursing.

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After identifying Level I, naming it, describing it, and listing all the terminal behaviors for each course, the faculty listed all the specific behaviors identified in the course outlines that the learner would need to demonstrate before she could demonstrate the terminal behaviors, or those behaviors expected at the completion of each course. Then using the specific behaviors identified in each course and the expected terminal behaviors, the faculty were able to develop a rating scale for each course in Level I.

The second group of courses consisted of Medical-Surgical Nursing I and Medical-Surgical Nursing II. The common bond here was man in illness. We found that these courses were not only related in content but comparable in depth of study. Therefore, they were assigned to Level II.

Level II was named "Man in Illness." At this level, the courses focus only, and directly, on the study of Medical-Surgical Nursing. The description of Level II is as follows:

> The study at this level is designed to teach the nursing student
> to observe patient behavior accurately and to infer correctly
> concerning an appropriate nursing plan of care. Study is re-
> stricted to adult patients whose illnesses are representative of
> common single medical-surgical conditions. The study advances
> through illnesses related to the body's systems and fluid elec-
> trolytes to a point at which the most common illnesses have been
> studied. The dichotomy between professional skills (how to do
> it) and professional decisions (what/when to do it) becomes en-
> capsulated in the nursing students' experiences in the clinical
> conference and clinical laboratory. It becomes increasingly
> necessary for the student to consider all the needs of the pa-
> tient and to understand the interrelated nature of the essential
> components of nursing care and action--observation, comfort,
> technical skills, and health teaching.

Again, after identifying Level II, naming it, describing it, and listing all the terminal behaviors, the faculty listed all the specific behaviors identified in the course outlines that the learner would need to demonstrate before she could demonstrate the terminal behaviors, or those behaviors expected at the completion of each course in Level II.

The third grouping of courses contained Maternity Nursing, Pediatric Nursing, Psychiatric Nursing, and Medical-Surgical Nursing III (which included operating room, recovery room, emergency room, intensive care unit, and coronary care unit). These courses had as their common bond "Man in Development and Stress" and were assigned to Level III. An important result of the thorough analysis of the courses Maternity Nursing, Pediatric Nursing, Psychiatric Nursing, and Medical-Surgical Nursing III was the recognition that they contained special nursing concerns related to the birth process, the developmental needs of the child (either sick or well), the psychologically dysfunctional patient, and the medical-surgical patient in identifiable stress situations, both in and out of the hospital. The faculty described Level III as follows:

> The study at this level is designed to have the nursing student
> apply the general principles and practices of nursing to special
> situations in which nursing practice is extended to the clinical
> areas of maternity, pediatric, and psychiatric nursing. In the
> clinical areas of medical-surgical nursing, a number of special
> stress situations are included (operating room, recovery room,
> intensive care, emergency room, hospital, and community nursing)

> in which accuracy and efficiency of action influence nursing prac-
> tice. The major emphasis is on the ability of the nursing student
> to transfer her knowledge and skills to new or special situations
> and to be effective in providing nursing care in these situations.

After completing Level III, it was relatively simple to identify Level IV because we had already determined what the student should be able to demonstrate at the time of graduation in the objectives of the school. Level IV was identified and named "Man in Complex of Nursing Focus." At this level, the focus was on an intensified experience in the practice of nursing throughout a complete temporal cycle in which complex nursing measures and care were planned, implemented, and evaluated. Level IV was described as follows:

> The study at this level is designed to acquaint the nursing stu-
> dent with the variety and regimen of professional service, and
> to work with the student in the formulation of a personally rele-
> vant understanding of what the rights and responsibilities of the
> nurse are and what opportunities for entry into licensed profes-
> sional practice are available. This experience provides the op-
> portunity for the student to demonstrate the ability to observe,
> judge, and act in a professional defensible manner.

Then, once again, the faculty set about listing all the specific behaviors that the learner would have to demonstrate before the terminal behavior could be expected.

We have decribed a number of steps in curriculum development in order that we might have specific information for levels of progression. Thus far, we have (1) reviewed the philosophy of the school; (2) reviewed the psychology of learning; (3) studied ways of formulating objectives; (4) studied the beginning learner and the experiences needed as a foundation for nursing; (5) studied and revised all course outlines, identifying in all of them specific behaviors and expected terminal behaviors; (6) studied and analyzed central, or terminal, objectives for all courses and grouped the courses that are related to one another; (7) assigned each group to a level, which we named and described, and listed all terminal behaviors expected at the end of each course and all behaviors to be demonstrated before the terminal behaviors can be expected; (8) shown how, using these behaviors, the faculty develop tools or rating scales for each course that will assist in determining whether the objectives have been met.

There are two final steps to be taken after this stage of level development. They are:(9) Using all the behaviors identified for all the courses within each level, the faculty develop objectives for each level--Level I, II, III, and IV; and (10) using the objectives of each level, the faculty develop tools or rating scales for each level so that faculty and students can know what is expected at the end of each level of the program.

Conclusion

After completing the development of levels of progression, the faculty group with whom I worked stated that they had a clearer understanding of their objectives, how they were to be formulated, and how they were to be put to use. Having identified the behaviors they expected, faculty were able to select specific course content and learning experiences that would bring about the desired changes in behavior.

It was also agreed upon by faculty that the use of the objectives in developing tools or rating scales for the evaluation of students at the end of each course and at the end

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of each level made possible a more objective and meaningful system of evaluation. All faculty developed a common concept of expectation of performance on all levels. Hopefully, all these efforts are resulting in an improved program in nursing and more competent nurses upon graduation.

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EXHIBIT 1

EXAMPLES OF OBJECTIVES

(Central, Unit, Classroom, Clinical Conference, and Clinical Laboratory)

CENTRAL
Through the application of previously learned principles and the utilization of new knowledge, is able to plan and implement nursing care in relation to developmental needs of the sick child.

UNIT
Is able to demonstrate beginning skills in the nursing care of children with upper respiratory diseases, based upon previous learning and newly acquired knowledge.

CLASSROOM
Is able to enumerate and discuss, orally and/or in writing, the major principles of care for a child with laryngotracheal bronchitis. This would be evidenced by the student's being able to correctly (1) define laryngotracheal bronchitis, (2) state the physiopathology, (3) list the signs, symptoms, complications, and prognosis, and (4) explain the prevention, treatment, and nursing care.

CLINICAL CONFERENCE
Is able to apply classroom knowledge and reference material to a group discussion on the plan of care for a child with laryngotracheal bronchitis.

CLINICAL LABORATORY OBJECTIVE
Through classroom knowledge and group discussion, is able to formulate and implement a plan of care for a child who is hospitalized with laryngotracheal bronchitis. The plan of care is in keeping with the philosophy of the hospital and the doctor's orders and is within the framework of the theoretical plan of care.

EXHIBIT 2
SUGGESTED STEPS IN DEVELOPING LEVELS OF PROGRESS

1. Study the philosophy of the school of nursing.
2. Study the psychology of learning.
3. Study the objectives of the school of nursing.
4. Study the beginning learner.
5. Study course outlines and identify all behaviors.
6. Study and analyze expected terminal behaviors and group them according to relationship.
7. Name and describe each grouping as a level, and list all expected terminal behaviors and behaviors to be demonstrated before terminal behaviors can be expected.
8. Use behaviors identified in each course and develop tools or rating scales for evaluation of the students in each course.
9. Use all identified behaviors for each course and develop behaviors for each level.
10. Using objectives identified in each level, develop tools or rating scales for each level.

LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Presentation by Dolores Milton

Level Objectives Defined

Let us observe the faculty of hypothetical diploma school of nursing X as it is involved in curriculum development work. The faculty members are making decisions about what the student will be able to do after a specified period of instruction in the school. At the moment they are focusing on what to expect at a beginning level. They believe that the student should proceed from the simple to the complex and that the beginning student can only be concerned with assisting patients to meet normal needs.

Here is a partial list of what they decide the student should be able to do at the first level:

1. State how individuals react at various levels of wellness.
2. Recognize behavior that may be indicative of stress.
3. Discuss man in his cultural and social order.
4. Define the legal status of the student nurse.
5. Explain the evolution of nursing practice.
6. Identify structures and functions of the normal human body.
7. Plan well-balanced meals for normal adults.
8. Identify ways of aiding patients to maintain normal body functions.
9. Assist patients to maintain normal body functions.

The faculty members we are observing are working on level or curriculum objectives. Since curriculum refers to all the courses offered in a program of studies, their work involves consideration of segments of the curriculum beyond the scope of individual courses. The objectives they have defined suggest content usually included in the following courses: Psychology, Sociology, Legal Aspects of Nursing, History of Nursing, Anatomy and Physiology, Nutrition, and Fundamentals of Nursing.

Before reaching this stage of their work, the faculty selected specific points in the curriculum at which level objectives were to be defined. In choosing the curriculum points, it was necessary for them to bear in mind that in the time span between them, all students in one class must complete the same courses.

The number of levels varies from school to school and is dependent on the curriculum plan and the thinking of the faculty. In fact, any curriculum plan offers a variety of possibilities for placement and number of levels. Decision on this rests with the faculty.

Purpose of Level Objectives

If we have defined school objectives and course objectives, why do we need level objectives? What purposes do they serve?

Learning results in behavioral changes. Therefore, as the student progresses in

the program of studies, behavior should change in terms of knowledge, skills, and attitudes acquired. After selecting checkpoints in the curriculum to which expected behaviors are ascribed, we can choose learning experiences with a view to helping the student achieve those behaviors, and we can measure his achievement in relation to the expectations.

The last level describes the end goals of the program--the expected behaviors of the graduate--and the other levels focus on the degree of achievement toward them. The scope of level objectives is beyond that of course objectives, since level objectives provide statements of expectations that are comprehensive and show the progression of the student in relation to expectations of the graduate.

Relationship of Level Objectives to Other Objectives

What is the relationship of level objectives to other educational objectives?

Fivars and Gosnell define three levels at which the school must establish objectives.[1]

At the first level are the school objectives. These are broad general statements from which a program of instruction is developed. First-level objectives describe the types of courses and the subject areas to be included and establish the general goals of the total program.

Second-level objectives refer to curriculum. They serve to translate broad school objectives into more explicit aims that are a guide to selection and organization of learning experiences, and they provide comprehensive measurement of progress. Courses, units, and general segments and the sequencing of these evolve from level objectives. Curriculum objectives are more specific than school objectives and less specific than course objectives. Generally, the terms curriculum objectives and level objectives are used interchangeably.

Third-level objectives apply to courses. These are needed for development and organization of instruction with respect to lessons and units as well as courses.

Use of Objectives

Almost everyone involved in the task of defining educational objectives agrees that it is difficult work, requiring much time and effort. In view of this, would it not be just as well to teach without them? Are they really essential in the teaching-learning process?

Ralph W. Tyler, the noted pioneer in study and research in this field, identifies three main purposes for educational objectives.[2] These are to guide the behavior of the teacher, to guide the behavior of the student, and to serve as a means of evaluation.

For the teacher, objectives provide the blueprint for curriculum development, course building, and lesson planning. To illustrate: If an objective in a nursing course is defined as "Compute daily fluid need for normal intake and output," the teacher has direction for selection of content and may include points such as the average amount of fluid needed daily to maintain normal fluid balance, normal daily fluid loss, variables influencing fluid need, and sources of method of computation. With the content decided, the teacher can develop related learning experiences, such as having the students read assigned materials on fluids and electrolytes, record daily intake and output of self and others, compute their own needs and compare them with those of others, and diagram

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differences according to age and sex.

For the student, the defined objective, which should be presented to him, lets him know what he is supposed to do. Studies have shown that learning is faster and more lasting when the learner knows what is expected.[3] Given the objective "Compute daily fluid need for normal intake and output," the student knows what he must do to achieve it.

Well-stated objectives enable the teacher to evaluate the student realistically and to determine the student's progress in the program. They serve also as a means of evaluating the instructional program and the effectiveness of the teaching. In addition, the student is able to self-evaluate and determine realistically if he is succeeding.

A school is a complex institution. Though it is organized for a specific purpose, a basic need, there are many details related to its efficient operation for which many individuals must be responsible. NLN's Criteria for the Evaluation of Educational Programs in Nursing Leading to a Diploma defines school as "an entity that is controlled by an identifiable group; has students enrolled for a specific purpose; has a faculty and other employed personnel; has educational facilities and resources; and offers a planned curriculum leading to a diploma."

Thus it is that decisions are needed in many areas, such as recruitment and selection of students; preparation of the budget; provision of faculty, classrooms, and clinical facilities; organization and implementation of an instructional program; and evaluation of student progress and the effectiveness of the program.

To be most efficient, these decisions need to be based on a clear conception of the goals of the educational program. School objectives serve as a basis for making decisions about the instructional program per se and the concomitant activities that are part of running a school.

General Characteristics of Behavioral Objectives

All objectives should be stated in terms of behavior expected of the learner. Mager identifies the following characteristics of objectives:[4]

1. An instructional objective describes an intended outcome of the instruction rather than content.

2. An objective is meaningful to the extent it communicates an instructional intent to its reader, and does so to the degree that it defines terminal behavior expected of the learner.

3. Terminal behavior is defined by:

   a. identifying and naming the observable act which is evidence the learner has achieved the objective.

   b. stating the conditions under which the behavior is to occur.

   c. including the criterion of acceptable performance.

In addition, objectives should be:

1. Reasonable in number.

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2. Consistent with the school's purposes and beliefs.
3. Consistent with each other.
4. Realistic and attainable.
5. Stated with an active verb.
6. Singular, that is, contains only one objective.
7. Stated in terms of the learner.

Framework for Developing Objectives

School objectives emerge from the school's purpose and beliefs. Level objectives emerge from school objectives, and course objectives evolve from level objectives. This is the logical sequence that must be utilized if we are to build a strong, unified educational structure.

Some schools of nursing may interpret their purpose broadly, since

> Society and education serve each other interchangeably.
> Education provides the basis for increasing and expanding
> the scope of the individual, the family, and the society
> in which they function. Society within a community and a
> nation, on the other hand, makes certain demands on edu-
> cation to provide increasing background and capabilities
> to enable its people to function and endure within a com-
> plex and changing world.[5]

While this is certainly true, we must recognize that the over-all purpose of a diploma school of nursing is singular; namely, to prepare nurses for first-level positions in hospitals and similar settings.

The school beliefs, which should be developed by the faculty, are operational, since they serve as a basis for decision-making and evaluation. Long-range plans and day-to-day activities are based on beliefs.

Whether defined or undefined, we all have beliefs that give direction in making choices and deciding on action. We cannot separate our beliefs from living experience. Our particular philosophy is always in the background, influencing us as we carry out our daily responsibilities. Thus, every individual and organization is guided by stated or unstated beliefs. Problems may arise in organizations where individuals holding varying beliefs are involved together in defining policies or making decisions. When faculty members who hold conflicting beliefs about, for example, what nursing is or how students learn attempt to develop an instructional program, only confusion and frustration for all concerned can result. Agreement is essential to a unified effort. In order to work with efficiency and confidence, it is necessary that the faculty develop statements of belief that its members agree upon, accept, and utilize as a basis for making decisions. These beliefs then are guidelines for action.

A definition of nursing must certainly be included in the statements. This in itself is no easy task, and it is made more difficult today by the dilemma arising from the absence of general acceptance of the differentiation of functions of the various workers in nursing.

Nursing includes a wide range of functions, and a variation of preparation is re-
quired commensurate with this range. Some nursing roles include responsibilities requiring judgments that can be made only by use of a broad scope and depth of knowl-
edge. Thus, preparation for these roles must include a strong theoretical base, and

the program is generally longer. Other nursing roles, while they require the making of judgments, may utilize a more narrow theoretical base and therefore require a different and shorter period of preparation.

The school must determine how its graduate will function in this total structure-- in other words, it must describe the graduate in terms of activities she or he will engage in as a graduate nurse. This description will then provide guidelines for developing the school objectives and a curriculum offering content and learning experiences that will enable the graduate to function in the areas described.

Since an understanding and knowledge of the learning process are important in making learning more efficient, faster, and more lasting, the faculty must consider how students learn and include statements of common acceptance in their beliefs. ". . . learning more about learning is a primary, continuing responsibility of the teacher . . . indeed, learning about learning is a key to curriculum improvement."[6]

This involves attention to the nature of learning and the selection of concepts that faculty members agree can be utilized to create a more effective teaching-learning situation.

The following statements of principles of learning are examples of what might be included:

1. The learner should be an active participant.

2. Frequency and repetition are important in acquiring a skill.

3. Positive reinforcement and repetition should be under conditions where correct responses can be rewarded.

4. Practice should be varied in context so that responses you want can be applied in a wide range of situations.

5. New behaviors can be enhanced through imitation of models.

6. Motivational conditions are important in learning, but not all social and personal motives are helpful to learning.

7. Learning experiences should be so organized that the student advances from simplified wholes to complex wholes.

8. Goal-setting by the learner is important.

9. Divergent thinking should be encouraged.

These stated beliefs are useful only if they serve as a guide to action. To illustrate: If a faculty accepts as a statement that the learner should be active rather than a passive listener or viewer, the teacher should so structure learning experiences that the student can actively respond. There is no question, then, that the student can better learn how to operate a circoelectric bed by working with one actively than by hearing about it in a lecture, reading about it, or seeing it operated by someone in a film or a live demonstration.

Objectives clearly stated suggest possibilities for learning experiences, and beliefs about how students learn give direction in choosing the learning experiences most conducive to learning.

Another accepted belief might well be: Motivation is important to learning. This should guide the teacher to focus on what motivates the student to learn. Mager offers

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a new perspective on the student's attitude toward a subject and its effect on the learning process.[7] He says a student demonstrates tendencies to approach or avoid a subject and that we can influence behavior so that the student leaves us with as favorable an attitude toward the subject as possible. He discusses conditions that develop avoidance and approach tendencies. It is important for a faculty to review stated beliefs periodically and to revise and reinterpret them in the light of new knowledge and new concepts.

Level and course objectives are sometimes preceded by belief statements specific to a level of instruction. For example, in a school where the Fundamentals of Nursing course is offered in the first quarter, the teachers stated the following belief:

> Acquiring a professional identity of nurse is learned.
> It involves many different experiences over a long period
> of time.

These teachers, then, will not expect students at this level to perform as experienced nurses, and the students, aware of this, will not feel anxious because they cannot fulfill the role of a finished product at an early stage in the educational program.

Developing Level Objectives

The following example is the method utilized by one school in defining level objectives. This is offered only as an illustration, not as a suggested method. Each faculty must decide the approach it finds most workable and efficient.

The definition of nursing that the faculty developed in the statements of belief was analyzed and six essential component skills were identified--namely, observation, administering, teaching, administrating, interpersonal relationships, and judgment.

Four curriculum points were selected at which expected behaviors were defined in relation to the six essential component skills.

The school beliefs state, "The faculty believes nursing practice involves . . . giving health counseling."

School objectives include the statement, "The student actively participates in the health education of patients for their immediate and long-range needs . . ."

From this belief and school objective, the following level objectives were defined.

LEVEL I

The student: Utilizes principles of good personal hygiene.
Serves as a model for others.
Maintains personal cleanliness.
Selects a personal well-balanced diet.
Encourages the patient to eat an adequate diet.

LEVEL II

The student: Utilizes opportunities to teach in specific
patient-nurse relationships.

Develops teaching plans geared to the level of
the patient's understanding.

Includes the family in the learning situation.

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LEVEL II (continued)

The student: Teaches the importance of the specific diet as a
factor in the maintenance of health and the treat-
ment of disease.

Encourages the patient toward independence by
gradually having the patient assume responsibility
for self-care and activities of daily living.

LEVEL III

The student: Prepares the mother to give good care to her new-
born as well as older children.

Utilizes knowledge of growth and development in
teaching the child.

Involves the patient in decisions affecting him.

Stresses the importance of mental health to
patients and families.

Adapts principles of nutrition to meet the pa-
tient's needs, while giving consideration to
socioeconomic and religious status.

LEVEL IV

The student: Utilizes all teaching opportunities.

Creates individual teaching programs which stress
restorative measures.

Adapts the teaching plan in accordance with the
patient's socioeconomic status.

Teaches the patient or family members principles
of good nutrition so that they may provide for
dietary needs for normal or therapeutic diet.

Communicates health-team goals to the patient,
family, and visitors.

Teaches other team members in regard to the pa-
tient's illness and how to adapt care accordingly.

Teaches team members by demonstration as well as
by discussion.

The last level describes the expectations of the graduate. You may or may not
agree with the objectives stated or their placement, but the faculty that defined these
levels provide students with the learning experiences needed to enable them to achieve
to the degree indicated at each level.

As the student progresses, she or he is expected to continue to use and improve skills gained at previous levels.

In summarization, characteristics of level objectives are as follows:

1. The school's purposes and beliefs are a foundation from which level objectives evolve.

2. Level objectives clarify school objectives.

3. Level objectives describe what the student is expected to do after completion of specified courses or educational experiences.

4. Level objectives deal with segments of the curriculum and thus their scope is beyond the limit of individual courses.

5. Level objectives must be defined at specific points where all students in the class have completed the same courses.

6. The faculty decides the levels at which level objectives are to be defined.

7. The number of levels varies from school to school and is dependent on the curriculum plan and the thinking of the faculty.

8. Whatever the level points selected, when examined from the first to the last, they indicate the progress of the student by describing expectations from a beginning level to increasingly advanced levels.

9. The last level defined describes the graduate of the program.

Ralph W. Tyler states:

> By defining . . . desired educational results as clearly as possible the curriculum-maker has the most useful set of criteria for selecting content, for suggesting learning activities, for deciding on the kind of teaching procedures to follow . . . objectives are the most crucial criteria for guiding all the other activities of the curriculum-maker.[8]

Thus for us as faculty members in schools of nursing, the task is clear. By planning learning experiences from well-defined objectives, we can provide more effective teaching-learning and, ultimately, more effective patient care. The privilege, the opportunity, and the responsibility are ours.

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LEVEL OBJECTIVES--DEVELOPMENT AND USE
IN THE CURRICULUM

Presentation by Mary McShain

Good morning. You all look bright and alert this morning, and to make certain that you stay that way, I promise to make this opening speech short and, I hope, helpful.

We are all here to learn something about the development and the uses of level objectives. Most of your learning will come about as a result of your participation in group sessions, where you will share with one another the past successes and failures you have experienced while attempting to develop levels and objectives back home.

I do not know all the answers and I will not attempt to give you the impression that I do by double-talking over, around, between, under, and about how level objectives are developed and their uses. This would only confuse you. You have sat through too many sessions like that in the past when seeking help with other school projects. I hope to be helpful by discussing some of the problems we face and how to avoid them, how you might proceed to reach a readiness for developing your levels and your objectives, and finally, how you might proceed to set a level and formulate objectives for that level. Please bear in mind that my approach is only one possible way to do this. I am sure that in your work sessions, your colleagues and resource persons can help you with other methods.

The greatest pitfall to be avoided immediately upon beginning this task is becoming so bogged down with semantics that your meaningful productivity comes to a screeching halt. Frequently, this problem is not the result of our inability to define and accept a definition; it arises because we cannot clearly see the direction in which we want to go and how we should proceed. We are full of all the wonderful ideas bombarding us, and caught between our incapacity to give meaningful form to these ideas and our inability to deny them.

Here we grasp the proverbial red herring and run with it. In this case, the red herring is our preoccupation with semantics. Can't you all see yourselves doing this in the past? I can see myself doing it. You probably never stopped running long enough to try to analyze such behavior. Now that you have a probable analysis, avoid it by having at your elbow a good English dictionary, and let Mr. Webster define your words for you. Surely, you and your colleagues will not disagree with Mr. Webster! The problem of losing our way develops from not having outlined our direction. We start a task in a disorganized manner. We grasp a new idea and we jump in with both feet-- right in the middle. We do not stop to consider what we must do to preface our task. There are many prerequisites for the developing of our levels and objectives. Some of these I will discuss later.

Our task today is not made easier by the fact that we are developing "objectives." That word has a tendency to arouse negative feelings on the part of many. Why? Because ever since pressure was brought to bear by particular interest groups, we

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have been forced to develop objectives. First, it was school objectives, then curriculum objectives; then it was recognized that just offering content in courses was not adequate--content had to be approached with an objective in mind--hence, course objectives. Now a new bandwagon has come down the street and we all scramble to jump aboard--Level Objectives.

I am not saying that we are not sophisticated enough to recognize the absolute necessity for these guidelines. I am saying that we cringe at the word and cry, "Oh no, not more objectives!" You would not think of starting a long trip without considering a good road map to guide you directly to your destination; so think of objectives as the best routes to take in reaching your goals in education.

Before we can proceed to the development of levels and goals, we must clarify our beliefs about education, nursing, and nursing education, the kind of environment most conducive to learning, our responsibilities as a school to the student, and our responsibility to honor these beliefs. This, then, is our philosophy. From our philosophy flows our educational objectives. To quote Bloom, in Taxonomy of Educational Objectives:

> By educational objectives, we mean explicit formulation
> of ways in which students are expected to be changed by the
> educative process. That is, the ways in which they will
> change in their thinking, their feelings and their actions.

Your educational objectives should reflect your beliefs concerning the psychology of learning. Do you purport to follow Professor Thorndike's theory that the kinds of objectives that need to be formulated are specific ones, very numerous, and of the nature of specific habits, or do you agree with Judd and Freeman who view learning as the development of generalized modes of reaction to generalized types of situations? This last theory proposes that many types of learning can be explained in terms of the learner's perception of general principles and his utilization of them in meeting new situations.

These objectives express the competencies expected of the graduates of your program and indicate the kind of position in nursing in which they can function. The objectives will outline the path you will take in curriculum development. The definition included in the new Criteria for the Evaluation of Education Programs in Nursing Leading to a Diploma states: "Curriculum is the collection of courses offered as the program of study." In developing your curriculum, you carefully select the courses you will offer, making sure that they will lead to the behaviors expressed in your curriculum objectives.

As Loretta Heidgerken suggests, the general objectives for each of these courses and the subject matter content should be agreed upon at the faculty level. This is to ensure continuity and progression in learning, to avoid gaps and repetition in subject matter content, and to provide for reinforcement of previous learning. The course development, planning, choice of methods of teaching, and evaluation are the work of the teacher at the instructional level.

For example, one way to plan for this necessary unity and cohesion of learning in Medical and Surgical Nursing is for the faculty to lay out a master plan. This should show the correlation of content of Medical and Surgical Nursing with the content of all courses in the physical sciences, the social sciences, and normal and therapeutic nutrition. It should include placement, time allotment, sequence, and progression from the development of simple to complex concepts. The faculty can work in small

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groups, the Medical and Surgical Nursing instructors meeting at different times with the science instructors and the nutritionist to lay out the content and the clinical experiences related to the content. All of the above should be clearly evident in the master plan.

It must be remembered that the courses offered in your curriculum are not tight little islands where your students are brainwashed into narrow paths of behavior. In high school, students often see a course in this way--as an end in itself. Through careful planning of your curriculum, you can guide your students toward developing broader concepts, to be derived from the content of all courses that are related.

I have been speaking here about relationships, both horizontal and vertical--horizontal, within a level of development, and vertical, from level to level. Basically, when we speak of levels, we are speaking of vertical relationships whereby your students will acquire greater depth and breadth in developing concepts, skills, and the like. Where and how you set your levels will be dependent upon the structure of your curriculum--whether you have discrete unit courses, as in the system-centered structure, or a form of core curriculum built around major health problems. As you can imagine, discrete unit courses offer greater problems in vertical movement and organization, since often there is no continuity or relationship.

Obviously, there is no set rule that dictates the number of levels or their placement in all programs. This is a decision that must be made by the faculty of each school on the basis of its curriculum organization and its expectations of the student.

The level objectives are the behaviors that the faculty expects of their students at predetermined points in the program. Level objectives are controlled by the general rules for all behavior objectives--they must describe the behavior expected, be attainable, and be measurable. Since level objectives describe behaviors brought about by the cumulative learning experiences the student has had in your program, you cannot just hope that a situation will occur that will give him the opportunity to demonstrate the expected behaviors. You must plan the experiences whereby the student's behavior can be studied or observed. Select the experiences with certain goals in mind, then state several criteria for each goal to indicate what you will accept as evidence of goal attainment.

It is not sufficient to state an objective in a generalized way--for example, stating that a student understands, recognizes, appreciates, or has developed an ability or a skill; you must follow such a statement with the content to which it applies. To demonstrate attainment, your student must do something specific as evidence. For instance, he may list and apply principles, make inferences from specific facts, establish priorities in planning nursing care, safely perform technical skills, or modify care according to an individual patient's needs. If you analyze each objective for its concrete components of behavior, you will be more likely to avoid stating behaviors abstractly. Abstract statement of behavior is subject to multiple interpretations and makes measurement of the behavior very difficult.

Let us stop and look at a level objective that might be formulated for the first level-- that is, at the completion of the elementary material presented in a curriculum.

The level objective could be: Utilize the principles of safety in protecting self and others. The faculty then agree on what would constitute evidence that the student has met this level. Some of the criteria they use could include the student's use of the principles of body mechanics when lifting and moving patients, recognizing the need for and applying side rails for certain patients, identifying hazards with wheelchairs and

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beds and locking them in position, washing hands after tending one patient before going to the next, checking equipment for defects before use. If criteria are established, all faculty members will be in agreement on the method for evaluating the students at any given level. You may find the Dictionary of Educational Terms helpful in assisting you with your selection of words.

It is even a greater challenge to develop level objectives and criteria for measurement of the objectives when they deal with attitudes and values. The difficulties involved are aptly stated by Tschudin, Belcher, and Nedelsky in Evaluation in Basic Nursing Education. I quote:

> Attitudes are not learned with the speed of intellectual processes. They take a long time to develop and change and it is not feasible to attempt to develop all the attitudes which are desirable for a professional nurse within the short span of the curriculum.

This implies that the faculty must not only identify desirable attitudes but also decide which of these are attainable by their students. Attitude and values cannot be taught in the same manner that factual material is taught; attitudes are affected by personal experiences. The student is guided toward the essential attitudes by our example, and by the experiences we provide that expose him to stimuli that evoke feelings to which he can react overtly. Changes in attitude spring from new insights and the satisfaction or dissatisfaction resulting from the application of new insights to specific situations. Therefore, experiences must be such as to provide an opportunity for the student to feel self-satisfaction because he has behaved in the desired manner.

When you have completed your level objectives, you will have a most valuable tool for evaluating not only the progress of your students but also the effectiveness of the constituents of your program. The suggestions I have offered today cannot possibly answer all your questions on the workshop topic, but I sincerely hope they have given you some direction and also some confidence in your ability to make these two days most profitable.

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LEVEL OBJECTIVES--DEVELOPMENT AND USE IN THE CURRICULUM

Presentation by Hilda Reynolds

The assigned topic for this presentation is "Level Objectives--Development and Use in the Curriculum." Suggestions for the presentation that were given by the program committee chairman of the Council of Diploma Programs included the following: " . . . emphasize the principles of learning and that the workshop curriculum plans were developed utilizing certain basic assumptions from these principles."

Before level objectives can be explained, it is expedient that theories of learning be explored. As you know, there is much research being done on how people learn. To learn is defined as "a change in response or behavior caused partly or wholly by experience, such experience being, in the main, conscious, but sometimes including significant unconscious components." Learning includes behavior changes in the emotional sphere.

A theory of the process of learning includes application of the processes of differentiation, integration, and generalization. For a nursing student to be able to tell the difference between an oxygen tent for adults and a croupette for infants is differentiation. Integration is the process by which the student combines individual knowledges into organized behaviors. In generalization, the student can use the same behavior in differing situations.

How students learn should be taken into consideration in the formulating, implementing, and evaluating of objectives at each level in the educational program. An objective may be defined as "an aim, or end in view, or the purpose of a course of action or of a belief." A "general" objective is a goal, or aim, stated for education in general or for a subject in general. A "specific" objective is a goal, or aim, serving as a guide for a teaching unit and directed toward the eventual achievement of a general objective, and stating, preferably in exact terms, the results that may be expected from a particular unit of instruction.
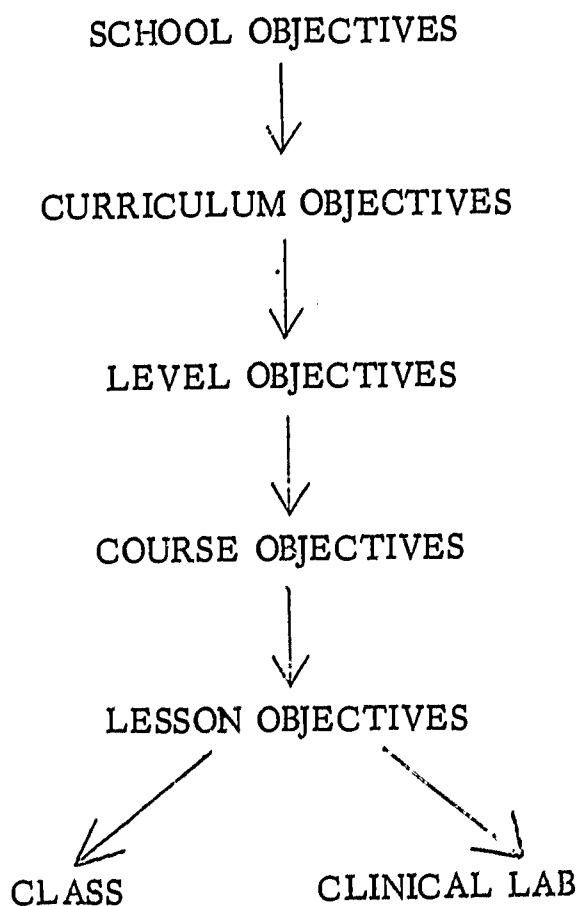
School objectives are formulated by the faculty, with the board of control of the school giving final approval. They should be developed in the form of statements that reflect the desired change in the student's behavior as a result of participating in the school program. School objectives should be attainable, and they should be understood by students, faculty, nursing service personnel, the board of control, and the administrative officers of the hospital.

Curriculum objectives may or may not be utilized, depending upon the content of the school objectives. Curriculum may be defined as "a group of courses and planned experiences that the student is given under the guidance of the school." Again, the curriculum objectives should reflect the change that should take place in the student as a result of participating in the course of study.

Many faculties have found that level objectives are useful. Level may be defined as "a stage or point of growth or change in function or organization constituting an advance

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in differentiation, complexity, integration, capacity, efficiency, or degree of maturity."
Level objectives should flow from the stated school and/or curriculum objectives, as
shown in the following chart.

SCHOOL OBJECTIVES

$\downarrow$

CURRICULUM OBJECTIVES

$\downarrow$

LEVEL OBJECTIVES

$\downarrow$

COURSE OBJECTIVES

$\downarrow$

LESSON OBJECTIVES

CLASS   CLINICAL LAB

Level objectives may be utilized in the developing of course objectives. A course
is defined as "an organized body of subject matter in which instruction is offered within
a given period of time." Course objectives, as well as all other objectives, should be
written in such a way that the identified behavior can be evaluated. Everyone concerned
should be able to state clearly what the student is expected to be able to do. The major
emphasis of this two-day meeting is on the development and use of level objectives.

Level objectives can be utilized in formulating objectives for courses, in placing
courses in the overall curriculum, in course content, in working with cooperating health
agencies, in planning field trips, et cetera. Level objectives can assist the faculty in
identifying objectives and course content throughout the program. For example, in the
first level, the basic sciences anatomy and physiology, chemistry, and elementary bac-
teriology are taught and a beginning knowledge of scientific principles and concepts is
obtained by the student. This knowledge can be progressively reinforced and extended
through review and application to pathological conditions studied in further levels and
provides a means for understanding alteration of normal body structure and/or physi-
ology. A course objective in anatomy could be the expected transfer of knowledge about
the normal to the abnormal. The student could develop knowledge of the normal basic
structure and functioning of the human body and could apply this knowledge to pathologic
conditions taught in subsequent levels. Subsequent levels build upon previous knowledge.
This demonstrates how objectives assist in the development of course content.

A school or curriculum objective may include the teaching of health procedures to
the patient and his family. The expectation of the student to understand principles of

teaching and the ability to formulate a plan for patient teaching depend upon the level of the student. For example, in an intermediate level, health teaching is often an objective in the rehabilitation of the patient. Opportunities for health teaching are in objectives such as "to give preoperative instructions and support adapted to the needs of the patient with tuberculosis." Detailed guidance is given the student in assisting her to recognize teaching needs and to develop a plan for teaching.

For the student in an advanced level, objectives for health teaching emphasize in greater depth principles of human relationships and the more complex nursing techniques. The student is expected to be able to recognize teaching needs more readily and to develop a plan for teaching the patient and/or his family with less guidance from the instructor. Expected behavior of the student in an advanced level might be "to give the patient praise for small successes," as, for example, in the ongoing rehabilitation of the stroke patient.

An evaluation format may be derived from the level objectives. Instructors can meet together to evaluate each student's progress in the program in terms of the level objectives, and the student can discuss this evaluation with the instructors. Hopefully, the student exhibits behavior that meets the stated student expectations.

The formulation and utilization of significant objectives are a rewarding experience. It is a challenge to be able to express in writing the intent of each planned learning experience for a nursing student. The sharing and implementation of objectives with all persons involved in the learning of nursing by the student will strengthen your teaching and give definitive purpose to your job.

Meaningful objectives are precise, clear, and stated in terms of expected change to be effected in student behavior. According to Dr. Robert F. Mager, a meaningful objective is one that clearly communicates the intent of the goal to be attained. The best statement eliminates the largest number of possible alternatives to the desired goal. Many words are open to a wide range of interpretations and if one uses only such words, it leaves the objective open to misinterpretation.

Examples of ambiguous terms that should be avoided in stating objectives are to know, to understand, to fully appreciate, to grasp the significance of, and to believe. Utilization of such words to identify the desired behavioral change to be effected diminishes ability to evaluate the extent to which the objective is achieved. For example, how does one measure the nursing student's ability to grasp the significance of "the emotional aspects of major surgery"?

Terms open to fewer interpretations include to write, to identify, to compare, to construct, and to solve. (For a more complete list, see appendix to this paper.) When these terms are the focus of the desired objective or behavioral change, it becomes much easier to evaluate the extent to which the goal is achieved. One is able to evaluate how well a student can identify specific fears a patient may have in relation to major surgery.

Thorwald Esbensen suggests that well-written objectives should state three things: (1) the specific kind of behavior the student who has mastered the objective will be able to do, (2) the conditions under which he will be able to accomplish this behavior, and (3) the extent to which this behavior can be expected to take place.

All objectives imply some type of learning experience. Pertinent objectives should be developed and implemented for levels, courses, course units, daily lesson plans, and for each clinical laboratory experience.

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REFERENCE LIST OF ACTION VERBS FOR POSSIBLE USE
WHEN WRITING EDUCATIONAL OBJECTIVES*

abbreviate	change	dance	excuse	grow
accent	chase	decide	expand	guide
accept	choose	decrease	experiment	
act	circle	deduce	explain	hammer
add	cite	defend	explore	hand
agree	clasp	define	expound	handle
aid	clap	demonstrate	express	hang
aim	classify	derive	extend	heat
allow	clean	describe	extrapolate	help
alphabetize	clear	designate		hit
alter	cling	detect	face	hold
analyze	close	determine	fasten	hook
answer	collect	develop	feed	hop
apply	color	diagram	feel	hum
appraise	comb	differentiate	fill	hunt
argue	combine	direct	find	hyphenate
arrange	come	disagree	finish	
articulate	communicate	discover	fit	identify
ask	compare	discriminate	fix	ignore
assemble	compile	discuss	flip	illustrate
attack	complete	display	float	include
attend	compliment	dissect	fly	increase
	compose	distinguish	fold	indent
bake	compute	distribute	follow	induce
bang	conclude	divide	forgive	infer
begin	conduct	do	form	inform
bend	connect	dot	formulate	insert
blend	consider	draw	frame	integrate
block	construct	dress	freeze	interact
blow	contrast	drill	frown	interpolate
borrow	contribute	drink	fry	invite
break	convert	drop		isolate
bring	cooperate		gallop	itemize
brush	copy	eat	gather	
build	correct	edit	generalize	join
button	count	eliminate	generate	jump
buy	cover	emit	get	
	crease	employ	give	keep
calculate	create	empty	go	kick
call	criticize	end	grab	knock
capitalize	cross	enter	graph	
carry	crush	erase	grasp	label
carve	cut	estimate	grind	lace
catch		evaluate	grip	laugh
categorize	dab	examine	group	lay

*List provided by St. Vincent School of Nursing, Birmingham, Alabama.

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lead	plan	sand	summarize
leave	plant	save	supply
lend	play	saw	support
lengthen	point	say	swim
let	position	scratch	swing
lift	pour	sculpture	switch
light	praise	search	synthesize
limit	predict	select	systematize
list	prepare	send	
locate	present	separate	take
look	press	serve	talk
	print	set	tally
make	proceed	sew	tap
manipulate	produce	shake	taste
map	pronounce	share	tear
march	propose	sharpen	test
mark	provide	shoot	thank
match	pull	shovel	throw
measure	punctuate	show	tie
meet	push	shut	touch
melt	put	sign	trace
mend		simplify	transfer
miss	question	ski	translate
mix	quote	skim	trim
modify		skip	turn
mold	react	slap	twist
move	read	slip	type
multiply	recite	slide	
	record	smear	uncover
nail	reduce	smile	underline
note	regroup	smooth	untie
number	relate	solve	unzip
observe	remove	sort	use
offer	rename	speak	
omit	reorganize	specify	varnish
open	reorder	spell	vary
operate	repeat	spread	verbalize
order	rephrase	stake	verify
organize	replace	stamp	volunteer
outline	report	stand	vote
	reproduce	start	
pack	respond	state	wait
paint	restate	step	walk
paraphrase	restructure	stick	wash
participate	retell	stir	watch
pass	return	stock	wear
paste	reveal	store	weave
pat	revise	straighten	weigh
pay	ride	stretch	whisper
peel	rip	strike	wipe
perform	roll	structure	work
permit	rub	strum	wrap
pick	run	substitute	write
pin		subtract	
place	sail	suggest	zip

APPENDIX A

Council of Diploma Programs
1969 Regional Workshops

DEFINITION OF A WORKSHOP

A workshop is a meeting of people where they work together in small groups
on a specific problem or project in which the members are interested and where
each member takes an active role in his own learning.

GUIDELINES FOR GROUP BEHAVIOR

1. The productivity of a group depends on the ability of all members to
   exchange ideas freely and clearly and to become involved in its processes
   and decisions.

2. Each member of the group feels free to give of himself, make a contribu-
   tion toward the work of the group, and assume responsibility for his own
   learning.

3. The ability of the group to function properly is not necessarily depen-
   dent upon the leader.

4. Members of the group must be willing to assume responsibility for the
   way the group acts.

5. The group refuses to permit one member or the leader to dominate discus-
   sions or decisions.

GUIDELINES FOR GROUP LEADERS

1. The leader maintains a flexible and unbiased attitude throughout the
   session, so that the group can arrive at its own decisions and assume
   responsibility for them.

2. The leader facilitates and coordinates group effort in the selection of
   a problem, its definition, and its solution and keeps discussion and
   action consistent within the scope of the problem.

3. The leader is resourceful in the use of procedures that will enable the
   group to work together and to develop a loyalty to one another and to
   the group as a whole.

4. The leader recognizes each individual's potential and creates an atmosphere
   in which each member of the group can make a contribution.

5. The leader is careful to suggest--not direct--the use of a particular
   procedure or technique in approaching and discussing a problem.

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APPENDIX B

Council of Diploma Programs
1969 Regional Workshops

GENERAL PROGRAM PLAN

THEME: ON THE LEVEL WITH OBJECTIVES

First Day

Morning Session	The CDP Program Committee	Regional Chairman
	This Workshop--Its Purposes	Regional Chairman
	Level Objectives--Development and Use in the Curriculum	Speaker
	Time for Clarifying	Participants and Speaker
Afternoon Session	Group Work Begins	

Second Day

Morning Session	Group Work Continues	
Afternoon Session	What We Have Heard	The Listeners Report
	Levels and Objectives Move Forward	The Listeners and Participants

APPENDIX C

WENS SCHOOL OF NURSING CURRICULUM PLANS[1]

PLAN I

First Year

First Semester (16 weeks)	Second Semester (16 weeks)	Summer Session (12 weeks)
Anatomy & Physiology I	Anatomy & Physiology II	Medical-Surgical Nursing I
Chemistry	Microbiology	
Psychology	Sociology	
Nutrition	Fundamentals of Nursing II	
Fundamentals of Nursing I		

Second Year

First Quarter (12 weeks)	Second Quarter (12 weeks)	Third Quarter (12 weeks)	Fourth Quarter (12 weeks)
Medical-Surgical Nursing II	Medical-Surgical Nursing III	Obstetric Nursing[2]	Psychiatric Nursing[2]

Third Year

First Quarter (12 weeks)	Second Quarter (12 weeks)	Third Quarter (12 weeks)
Pediatric Nursing[2]	Medical-Surgical Nursing IV	Nursing Care Management
	Trends in Nursing	

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1.   These curriculum plans were drafted for use at this workshop. The plans should not be viewed as curriculum patterns for adoption by any faculty, since there are many other approaches to placing course offerings, offering additional courses (nursing and nonnursing), and organizing the total plan.
2.   Courses repeated three times for each class.

PLAN II

First Year

First Trimester (16 weeks)	Second Trimester (16 weeks)	Third Trimester (16 weeks)
Anatomy & Physiology	Microbiology	Medical-Surgical Nursing II
Chemistry	Sociology	
Psychology	Nutrition	
Fundamentals of Nursing I	Medical-Surgical Nursing I	

Second Year

First Term (8 weeks)	Second Term (8 weeks)	Third Term (8 weeks)
Medical-Surgical Nursing III	Obstetric Nursing[1]	Pediatric Nursing[1]
Fourth Term (8 weeks)	Fifth Term (8 weeks)	Sixth Term (8 weeks)
Psychiatric Nursing[1]	Medical-Surgical Nursing IV	Group Nursing
	Trends in Nursing	

1. Courses repeated three times for each class.