

A COMPARISON OF THE ACHIEVEMENT  
IN PEDIATRIC NURSING BY STUDENTS  
IN TWO SELECTED SCHOOLS

By

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A THESIS

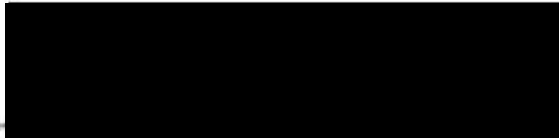
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## CHAPTER I

### THE PROBLEM AND ITS SETTING

#### I. Introduction

A casual reading of today's newspapers, or hearing a current newscast cannot fail to impress the reader or listener that ours is a "changing world." One crisis after another arises, is either resolved or disappears in uneasy turbulence. New scientific advances and achievements capable of revolutionizing our world are announced almost daily. Ideals and philosophies seem to be in a state of unrest and upheaval. Editors, commentators, church leaders, statesmen, educators — all recognize that the changing conditions of today hold implications for tomorrow.

Lulu Hassenplug in, "The World of Nursing . . . 2,000 A.D." aptly describes our "world of today" in her opening comments:

During the past 40 years 'change' has been the dominant characteristic of our lives. The automobile has replaced the horse and carriage. Radio, developed in the 20's, followed by television in the 40's, added to our knowledge and understanding of the world. Many of the appliances in our homes, an accepted part of today's living, were not invented in 1920. Achievements in the field of electronics, outer space, and atomic energy were not even dreamed of 40 years ago.

Scientific advances have made many changes in the way we live and work. We can no longer rely on the knowledge and techniques we learned yesterday. We are more sophisticated. We are better educated, have higher living standards, work fewer hours, have more leisure time, and demand better health and medical services. . . (21)

In keeping with the changing society and environment, educational

standards and practices have been altered to meet the diversified needs of modern learners. In common with other professions, nursing has experienced radical renovations within the past decade or two. Elizabeth Ogg says that the times have changed so fast that the nursing profession is still struggling to catch up.<sup>(33)</sup>

As might be expected, the changes occurring within general education and those occurring within the practice of nursing have affected the field of nursing education which is necessarily involved in both disciplines. Ruth Sleeper has stated that "the continuance of any type of education [can be justified only] if that education proves it can keep in step with changing needs."<sup>(31)</sup> Nursing educators have become increasingly aware of the implications of varying concepts and their consequences for nursing education.

The ultimate goal of both nursing education and nursing service is improved patient care. The means to this end are viewed differently, for while the ultimate goal of each is the same, the immediate goals are quite different. The goal of nursing service is to nurse the patient, while that of nursing education, regardless of the type of program, is to teach students how to nurse the patient.<sup>(5)</sup>

The current dilemma of nursing education revolves around the problem of how the student should be educated, and for what type of position she should be prepared. Involved are problems of (1) the number of hours which should be devoted to practice and (2) how many hours should be given to classroom instruction. Both problems are controversial and contain areas in which there is much difference of opinion, and in which there are many currently changing practices.

There are differing opinions as to how much time is required and what

is the method of teaching best adapted to assist the student of nursing to acquire concepts of "the factors and forces which affect competent functioning in a service situation." That such confusion and controversy should be present is not entirely surprising when it is realized that all education takes place within a culture containing its own values and processes. Education should serve both the culture by preserving it and providing some of the conditions for improving it, and the individual by providing him with opportunity for the best development of his capacities. Education serves both the culture and the individual when it develops moral beings with purposes and loyalties which are valuable both to the individual and his society. (9)

Because each civilization has a cultural tradition and sets up an ideal individual and an ideal society as its goals, educational processes must be selected and managed with a view toward leading learners to these goals. The objectives of classroom assignment or unit must be in line with these ultimate aims. (9)

Four nursing educator's responses to questions related to nursing education and the American Nurses' Association's proposed Goal Three formulated at the 1960 convention, and some of the current problems of nursing educators are discussed in "Nursing Education for Whom, Where and When." The various types of programs are considered with the contributions each has to offer. Eleanor Lambertsen states that all nurses need to have some idea of the factors and forces which affect competent functioning in a service situation. She says that while nurses must certainly continue to see themselves in relationship to the patient, they must also be able to recognize and deal with extraneous influences and factors in an intelligent and mature way before nursing service can be

improved. She further states that one of our major problems today is the nurse within nursing service who herself may not recognize or have the skill to modify an environment to facilitate patient care. (31)

Different curriculum practices are being followed in collegiate schools of nursing. This study is concerned with whether the student is achieving course objectives in the amount of laboratory or clinical practice time assigned students in collegiate schools of nursing. A review of catalogues indicates that the general practice is to designate clinical practice hours on a laboratory ratio; i.e., three hours practice for one hour of credit where the school is on a quarter curriculum plan. (30,50-52,54) The student is apt to be enrolled for a clinical nursing course with accompanying laboratory clinical practice of five credits or fifteen clock hours per week. In some settings the didactic clinical course and laboratory are developed as an entity. The total hours of instruction and practice and the resultant amount of credit is similar in both plans. The student may carry one or more additional related courses and still not exceed 14-15 credits per term. Such an arrangement places the collegiate nursing student on a par with students in other academic disciplines as far as credit load is concerned.

Interest in the differences of curricular practice led to the present study. It was hoped that by studying two collegiate schools employing different practices, a better understanding of the philosophies and objectives underlying each practice, and the results of the differing methods might be ascertained. The knowledge thus gained might serve as a helpful guide in further planning.



## II. THE PROBLEM DEFINED

### Statement of the Problem and Purposes of Study

The purpose of this study was to determine the similarities and differences in achievement in pediatric nursing of two groups of students enrolled in collegiate, church-operated schools of nursing. Each group had 15 hours of nursing practice per week; eight hours of nursing service\* was required of one group in addition to the 15 hours of nursing practice. Differences were identified by studying and comparing the objectives for the pediatric curriculums of the two schools, by observing the students in an endeavor to compare those learning activities and behavior changes related to the objectives which gave evidence of fulfilling the objectives, and by comparing the students' achievement on a standardized test.

### Hypothesis

There will be no appreciable difference in the performance and achievement between students of the two schools.

### Assumptions

It was assumed that:

1. student activities could be identified and categorized under behavior changes which indicated the achievement of objectives.
2. students would perform in the same manner when being observed as when no observer was present.
3. the two groups studied would be representative of students in pediatric nursing as a whole in their respective schools, that is, they will represent adequate sampling.
4. The use of the National League for Nursing standardized achievement

\*See page seven for definition of terminology.

test "Nursing of Children" would yield data reliable for making comparisons between the two groups of students.

#### Limitations

This study was limited to:

1. a group of 13 students in school A and eight students in school B. Both groups of students were in pediatric assignment in their respective schools of nursing.
2. information that could be obtained by the continuous observation of three students in each group. The observation was done on one student a day during the length of the laboratory practice until three continuous observations had been conducted in both groups.
3. information that could be obtained by the work-sampling method of observation. All the students of both groups were observed during their laboratory practice sessions.
4. information that could be obtained from standardized achievement test scores.

#### Definition of Terms

For the purposes of this study, the following definitions have been adopted.

#### Laboratory time

Laboratory time is that time spent by the student in the hospital wards under the direct supervision of a clinical instructor. This time may or may not be spent in giving actual patient care. The learning experiences are planned at the discretion of the clinical instructor, without reference to meeting the service needs of the institution. The amount of time per week is consistent with the number of credits for which the student is registered.



### Nursing Service Time

Nursing service time is that time spent by the student in the hospital wards without the direct supervision of an instructor. During this time she is under the direction of the head nurse and/or floor supervisor. This time is spent rendering patient care which is calculated to help meet the needs of nursing service. The student receives payment from the hospital for this time, either directly, or as a credit to her account.

### Behavior

For the purpose of this study, Gerchberg's description of behavior was adopted as follows: "Performance behavior (overt behavior) is an activity (or activities) executed by an individual which an observer can sense by hearing or seeing."<sup>(16)</sup> According to Brester two principle elements of students' progress in nursing should be evaluated, one being their acquisition of knowledge, the other, the development of skills and abilities in their concurrent clinical practice. The first is done primarily through written examinations, but the evaluation of skills and abilities in clinical practice is achieved through appraising student behavior and activities.<sup>(7)</sup>

### Importance of the Problem

Very little recent study has been devoted to the learning experiences included in its curriculum in relation to the course objectives. How much time does it take for a student to learn pediatric nursing to the extent that she can function in the clinical setting consistent with the objectives of the program? Is there any observable difference in performance between students who have only laboratory time and those who have 15 hours of laboratory plus eight hours nursing service time? How skillful are the students of the two patterns in giving pediatric care, and is there any

observable difference in their level of performance? Specifically, does the nursing service time increase the students' achievement on the National League for Nursing standardized test, Nursing of Children? Does the extra practice aid in establishing an appreciation of some of those extraneous forces which affect competent functioning in a service situation? By placing so much faith in the time element of a designated number of practice hours per week, are not the human factors of individual differences being overlooked? Some people develop competencies and acquire new knowledge much faster than others. The 1:3 ratio of credit to laboratory is purely an administrative convenience. Is it really adhered to in science laboratories? Should not interpretations in clinical laboratories be less fixed? The faster learner needs less time, the slow learner, more.

Preserving the dichotomy between what is laboratory time and service time is not nearly so important as answering the real question which is: Are the students really learning pediatric nursing? Are they achieving the objectives stated for the course? It would be well also to take a critical look at the objectives. Are they realistic? Achievable? Do they contribute to the general objectives and philosophy of the school?

By observing students during pediatric nursing practice to analyze the activities performed, and by classifying those activities under the objective they fulfilled, it was hoped that a better understanding would be gained of what the Pediatric nursing program offers. Discovery of needless repetition or of unmet objectives could serve as a guide in further planning for an effective Pediatric nursing program.

#### IV. PLAN OF THE STUDY

The design for this study may be described in the following steps:

1. Permission to conduct the study was obtained from the directors of both schools of nursing and from both Pediatric instructors.
2. After reviewing the literature, the continuous and work-sampling methods of observation were chosen.
3. A pilot study was conducted at school A with a group of pediatric students in a quarter previous to the group observed in this study. In the pilot study two students were observed for one nursing practice laboratory session to test the workability of the work-sampling method described in the literature. (4,16,17,24,39,46)
4. Three days were spent with each group in continuous observation of one student during the nursing practice laboratory session to ascertain a "typical day." Group A students' laboratory practice was from 6:45-11:30 a.m. Students in group B had laboratory practice from 6:45-10:00 a.m.
5. By observing students of one group, and students in the other group on an alternate day of the same week, both groups were observed each week. After the three continuous observations were made in each group, the remainder of the quarter (or nine weeks) was spent in observation by the work-sampling method.
6. Those students who were observed continually were chosen by random by assigning each a number, then using the table of random digits to select the one to be observed.
7. All observations were recorded on a form specially prepared for that purpose, described more fully in chapter III and illustrated in appendices A and B.
8. Each objective was analyzed in terms of activities necessary for



its accomplishment. Then students' activities were compared with the objectives to determine which objective the various behaviors fulfilled.

9. The National League for Nursing test, "Nursing of Children" was administered to both groups by their instructor. Each student's score was obtained and the class mean was calculated. Analysis and comparisons relevant to the scores were made.
10. The study was summarized, conclusions drawn and recommendations made.

#### V. OVERVIEW OF THE STUDY

The report of this study has been divided into four chapters as follows: Chapter I consisted of the introduction. In Chapter II, there will be a review of the literature and related studies. Chapter III will consist of a report of the methodology used, a report of the study, and an interpretation of the findings. Chapter IV will be devoted to a summary, the conclusions and recommendations for further studies.

CHAPTER II  
REVIEW OF LITERATURE  
AND RELATED STUDIES

I. Philosophies and Objectives

If the objectives of a course were broad and inclusive of the general goals of education, and evaluation revealed that a student was achieving all the objectives, it would be safe to conclude that such a student was being well educated. Too often, however,

faculty members in colleges of nursing take a relatively narrow view of the purposes of the program. They visualize the objectives of all the courses in relation to professional preparation. This restricted outlook in part accounts for their failure to extend the scope and variety of instruction to reach the broader objectives of sound professional education.<sup>(41)</sup>

Several writers have expressed the need for nursing education to incalculates the objectives of general education into their courses. Hugh D. Laughlin, in "Educational Programs in Service-Centered Hospital Schools," suggested that one way a school of nursing could improve its program would be to minimize student service activities when they are not related to the instructional program. In this way schools would have time in their curricula to meet more of the general goals of education.<sup>(27)</sup> He listed nine such goals, their being (1) healthful living, (2) critical thinking, (3) communication skills, (4) ethical values, (5) aesthetic appreciations, (6) family living, (7) vocational future, (8) social relationships, and (9) civic responsibility.<sup>(27)</sup>

Russel suggested three main goals of general education to be reached, namely, (1) incalculating a corpus of knowledge, complement of skills and traits which constitute the distinctive features of a particular craft; (2) including concepts of general education so that the graduate will be able to effectively assume his duties as a citizen and will appreciate his opportunities and responsibilities in a democracy; and (3) assist the student to gain self-understanding, a moral grounding, and a consistent view of the world, with a knowledge of his own nature and a reasoned philosophy of life so that he may realize his full potential. He observed that if these three comprehensive objectives of professional education are to be achieved, a judicious re-adjustment must be made in the balance of instruction directly related to the student's prospective occupation. . . (41)

Robert Henle added that the general or liberal components within nursing education are not merely intrinsic additions to, or luxuries of professional training, but that, while they are a boon to the student herself, they are also "intrinsic to the proper education of the professional nurse and contribute powerfully to, and improve the professional courses themselves." (22)

To incorporate principles of liberal education into the nursing curriculum because it is the thing to do, without being convinced of the value will accomplish little or no good, for "the climate that prevails in the controlling institution affects the quality of the educational program." (13) Florence Elliott has said that in the study of curriculum development there must be a foundation of beliefs concerning educational programs, their implementation, and their evaluation, and that the curriculum is the design by which the faculty plans to accomplish the purposes of the school. (13)



Education today takes place in a culture which has its own values and standards, and which expects the educative process to produce a student capable of meeting both cultural and professional expectations.<sup>(9)</sup> This was further illustrated in a workshop organized by the executive secretary of the National Nursing Council for the purpose of providing suggestions concerning the probable nature of nursing in the second half of the twentieth century.<sup>(8)</sup> Their forecast in part is quoted.

To understand the characteristics and aptitudes which are needed by the effective professional nurse, it is necessary to visualize her in action against the backdrop of a rapidly changing and increasingly complicated civilization. In past eras, nurses, like other groups, have often been expected to fit into traditional niches in a relatively static situation. In that kind of society the nurse might fill her place satisfactorily if she were a passive, obedient, and unquestioning individual. In a rapidly changing world the nurse's activities will require that she be alert and self-directing. The professional nurse must be able to evaluate behavior and situations readily, and to function intelligently and quickly in response to their variations. She must recognize physical symptoms of illness which are commonly identified with organic changes. She must also recognize those heretofore less considered manifestations of illness such as anxieties, conflicts, and frustrations, which have a direct influence on organic changes and are now thought to be the result of an incompatible interaction between a person and his environment.<sup>(8)</sup>

Elisabeth Ogg expressed the same idea by saying, "The professional nurse of today must be more than a bundle of knowledge and skills. She must be able to analyze situations and make decisions, to lead her team members. . . to keep abreast of her growing profession. . ." <sup>(33)</sup> Her preparation should be so broad in scope and profound in nature that technical competence is only one component.<sup>(8)</sup>

It is such ideas and ideals as these that form the basis for the formulation of philosophy of nursing education today.

However sound the philosophy, unless reduced to writing and accompanied by well stated objectives, it is useless. The National League for Nursing has shown the relationship of objectives to philosophy and activities thus:

An educational program in nursing, like any other educational program, aims to bring about significant changes in the behavior of its students—in their ways of thinking, feeling, and acting. Thus the objectives of an educational program are the changes which it endeavors to help its students bring about in themselves.

These objectives are based upon certain ideas of nursing and of education—ideas about what nursing is and what it could or should be, ideas of how students learn and of what constitutes the best atmosphere for much learning. These concepts comprise the philosophy under which the educational program operates.

So closely related are the philosophy, objectives, and activities of a school that they are developed in the light of each other. . . .

Logically, however, the objectives of a school are evolved from its philosophy, and the philosophy and objectives form the basis for determining its activities. . . .

Thus, the statement of a school's objectives not only is a concrete derivative of its philosophies of nursing and education but also establishes the criteria against which the adequacy of the school's activities and resources can be evaluated. (32)

After broad, general objectives have been formulated, more specific objectives are defined for each course in the curriculum. There has been found to be a direct relationship between the clarity of objectives of an educational unit in nursing and the effectiveness of the programs offered by this unit. (32)

Burton suggests that perhaps the reason many find it difficult to state objectives is that their purpose is not understood. He sees the purpose as being to determine what is to be measured or evaluated, and



says "organized, comprehensive statements are rare," because "remote general aims and immediate limited aims are indiscriminately mixed."<sup>(9)</sup> Another factor which makes the stating of objectives difficult is that there is no one list or statement that has universal acceptance.<sup>(29)</sup>

Barton suggests:

Teachers will be aided very greatly in stating objectives if they will look ahead to try to determine the type of evidence which must be found to prove that learning did take place. Vague and indefinite objectives will be discredited at once, because no method of evaluation could be devised nor evidence of learning identified. . .

. . . objectives should be stated always in such a form that evidence of achievement by learners can be derived.<sup>(9)</sup>

He stated further that whatever is to be measured or evaluated must be first clearly defined or the evaluation is a waste of time.<sup>(9)</sup>

Stating objectives need not be a major hurdle if the teacher will follow certain basic criteria. All objectives have one premise in common since the general function of all education is to educate persons to be effective members of our democratic society.<sup>(29)</sup> According to the National League for Nurses and Lindvall, specific criteria to serve as guidelines might include the following. They should:

1. be so stated as to have a clear and specific meaning.
2. be attainable in an educational program in basic nursing.
3. be stated in terms of the pupil.
4. be stated in terms of observable behavior.
5. refer to the behavior or process and to the specific content to which this is applied.
6. reflect a concept of education that is broad in scope.

7. be stated in terms of a well-defined philosophy of education based on an understanding of how people learn. (29,32)

Beland indicated that after the course objectives have been stated, an interpretation of them should be made to the students so they will understand their meaning and how the accomplishment of these objectives will change their behavior. (2)

A survey of the literature seems to indicate a need to examine closely the objectives of a single course and of all the courses composing a curriculum to determine whether they reflect the philosophy of the school, are broad and inclusive, capable of being evaluated in terms of student behavior or learning, and attainable in the length of time allotted the course.

## II. EVALUATION AND OBSERVATION

A review of the literature published during the past five years revealed that there is much concern over and interest in evaluation. Fifty-seven articles referring to some phase of evaluation have appeared in the nursing journals from 1958 to 1962.

Beland described her duties as a faculty member at Wayne University School of Nursing in an evaluation project. A group of basic students were helped to establish, interpret and understand course objectives in light of expected behavior change as the objectives were achieved. Both instructor and self-evaluations were made, using an evaluation guide divided into the two major areas of professional growth and behavior, and care of patients. One of the important objectives of this evaluation project was to help the student develop a realistic concept of her own strengths and weaknesses as a basis for making a constructive plan of

action. Those participating in the project discovered that students can contribute a great deal to their own learning when they have an active part in determining their educational objectives and in evaluating their progress in achieving their objectives.<sup>(2)</sup>

As a basic student Sefford had been handed an evaluation which she considered unfair, and about which she felt quite resentful. While doing graduate work she was encouraged to write her own objectives for patient care, followed by her evaluation of these objectives. She stated that she felt freer to discuss her reactions in her later experience since they were derived from her own observations.<sup>(12)</sup>

Another project in self-evaluation was presented by Ingire. Each student kept a daily record of her work, describing her satisfactions and dissatisfactions. At the end of the project she prepared a written evaluation compiled from her weekly summaries. The final report written by both instructor and student was based on anecdotal notes kept by the instructor as well as on the student-kept record.<sup>(23)</sup>

In reference to a study conducted in a specific collegiate school of nursing in Vermont, Palmer says

it was to develop a valid and reliable rating scale, based on clinical practice objectives, which could be used in the determination of grades for clinical performance in the medical-surgical nursing course of a specific basic collegiate program. Other purposes of this study were to devise a scale which would: (1) be practical to use; (2) be as objective a measuring tool as possible; (3) assist in the estimation of student growth; (4) help in the interpretation of progress to students, parents and administrators; and (5) aid the student in the assumption of self-evaluative activities.<sup>(35)</sup>

Prior to constructing a behavioral description scale based on the medical-

nurgical objectives, she found it necessary to refine and reformulate some of the clinical practice objectives.

The scale which she constructed consisted of three behavioral descriptions for each of the ten clinical practice objectives. These descriptions contained typical examples of "outstanding," "acceptable," and "unsatisfactory" behavior. These descriptions were written so the instructor, following a review of anecdotal records, could decide to what degree the student had achieved each of these objectives.

After constructing the scale, Palmer devised an evaluation form on which the clinical practice grade (derived from the scale) could be recorded along with comments pertinent to the actual student performance.

In describing the evaluation of her scale, Palmer stated,

When the scale was evaluated, the two tests for validity and the one test for reliability revealed positive and significant correlations to the degree that the scale could be considered to have met both of these criteria satisfactorily. (35)

So successful were Palmer's efforts that she reported her findings at various regional and group meetings, and published an abstract based on her study under the title, "A Method of Determining Grades for Clinical Practice." (34)

A year later, following one of her own recommendations, Palmer worked out a self-evaluation form from her rating guide. This involved another whole project which she reported in Self-Evaluating of Nursing Performance Based on Clinical Objectives. (36)

This study is largely a re-statement of the first, with the chief difference being the development of a self-rating scale to be used by the student in evaluating her own performance of clinical practice.

Brester and others state that there is much more to developing an



evaluation guide than defining the course objectives. They discovered that one of the first steps in their situation was to define education. The next step was to define professional nursing education. After these definitions were developed, they reviewed nine principles of the learning process and developed a definition of learning. Not until these points had been defined and accepted by all, did the group tackle the objectives which they checked with the philosophy of the school to determine their desirability, and with the principles of learning to check their attainability. Then, and only then, were they able to devise an evaluation guide which they set up in three columns. The first column was for the objectives, the second for learning areas and the third for identifiable or expected behavior. (7)

One of the purposes of evaluation, according to Brester, et al, is to provide evidence to show the progress of the student toward the goals set up in the curriculum. In a school of nursing both theoretical knowledge acquired in the classroom, and concurrent clinical practice in which the student demonstrates her skill in applying her knowledge to the care of patients must be evaluated. Theoretical knowledge is most often shown by written examination, while the concurrent clinical practice is more subjectively evaluated by multiple appraisals of a student's behavior during clinical practice. (7)

Brester, et al. stated that they felt that the purposes of their study (to devise a method for evaluation of students' clinical performance which would be objective and which would be readily understood by both students and faculty) had been at least partially fulfilled. After a year of using the tool, both students and faculty expressed satisfaction with the evaluating process, indicating that subjectivity had been partially

eliminated and that they (the students) had more definitive goals so self-evaluation was easier and there was more uniformity in the meaning of a grade. (7)

Even when an evaluation tool is based on course objectives and is relatively objective, there is still the possibility of biases entering according to Percival M. Symonds for there are factors which influence evaluation. Some of these factors are: (1) the "halo effect" -- seeing the person in light of likes or dislikes, and becoming influenced by first impressions. (2) a "constant error of judgment" -- always rating high or low, (3) errors in observation -- basing a judgment on a single observation or incident, or (4) errors in memory -- not recording immediately the observations made. (44)

To overcome these errors Symonds suggested four methods. First there must be a wish on the evaluator's part to be objective. Second there must be direct observation. Third, use an objective standardized form for an evaluation to help eliminate bias. Fourth, have evaluators who are trained in evaluation methods, and who know who they are evaluating. (44)

Tate gives a terse history of evaluation and states that evaluation of clinical practice of nurses has existed in some form since our earliest days in nursing. The early criterion used were "What would I have done in this situation?" and a little later, "To what extent does this nurse's performance resemble or deviate from my own in a similar situation?" Such crude criteria are no longer acceptable, and currently evaluation of nursing practice is a major dilemma particularly for those who are experimenting with what they consider new and better educational programs and new and better methods of nursing practice. Tate states that competence

in theory and competence in practice do not necessarily go hand in hand.<sup>(47)</sup> Potts does not agree with this, but says there is a definite relationship between performance in theory and practice.<sup>(37)</sup>

Lindeman outlines a seven-point process for evaluating a program. He suggests these steps: (1) stating the objective for the evaluation, (2) securing evidence of the degree to which the objectives are being achieved, (3) securing facts about what is being done to achieve the objectives, (4) developing ideas about what factors might be helping and hindering the achievement of the objectives, (5) securing evidence for and against these ideas, (6) on the basis of the evidence obtained revising ideas about what is helping and hindering, and (7) developing and trying out methods of remedying the weaknesses.<sup>(28)</sup>

Berthiaume stated that observing is more than watching. She indicated that there are different kinds of observation -- directed and undirected. In directed observation, the observer is looking for specific factors related to defined objectives. She stated further that it is not enough merely to observe, but that the observations should be recorded, concurrently if at all possible.<sup>(3)</sup> Symonds and Best also stated that immediate or concurrent recording of observations should be made unless this created a barrier, or distracted.<sup>(45,4)</sup> They stated that this would minimize error due to memory fault.

Froelich and Darley described two methods of observation. One was the observer-description method in which the observer simply described what he had seen with no attempt to interpret or evaluate. The other method was the observer-evaluation method in which the observer evaluated and otherwise interpreted his observations. In its pure form, it does not allow any



descriptive material. In common practice, the two methods are often combined. (15)

Gerchberg, in the very thought-provoking report of her project for establishing an observational method for evaluating student performance in clinical situations pointed out that self-evaluation is the most desirable kind of evaluation, for in this practice the student knows what behavior changes are expected of her, can see and feel for herself where she is and is not attaining. For this kind of evaluation to be effective there must be clearly stated, concise objectives. Accompanying this should be the teacher's evaluation of the student, however, to serve as a guide or an aid to the student. She said:

The efficacy of the instructor's role in the evaluation process of the student is to a large degree a function of the relationship existing between teacher and student. However, completeness of the observations the instructor has made on the student's performance will bear no less heavily on the help she will be to the student in this respect.

Behavior is a multiplex of activities, thinking, feeling, and doing. Therefore, the more evidence the instructor can gather on these activities in her students, the more complete and therefore helpful will be the observations she shares with each of them.

Ideally, the instructor should be able to observe each of her students' total behavior continually over the span of the learning experience. Practically, behavioral observation is limited to systematic sampling throughout the entire experience. (47) The implication is that it is possible by intelligent, systematic sampling to infer the character of the student's continuous performance. (16)

Taba stated that there is no one type of behavioral observation which yields sufficient information to form a total picture of human behavior. (46) Therefore, numerous types of observations must be devised and used with



an eye to gathering information about specific aspects of behavior. However, practical devices must be simple and require a minimum of effort and time from both teacher and student while yielding sufficient information to make them of value. (46)

Behavior in its broad sense is defined by Tyler as including thinking, feeling and acting. (48) Because this definition did not seem to tell in what respects behavior was amenable to objective and universal interpretation, Gerchberg synthesized a more complete definition as follows:

Behavior is a continuous phenomenon and consists of a person's performance (overt behavior) and associated covert behavior past and present.

Covert behavior is a complex of mental and emotional activities which affect performance (i.e., thinking and feeling.)

Performance behavior (overt behavior) is an activity (or activities) executed by an individual which an observer can sense by hearing and seeing. (16)

Because behavior is so complex, to gain a complete view of student behavior requires more than one type of observation. Gerchberg felt that using the following four methods assured adequate observational methods: direct observation, assignment of a nursing care plan, a nursing diary, and a nursing process recording. (16) David agreed by stating that evaluation of student achievement to be effective must include more than direct observation. She used course grades and achievement scores of a comprehensive examination, to help her evaluate student achievement. (11) Rummel described the various methods of gathering data. One of the observational methods he described was the time sample observation in which the observer watches the one being observed at a given time each day for a given length of time. The observation may be at just one time during the

day for several days in succession, or at given intervals of time throughout the day for several succeeding days. The same person may be observed every day, or different persons observed each day. (40)

A modification of this method, known as the work sampling method, and which permitted observation of many students, was perfected by the Division of Nursing Resources of the United States Public Health Service under the direction of Margaret G. Arnstein to help hospitals study the activities performed by personnel assigned to nursing units. (49) The work-sampling method was first developed for use in industry. The advantages of this technique are that it permits the observation of a large number of personnel by a small number of observers, and provides accurate data for study and analysis. There are limitations since no one person is under constant supervision. Kelsven used the work-sampling method in her project to determine the various sources from which nursing students obtained information. She observed 22 students at one hour intervals for a total of 60 hours. She also used the continuous observation or "shadowing" method which is limited to the detailed observation of only one person, when she followed a student for a one hour interval, recording every instance in which the student sought any type of information. She chose these two methods observation to allow both wide and specific sampling. (25)

Several kinds of direct observation methods have been discussed. Writers concur that there are weaknesses in this method. (4,16,17,18) Its most apparent one is that it is limited to the observation of overt behavior. (16,18) Some of these weaknesses are identified by Good as he described ways of planning the design of an observational study to assure its reliability. He listed inadequate sampling, lack of precision in



defining behavior, complexity of method of recording, rapid, complex interaction, differences in perspective of observers, constant errors, inadequate training of the observer, the effect of the individual observer upon the behavior of the subjects, and the degree of acquaintance with the subjects as some factors which, if recognized and dealt with could make a study reliable, or which, if not considered might render a study weak. (17)

Other factors which should be present to insure that an observational study is satisfactory were listed by Symonds; Best; and Good, Barr and Scates and include: making specific observation at frequent intervals in a systematic way by the same observer, good eyesight, alertness, ability to estimate and discriminate, good perception, freedom from preconceptions, good physical conditions, and immediate recording. (4,18,45)

Recognition and control of these factors, and more refining of the procedures used have resulted in the direct observational method to be looked upon recently as a scientific procedure (18) in the form of descriptive research. (4)

Regardless of its weaknesses and limitations, the direct observational procedure is sometimes the only method available by which some aspects of behavior can be studied, and one has to "choose between bearing the criticism of those who emphasize the formalities of science, and foregoing the study of many characteristics which are of large practical importance." (18)

The literature reviewed in regard to evaluation and observation indicated that there is a definite need for better methods of evaluation. Definition of objectives seemed a pre-requisite to effective evaluation or observation. When observational methods are employed, there must be a studied effort on the part of the observer to be objective, to know for what he is observing, to record his observations as immediately as possible,

to qualify himself for the function, and to recognize that the method is limited in its effectiveness to observation of overt behavior.

### III. THE ASSIGNMENT OF STUDENTS TO NURSING SERVICE AND PLANNING LABORATORY PRACTICE FOR NURSING STUDENTS

The controversy of whether or not a student should be assigned to "nursing service time" is not new. The basic issues seem to center in four areas: (1) How much clinical experience is actually necessary in preparation of a nurse, (2) In gaining clinical experience, how much service is provided by the student? (3) If the student gives service in the course of learning, should this service be evaluated for purposes of financial negotiations? If so, how? and (4) How should nursing education be supported?<sup>(53)</sup>

Around these four very broad and general issues center all, or nearly all, the controversy regarding students in nursing service, and the place of such in nursing education.

There has been no answer to the first question. A review of the literature failed to uncover any conclusions as to how much experience is needed to prepare a nurse. All authors agree that students in the past were exploited and that it is not necessary to devote as many hours to practice as were formerly required, but no one conjectures how much time or how much experience is required, to prepare a student nurse to perform adequately on the level expected of her as a student.

There seems to be general agreement that the clinical assignment should be a planned experience. The American Nurse's Association's Committee on Current and Long-Term Goals derived twelve principles for nursing education from generally accepted theories of education. The



sixth of these principles is cited:

The responsibility for the total education experience should rest with the faculty of the educational institution. . . . The persons qualified to select the appropriate teaching methods and resources are the faculty. . . . The laboratory, . . . a hospital ward for a nursing student, has been selected in order to assist the student in acquiring knowledge. The fact that the laboratory may be a service institution in no way changes the goals of the student nor the educator. (38)

There is not complete agreement as to whether it is necessary that an instructor always be present. Sister Charles Marie says, "I am convinced that, no matter what we teach, the environment in which the student learns by application has a lot of influence." (31) Lambertson said that "in the majority of working situations, [nurses] are influenced by many other factors [than the nurse-patient relationship]. Until they can deal with these in a mature and intelligent way, we will not be able to improve nursing service." (31)

In relation to the second issue service as a learning experience has not been distinguished from service as required work. (43) Dolan has indicated that when the clinical experience of the student is geared to meet the service needs of the institution, the educational objectives of the students are frequently subordinated to the more pressing and obvious service needs. (12) Smith emphasized that experience in a hospital or any other service agency should be considered as laboratory practice, comparable with the laboratory practice of other disciplines such as practice teaching. Though the services of the student of nursing are an indispensable part of the care of the sick and though there must continue to be a manifestation of zeal for service on the part of the student, still it must be recognized that education should be student-centered and patient-centered. (43)

While it is important that the student not be exploited for service, it is also important that the experience she is given occur in true to life situations so she will feel that her services are necessary to the patients.<sup>(5)</sup> The desire to serve still inspires most students who enter nursing, and it is fortunate for society that there always will be young people who chose to enter the nursing profession because of their strong service motivation. Few other vocations offer a comparable opportunity for service.<sup>(33,43)</sup>

The third and fourth issues are somewhat inter-related. If, as Smith suggests, experience in the hospital is to be considered as laboratory work comparable with the laboratory work of other disciplines<sup>(43)</sup> the student should not expect to receive pay for it any more than a student in any other laboratory would expect pay for gaining experience. How then should nursing education be supported? Dolan has said that the public must be made aware of its responsibility to support nursing education even as it is supporting general education.<sup>(12)</sup> More and more industries are offering unrestricted grants for education and the federal government has now seen fit to help finance nursing education.<sup>(19,33)</sup> These suggest a few ways that nursing education might be financed.

Those young people who are enrolled in schools of nursing are entitled to receive high quality instruction accompanied by meaningful laboratory experience, because the development of the nursing profession is dependent upon its educational foundation.<sup>(12)</sup> In her provocative article "New Approaches to Teaching Will Come" Walters discussed five conditions which she considered critical to the teaching of comprehensive nursing care, namely: induction, interaction, instruction, effective teaching, and role anticipation. Discussing interaction she said,



Students do not learn to give comprehensive care all at once. They proceed from the simple to the complex in learning the components and variables of care. One day, if the foundation has been solidly laid, they will approach the synthesis. . . How, then, do teachers divide, arrange, and provide the component parts of the concept?<sup>(55)</sup>

This implies responsibility among nursing instructors to identify the varying levels expected of nursing students. It also implies planning laboratory experiences commensurate with the students' experience.

Thinking of learning in nursing as a two-step system of theory followed by practice, or acquisition of facts followed by application of facts is a limited concept, she stated. The hiatus between theory and practice is problem solving, and this method needs to be incorporated more into instruction. She stated further that while teaching machines, or programmed instruction, was becoming more and more prominent, the need for effective teaching will be omnipresent. "Students learn to relate to patients more from the teacher's relationship with the students than they do from what the teacher [or a machine] says about relating to patients,"<sup>(55)</sup> she stated. The teacher's presence and influence during laboratory time can and should be similarly one which would enhance student-patient relationships, and which will give the student a foundation for later nurse-patient relationships.

Because nursing students are now spending less time in hospital laboratory, they do not become acculturated to the worker role in the hospital to the degree that they did in the past. This has been defended as educationally sound, but imposes additional responsibility for providing learning activities which would provide students with an opportunity to anticipate the frustration, anxiety, and dissatisfaction

so often a concomitant of the practicing nurse.<sup>(55)</sup> Our educational programs must enlarge to meet the changing demands. Kingsbury predicts that educational programs will be broader.<sup>(26)</sup> With broadening nursing programs will need to come a more careful planning of nursing laboratory experience. Much research has been done in this area. One study of interest was reported by Quinlan.<sup>(39)</sup> In an experiment conducted at Massachusetts General Hospital, it was found that students could learn the essential components of comprehensive nursing care of orthopedic patients by learning to provide for the nursing needs of a selected group of orthopedic patients. An analysis of the basic skills needed to give care to patients with hip arthroplasty revealed that all but five of the skills recommended by the National League for Nursing for orthopedic service were required in giving care to this type of patient alone. The five unmet skills, it was felt, could be learned as readily on a unit other than an orthopedic unit. This study proved that a variety of nursing skills can be developed from a single situation, and portends a coming trend—that of intensive care for a limited number of hours, on a limited number of carefully selected patients.

Abdellah stated that nursing is more than giving treatments and medications, more than caring for a patient with a diagnosis. Technical competencies are essential, but represent only the quantitative measures of nursing. The larger horizon of nursing is helping patients and families to solve health problems. This requires a much broader preparation — specific preparation in the area of human relations skills.<sup>(1)</sup> Professor Clarke voiced a similar opinion when he said that the nurse of today must be concerned with keeping body and soul together in much more than a physical sense.<sup>(10)</sup> The nurse, he said, is a representative of the culture,



so must have an education rooted in liberal human disciplines. Similarly, the nursing student's laboratory experience must provide opportunity to practice inter-personal relationships.<sup>(24)</sup>

In a letter to the editor which appeared in the January, 1960 Nursing Outlook, Marie Farrell<sup>(14)</sup> stated her reactions to two articles which had appeared two months earlier. The two articles to which she referred were: "Part-time Work for Basic University Nursing Students The Faculty's Viewpoint" by Lulu Hassenplug<sup>(20)</sup> and "An Employer's Viewpoint" by Doris Bresnahan.<sup>(6)</sup> Both these articles reported favorably on the practices of the University of California in Los Angeles of employing its basic nursing students on a part-time basis. Farrell, in her letter to the editor stated "I agree with the thesis of the article. . . and disagree with those who object to nursing students working their way through school."<sup>(14)</sup> She stated further that it is either legal or illegal for a student to work as a hospital employee. She saw no difference between students working for "over-the-counter cash payment" or "room and board on a barter basis." She implied her agreement with both Hassenplug and Bresnahan that extra experience in the hospital situation could afford valuable learning experiences, but that both the student and the employer should know the limitations of the student's preparation thus far.

The literature reviewed pertinent to assignment of students to nursing service, and to laboratory practice indicated that nursing service time no longer is considered vital to a student's nursing education, but that the objectives of the school should be fulfilled within the confines of its curriculum. To prepare qualified nurses to meet the expectations of today, nursing educators must broaden their programs, and plan more carefully the laboratory practice of their students. Newer methods of teaching and

of presenting laboratory experience must be investigated and implemented. Extra-curricular employment by nursing service may add considerable to a student's experience but needs to be evaluated carefully to determine its legality and the level of student limitations clearly defined by both student and employer.

#### IV. SUMMARY

A review of the literature revealed the importance of incorporating the broad principles of general education into nursing education, and then establishing course objectives which will ensure the achievement of these broader goals. Effective evaluation is based upon determination of the extent to which the objectives have been attained. This determination may be by the use of observational methods, student self-evaluation, written assignments, and similar devices. Evaluations are made less biased by the use of some objective form or tool, and by multiple observations.

Although the general trend is towards eliminating nursing service from the curriculum of nursing education, there is some concern over whether students are being deprived of a feeling of service and looking for the hospital where they can achieve both academically and in these areas of feeling. Nursing laboratory experience must be carefully planned to assure the achievement of these student needs, the stated course objectives, and to provide optimum learning. The problem of financing nursing education must be removed from the student and the hospital to the public at large. The nursing profession must determine whether nursing students working for compensation is legal or illegal, and take action which will assure that it is within the law. By working part time for nursing service, the nursing student can not only help defray her expenses, but also augment her exposure to learning situations.



## CHAPTER III

### REPORT OF THE STUDY, FINDINGS, AND INTERPRETATIONS OF DATA

#### I. THE METHOD OF THE STUDY

##### A. Settings of Study

This study was undertaken for the purpose of determining the similarities and differences in achievement in pediatric nursing of two groups of students enrolled in collegiate schools of nursing. Students in school A, known as group A, were assigned to clinical practice for 15 hours per week, and had an additional eight hours of practice under Nursing Service supervision; students in school B, known as group B, had the same number of hours of clinical (or laboratory) practice, but had no required practice under Nursing Service supervision. Laboratory hours for group A, as stated above, were from 6:45 - 11:30 a.m., in group B they were from 6:45 - 10:00 a.m. to total 15 hours per week respectively.

The study was conducted in the two schools simultaneously for one quarter, from March 19 to June 1, 1962.. The participating schools were selected because:

1. both were church-operated, collegiate nursing schools
2. both were in the process of curriculum change.
3. the enrollments were somewhat equal; school A had an enrollment of 113 students; school B had 101 students enrolled at the time of the study.
4. the number of students registered for pediatric nursing

was somewhat comparable; school A, 13 students; school B, eight students. Had other schools in Oregon been selected for comparisons, the differences in pediatric assignment would have been greater.

5. the pediatric rotation in both schools occurred at approximately the same point in the students' program.
6. the students' age range was similar; group A ranged between 20-25 years of age. Only one student was 25 years old. All other students ranged in age from 20-22. The average or mean age was 21.84. Group B ranged in age from 20-21 years with an average or mean of 20.62 years of age.

#### B. Conducting the Study

##### Purpose of the Study

The purpose of the study was to identify similarities and differences in achievement between the two groups. It was divided into three parts, namely,

1. a comparison and analysis of each school's objectives for pediatric nursing,
2. observation of student activities and behavior changes in clinical practice related to the objectives which gave evidence of fulfilling the objectives,
3. comparing the students' achievement on a standardized test.

Each part will be reported separately.

It was hypothesized that there would be no appreciable difference in the achievement of the two groups.



### Developing the Observation Plan

A method for observing pediatric nursing students during their nursing practice laboratory was developed. This could only be done completely and in adequate detail to yield sufficient data for analysis if all students were observed over a period of time. A prepared check list was found to be ineffective because it did not allow for specific description of behavior. Because the time was limited to one quarter and because there was only one observer, two methods were chosen, namely the work-sampling and continuous observation methods. A combination of these two methods allowed both close and detailed observation and a wide sampling of performance. Good, Barr and Seates and John Best described these methods as "scientific procedures"<sup>(18)</sup> in the form of "descriptive research."<sup>(4)</sup> The work sampling method was adapted from industry to nursing research by the Nursing Resources Division of the United States Public Health Service,<sup>(19)</sup> and was first used under their direction at the Massachusetts General Hospital in an effort to analyze head nurse duties.<sup>(3)</sup> The recording for this study was a blank notebook in which all observations (either continuous or work-sampling) were recorded.

### Conducting the Pilot Study

A pilot study was conducted for approximately five hours at School A with a group of twelve pediatric students during their nursing practice laboratory for the purpose of providing the observer with practice in using the work-sampling technique. During the pilot study the observer found that rather than confining observations to a single area of the unit she should locate the student at each time interval in the area in which she was performing. This was necessary to gain a composite report



of nursing activities carried out by the students during their laboratory practice. The observations of the pilot study were tallied to determine if they would lend themselves to analysis as related to the objectives. They were not used as a part of the final study.

#### Procedures Used to Collect Observational Data

Two methods of observation were used to collect data during clinical practice sessions: work sampling and continuous (or shadowing) observation. This combination allowed wide sampling of student activities while permitting close and detailed observation. Representative sampling of clinical practice in each school was obtained. During the pilot study a prepared check list was found to be ineffective because it did not allow specific descriptions of behavior. Use of a blank notebook, in which all observations were recorded, was tried and found to be more satisfactory as explained under description of the pilot study.

It was arbitrarily decided to limit continuous observations to three at each school as less than three would not provide sufficient detail, and more than three was found to be repetitious. To determine which student was to be observed continually, each student on the instructor's list was numbered consecutively. The student was then chosen by use of a table of random digits, and a moment-by-moment account of her activities was recorded. A sample page of continuous observations is shown in Appendix A.

After three continuous observations of a morning's laboratory session were made, the remainder of the observations during the quarter were conducted by the work-sampling method. The students were observed at 15 minute intervals and their activities recorded. It was possible to

to make a two-minute observation of each student every fifteen minutes because a maximum of six students a day were assigned. When fewer than six students were assigned, longer observations were possible. This eliminated possibility of error based on a single observation or incident.

Work-sampling observations were recorded thus: (1) The number of students assigned to clinical practice was determined, and numbered consecutively. (2) Beginning with seven o'clock, the hours were divided into 15 minute intervals. Under each time entry two lines per student were allotted and numbered. (3) During each 15 minute interval, as a given student was observed, her activities were recorded on the numbered lines corresponding with her number. A sample page of this method has been reproduced in Appendix B.

By recording each student's activity immediately after performance, memory failure was minimized. The "halo effect" was minimized by becoming better acquainted with the students and by observing for a full three months. It was possible to note progress of students from week to week.

## II. PRESENTATION AND ANALYSIS OF THE DATA

### A. THE OBJECTIVES

The first step in conducting the study consisted in reviewing and analyzing the objectives of pediatric nursing. A comparison of the objectives for the two schools revealed many similarities in context although the format differed. It would not be logical to assume that the statements would be identical, but it is logical to assume that in a state where both schools are meeting the same minimum requirements as established by the state board of nursing, there would be many similarities. Parenthetically, it should be explained that although school A is



accredited by the board of nursing in another state, it meets the Oregon requirements also. The majority of those who graduate from school A take their licensing examination in Oregon.

School A listed one main objective and ten contributory objectives. School B divided objectives into those applying to the class room and to the clinical laboratory. However, it was stated that all class room objectives would apply to the clinical laboratory.

The objectives of the two schools are quoted:

Objectives for School A

**MAIN OBJECTIVE:** The paramount objective of this course is to help the student to provide competent nursing care for children of all ages in varying degrees of illness and health.

**CONTRIBUTORY OBJECTIVES:** To help students to:

1. Develop competence in the nursing of children through selected supervised practice.
2. Learn how to modify principles of health, education and human relations in caring for children.
3. Increase awareness of the nurse's responsibility for the health, protection and safety of children including education in self-protection.
4. Develop competence in providing for and supervising the play of children.
5. Study the special needs of children in stress situations.
6. Foster meaningful relationships between growth and development theory and actual problems in the nursing of children.
7. Gain a thorough knowledge of growth and development, including the concept of individual differences.
8. Become increasingly aware of positive nurse-child-parent relationships.
9. Develop competence in the education of parents.
10. Be motivated to active participation in organizations for the prevention and conservation of child health.

## Objectives for School B

### I. Classroom Objectives:

1. To help the student to attain further knowledge and develop understanding of:
  - a. adapting principles and skills previously acquired to the nursing care of children.
  - b. the basic principles of pediatric nursing.
  - c. the etiology, symptoms, diagnoses and treatment of diseases of children.
  - d. the nursing care of children afflicted with these diseases and how to individualize care to solve specific problems of children.
2. To help the student to gain an appreciation of the emotional and sociological problems of the ill child.
3. To develop further an appreciation of the role the nurse plays in patient teaching to prevent further occurrence of illness.
4. To help the student learn to recognize normal growth and development of the child.

### II. Clinical Laboratory Objectives

1. All classroom objectives will apply to the clinical laboratory.
2. To help inspire the potential pediatric nurses to continue in pediatric nursing.
3. To help the student develop skill in resolving nursing care problems and to apply principles of nursing care to meet needs of the individual child.

### Analysis of the Objectives

Analysis of objectives is facilitated when the objectives are stated in terms of the expected outcomes of learning, namely the acquisition of knowledge, the development of understanding, skills and abilities, attitudes, appreciations, and concepts. In the studies cited in the review of literature, particularly those by Palmer, the anticipated behavior changes led smoothly from the objective thus expediting evaluation. That



was not the circumstance in the present study. An attempt was made to identify the broad outcomes of learning and the implied subject matter in each objective. Table I shows the result of such analysis. The initials A or B have been inserted in reference to the appropriate school.

Much of the analysis is based on arbitrary decision. There was no real way of determining exactly what each objective was intended to convey. Comments on each individual objective are made for further clarification.

#### Analysis of Objectives of School A

The main objective is designed "to help the student to provide competent nursing care for children of all ages in varying degrees of illness and health." Providing competent care is really a behavior change rather than an objective. This was arbitrarily interpreted to mean that the school aimed to assist the learner to develop ability to perform in such manner as to assure that competent nursing care would result. Hence this objective was classed as objective IV, subject matter area 5.

Contributory objective 1 indicated that competence would be developed "through selected supervised practice." This not an objective since it refers only to the learning experience through which competence is to be developed. This objective was not classified on Table I.

Contributory objective 2 referred to learning "how to modify principles of health, education and human relations in caring for children." It may be presumed that the students already knew those principles since a modification was expected. This seemed to imply the development of an ability rather than understanding of the principle. Accordingly, this objective was classified under objective IV, subject matter area 8.

Contributory objective 3 was designed to "increase awareness of the nurse's responsibility for the health, protection and safety of children including education in self-protection." It is difficult to interpret what is meant by "increasing awareness." It is possible that the result of such awareness would be that of developing an attitude of responsibility. For that reason, this objective was classified as objective V, subject matter areas 4 and 7. It was assumed that education in self-protection referred to patient-teaching, though it may have referred to developing an attitude of concern for one's own safety and health.

Contributory objective 4 referred to developing "competence in providing for and supervising the play of children." Since other objectives relative to competence had been categorized as the development of ability, this was placed under objective IV, subject matter area 2.

Contributory objective 5 was concerned with studying the "special needs of children in stress situations." This seemed to imply developing understanding of such needs, hence the objective was classed as objective II, subject matter area 2.

Contributory objective 6 was written "foster meaningful relationships between growth and development theory and actual problems in the nursing of children." This seemed to infer that the student was to develop understanding of the growth and development by converting a theory to a function. This was classed as objective II, subject matter area 3.

Contributory objective 7 was designed to "gain a thorough knowledge of growth and development, including the concept of individual differences. This objective really should precede the one above since the acquisition of knowledge is a forerunner of developing understanding. However, it was



TABLE I  
OBJECTIVES OF SCHOOLS A AND B IN TERMS OF OUTCOMES OF LEARNING

Areas of Subject Matter implied in the Objectives	Objective I Acquire Knowledge	Objective II Develop Understanding	Objective III Develop Skill	Objective IV Develop Ability	Objective V Develop Attitudes	Objective VI Develop Appreciations	Objective VII Develop Concepts
1. Diseases of Children etiology diagnosis symptoms prevention treatment	B B B B B	B B B B B					
2. Emotional and Social needs of Children nurse-child- parent relations play supervision stress or special needs		A   A		A		B	
3. Growth and Development or Individual Differences	B A	A					A
4. Health of Children organiza- tions concerned with protection safety self-pro- tection					A A A	A	
5. Nursing Care of all ages of children varying degrees of illness	B	B	B	A			
6. Parent Education				A			
7. Patient Teaching					A	B	
8. Principles of Education Health Human relations Pediatric Nursing	B	B	B	A			



classified under objective I, subject matter area 3. The second part was placed under objective VII.

Contributory objective 8 referred to becoming "increasingly aware of positive nurse-child-parent relationships." This was interpreted to mean the development of understanding, hence was categorized under objective II, subject matter area 2.

Contributory objective 9 referred to developing "competence in the education of parents." As in other objectives, competence was interpreted as meaning an ability. Accordingly this objective was classed as objective IV, subject matter area 6.

Contributory objective 10 was "be motivated to active participation in organizations for the prevention and conservation of child health." This is a rather nebulous statement. It is not known which organizations "prevent and conserve child health." It is highly probable that some words were omitted. It is unrealistic to assume that nursing students would actively participate in health organizations while still in the student status. Accordingly, the statement was interpreted to infer that the students were to be assisted to develop appreciation for the purposes and programs of organizations concerned with child health. This interpretation led to classifying under objective VI, subject matter area 4.

#### Analysis of Objectives for School B

The objectives of school B were divided into four objectives applying to the classroom and three for the clinical practice area.

Classroom objective 1 was designed to "help the student attain further knowledge and develop understanding of. . ." followed by four sub points. Since this objective specifically refers to acquiring knowledge and developing understanding, it has been classified under objectives I and

II and the subject matter areas of 1, 5, and 8. Subpoints a and b had some overlapping, hence were used only once.

Classroom objective 2 was formulated "to help the student to gain an appreciation of the emotional and sociological problems of the ill child." This was classed under objective VI, subject matter area 2. It would be interesting to review the course content to ascertain whether this objective is developed as an appreciation or an understanding.

Classroom objective 3 was stated "to develop further an appreciation of the role the nurse plays in patient teaching to prevent further occurrence of illness." This was categorized as objective VI, subject matter area 7.

Classroom objective 4 read "to help the student learn to recognize normal growth and development of the child." This was classified under acquiring knowledge, objective I, subject matter area 3.

The first clinical laboratory objective read, "all classroom objectives will apply to the clinical laboratory." This is not of itself an objective, but the inference that classroom instruction and nursing practice are an entity with identical goals is noteworthy.

Objective 2 was stated "to inspire the potential pediatric nurses to continue in pediatric nursing" simply could not be classified. The students will definitely rotate from the pediatric department at the completion of the term. Any continuation in pediatric nursing would of necessity have to be deferred until the future.

Objective 3 read "to help the student develop skill in resolving nursing care problems and to apply principles of nursing care to meet the needs of the individual child. This was classified under objective III, subject matter area 5.



In reference again to Table 1 it should be noted that School A stated no objectives in terms of acquiring knowledge except in subject matter area 3, growth and development; no objectives concerned with the development of skills in any subject matter area. School B's objectives were categorized mostly under acquiring knowledge, and developing understanding and skills, but none under objective IV, the development of ability. Since a skill is a facility in performance and an ability is a generalized power, the development of skill may be more feasible on the student level. (9)

It should be noted that the subject matter areas listed on Table 1 are only those implied in the stated objectives of the two schools. The eight areas should not be construed to represent a course outline in pediatric nursing.

The second phase of the study consisted of observations, both continuous and work-sampling as described under method of collecting data.

#### B. OBSERVATIONS

Observations were conducted simultaneously in both schools during an entire quarter so extraneous influences (such as tensions from world conditions, weather conditions, and similar factors) would not materially cause differences of behavior. The study continued for an entire quarter to provide a comprehensive investigation of the pediatric assignment of both schools.

##### Observations and Analysis for Group A's Achievement of Objectives

Analysis of the recorded observations of clinical nursing laboratory practice of students in group A revealed that some activity apparently fulfilled every objective but the ninth and tenth. Although no specific



behavior was observed which indicated the achievement of these two objectives, this is not conclusive evidence that they were not realized; it merely indicated that such behavior was not observed, or that the objective was not attainable within the limits of one quarter's time.

An analysis of the activities which seemed to fulfill each objective follows. While many more than the reported activities were recorded, only those incidents which seemed to be closely related to the objective have been included.

The "main objective" of school A's pediatric course arbitrarily placed under objective IV, subject matter area 5, was observed to have been fulfilled in the following ways:

Students gave nursing care to patients ranging in age from seven weeks through adolescence; to acutely ill, or moderately ill; to recuperating or convalescent children in both a general hospital and in children's orthopedic hospital. Some patients were confined to bed, some were allowed wheel chair privileges, some were ambulatory. No evaluation of the care given was attempted, as "competent care" is a subjective term.

The second contributory objective was realized when applications and modifications of the principles of health, education, and human relations were observed in such activities as (1) employing sterile technique in preparing bottles of formula, in changing dressings, and in preparing medications for administration, (2) avoiding contaminations; infection while making a child's bed, in using isolation techniques, and in careful handwashing, (3) in calculating fractional doses of medications, (4) in communicating with children, and (5) in accepting children in either pleasant or irritable moods, a manner that appears to be non-judgmental, and in recognizing and acknowledging the need for love and attention.

Contributory objective three was realized when students were observed applying restraint jackets on active children trying to climb out of bed, in carefully putting up the side rails before leaving the bedside, in closing safety pins when removing them from the diaper, and in using careful techniques to insure that infection not occur. Self-protection in the area of patient teaching was not observed. If the objective referred to insuring the student's own safety, this was stressed when the instructor reviewed with a student the properties of staphene and encouraged more careful handling of this solution; also, when body mechanics and posture were stressed.

Contributory objective four interpreted to refer to developing abilities in meeting the social play needs of children.

Students were observed developing their ability in this area by providing play materials, such as stuffed animals, crayons and color books, paper, scissors and glue; and varied kinds of beans, paper plates and glue for patients; allowing a child to play with toys in the bath water; reading letters and stories to patients; in first receiving instructions from the teacher in how to weave a potholder, and then teaching a patient how to do this.

The fifth contributory objective aimed at helping students develop understanding of children in stressful situations. The following incidents seem to relate to this objective.

Nursing Students were observed with the instructor attempting to give care to a severely burned patient who was resisting all care because of her fright and pain. The instructor took the leading role while the students observed intently the methods she employed to reassure and give care to this patient. In another instance a child had become very



frustrated at being twisted in his restraint jacket. He was crying, and straining to free himself. The student helped the child untwist by removing the jacket and straightening it. Instead of arguing with the patient about replacing it the student diverted his attention to activities occurring outside the window, and then gently replaced the jacket. Other students were seen admitting patients to the unit and staying with them immediately after the parents left, giving reassurance to the children.

The sixth contributory objective referred to the development of understanding regarding growth and development, and was apparently fulfilled in the following observations. Spontaneous discussion occurred between instructor and student regarding growth and development in incidents such as the following. The food likes and dislikes and eating habits of two-year-olds as related to the breakfast tray sent were discussed. Following the behavior of another patient who started crying that she wanted a bath, the emotional implications, intellectual capacities and growth and development characteristics of her age group were discussed.

No evaluation of the seventh objective was made as it referred to classroom activities or to development of broad concepts which cannot be evaluated by observing overt behavior.

Contributory objective eight aimed at helping students gain understanding of emotional needs and social relationships. Students were observed adapting their care to meet the needs and ages of their patients, spending time playing with the patients, and allowing the patient to choose when this was possible. Few nurse-parent relationships were observed, but there was some inter-relationship when the student was admitting a new patient to the unit. However, the parents were very hurried and were in



the unit a limited amount of time, so that little understanding could have developed from the experience.

The ninth and tenth contributory objectives were not observed to have been fulfilled. While no behavior was observed which seemed to fulfill these objectives, this is not conclusive evidence that they were not realized.

#### Observations and Analysis for Group B's Achievement of Objectives

The objectives for school B were divided into four objectives applying to the classroom and three for the clinical practice area. Analysis of the recorded observations of clinical nursing laboratory practice of students in group B revealed that some activity apparently fulfilled every objective but classroom objectives one b and c, and clinical laboratory objective two. Although no specific behavior was observed which indicated the achievement of these objectives, it cannot be stated that they were not realized. It can only be stated that either no behavior was observed which seemed to fulfill the objective, or that the objective was too long-range in nature to be realized in one quarter's time. Because the first laboratory objective stated that all classroom objectives would apply to the laboratory, all classroom objectives were considered.

An analysis of the activities which seemed to fulfill each objective follows. As with group A, only those incidents which seemed to be closely related to the objectives have been included in the report.

Classroom objective one a was designed to help students gain knowledge and understanding of how to adapt previously acquired principles of nursing care to the nursing of children. In "adapting principles and

skills previously acquired," it was assumed that the student had already acquired a degree of knowledge and understanding, and that there would now follow an adaptation and application in their pediatric clinical practice. Students were observed in following the same bathing and bed-making procedures as would be used for adults, with adaptations to the situation. The same powers of observation regarding skin and general over-all condition of the patient were employed when bathing infants and children. Previous knowledge of care of orthopedic patients was demonstrated when students cared for children in Bryant's or Russel's traction.

Classroom objectives one b and c aimed at helping students gain knowledge and understanding of the basic principles of pediatric nursing and of the etiology, symptoms, diagnosis and treatment of the diseases of children. Subpoint b seems to be included in subpoint a so that activities which fulfilled objective one a would also fulfill objective one b. No overt behavior was observed which seemed to fulfill objective one c.

Classroom objective one d was to help students gain knowledge and understanding of the nursing care of children with diseases, and how to individualize care "to solve specific problems." Although this was a classroom objective, its application might be realized in the clinical laboratory and was implied in clinical laboratory objective three. Students were observed using sterile linens in caring for a severely burned patient, in consulting with the parents regarding food likes and dislikes of a child with anorexia, and in maintaining correct alignment of the body of a child with Russel's traction.

Classroom objective two aimed at helping the student gain an appreciation of the emotional and sociological problems of the ill child.



As stated before, it would be interesting to review the course content to ascertain whether this objective was developed as an appreciation or an understanding. During clinical practice some behavior was observed which seemed to show understanding of emotional problems, but none which showed either appreciation or understanding of sociological problems. Students were observed comforting and loving the crying patients to whom they had just administered medications by injection. One student was observed letting her young patient who had been burned from hot bath water feel the temperature of the water in the tub before putting her in to soak. A definite rapport was established by this act, for the patient said to the nursing student, "I like you 'cuz you like me." The instructor and student were observed discussing the behavior and emotional reactions of a sobbing child who had just been left in the hospital by his parents.

The third classroom objective was stated "to develop further an appreciation of the role the nurse plays in patient teaching. . ." Only one instance of patient teaching was observed when a student was stressing to a patient the importance of maintaining adequate fluid intake.

Classroom objective four aimed at helping students learn to recognize normal growth and development of children. Applications of knowledge they learned in the classroom were made by the students during their clinical laboratory nursing practice in incidents such as the following two. The student was observed feeding a child her breakfast. The patient, sitting on her bed, was slapping at the spoon every time a bite was offered. The instructor came in and suggested that the student either put the patient in a high chair or hold her in her lap. No discussion of the reasons for these suggestions was made, but perhaps the student applied her knowledge regarding the habits of children of this age to the



situation. In another incident a student was observed giving her patient a drinking straw to use as a thermometer on her dolly while the student took the patient's temperature. The student was apparently applying her knowledge of the growth and development of children to this experience.

The first "clinical laboratory objective" was not stated as an objective but merely stated that all classroom objectives would apply to the clinical laboratory. Hence, those observed activities which seemed to fulfill any classroom objective would have fulfilled this "objective" had it been stated as an objective.

Clinical laboratory objective two, "to help inspire the potential pediatric nurses to continue in pediatric practice," was too far-reaching and unrealistic to be achieved or appraised in one quarter's time.

The third clinical laboratory objective was aimed at helping the student develop skill in resolving nursing care problems and in applying the principles of nursing care to meet individual needs. This objective is an enlargement of classroom objective one d, so that any activity noted under the later would also be applicable for the third clinical laboratory objective. Further, students were observed giving Aveeno soak baths to a patient suffering with eczema, and dressing the leg of another patient with "Adaptic" and Kerlix and taping it in place with adhesive without taping it to the sensitive skin.

#### Summary of Observations in Both Schools

Observations in both schools A and B revealed the need for clearly stated, achievable objectives written specifically for the clinical laboratory. Neither school would be able to evaluate whether or not the achievement of some of its objectives had occurred, because they were

either not applicable to a clinical practice situation, or they were too far-reaching for immediate evaluation.

The instructor in school A was observed doing more actual teaching and guidance during the laboratory practice sessions than was school B's instructor. The facilities used by school B seemed more adequate than those utilized by school A, as the pediatric department of school B's hospital was approximately three times as large as school A's, and contained a greater variety of patients.

No attempt was made to rate the performances of the students in either group, as there were no criteria for this. However, student progress was noted in both groups of students. To illustrate, during the first week students seemed tense and uncomfortable both when preparing bottles of formula and in feeding infants. By the sixth week they were applying nipples to the bottles with ease, and relaxed enough to rock a baby a little when feeding him. By the twelfth week they were able to "talk" and "coo" with a baby while feeding him or giving him care. Again, students seemed at a loss for words during their first week but by the end of the quarter they could carry on an easy conversation with nearly any child.

### C. ACHIEVEMENT TEST

#### Description of Test

A standardized achievement test, "Nursing of Children," compiled at the request of the National League for Nursing by a group of pediatric instructors from different sections of the United States, was administered by the instructor to each group at the end of the pediatric quarter.

The scores are expressed in percentile norms and are based on the



(1) normative group for accredited diploma programs, the number of students who have taken the test, the number of schools they represent and the year in which the normative data were collected; (2) similar information for accredited degree programs, and (3) similar information for all students taking the test covered by the report regardless of the degree-diploma status of the program or the accreditation status. Performance in these tests is not reflected on individual grades, but is used in counseling the student, and in indicating areas of weakness or strength as compared with a national student group.

The test is constructed in three sections, namely, growth and development, psychology and sociology, and theory and practice with subscores for each. Those questions which do not belong in any of the sections, or which could fit into several were included in the total score.

The test was machine-scored by the National League for Nursing. Then they were returned to the registrars of the respective schools, and the data presented in this study were obtained from them.

Individual scores were presented for both groups in table II. No attempt was made to rank order the students in either group, nor is student 1 in group A necessarily comparable with student 1 in group B. The students were listed alphabetically on the National League for Nursing summary score report and they were left in that order for the table. Since these students were enrolled in degree schools, only the degree scores have been included in this report.

#### Achievement of Groups A and B

In the first section of the test, "Growth and Development," one



student in group A received a score of 96. There were none in group B who received a score of 90 or above in this section of the test. One student in group A earned the low score of only 11; two students in group B received low scores of only 05 and 11 in the same section. The class means of the two groups were close, group A's being 56.61, and group B's being 51.00.

Using the below formulas, t-tests were calculated for each section of the test, and for the total score, for test of significance.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s^2}{n_1} + \frac{s^2}{n_2}}} \quad s^2 = \frac{\sum (x - \bar{x})^2}{n_1 + n_2 - 2}$$

In the Growth and Development section of the test, the difference between the two mean scores was not significant. The null hypothesis, if applied to this section of the test alone, would stand, showing that the two groups are similar.

The second section of the test, "Psychology and Sociology," shows only one student with a score of 90 or higher. This student was in group B with a score of 95. There were three students with scores of 20 or below, all of 09. One of these students was in group A and the other two were in group B. Group A's mean score was 53.84 and group B's mean score was 50.62. The t-test applied to these scores revealed that the difference in the achievement of the two groups was not significant. The null hypothesis that there would be no difference between the two groups would therefore be accepted as valid if this section of the test were considered alone.

The "Theory and Practice" section of the test showed an unexpected change. There were three students in group B with high score of 91,

Table II

PERCENTILE SCORES OF GROUP A AND B ON THE NATIONAL LEAGUE FOR NURSING  
STANDARDIZED ACHIEVEMENT TEST "NURSING OF CHILDREN"

Student	Growth and Development Section		Psychology and Sociology Section		Theory and Practice Section		Total Score of All Sections	
	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B
1	61	22	36	47	30	14	36	17
2	96	72	58	58	73	82	84	79
3	72	81	36	95	47	82	52	90
4	87	05	70	47	60	82	76	49
5	61	61	70	09	60	91	66	70
6	50	31	47	09	02	17	12	13
7	50	14	70	70	78	94	74	76
8	50	81	70	70	47	97	56	96
9	22		58		67		52	
10	81		70		47		66	
11	61		25		06		15	
12	31		09		06		09	
13	14		81		73		59	
Group mean	56.61	51.00	53.84	50.62	45.85	69.80	50.54	61.25

94, and 97, but none in group A with scores this high. Although there was one in group B with a score of below 20, there were three in group A with low scores. The three students with the high scores in this section of the test had no other high scores on any other section; in fact one had the low degree score of 11, on the Growth and Development section. Although none of these three rated 90 or above on any other section of the test, student 8 rated fairly high in the other two tests so her total score on the entire test rated 96.

The one student in group B rating low in the Theory and Practice section did not have a score as low as 20 in any of the other sections of the test, but her Growth and Development score was only 22 and her total score for the entire test, derived from the three sections, was only 17. Two of the three students in group A who rated low in this section of the test also rated low in the Growth and Development score. Both of these students' total scores were below 20.

The group means for the Theory and Practice section of the test were higher for group B than for group A. Group B's mean was 69.88 and group A's 45.85. This difference, when tested by the t-test, was not significant at the .05 level but was significant at the .10 level. This difference is not significant enough to cause rejection of the null hypothesis.

It might have been suspected that since group A students were spending more hours in giving patient care they would perform better than group B in the Theory and Practice section of the test, but this did not prove to be true. Several subjective reasons for this might be postulated. One might be that the extra eight hours spent by group A in performing "nursing



service" did not constitute a learning experience; indeed, it may be that some of the principles learned during their laboratory practice were violated or negated while they were performing for nursing service. It might be that this extra eight hours were spent by group B in study so they fixed more firmly those things learned in class and practice. Since no attempt was made to match the two groups, there is no way of knowing whether group B is academically superior to group A, or vice versa. The differences could be ascribed to the nature of the learner, the environment for learning, the caliber of instruction, the type of practice or many other factors beyond the scope of this study.

It might be that even with the several facilities utilized by group A for laboratory practice they were still receiving a less varied exposure to actual nursing care of pediatric patients. Perhaps none of these postulates is valid.

Because the total score of the entire test is perhaps the most indicative of a student's whole approach to Pediatric nursing, a consideration of these scores seems important. There were two students in group B with scores of 90 or above. There were no students in group A with scores of 90 or above. There were three students in group A and two students in group B with scores below 20 in the total score. The difference when tested with a t-test was not significant.

Disregarding the divisions of the test, group A had only one high score (90 or above) while group B had six high scores. It must be noted that group B had five fewer students, yet earned five more high scores than group A. There was no difference in low scores: group A had a total of eight and group B had a total of eight low scores also.

These t-test scores reveal that there is no significant difference between the performance of the two groups. In only one section, the Theory and Practice section, was there any significance, but that at only the .10 level. No other sections of the test were significant. Taking the test as a whole, the null hypothesis would stand, as there is no significant difference.

It would be interesting to know how the test was weighed, and how much meaning can be attached to any single score. It would also be interesting to compare these same students performance later on their State Board Test Pool Examinations. It could probably be forecasted that those students who did well on more than one section of the test could be expected to do well in their licensing examinations also, and vice versa unless intensive study were pursued in the interim.

### III. SUMMARY

After listing and comparing the objectives of the two schools, reporting the observations of activities of the two groups, relating the observations to the objectives and comparing and analyzing the two groups' achievement on the test, there seemed to be little evidence to disprove the null hypothesis.

In the studies conducted by Palmer,<sup>(35)</sup> Quinlan,<sup>(39)</sup> Beland,<sup>(2)</sup> Brester,<sup>(7)</sup> and Gerchberg<sup>(16)</sup> there were clearly defined nursing laboratory objectives which could be evaluated for achievement. This was not the case in this study. Had there been such, and had there been no more differences observed than were, then it could have been assumed that there was little difference between the two groups. However, there were

not clearly stated objectives. The process of observation was not sensitive enough to yield data which could cause rejection of the null hypothesis. The achievement test similarity did not reveal any significant differences between the two groups.

There were many variables which might have affected this study, such as the preparation and personalities of the two instructors, group cohesiveness, philosophies of the schools and/or hospitals, facilities used by the two schools for giving experience in pediatric nursing, student acquaintance with the observer, and the amount of time spent by the students in extra-curricular activities. No measure of the effect of any of these variables was made, although their presence was recognized as capable of influencing the results of the study.



## CHAPTER IV

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDIES

#### I. Summary

This study was undertaken to determine the similarities and differences in achievement in pediatric nursing by students enrolled in two collegiate church-operated schools of nursing. The problem primarily stemmed from the fact that in both schools the students were assigned for clinical laboratory practice of 15 hours per week, but in school A the students were required to devote an additional eight hours per week under the direction of Nursing Service. Would the extra eight hour of practice time make a difference in the students' achievement? It was hypothesized that there would be no appreciable difference between the performance and achievement of the two groups of pediatric students.

The study was conducted in three steps by

1. comparing and analyzing each school's objectives for pediatric nursing, and by categorizing each objective in terms of outcomes of learning.
2. observing student activities and behavior changes in clinical practice by the continuous and work-sampling methods.  
Observations were tallied under the objectives which they gave evidence of fulfilling.
3. comparing the students' achievement on the National League for Nursing standardized test, "Nursing of Children."

The studies conducted by Palmer and others were all based upon clearly defined clinical objectives. This was not the case in this study. Burton identified learning outcomes in terms of skills and abilities, saying that a skill was a facility in performance but that an ability was a generalized power. In this study learning outcomes were difficult to identify in clinical practice, as the levels of skill or ability expected were not delineated. Further, direct observation is limited to overt behavior. Therefore, the observed activities were classified under the objective they seemed to most nearly fulfill.

Variables which might influence the study, such as teacher preparation, group cohesiveness, school or hospital philosophies, classroom instruction and regularity of class attendance, facilities used, student acquaintance with the observer, and amount of student time spent in extra-curricular activities were considered, but no measure of their effect was made.

The findings of the study indicated:

1. The purpose of the study was realized in that the similarities and differences of the two groups were identified.
2. The null hypothesis that there would be no appreciable difference in the performance and achievement between the two groups of students was not disproved; therefore it would appear that nursing service time had no measured effect on group A.
3. The objectives of the pediatric courses in both schools were studied and, though worded differently, were found to be quite similar in scope and concept. Most of the objectives were not stated in terms of the outcomes of learning; hence they did not



lend themselves easily to analysis. Students in both groups were found to be performing activities, however, which seemingly fulfilled most of the objectives.

## II. CONCLUSIONS

1. Well-formulated objectives are essential as guidelines for a course and are pre-requisite to evaluating either the course or the students' achievement.
2. The method of obtaining data by observation yielded information of value in identifying the learning activities and some of the resultant behavior changes of two groups of students during pediatric nursing, but the method was not sufficiently sensitive to yield data that could be tested statistically. The findings did not lead to any conclusion that the amount of time spent in the clinical area made any real difference in the achievement on the standardized test, "Nursing of Children."
3. The finding that the amount of time devoted to nursing practice did not appreciably or significantly alter the achievement of the students leads to the conclusion that over-emphasis has probably been placed on the "time factor" in a ranging clinical practice and that it is really not known how long it takes to achieve on the level expected of the nursing student.

## III. RECOMMENDATIONS

### General Recommendations

On the basis of the findings of this study it is recommended that:

1. Careful study be given to the objectives of the pediatric



curriculum of both schools. Objectives for both classroom and clinical nursing laboratory should be concise, attainable, and stated in terms of expected outcomes of learning of different levels of achievement.

2. Those students in both groups who achieved poorly on the standardized test be counselled and given special help as needed.
3. School A give careful study to the place of nursing service as a requirement.

#### Recommendations for Further Studies

It is recommended that research be done in the following areas:

1. The study be repeated after the objectives are more precisely defined. When repeating the study, divide the class. Place one group (experimental) in the clinical practice area for 23 hours per week and the other group (control) for only the 15 hours for which they are registered for credit.
2. Similar studies be conducted in other phases of the curriculum.
3. More precise tools be devised for evaluating student achievement in nursing practice.
4. Seek opinions from students regarding the amount of time they consider essential for satisfactory achievement.

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APPENDIX



## APPENDIX A

## SAMPLE PAGE OF CONTINUOUS OBSERVATION

gauze) & Kerlix. Taping in place & Adhesive  
but none of adhesive on skin.

9<sup>20</sup> Cut toe nails

9<sup>23</sup> Soiled diag. in newspaper. All linen wrapped in a  
bundle while Miss Ennis finished cut nails.

9<sup>25</sup> To room in w.c. Left her sit in w.c. while she  
changed linen. Another student who cared for her last wk  
came in to visit, took her for a w.c. ride while  
she finished making bed. Again, is well reorganized  
thinks smoothly.

9<sup>31</sup> Bed made. Out in hall to find Deb she wants to  
stay in w.c. but nurse who was walk her has to go  
chart.

9<sup>34</sup> In bed. Restraint jacket on. Apply bandage  
to all burned areas

9<sup>35</sup> Comb pt's hair

Feeding Area Left play thing in bed & Deb

9<sup>38</sup> Removing gown. Took linen bag to chute. To  
bath room. Put all soiled diag. on table, rolled out in  
hall, discarded in appropriate places. Table to  
bath room. To linen rm for linens for table.

9<sup>41</sup> Jean capt. asked her to get Deb up in w.c. bring to  
play room. Made table up, then to Deb's rm.  
A jacket she got from linen room same time as  
table linen. Was very happy.

## APPENDIX B

## SAMPLE PAGE OF WORK-SAMPLING OBSERVATION

Work Sampling Group B 3 hr

7:00 students / to check charts, <sup>100</sup> report

I Volk <sup>307</sup> II Levison <sup>350, 323</sup> III Meissner <sup>315, 325</sup> IV Ray <sup>350, 357</sup> V Buck <sup>327</sup>

VI Wren

7:15 Report checking Kardex, getting Thermos, etc — all students

7:30 I taking temp — preparing feed on tray

II preparing scales, weigh baby

III taking temps — weigh baby

IV " " feed pt

V Taking temp, help small pt = bck.

VI " " changing diaper, fed pan to 2nd pt, emptied J

7:45 I feed & play = pt

II hold baby, feed him

III bath baby

IV pour media, give, instruct pt on imp. of fluids

V 1/2 pan. am. get bottle, cereal. Then to 1st room, poured in, took temp.

VI put pt already read cards to her between bites

8:00 I sponge bath pt.

II upset bottle, child pushed it away. So 3 wash hands, 1st pt was lost. Removing empty dishes from am. to 2nd pt. room, cleaned his tray, 10-gallon pitcher for pt II then 1st linen am. for supplies

III changing linen

IV bath & play to pt., talk to him. Both seem to enjoy themselves

V weighed pt, then feed him

VI sponge bath pt

8:15 I Has bed almost completely made in sterile linen. Talked to pt. as works

II Bath pt. II who is asleep.

III preparing bottle, got cereal, to 1st room. <sup>1st to</sup> poured in, no temp. blades (for 2nd room) to 2nd room, got cereal house blades, then back to 1st room poured in, set food water (pt. still in room)