TEACHING STRATEGIES AND TACTICS AT
ST. CLARE'S MERCY HOSPITAL SCHOOL
OF NURSING: GUIDELINES FOR
IMPROVEMENT OF INSTRUCTION

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ST. CLARE'S MERCY HOSPITAL SCHOOL OF NURSING

GUIDELINES FOR IMPROVEMENT OF INSTRUCTION

BY

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A thesis submitted to the School of Graduate
Studies in partial fulfillment of the
requirements for the degree of
Master of Education

Division of Learning Resources
Faculty of Education
Memorial University of Newfoundland
July 1985

St. John's                                    Newfoundland

## ABSTRACT

The purpose of this study was to develop guidelines for specific instructional strategies and tactics to be used by instructors at St. Clare's Mercy Hospital School of Nursing to aid in the improvement of classroom instruction.

The literature on change in nursing and in nursing education indicated that nursing students have an ever-increasing body of knowledge to acquire and that nursing education must change to meet the demands of society. More effective means of providing nursing students with the knowledge and skills they require are constantly being sought.

An evaluation of the instructional setting and existing instructional practices at the school of Nursing was conducted as an initial step. It was anticipated that this evaluation would provide useful information on which to base decisions regarding the possible need for improvement in instructional procedures.

Naturalistic methods of inquiry were employed with multiple sources used to obtain information. Data gathered through classroom observations, structured and unstructured interviews, preview of media, and record and document

analysis indicated that the number and variety of instructional techniques employed were limited and that there were implications for the use of additional strategies. This suggested that a review of related literature should be conducted.

The literature on large-group instructional techniques such as the lecture, discussion, lecture-discussion, and demonstration and on the use of computer-assisted instruction in nursing education confirmed a need for specific guidelines for instruction. Charts were prepared on the rationale behind the use of specific strategies and on the procedures to be followed. Guidelines were developed for tactics to be employed.

Recommendations have been made for the implementation of the guidelines, and for the provision of training in instructional techniques. It is also recommended that possible improvements in the instructional setting and the implementation of computer-assisted instruction be investigated.

## ACKNOWLEDGEMENTS

I wish to express appreciation to those people who have provided support and encouragement throughout this study.

To Dr. Mary Kennedy, my supervisor, for her assistance and perseverance through reading after reading and for her unfailing patience and constructive recommendations, I am truly grateful.

I wish to acknowledge the assistance of Mrs. Katherine Daley, Director of St. Clare's Mercy Hospital School of Nursing for her cooperation in making records and documents available and for taking time to discuss the program with me. Thanks go also to the instructors and students who were always pleasant and helpful and obligingly permitted me to observe classes. They made me feel most welcome at the School of Nursing.

Special thanks are due to Jean, a true friend who helped with the editing and provided invaluable advice and encouragement, and to Betty Norris for the typing of this thesis.

Appreciation is expressed to Memorial University for financial support received which facilitated my pursuit of graduate studies.

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## NATURE OF THE STUDY

### Introduction

The purpose of this study is the development of
guidelines for instructional strategies and tactics
which might be implemented, with the aim of improving
classroom instruction at St. Clare's Mercy Hospital
School of Nursing.

This chapter describes the background of the study,
presents the statement of the problem, defines the terms,
outlines the limitations and significance of the study,
and concludes with a description of the design of the
study.

### Background to the Study

Many changes are taking place in nursing education
with new curricular patterns, interdisciplinary approaches
to subject-matter content, and new methods of teaching
and learning. Changing societal and health care trends
and advances in science and medicine have caused nursing
itself to undergo changes. Nurses must assume a broader

range of responsibilities than in the past and must
have an ever-increasing body of knowledge (Heidgerken,
1965). "The focus for successful student achievement
[has] slowly shifted from a clear emphasis on manual
performance to broader application of cognitive skills"
(Sweeney, Hedstrom, & O'Malley, 1982, p. 5).

> Nursing students...have, over the past 20
> years, been exposed to a progressive increase
> of technological data related to more refined
> patient care techniques. They now have more
> knowledge and more tasks to be mastered, more
> responsibility for patient care to be assumed,
> a greater abstraction for knowing, and a require-
> ment to care for the patient as a holistic
> being. (Jeglin-Mendez, 1982, p. 30)

Many problems and challenges face nursing schools.
The continual knowledge explosion makes constant revision
of the nursing curriculum necessary so that reliable
and relevant knowledge can be imparted to nursing students.
The makeup of classes is becoming increasingly diverse
as more mature students and increasing numbers of male
students enter nursing (Schoolcraft & Delaney, 1982).
There is an increasing need for nurses to become computer
literate as hospitals become computerized (Hassett,
1984; McAlister & Covvey, 1983). The Canadian Nurses
Association (CNA) recommendation, "that by the year
2000, the minimal educational requirement for entry
into the practice of nursing should be the successful

completion of a baccalaureate degree in nursing" (Canadian
Nurses Association [CNA], 1984, p. 1), has affected
both the enrolments and the curricular planning of hospital-
based schools of nursing. Advances in technology are
forcing nursing educators to look at education and to
find those methods of instruction that will most efficiently
and effectively provide professional nurses with the
knowledge bases and experience they require.

The Director and instructors of St. Clare's Mercy
Hospital School of Nursing are aware of the changes
in the nursing profession and of their potential impact
on the School of Nursing program. The researcher was
charged with the responsibility of evaluating current
instruction, its techniques and strategies, with a view
toward improving the quality of instruction in the School
of Nursing.

St. Clare's Mercy Hospital School of Nursing has
retained a two plus one year diploma program. Students
receive two years of theory and supervised clinical
experience. This is followed by one year of nurse intern-
ship. The school curriculum has been revised periodically
since the school was founded in 1939 to reflect the
latest educational approaches. Beginning in September
1982 a program was implemented which reflects a conceptual

approach and eliminates repetition of courses (St. Clare's Mercy Hospital School of Nursing, 1982).

Within the conceptual framework nursing is defined as an intrinsic part of the man--environment interaction:

> Disruptions in health are explored through the biophysical concepts of cellular growth and proliferation, inflamation and immunity, fluids and electrolyte dynamics, metabolism, oxygenation and perception, and co-ordination.... Throughout the program psycho-social and cultural factors that affect the human-environment interaction in the presence of pathologies are examined. Current research, an essential component of nursing knowledge, is incorporated into the discussions as well. (St. Clare's Mercy Hospital School of Nursing, 1982, p. 5)

### Statement of the Problem

Control of the educational preparation of its members is one means by which a profession fulfills its responsibility to society. Accreditation of schools of nursing has not yet been implemented in Canada, however, the Association of Registered Nurses of Newfoundland (ARNN) plans to initiate a system of approval for schools of nursing within its jurisdiction. Accreditation is a voluntary process instituted by an external agency, whereas approval is a compulsory process instituted by a governing body. This forthcoming approval is forcing the staffs of schools of nursing to examine their objectives,

curricula, and methods of instruction. Future approval
has raised the issue of classroom teaching, and the
Director and instructors of St. Clare's Mercy Hospital
School of Nursing are interested in seeing if they are
doing whatever possible in this area.

Instruction, at the classroom level, is the respons-
ibility of instructors at the School of Nursing. Nursing
instructors are, for the most part, not trained educators.
They are knowledgeable in their content areas, having
graduated from nursing programs and practiced as nurses
for a number of years. Because of their lack of training
as teachers, however, the scope of their instructional
strategies and tactics might be narrow.

The content of the courses in the nursing program
is varied, dealing with factual learning, procedural
learning, and concept learning, and demanding that students
be able to analyse, synthesize, and evaluate what they
learn. Current practices might not match content and
learner needs. An evaluation of these instructional
practices was undertaken with a view toward recommending
specific improvements if and where needed.

## Definition of Terms

For purposes of this paper terms used in reference
to nursing or nursing education are defined according
to the Standards for Nursing Education in Canada (CNA,
1978):

### Accreditation

Recognition by an external agency of a nursing
education program that has met predetermined qualifications
beyond the minimum qualifications necessary for approval
of the program

### Approval

Formal positive sanction given to a nursing education
program that has met minimum qualifications authorized
by provincial statutes or regulations

### Curriculum

A systematic and comprehensive plan of learning
activities

### Nursing Education

The process that facilitates acquisition and modifi-
cation of nursing knowledge, skills and attitudes to
prepare beginning practitioners of nursing and to enhance
the competence of experienced nurses

## Basic Nursing Education

Refers to diploma or baccalaureate programs that prepare candidates to apply for initial registration or licensure as professional nurses

## Standard for Nursing Education

Refers to a generally accepted set of elements or characteristics against which the value and suitability of nursing education programs can be judged

For clarification of meaning, other terms used in this thesis are defined as follows:

## RN Examination

A national examination used to determine minimum competency for entry into practice as a registered nurse; examination measuring accumulated knowledge and powers of reasoning as elicited by paper and pencil test

## Instructional Strategies

Those methods the instructor uses and things he/she does to facilitate learning; an overall plan to enhance learning

## Instructional Tactics

Specific ways that one chooses to implement a particular method in a particular case; detailed steps of instruction

The School, The School of Nursing

 Will be used to refer to St. Clare's Mercy Hospital
School of Nursing

The Hospital

 Will be used to refer to St. Clare's Mercy Hospital

Note: In this thesis the author has used the feminine
pronoun in reference to the instructor or student of
nursing. This has been done because, at this time,
the vast majority of nursing instructors and students
are feminine. No offense is intended to any males in
nursing or nursing education.

### Limitations of the Study

 The following limitations are evident throughout
the study:

1. The study pertains to one hospital-based diploma
   school of nursing, St. Clare's Mercy Hospital School
   of Nursing, and is intended to assist in the improvement
   of instruction at that particular institution.
   While the results of the study may be internally
   valid, they may not be generalizable to other schools.
2. The study was supported by the School of Nursing
   and instructors were anxious to improve their instruc-

tion.  Therefore, the focus of the evaluation was designed to meet the information needs of that group and so is limited in order to concentrate on those techniques teachers regularly engage in.

3. Data collected by interview are limited to opinions of instructors and students regarding instruction and facilities at the School of Nursing.

4. The results of the evaluation of classroom instruction are limited by the reliability of the measures used for data collection and analysis.

5. The researcher recognizes the need to provide practical suggestions in order that they be implemented by the instructors of the School of Nursing.  Instructional strategies and tactics investigated are limited to those which can practically be implemented or in which interest has been expressed by instructors.

6. Cooperation is required from the Director of the School of Nursing for implementation of the guidelines and recommendations.

### Significance of the Study

It is anticipated that the guidelines developed through this study can make a significant contribution to the improvement of instruction at St. Clare's Mercy

Hospital School of Nursing. It is hoped that these guidelines may also be of value to other instructors engaged in nursing education and/or large-group instruction at the postsecondary level. The guidelines provide practical suggestions that should make it easier for teachers to determine the most effective strategy to employ and appropriate steps to follow in carrying out instruction.

## Design of the Study

This study is reported in five chapters. Chapter I has outlined the nature of the study including the background to the study, the statement of the problem, the definition of terms, and the limitations and significance of the study.

In Chapter II the literature relating to change in nursing practice, change in nursing education, nursing education in Newfoundland, and the basic program in nursing education are reviewed.

In Chapter III an overview of educational evaluation is presented, followed by a description of the evaluation approach taken, and specification of the program to be evaluated. It concludes with the collection and analysis of data relating to the evaluation.

Chapter IV provides a review of the literature on the rationale for using the lecture, discussion, lecture-discussion, demonstration, and computer-assisted instruction. The rationale for each instructional strategy is followed by a review of the literature on effective tactics to be employed, points to consider in strategy selection and planning, and, in addition, guidelines for specific tactics.

Chapter V contains conclusions regarding the present instructional setting and techniques employed at St. Clare's Mercy Hospital School of Nursing. Recommendations are made for future improvement of instruction.

Chapter II

REVIEW OF THE LITERATURE

Change in Nursing Practice

Nursing, as a part of society, is affected by the changes in society in general as well as those that specifically affect the health sciences. The economic, social, and political environments in which nurses function all have an influence on nursing. Changes in the health care system, in health care financing, the increasingly aging society, the need for community mental health services, the world population explosion, trends in education, the demand for more comprehensive health care, and advances in science and technology all affect the nursing profession. Nurses are essential to the efficient operation of the majority of health care institutions. In hospitals they are the only around-the-clock professionals. Since they have major roles to fill, their knowledge and ability in clinical assessment are of vital importance.

Traditionally the nurse has been regarded as filling the role of care-giver and integrator (McClure & Nelson,

(1982). As a care-giver she has been responsible for meeting patient dependency, comfort, monitoring, therapeutic, and educational needs. Since hospitals are organized into highly specialized departments, integration is required for the hospital to accomplish its goal of service to patients. The nurse is the person who integrates these differentiated departments (McClure & Nelson, 1982).

Fagin (1982) emphasized that the range of caring functions performed by nurses ranges from helping people to do things they normally do for themselves, to applying sophisticated technological treatment to enable people to cope with disease. While many aspects of the nurse's caring role have remained constant, other aspects having to do with advanced technology and knowledge have changed over the years. "It is this amalgamation and breadth that form the basis for nursing's unique contributions and its requisite knowledge base" (Fagin, 1982, p. 467).

## Changing Requirements

While nursing has remained the key to the success of patient care, hospital nursing has become increasingly specialized. Changes in the hospital setting such as the development of coronary-care units and units devoted to patients suffering from burns, trauma, respiratory

problems, and renal problems have required a rethinking of the education of nurses and of the tasks they perform (Bullough & Bullough, 1984). There has been a major change in the level of knowledge required to carry out the various roles. Rapidly increasing knowledge and new technologies have required nurses to become increasingly involved in the application of complex medical technologies to patient care.

As a result of the steady advance of medical knowledge a greater number of seriously ill patients are able to survive, thus requiring hospital services. Elliott and Osgood (1982) stated that the nature of the patient population has changed, as patients admitted to hospitals have more severe illnesses yet their hospitalizations are shorter. There is an increasingly older patient population with multiple-system problems. "In addition to the admitting diagnosis, they may have hearing or vision impairment, decreased mental acuity, ambulation problems...and lack of self-care skills such as feeding, toileting, and dressing" (McClure & Nelson, 1982, p.61). Hence nurses are presented with more dependent and more seriously ill patients than in the past.

Even nonspeciality nurses require a knowledge of the action and side effects of numerous drugs, of nutrition, of infection control, and of the psychosocial needs

of patients. They require a working knowledge of a variety of equipment, of fluid and electrolyte balance, intake and output norms, and the interrelation of temperature, pulse, respiration, and blood pressure. Nurses must be able to perform many functions and generally integrate their knowledge into a coordinated plan for safe patient care (Bullough & Bullough, 1984).

Changes in health care financing have enabled more people to make use of hospital services. As the family structure changes due to the rising divorce rate, the increase in the number of children born to unmarried parents, and the changing roles of men and women in society, it is likely that the health care system will become, in part, a substitute for the traditional family support group.

Aydelotte (1983) stated that as a result of rising educational levels and greater affluence, the public will demand more comprehensive health care services. She speculated that there will be a continuing decline in the birth rate and advancing life expectancy leading to increased demands for a more comprehensive system of gerontological services. There will be greater need for self-help programs as social problems contribute to an increase in venereal diseases and self-damaging behaviour through drug and alcohol abuse.

Chronic disease, rather than acute illness, is presenting a major health problem today, especially in regard to the increasingly aging population. Reif and Estes (1982) stated:

> Chronic diseases are the leading causes of morbidity, mortality, and physical impairment.... Nursing practice is increasingly being affected by the preponderance of persons who require assistance in preventing, postponing, recovering from, and managing chronic illnesses and the functional impairments that accompany disease or disability. (p.169)

As a result there is increased emphasis on prevention, health education, primary care, and long-term services. There is likely to be more emphasis on keeping people healthy through modification of life-styles. Nurses will become more involved in long-term care as medical technology allows life to be sustained. Reif and Estes (1982) stated that nurses will likely become more involved in teaching patients self-care so that disability related to chronic disease can be postponed or prevented.

Similarly Chaska (1983) stated, "the role of professional nurses is changing to focus more on illness prevention, health maintenance, and education, but at the same time acute-illness care is not being neglected" (p.884). Nurses who work with the community may favour emphasis upon programs of prevention and environmental

change, while those in hospitals look after the needs of the acutely ill.

> A nursing profession aware of the forces and counterforces acting upon the complex health care system and upon the profession can shape certain trends, seize upon others to advance its cause, and try to accommodate itself to those over which it has no control. A nursing profession unaware of changing events and trends in this complex environment will be unable to direct its energies toward realistic and beneficial goals and time its actions appropriately. (National League for Nursing [NLN], 1979, ix)

## Summary

Nursing, as a part of society, is affected by the changes in society in general, as well as those changes that specifically affect the health sciences. Changes in the health care system, in health care financing, the demand for more comprehensive health care, the increasingly aging society, the need for community mental health services, and advances in science and technology are all having an effect on the nursing profession. The economic, social, and political environments in which nurses function all have an influence on nursing.

## Change in Nursing Education

### Introduction

Programs in nursing education are established in response to the nursing service required by society. There is considerable controversy regarding nursing education, with the central issue being the entry level for professional practice. A review of the literature pertaining to entry into practice has revealed that there is a lack of consensus regarding the differences in nursing practice of graduates from the various entry levels (Chaska, 1983; National Advisory Council on Vocational Education, 1983).

The nursing profession, unlike most professions, has more than one program leading to entry into the profession. In Canada the major educational routes that lead to the RN diploma are the diploma programs offered either by hospital-based schools of nursing, regional schools of nursing, community colleges, or Collège d'Enseignement Général et Professionnel (CEGEP) schools of nursing, and the baccalaureate programs offered by universities. Although by 1977 the number of students entering diploma programs (9746 admissions) was still considerably higher than the number of students entering baccalaureate programs (1470 admissions), the number

of students entering baccalaureate programs was generally
increasing while the number of students entering diploma
programs was declining (Statistics Canada, 1980).

With different basic educational programs in nursing
leading to the same licensing examination and the same
cutoff point for passing, it is difficult to differentiate
between the graduates. The CNA has taken the position
that nursing education should take place within the
general education system, and that the minimal educational
requirement for entry into practice by the year 2000
should be the successful completion of a baccalaureate
degree in nursing (CNA, 1984). There is not, however,
complete agreement, either among those involved in nursing
training or among prospective employers, as to which
program produces the most effective nurses. Entry into
practice continues to be a major issue in nursing in
Canada.

## Early Canadian Schools of Nursing

The development of nursing schools in Canada is
tied to that of Great Britain and the United States.
The first Training school for Nurses in Canada was organized,
on the Nightingale principles, in 1874 by Dr. Theophilus
Mack at the General and Marine Hospital in St. Catherines,
Ontario (Gibbon & Mathewson, 1947). Dr. Mack believed

that, through building up a profession of trained lay nurses, he could overcome the prejudice of many people against going into public hospitals.

After 1880 several schools for nurses were established in Canada. The first of these was at the Toronto General Hospital in 1881. It was organized under Miss Agnes Snively who was a graduate of the Bellevue Hospital in New York (Griffin & Griffin, 1969). Gibbon and Mathewson (1947), in writing of the Training School at the Toronto General Hospital said:

> Seventeen students enrolled, of whom eight resigned or were dismissed. Those who resigned found the discipline too much for them. The students, who also nursed, received instruction in the wards and heard lectures twice a week 'on the most important points of nursing'. (p.152)

Other early Canadian schools were established in Manitoba in 1887, in New Brunswick in 1888, in Nova Scotia, Prince Edward Island, and Quebec in 1890, in British Columbia in 1891, in Alberta in 1894, in Saskatchewan in 1901, and in Newfoundland (at that time not included in the Dominion of Canada) in 1903 (CNA, 1968).

Unlike the Nightingale School in London, after which many early schools in the United States and Canada were patterned, these schools became dependent on the financial stability of the hospitals with which they

were associated. This meant that "the essential component of learning to provide nursing care, with accompanying practice, was subordinated to the service needs of the institution" (Duncanson, 1970, p. 112).

The training in these early schools generally extended over a two-year period. However, it emphasized apprenticeship in the wards rather than academic training. In writing of the training at the School for Nurses at the Toronto General Hospital, Gibbon and Mathewson (1947) noted:

> The course of training for 1891 occupied just 160 hours, spread over nine months in a two-year programme. In between the practical nursing were sandwiched lectures on anatomy, physiology, medical, surgical and obstetrical nursing, communicable diseases and diseases of the eye, ear, nose and throat. (p. 154)

They noted also that by 1896 the program had been lengthened to three years and that this was also done in most Canadian schools of nursing. However, the majority of the students' time continued to be spent in the wards, and nurses were given the management of the wards in their third year. By 1909 there were seventy schools for nurses in Canada: ten of them following a two-year course, three following a two and one half-year course, and fifty-seven following a three-year course.

Over the years the curriculum for the training schools became more arduous due to advances in medical knowledge, and it was realized that the strain of working in the wards as well as following the academic curriculum was too difficult for the average student. In 1914 a Special Committee on Nurse Education recommended that the training schools should be separated from hospitals (Gibbon & Mathewson, 1947). However, the apprenticeship program remained despite the fact that other professions requiring specialized professional or technical education had abandoned the practice of apprenticeship (Dolan, 1968).

## Nursing Associations

In 1893 eighteen superintendents of leading training schools in the United States and Canada met in Chicago and decided to form a society (Riddell, 1970). The first annual convention of this society, the American Association of Superintendents of Training Schools, was held in 1894. At this convention, the importance of planning the educational program of the training schools for the student rather than to serve the needs of the hospital was stressed (Dolan, 1968).

Graduates of various training schools began to meet in alumnae associations. The association founded

at the Toronto General Hospital in 1894 was followed
by others in virtually all schools. An international
organization, the Nurses Associated Alumnae Associations
of the United States and Canada, was inaugurated in
1896. One of its main purposes was to secure legislation
to differentiate between trained and untrained nurses.
This Association later became the American Nurses Associ-
ation, forcing the withdrawl of Canada from the organiza-
tion.

Since membership in the International Council of
Nurses, formed in 1899, required participation as individual
countries, the United States and Canada formed separate
nursing organizations. The name of the Canadian Society
of Superintendents of Training Schools of Nurses was
changed to the Canadian Association of Nurse Education
in 1917. In 1908 the Canadian National Association
of Trained Nurses was formed. In 1924 it became the
Canadian Nurses Association, and the Canadian Association
of Nurse Education became the nursing education section
of this association. Later a committee on nursing education
acted in a consultant capacity. As provincial associations
formed, they affiliated with the Canadian Nurses Associ-
ation. These early associations laid the foundations
for nursing education in Canada (Tunis, 1966).

Establishment of University Schools

By 1910 nursing leaders in Canada began to seek
more advanced nursing education at Canadian universities.
The pioneer work in this field was done by the University
of British Columbia in cooperation with the Vancouver
General Hospital. It established the first Canadian
baccalaureate program in 1919 (CNA, 1968) and thus became
the first university in the British Empire to offer
a course of instruction in nursing leading to a degree
(Gibbon & Mathewson, 1947). In 1920 the first course
for graduate nurses in teaching and supervision was
established at McGill University (CNA, 1968) and other
universities began to provide facilities for higher
learning.

King (1970) stated that the course at the University
of British Columbia in 1919 was the prototype of what
came to be known as the 2+2+1 course, the non-integrated
course. This new course required two years of study
at the university followed by two years in the hospital
and a further year of study in the university. King
noted that during the years 1920-40, when the early
non-integrated degree programs were accepted, students
were not well served:

> Students received their nursing preparation
> in a hospital school of nursing with the university

having no authority over either the students or their course. The university conferred a degree for work over which it exercised no control....Two such sharply contrasting environments, one institution devoted solely to education, the other oriented mainly to service, made entirely different demands on the students. There was a discontinuity of studies not only in content but also in method and philosophy. (p. 71)

After approximately 20 years a new integrated basic course was introduced into the university. This program, first introduced at the University of Toronto in 1942, changed university nursing education, for the courses were planned, taught, and evaluated by the faculty of the university. At this time Canadian nurses had to go to American universities for graduate degree preparation. This was not only costly but also resulted in many nurses remaining in the United States. By the late 1950s many university schools were offering courses comparable to those offered in other professions (King, 1970).

Abu-Saad (1979), writing of the different programs in Canada, said that in 1965 there were two classifications of baccalaureate programs, integrated and non-integrated. The integrated program was organized as an integral part of the university, whereas the non-integrated, as noted above, was divided between the university and the diploma school of nursing. This trend changed in 1970 when universities that had previously offered the

non-integrated program began to offer the integrated one.

King described the situation in 1970:

> At present in the undergraduate programmes two courses of study are offered--the basic and the post-diploma programmes. The basic baccalaureate programme is an initial preparation in nursing; it lasts over a four- or five-year period and qualifies the student for a bachelor's degree and also qualifies her to write registration (RN) examinations. The post-diploma programmes, of two or three years, are offered to nurses who have graduated from a diploma school of nursing and who have qualified to write registration examinations before entering university. In order to be eligible for graduate study the student must have successfully completed a baccalaureate course and be admissible to the graduate school. (1970, p. 67)

The first graduate degree in nursing in Canada was offered at the University of Western Ontario in 1959. The number of universities offering nursing courses on a graduate level increased slowly, but by 1970 was not adequate to meet the requirements of either educational institutions or service agencies (King, 1970).

At the same time that university courses were expanding, enrolment in diploma schools of nursing was increasing. Since the diploma schools were closely associated with hospitals, they had easier access to clinical facilities than the universities. King (1970) said that the evolution of health sciences centres in many universities was

enabling students to benefit from the competencies of various professional groups. However, the problem of access to clinical training still existed.

According to the last issue of Nursing in Canada: Canadian Nursing Statistics 1978, in 1977 there were 9746 admissions to diploma programs in nursing and 1470 admissions to baccalaureate programs for a total of 11,216 admissions. The number of admissions to diploma schools in the province of Newfoundland and Labrador was 327 and to baccalaureate programs was 34, for a total of 361 admissions (Statistics Canada, 1980, p. 63).

By 1977, in some provinces, diploma programs had been transferred or were being transferred to community colleges. Three provinces, Quebec, Ontario and Saskatchewan, had effected the changeover. The four Atlantic provinces retained the diploma programs in hospital schools only (Statistics Canada, 1980).

## Registration

Early in the history of nursing education many in the nursing profession looked towards registration as a means to solving the increasing problem of controlling nursing practice. Nova Scotia was the first Canadian province to enact legislation for registering nurses. However, the Bill, assented to in 1910, was permissive,

not mandatory. Manitoba, in 1913, achieved the first
full Bill of Registration (Gibbon & Mathewson, 1947).
By 1922 there was an act for the registration of nurses
in each of the nine Canadian provinces. Newfoundland
obtained registration in 1931, prior to becoming a province
of Canada (Riddell, 1970).

These acts of registration generally included edu-
cational requirements for admission to schools of nursing
and gave responsibility for maintaining the standards
of nursing education to the provincial association (CNA,
1968).

The provincial associations gradually became more
influential, until in 1930, the constitution of the
Canadian Nurses Association was amended and that organization
actually became a "federation of the provincial associations"
(Gibbon & Mathewson, 1947, p. 358) with membership restricted
to the members of the provincial associations. The
Registered Nurses Association in each province, with
the exception of Ontario, is the registering body of
the profession. In Ontario the College of Nurses, formed
in 1962, holds that authority (Griffin & Griffin, 1969).

## Accreditation

Accreditation is a voluntary process instituted
by an external, non-government agency which
is responsible for the on-going development
of a plan of accreditation, its management,

and promotion. An institution which has voluntarily sought and received accreditation of its program(s) by the external agency, provides the public with a measure of assurance of the quality, hence value, of its program(s). Accreditation implies that the program has achieved a standard of excellence which is above the minimum requirements required for approval. (French, 1982, p. 82)

Canadian nursing associations have shown interest in the need for evaluating schools of nursing for many years. At the CNA General Meeting in 1944 it was recommended that a national program of accreditation be undertaken to assist schools of nursing to meet the health needs of Canadians. In 1945 a resolution was passed by the CNA approving the principle of accreditation, but in 1946 it was decided that sufficient funds were not available (Mussallem, 1960). The question of accreditation of nursing education programs was raised periodically until in 1956 a project for evaluation was initiated. A study was carried out under the direction of Helen Mussallem and as a result a report Spotlight on Nursing Education was published. The following recommendations were made:

1. That a re-examination and study of the whole field of nursing education be undertaken.

2. That a school improvement program be initiated to assist schools in upgrading their educational programs.

3. That a program be established for evaluating the quality of nursing service in the areas

where students in schools of nursing receive their clinical experience.

4. That a program of accreditation for schools of nursing be developed by the Canadian Nurses' Association. (Mussallem, 1960, p. vii)

The executive Committee took steps to carry out the first three recommendations. However, in spite of the recommendations of the Committee, accreditation was not initiated. During the next ten years committees on accreditation were alternatively set up and dissolved. In 1974 an Ad Hoc Committee to Develop Standards for Nursing Education was named and in 1978 the Board of Directors accepted the Standards for Nursing Education in Canada (CNA, 1978). At that time an Ad Hoc Committee on Accreditation was established to look into the accreditation of diploma programs, and was directed to maintain a liaison with the Canadian Association of University Schools of Nursing (CAUSN), which had started a project for the accreditation of university schools of nursing (Crawford, 1980). The CNA felt that the two accreditation projects should complement each other.

In 1982 the CNA issued a position statement on accreditation of education programs in the health disciplines in which it stated:

The association...believes a national accreditation program for the recognition of health science

educational programs is in the best interests
of both the public and the health professions.
Therefore, the Association supports the estab-
lishment of a national accrediting body for
health science programs. This body would
be broadly representative of the health care
professions, both practitioners and educators,
and the general public. This body would have
clear, specific terms of reference regarding
the provision and evaluation of the accrediting
process. (CNA, 1982, unpaged)

Crawford (1980) gave four reasons for the delay
in implementing an accreditation program: (1) the fear
of confirmation of an educational system that was funda-
mentally unsound; (2) concern that accreditation would
discourage innovation and result in rigidity in education
programs; (3) the desire not to interfere with or duplicate
the activities of the provincial bodies; and (4) the
expense connected with accreditation.

Accreditation of schools of nursing has not yet
been carried out. However, a system of approval of
programs is to be enforced. The Registered Nurses Associ-
ation of Newfoundland has circulated to schools of nursing
within its jurisdiction a questionnaire regarding approval.
Crawford (1980) said that there is a "fear that an accred-
itation program for diploma programs would interfere
with the desired transition to baccalaureate education
for all nurses" (p. 79). It will be difficult to phase
out diploma programs if they are found to provide adequate

training for nurses. The CNA, in its 1984 recommendation requiring a baccalaureate degree for entry into nursing practice, obviously is attempting to do this.

## Summary

Nursing education, of necessity, changes in response to changes in nursing practice. Levels of nursing education in Canada have changed since the first Training School for Nurses was organized in 1874. Early schools had an apprenticeship program which provided little opportunity for academic instruction. Present diploma programs offer a combination of theoretical and practical experiences over a two to three year period. Baccalaureate programs in nursing are of longer duration, with more emphasis on the academic. However, all nursing graduates are required to pass the same RN examinations. The issue of entry into practice remains a major concern.

Nursing associations developed in Canada parallelling those in the United States. These associations have laid the foundations for nursing education and they generally control the registration of nurses. Although accreditation has not been carried out for diploma schools of nursing, a project for the accreditation of university schools of nursing was started in 1980.

## Nursing Education in Newfoundland

In 1903 the Training School for Nurses at the General
Hospital, the first school of nursing in Newfoundland,
was founded (Nevitt, 1978). Most of the early graduates
left Newfoundland, as no distinction was made between
trained and untrained nurses with regard to salaries.
Newfoundland's second school of nursing was established
at the Grace General Hospital in 1929, and the St. Clare's
Mercy Hospital School of Nursing opened in 1939.

In 1913 the Graduate Nurses Association of Newfoundland
was formed and it applied for membership in the Canadian
National Association of Trained Nurses. The application
was not accepted because Newfoundland was not then a
part of Canada (Nevitt, 1978; CNA, 1968). In the early
years graduates of schools of nursing in Newfoundland
applied to the General Nursing Council for England and
Wales, which agreed to register graduates.

Nevitt (1978) noted that in 1929, the Royal Commission
on Public Health and Public Charities recommended that
a uniform standard for nurses' training in Newfoundland
be established by adopting the minimum curriculum for
nursing schools in Ontario already in use at the Grace
Hospital. The Commission also recommended that the
government of Newfoundland pass an act governing registration.

of nurses graduating from the schools of nursing in the province.

In 1934 the Newfoundland Graduate Nurses Association was reorganized. However, the Association did not have authority over standards of education or of service. "These were under the control of the government until the Association of Registered Nurses of Newfoundland came into being in 1953" (Nevitt, 1978, p. 234).

According to the Newfoundland Registered Nurses Act, the Association of Registered Nurses of Newfoundland (ARNN) is to recognize schools of nursing which meet the requirements that:

1. They are operated in conjunction with general hospitals having at least one hundred beds and a daily average of at least sixty patients.

2. They are staffed by registered nurses in all executive positions of nursing responsibility.

3. They provide experience in medical nursing, surgical nursing, obstetrical nursing, paediatric nursing and other such aspects of nursing as the association shall by law prescribe. (Newfoundland Registered Nurses Act, 1970, Section 11)

In 1966 a basic baccalaureate program in nursing at Memorial University of Newfoundland in St. John's was inaugurated and in 1969 Western Memorial School of Nursing in Corner Brook began operation with a two-

year diploma course. At the present time there are
four hospital-based diploma schools of nursing and one
university baccalaureate program in Newfoundland.

In the conclusion to White Caps and Black Bands:
Nursing in Newfoundland to 1934, Nevitt (1978), writing
of the development of nursing in Newfoundland, said:

> The evolution of nursing in Newfoundland from
> a domestic service to an organized profession
> was not marked by dramatic or radical changes.
> It grew as a response to the same social and
> economic pressures that affected all aspects
> of life on the island. No major suffragette
> movements disturbed the status quo of women
> in society.
>     As a source of power, the central government
> had considerable control over the manner in
> which nursing developed and the direction
> it would take. Hours of work, salaries, and
> opportunities for advanced education were
> largely dependent on the government's ability
> to perceive these as being fundamental to
> the well-being of the public.
>     Not until after Confederation with Canada
> would nurses assume responsibility under the
> law for the standards of nursing education
> and practice, and these would reflect national
> and international goals through membership
> in the Canadian Nurses Association and the
> International Council of Nurses. (p. 234)

## The Basic Program in Nursing Education

### Introduction

The fundamental raison d'être of basic nursing
education is, of course, preparation of competent nursing
practitioners in the number and diversity that society

expects" (Baumgart, 1980, p. 13). Baumgart noted that despite significant differences in the educational system in which students are prepared, and the philosophy and duration of programs, there is still an amazing uniformity of expectations regarding the clinical proficiency of graduates.

McClure and Nelson (1982) noted that nurses will require "an ability to integrate and synthesize a volume of differentiated knowledge in order to translate that knowledge into coordinate, sage patient care" (p. 63). As the person who has primary responsibility for the well-being of patients nurses must be able to conceptualize the totality of the nursing process:

> In order to accomplish this, nurses must have
> a current, working knowledge of laboratory
> values; of the action, side-effects, and uses
> of a voluminous number of drugs; of the nutritional
> needs of patients; of environmental control,
> including cleanliness, isolation, and reverse
> isolation techniques, along with other infection
> control measures; of thermostatic heating
> and cooling effects; and, not surprisingly,
> of mechanical engineering. Additionally,
> in certain specialties nurses must be capable
> of differentiating such abnormalities as cardiac
> arrhythmias in order to determine when intervention
> is required; they must have a working knowledge
> of chest tubes, various suction apparatus,
> central venous pressure (CVP) lines and other
> types of catheters, fluid and electrolyte
> balance along with intake and output norms,
> and the interrelatedness of temperature, pulse,
> respiration, and blood pressure to any or
> all of the above.

> To go a step further, the nurse is expected
> to address the psychosocial needs of patients,
> work with anxious families, and cope with
> other stresses such as death and dying, combative
> or angry patients, multiple specialty services
> on a single nursing unit, and ongoing, never
> ending introduction of yet newer equipment,
> newer drugs, and changes in various policies
> and procedures. (McClure & Nelson, 1982,
> p. 63)

In the last twenty years much has happened in nursing and nursing education. The nursing process, a systematic process for the planning and giving of patient care has been introduced. There has been an increased emphasis on prevention and rehabilitation rather than on disease. Program objectives have been stated in behavioral terms and these have, in turn, been used as the basis for evaluation, thus delineating the knowledge, skills, and attitudes required of graduates. The Nursing School diploma programs are meant to prepare graduates for beginning practice. As learning is recognized to be a life-long process, it is expected that orientation and inservice programs would be available in the work situation.

## Standards

Steed (1980) stated that professional nursing associations, both at the national and provincial levels, have prepared and/or are preparing standards for nursing

as guides for curriculum development, skill identification, and decisions related to competency levels. The Standards for Nursing Education in Canada (CNA, 1978) deal with the formulation of plans for nursing education programs, statements of beliefs about nursing, descriptions of the philosophy and objectives of programs, and plans for specific program activities and evaluation.

Although it is necessary for a profession to set standards and to promote educational programs that will achieve high standards of practice, there must be provision for flexibility and allowance for regional differences in a country as diversified as Canada.

The Standards for Nursing Education in Canada (CNA, 1978) are based on the assumptions that:

1. educational programs are developed in response to needs, values and beliefs of society;

2. the nursing profession has identified and subscribes to beliefs related to man, society, health, education, research and nursing;

3. nurses are committed to the professional imperatives of integrity, knowledge, service to society, continuous learning and accountability for action;

4. evaluation is inherent in sound planning and implementation of nursing education programs;

5. research activities that contribute to the extension and expansion of knowledge

are inherent in sound nursing practice and nursing education programs;

6. nursing education programs are developed by nurses in consultation with other resource personnel; and

7. nursing curricula are made up of interrelated and integrated parts in hierarchical and sequential progression. (CNA, 1978, p. 1)

As a result of reviewing nursing education, Peterson (1983) expressed several concerns. She stated that nursing programs seem obsessed with curriculum revision, that the rigid implementation of behavioral objectives, competency-based instruction, and mastery learning have contributed to the production of nurses with a fractionalized view of nursing practice; and that rigid ideas about ratios, assignments, hours, and student-teacher relationships have caused educators to overlook some of the most relevant learning in the clinical setting. She stated that nursing education should look at ways of capitalizing on the positive aspects of apprenticeship education, using multimedia to reach extended sites, investigating ways of implementing computer technology and using independent study experiences to contribute to flexible education. Much needs to be done to bridge the gap between what is and what could be in nursing education.

## Nursing Instructors

Teachers in a clinical subject such as nursing need to have the necessary theoretical background, and they must be competent practitioners and rôle models. In nursing education the teachers have historically been practicing nurses. Attention has been focused on their clinical background, not on their ability to communicate knowledge:

> The quality of teachers in any educational program and the leadership of the program's director are key factors in the overall quality of the program. They develop and implement the curriculum, usually select the students, and provide a milieu in which learning is either a chore or a joy, or something in between. (Kelly, 1981, p. 220)

The ARNN (1984) stated as a requirement that the faculties of schools of nursing must have adequate qualifications to achieve the goals of the program of the school. Specifically, for diploma programs, at least 75% of the instructors should have a bachelor's degree in nursing or its equivalent in a related area as well as preparation in teaching and two or more years clinical experience.

Mauksch and Styles (1982) listed five functions of nursing faculty: (1) teacher, (2) clinician, (3) scholar, (4) counsellor, and (5) consultant. They noted

that faculty members must be knowledgeable in their field as well as in related fields, must have knowledge about theories of learning and their relationship to teaching, knowledge of the history, goals and future prospects of the profession, knowledge of society and how nursing responds to it, and knowledge of health care delivery systems and their relation to the nursing student. Kelly (1981) agrees:

> Besides the educational requirements, teachers in all nursing programs are expected to have a knowledge of nursing in general and continuously updated knowledge and clinical expertise in the subject area in which they expect to teach. They also need knowledge and skill in curriculum development, the teaching-learning process, and teaching methods and techniques. (p. 300)

In discussing accountability for the learning process of students, Guinee (1978) stated that the teacher of nursing has several responsibilities: to know the subject content and background information on students that may influence their learning, to be able to apply the principles of learning and understand the factors that influence learning, and to be familiar with several teaching strategies so as to be able to meet the individual needs of students and the demands of subject content. Guinee stated further that all teachers should participate in curriculum planning and the formulation of behavioral

objectives, selection of appropriate learning experiences, and evaluation of learning. It would seem logical that in order to fulfill these responsibilities the teacher of nursing requires training in instructional theory and educational strategies, just as any other teacher does. De Tornyay (1971) noted that the distressing fact is that many nursing instructors lack this training:

> The point is, knowledge of the subject is
> necessary but not sufficient for effective
> teaching. If the ultimate criterion for teaching
> effectiveness is changes in students, then
> teachers need help in the kind of teaching-
> learning situations that help bring about
> learning. (p. 4)

## Content of the Diploma Program

The most traditional form of nursing education, and the one with which this rehas is primarily concerned, is the three-year diploma program. This is a hospital-based course of instruction which provides considerable on-the-job training. It was the first type of nursing education in Canada. In the early years it reflected an apprenticeship type of training with little formal classroom work, and was designed primarily to meet the service needs of the controlling hospital. Today's diploma programs offer an education not unlike that of other postsecondary educational institutions with regard to instructors, students, and resources.

In Canada, the three-year hospital-based diploma program in nursing is a learner-centered program in which students utilize hospital areas to fulfill educational objectives. Students are taught nursing principles and the application of these principles to specific nursing situations.

The ARNN is responsible for prescribing the curriculum of schools of nursing in Newfoundland. The main function of such schools is to provide education for students. In 1962 the Association prescribed a minimum curriculum for hospital schools of nursing. It recommended that the curriculum provide for instruction in communicable disease nursing, obstetrical nursing, pediatric nursing, psychiatric nursing, psychology, anatomy and physiology, tuberculosis nursing, medical-surgical nursing, pharmacology, personal hygiene, sociology, professional adjustments, microbiology, nutrition, human growth and development, chemistry, operating room nursing, and the history of nursing. The curriculum was also to include the following clinical experience: dietary, communicable disease nursing, community agency, obstetrical nursing, pediatric nursing, and psychiatric nursing (Association of Registered Nurses of Newfoundland [ARNN], 1962).

In 1984, the ARNN required that, in order to comply with the Standards for Nursing Education in Canada (CNA,

1978), the curriculum was to be based upon a conceptual model and to include an integration of theory and clinical practice. The curriculum should reflect current trends in nursing education, it should contain situations representative of those graduates will encounter in practice, it should provide a sound knowledge base and clinical application of skills, and should identify the focus, goals, and scope of nursing graduates will be expected to perform. The curriculum should also provide an ordered progression of increasing knowledge so as to provide graduates with the necessary skills (ARNN, 1984).

Although nursing and the preparation of the nurse have changed almost beyond recognition since Miss Nightingale's day, the principle of combining education and service has survived in hospital-based diploma schools of nursing.

## Present Teaching Strategies in Nursing Education

In referring to the way in which teachers assist students to learn, Heidgerken (1965) observed, "The crucial problem in teaching is to create learning experiences which provide internalized motivation for learning" (p. 15). Guinée (1978) emphasized that tradition reinforces the idea that teachers teach a class rather than individual learners. However, a class of 75 nursing students consists

of 75 individuals, and individual learners differ in
their rates of learning, motivation to learn, and learning
styles. The challenge is how to make effective contact
with the individual learner. It is the responsibility
of the teacher to devise methods or strategies of teaching
to meet the individual needs of the learners. Some
students profit from a visual approach, others from
a verbal approach, and other students profit from more
physical activities. Most learners will learn more
from a combination of several approaches.

The previous knowledge and experience of the student
also affect the kind of learning activities which will
be most effective (Heidgerken, 1965). As increasing
numbers of students are exposed to computers in elementary
schools and high schools, they will become accustomed
to learning through computer-based instruction. In
addition, since knowledge is increasing at a tremendous
rate, students must also "develop skills and techniques
for continued self-education" (Schoolcraft & Delaney,
1982, p. 7). The task of the teacher is much more than
merely imparting information.

Teachers in schools of higher education must concern
themselves with appropriate instructional strategies
to meet the needs of learners and the curriculum. This
can be a difficult task. Knapper (1980) observed that

"in choosing a particular instructional approach, a useful general criterion might be whether or not the teaching strategy concerned is better than the existing alternatives" (p. 130). Knapper stated that "an important guide to choice of instructional medium lies in the objectives laid out for the learning situation" (p. 131), thus indicating that not only is no single instructional medium ideal for all learning situations, but also a good many learning tasks would benefit from a combination of different instructional strategies.

The lecture has been the predominant method of teaching in higher education for centuries, with the teacher assuming the role of fact giver and students assuming the complementary role of passive receiver of information. Knopke and Diekelmann (1978) noted that although the lecture has primarily been used to transmit knowledge, "it can be the means for bringing together ideas, concepts, and principles from diverse sources for presenting both general and specific approaches to problem solving, and for encouraging students to apply previously acquired knowledge to new situations" (p. 187). They stated further that the use of the lecture primarily to transmit information causes apathy and frustration for both teachers and students. They suggested that alternate strategies and resources should be used.

to transmit information. If students had available to them resources they could use individually or in groups, lectures could be used to provide a unifying thread for course content, to provide the means for stimulating problem solving, and/or conveying knowledge students would have difficulty obtaining.

Guinée (1978) suggested that "the scope, balance, and levels of learning activities in the curriculum will be determined by the purpose and behavioral objectives of the education program or curriculum" (p. 96). She suggested that a wide variety of activities are required to help students develop the competencies required. Guinée noted several advantages of group discussion in nursing education. It is beneficial in developing behaviors in higher levels of cognitive and affective learning, it is useful in creating interest, it can be used to capitalize on the social values of learning in a group, it encourages students to look for ways of finding answers to problems, and it encourages self-evaluation. Guinée listed several factors to be considered in planning for effective discussions. She noted also that one type of learning experience should not be used to the exclusion of others.

The purpose of the teaching-learning process in nursing, according to Miller (1982), is the acquisition

by the student of behaviors necessary to perform the functions of a nurse. This involves allowing students the opportunity for growth to the limits of their abilities. Many different learning activities and strategies may be used, from those planned by teachers to those initiated by students. Activities such as role playing, buzz groups, field trips, workshops, panels, seminars (Guinée, 1978), and simulation games (Knopke & Diekelmann, 1978) are described in the literature. In noting the variety of approaches that may be used, Heidgerken (1965) stated: "The problem for the teacher is the selection of those procedures which will provide the most effective learning opportunities to achieve the desired goals and will most likely lead the learner to assume responsibility for and direction of her own learning" (p. 15).

Nursing programs at all levels must prepare nurses who will be able to synthesize their knowledge in order to deliver effective, safe patient care. Standards for nursing practice and education have been developed to serve as guides at national and provincial levels. The curriculum requires constant revision and those engaged in nursing education require not only clinical expertise but also training in the effective delivery of instruction. Teachers must plan instruction taking into consideration the needs and abilities of students,

the content of courses, the constraints of the instructional
setting, available resources, and their own teaching
abilities and preferences.

## Summary

Nursing has changed and continues to change with
new developments in science and technology, with societal
changes such as the aging society and world population
explosion, and with increasing demands for comprehensive
health care. As nursing changes so must nursing education,
in order to meet the demands of society. Programs are
established and change in response to changing requirements.

Levels of nursing education in Canada have changed
since the early apprenticeship programs. There are
presently two levels of entry into practice, with graduates
of both diploma and degree programs being required to
write RN examinations for licensure. In Newfoundland
there are four hospital-based diploma schools of nursing
and one university baccalaureate program.

Provincial nursing associations control registration
in all provinces except Ontario. These provincial associ-
ations are affiliated with the Canadian Nurses Association.
Standards for nursing practice and nursing education
have been developed to serve as guides for curriculum

development, skill identification, and decisions related
to levels of competency. In order to provide effective
training for nurses, the curriculum must be revised
constantly to meet changing needs and teachers must
be trained in effective means of delivering instruction.

## Chapter III

### THE EVALUATION

#### Introduction

Neale, Bailey and Ross (1981) noted that projects aimed at the improvement of schools "are most likely to be successful when they meet local needs or solve local problems" (p. 208). This is true whether they are elementary schools, secondary schools, or postsecondary institutions such as trades colleges or schools of nursing. The focus of this evaluation is, therefore, on assessing the instructional needs of the School of Nursing and diagnosing the problems related to classroom instruction.

This chapter contains an overview of the field of educational evaluation with emphasis on qualitative methods; a discussion of the approach taken in this evaluation including the instruments used; the specification of the program in which instruction takes place including the philosophy, objectives, curriculum and participants; and a description of the instructional setting, media, and techniques related to that instruction.

## Purpose of the Evaluation

The Director and instructors of St. Clare's Mercy Hospital School of Nursing, are aware of the changes in the nursing profession and their potential impact on the School of Nursing. In the Spring of 1984 two instructors drafted a proposal in which they noted that it had been observed that the St. Clare's nursing students, as a group, demonstrated dependence on the classroom teacher as the sole source of information, and thus lacked self-direction in the learning process. They proposed that a study be conducted to investigate methodologies of teaching in order to select those most appropriate for the School of Nursing.

A study was undertaken during the Summer of 1984 to evaluate the existing educational setting and instructional practices employed in the nursing education program. It was anticipated that the study would provide useful information on which to base decisions regarding the possible need for improvement in instructional procedures. It was agreed by the Director of Nursing Education and the researcher that the initial evaluation would be conducted during the summer employment period.

The evaluation was intended solely to provide useful information to aid in the improvement of classroom instructional strategies and tactics. There was no intent

to evaluate individual teachers or students, nor were they to be identified in reports. Neither the curriculum nor clinical instruction were evaluated. The researcher was concerned solely with the actual teaching methods and strategies employed in the classroom setting.

Constraints of the Evaluation

As the initial evaluation was to be carried out during the summer employment period, this allowed the researcher a period of ten weeks in which to conduct whatever procedures were deemed necessary in order to gather appropriate information for analysis. During this ten week period nursing students were away from the School for periods of time on summer holidays. As a result classroom observations could not be carried out continuously for the ten week period.

As only one researcher was assigned to the project, all functions were to be carried out by that person alone.

Although all records and documents pertaining to the School of Nursing were made available to the researcher, she agreed to respect the anonymity of both students and instructors in reports.

Evaluation: An Overview

Evaluation as practiced today is less than a century old. Initially evaluation meant measurement and was tied to the scientific paradigm of inquiry. Evaluation and measurement both focused on individual differences in students, not on programs or curricula. Tightly controlled quantitative evaluation dominated the field (Fisher, 1935; Campbell & Stanley, 1963). It was oriented toward norm-referenced rather than criterion-referenced measures with all subjects tested as objectively as possible (Guba & Lincoln, 1981). Great faith was placed in the truth of numbers generated from the evaluations of human behavior. It was thought that what could not be measured in quantitative terms could not be evaluated.

During the 1930s Ralph Tyler conducted an eight-year study which had an enormous impact on the evaluation process. For the three decades that followed, to evaluate in an educational setting meant following the guidelines developed by Tyler. His evaluation model was based on the concept of behavioral objectives and a scientific approach, resulting in data in the form of test scores (Tyler, 1950). Tyler's rationale was innovative in that it focused on the improvement of curriculum and instruction as the purpose of evaluation.

A different view was expressed by Cronbach (1963) who stated that evaluations should focus on decisions, not objectives; that they should be concerned with evaluation while the course was in the process of development, and that they should be concerned more with course performance characteristics than with comparative studies.

By the 1970s educational decisionmakers became interested in the reasons why a program worked or did not work, as well as whether it worked or not. There developed a search for alternative forms of evaluation, with a resulting increase in studies using qualitative methodologies (Parlett & Hamilton, 1975; Stake, 1978).

While quantitative methods involve the use of close-ended techniques and instruments such as controlled experiments, achievement and aptitude tests, survey instruments, and close-ended questionnaires (Campbell & Stanley, 1963; Cooley & Lohnes, 1976), qualitative methods are open-ended methods which include more subjective procedures. Qualitative methods include observation, case studies, structured and unstructured interviews, and record and document analysis (Guba & Lincoln, 1981).

Of the many models produced during the 1960s and 1970s Guba and Lincoln (1981) provide details of four of the most influential to today's view of educational evaluation. These are Stufflebeam's Context-Input-Process-

Product Model (CIPP), Scriven's Goal-Free Model, Eisner's
Connoisseurship Model, and Stake's Responsive Model.

Stufflebeam's Context-Input-Process-Product Model
requires information on decisions including "what decisions
are to be made, who is to make them, on what schedule,
and using what criteria", (Guba & Lincoln, 1981, p. 14).
Within this model evaluation is "a process for delineating,
obtaining and applying descriptive and judgmental infor-
mation concerning some object's merit" (Guba & Lincoln,
1981, p. 15).

Guba and Lincoln note that Scriven drew a distinction
between formative evaluation and summative evaluation.
The basis of his Goal-Free Model for evaluation became
effects rather than goals or decisions. This model
has demonstrated that evaluation can be carried out
in the absence of objectives, but the model has limitations
and is best used as an auxiliary method of evaluation.

Eisner's Connoisseurship Model is a judgmental
model aimed at discussing the qualities that constitute
an object or event, thus providing the bridge needed
by others to experience these qualities. It provides
a supplementary approach to traditional evaluation and
"demonstrates that the scientific paradigm is not essential
to the development of a powerful and useful evaluation
approach" (Guba and Lincoln, 1981, p. 20).

Stake's Responsive Model is based on the concerns and issues of those who have an interest in the evaluation. The design of responsive evaluation is emergent, as each step in the process is determined by what has emerged in advance of it. It is more flexible than other models.

In Creative Evaluation, Patton (1981) notes that there has been a shift toward the matching of evaluation methods to specific situations and problems. There is now an emphasis on the use to which information will be put, on the ethics of evaluation practice, and on the practicality of implementing an evaluation. This researcher is of the opinion that if the recommendations made as a result of an evaluation are not implemented, the evaluation will be of little use in contributing toward the improvement of an object. "An educational evaluation study is one that is designed and conducted to assist some audience to judge and improve the worth of some educational object" (Stufflebeam & Webster, 1980, p. 6).

## Evaluation Approach

As noted earlier, this evaluation was carried out for the purpose of examining the existing methods of instruction at St. Clare's Mercy Hospital School of

Nursing, with the aim of improving that instruction.
In order to accomplish this aim naturalistic methods
of inquiry were adopted. In naturalistic evaluation
all methods of inquiry and all types of data should
be considered for inclusion in the techniques selected
to describe the setting, the activities, the participants,
and the outcomes. Naturalistic inquiry methods produce
data that are mainly descriptive in nature. The design
is emergent and requires that the evaluator enter the
environment with an open mind, permitting discovery.
Every evaluation situation is unique, so the design
must emerge from the particular combination of people,
concerns, constraints, values, history, and setting
of the situation.

As Guba (1978) has pointed out, naturalistic evaluation
methods have specific conceptual or theoretical character-
istics:

1. They are concerned with social phenomena.

2. They focus on description and understanding, checking
   impressions by triangulation, or a combination of
   methods.

3. They have as their purpose the discovery and testing
   of relationships among phenomena.

4. They take an open-minded, holistic view of the system
   being evaluated.

5. They employ an emergent variable design.

6. They use the inquiry situation in a selective manner rather than by intervening and manipulating the situation.

7. They seek a multiple reality, expecting "reality" to be different at different times.

8. They recognize that there are multiple possible value positions to be considered.

In addition, naturalistic inquiry methods have the following operational characteristics:

1. They are carried out in a natural environment.

2. They seek to understand context in order to assess its impact on phenomena.

3. They invite and attempt to understand uncontrolled conditions or interference.

4. They realize that continuous change is the essence of real situations.

5. They consider any variable that appears relevant.

6. They strive for confirmability (i.e., agreement among sources of data).

Guba (1978) notes that models such as Stake's Responsive Model, Wolf's Judicial Model, Rippey's Transactional Model, Eisner's Connoisseurship Model, and Parlett and Hamilton's Illumination Model seem congenial to the use of naturalistic methods of inquiry.

The researcher believes that the approach taken in this evaluation may be termed "Prescriptive Evaluation" (Kennedy, 1981) as it seeks to provide a description of the setting, events, participants and their concerns, and then to prescribe effective means of improving the event for all concerned.

The methods of inquiry used by the researcher emerged as the evaluation progressed. Such methods as classroom observation, record and document analysis, structured and unstructured interviews, and a review of the literature on the applications of computers to nursing education, and on large-group instruction, especially as it relates to nursing education, were employed.

## Evaluation Instruments

As the naturalistic method of inquiry is emergent in design, the naturalistic evaluator is not able to be specific about procedural steps or instrumentation at the outset of the evaluation. He/she intends each stage of the evaluation to build upon all preceding stages. The researcher in this study allowed the emergent design to suggest appropriate instruments for inquiry.

Guba and Lincoln (1981) pointed out five kinds of information that the evaluator working within the naturalistic paradigm must generate: (1) descriptive

information, (2) information responsive to concerns, (3) information responsive to issues, (4) information about values, and (5) information about standards relevant to worth and merit assessments (p. 339).

Descriptive information. In order to satisfy the requirement for descriptive information about the methods of instruction employed and about the setting, the researcher turned to multiple sources. In seeking background information, the philosophy behind the program was examined, as well as the objectives of the program and a description of the graduate the School of Nursing expects to produce.

Profiles of the targets of instruction, the students, were examined, since they are the beneficiaries of the instruction. Faculty profiles were examined to provide information regarding academic qualifications and experience of the teachers who deliver instruction, program coordinators who plan and schedule instruction, and the Director and Assistant Director who have ultimate responsibility for all activities of the School of Nursing.

Course outlines were examined to provide information regarding the types of content contained in the various courses as well as to investigate the relationship of theory to practice. Detailed outlines also provided information regarding specific behavioral objectives,

the amount of time to be devoted to specific topics, and resources to be implemented.

Student enrolment forms and records pertaining to student admissions and withdrawals were examined to determine the type of information required by the School prior to admitting students, and to see whether patterns emerged in regard to admissions and withdrawals. Records of class mean scores on tests were examined to determine the relative difficulty of specific sections of course content; sections which a significant number of students found difficult might warrant particular attention when planning instructional techniques.

Classroom observation sessions were conducted to provide descriptive information regarding the instructional setting and the nature of classroom instruction. Observations were also made regarding student/teacher interaction in classroom situations.

The library/media holdings were perused and a sampling of nonprint media was examined to determine its appropriateness for inclusion in instruction.

Information responsive to concerns and issues. Information pertaining to the concerns of stakeholding audiences was obtained through personal interviews with administrators and instructors. Examination of questionnaires completed by graduating students provided information

regarding the concerns of that audience and the issues
they deemed important. Observation sessions also provided
information. Interview guides were devised to be employed
in interviews with the Director of the School, coordinators,
and instructors (see Appendix A for interview guides).

   *Information about values.* For information dealing
with values, interviews were conducted with members
of the stakeholding audiences and questionnaires completed
by graduating students also provided useful information.
Since the School of Nursing is owned and operated by
the Congregation of the Sisters of Mercy, values consistent
with those of the Catholic faith are deemed to be important.

   Guba and Lincoln (1981) suggested that "for the
evaluator's purpose, an audience's values can be reasonably
well inferred from the issues and concerns that it iden-
tifies" (p. 321).

   *Information about standards.* Interviews with the
Director of the School and instructors yielded infor-
mation dealing with their expectations in regard to
changes in student behavior as a result of instruction,
and provided insight into the standards by which they
value instruction. Documents were examined for statements
regarding expected levels of instruction. The literature
on nursing education and large-group instruction at
the postsecondary level was reviewed to determine the

methods deemed to be effective for instruction at that
level. Care was taken to ensure that standards used
were consistent with those of the Canadian Nurses Association
and the Association of Registered Nurses of Newfoundland.
The questionnaire on approval of schools of nursing
circulated by the Association of Registered Nurses of
Newfoundland provided useful guidelines as did the Standards
for Nursing Education in Canada (CNA, 1978).

Consensus of student opinions gleaned from question-
naires and unstructured interviews was used, in addition
to information gathered through a review of the literature,
as the standard when judging the suitability and pace
of instruction.

## Summary

A proposal drafted by two instructors that a study
be conducted to investigate methodologies of teaching
in order to select those most appropriate for the School
of Nursing initiated the present study. An evaluation
of existing methods of instruction was conducted during
the summer of 1984.

A review of the literature on evaluation with particular
emphasis on qualitative methods, as these were deemed
to be most appropriate for the study, led to the decision
to use naturalistic methods of inquiry. The researcher,

believing that there is no one best method of inquiry, allowed the emergent design to suggest appropriate instruments for inquiry. Multiple sources were used to obtain descriptive information, information responsive to concerns and issues, information about values, and information about standards.

The researcher examined documents such as Annual Reports, the By-Laws of St. Clare's Mercy Hospital School of Nursing, the Faculty Handbook, the Student Handbook, the By-Laws of St. Clare's Mercy Hospital, the Newfoundland Registered Nurses Act (1970), and the Standards for Nursing Education in Canada (CNA, 1978). She reviewed records of student applications, withdrawals, admission profiles, and academic achievement, and examined curriculum guides. She visited first and second year classrooms to become familiar with the setting and the instructional techniques employed. Personal interviews were conducted with the Director of the School, the program coordinators, the Educational Materials Specialist Librarian, and members of the teaching staff. The library setting and the list of holdings were examined and a sampling of filmstrips were previewed.

## Specification of the Program

St. Clare's Mercy Hospital School of Nursing has a two plus one year diploma program. Students receive two years of theory and supervised clinical experience, followed by one year of nursing internship. Since the founding of the school in 1939, the curriculum has been revised periodically to reflect changing educational approaches. The two year plus one year internship program was introduced in September 1963 on a trial basis. Approval for the program was granted by the Association of Registered Nurses of Newfoundland in March, 1964. In September, 1982 a program was implemented which reflects a "conceptual and integrated approach" (St. Clare's Mercy Hospital School of Nursing, 1982).

The Congregation of the Sisters of Mercy owns and operates both St. Clare's Mercy Hospital, the sponsoring agent, and the School of Nursing. The Director of the School of Nursing is appointed by the Executive Director of St. Clare's Mercy Hospital, who is in turn appointed by the Board of Governors of the Hospital. The Advisory Committee, appointed by the Board, acts in an advisory capacity to the management of the School of Nursing. Figure 1 contains an organizational chart showing the formal structure of the School of Nursing.

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              ┌─────────────────────────┐
              │   Congregation of the   │
              │    Sisters of Mercy     │
              └─────────────────────────┘
                          │
              ┌─────────────────────────┐
              │    Board of Governors    │
              └─────────────────────────┘
                                  ┌─────────────────────┐
                                  │ Advisory Committee  │
                                  └─────────────────────┘
              ┌─────────────────────────┐
              │    Executive Director    │
              └─────────────────────────┘
        ┌────────────────┐     ┌──────────────────┐
        │   Director,    │     │    Director,     │
        │ School of Nursing │  │ Nursing Service  │
        └────────────────┘     └──────────────────┘
  ┌───────────────┐
  │ Inter Agencies │
  └───────────────┘
              ┌──────────────────────┐     ┌──────────────┐
              │ Assistant Director,  │     │ Staff Health │
              │ School of Nursing;   │     └──────────────┘
              │ Nursing Education    │
              │    Coordinators      │
              └──────────────────────┘
  ┌──────────────┐                    ┌──────────┐
  │ Counselling  │                    │ Clerical │
  │   Service    │                    │  Staff   │
  └──────────────┘                    └──────────┘
  ┌───────────────┐  ┌──────────┐  ┌──────────┐  ┌───────────┐
  │ Instructional │  │ Teachers │  │ Teachers │  │ Residence │
  │ Development   │  └──────────┘  └──────────┘  │   Staff   │
  │ Specialist    │                              └───────────┘
  │ Librarian     │
  └───────────────┘
              ┌────────────────┐  ┌──────────┐
              │ First & Second │  │  Nurse   │
              │ Year Students  │  │ Internes │
              └────────────────┘  └──────────┘
```

**Figure 1.** Organizational chart; St. Clare's Mercy Hospital School of Nursing

Note. Adapted from St. Clare's Mercy Hospital School of Nursing, 1984, Report of Self-Evaluation Study, unpaged, St. John's, Newfoundland, Unpublished document.

The authority for the conduct of the School of Nursing is granted by Article XII of the By-Laws of St. Clare's Mercy Hospital. The contents of Article XII are as follows:

## ARTICLE XII

1. There is established at St. Clare's Mercy Hospital under the authority of the Board of Governors a school of nursing known as 'St. Clare's Mercy Hospital School of Nursing'.

2. There shall be carried on in the said School of Nursing a diploma program for the education of professional nurses or any other educational activity approved by the Board of Governors.

3. The School of Nursing shall be under the control and management of the Director of Nursing Education assisted by the School of Nursing Executive Committee.

4. The School of Nursing Executive Committee shall advise the Director of Nursing Education with regard to courses of studies, subjects to be taught in the school, admissions to the school, and examinations standards and discipline therein.

5. The Board shall appoint a committee to be known as 'The Advisory Committee for St. Clare's School of Nursing' which shall act in an advisory capacity to the management of the School of Nursing in matters relating to the administration of the school.

6. The Advisory Committee shall consist of twelve members. The members shall be appointed for three years and may be re-appointed for a maximum of three terms.

7. The Chairman of the School of Nursing Advisory Committee shall be appointed

by the Board of Governors. (St. Clare's
Mercy Hospital, 1983, unpaged)

## Significance of the Program

The School of Nursing attempts to meet two distinct
needs, (1) the needs of students, and (2) the needs
of the community and the province in which the school
is located. In an effort to meet the needs of students
the School provides a diploma program designed to prepare
graduates who can respond in an accountable manner in
helping solve health care problems. It presently offers
two university credit courses and, in addition, its
program is recognized by the Memorial University School
of Nursing in that 15 university credits are granted
to graduates of the School. The School responds to
the needs of adult learners by accepting mature students
into the program and by developing admission policies
to meet their needs.

In order to meet the health manpower needs of the
province, the School has periodically increased enrolments.
In response to requests from the Department of Health,
there were significant increases in enrolments in 1974
and in 1980 (St. Clare's Mercy Hospital School of Nursing,
1984).

## Philosophy Behind the Program

> Since all education is the outgrowth of philosophic
> beliefs, a philosophy of nursing education
> is the application of these fundamental beliefs
> to the field of nursing education....This
> philosophy will determine the selection of
> students, the preparation of faculty, the
> development of the curriculum, attitudes toward
> patient and community and the personal life
> and professional growth of every member of
> the student body and the faculty. (Heidgerken,
> 1965, p. 85)

The statement of philosophy of St. Clare's Mercy Hospital

School of Nursing was formulated in 1941. There have

been some modifications to the statement since that

time, but the fundamental philosophy has remained the

same (K. Daley, personal communication, June 6, 1984).

The program philosophy of the School of Nursing

contains the belief that nursing "is a profession concerned

with meeting the physical, emotional, social, economic

and spiritual needs of the individual" (St. Clare's

Mercy Hospital School of Nursing, 1983, p. 1) and that

this is accomplished "through assessment of the individual's

needs, formulation of a plan of action, implementation

of this plan and continuous evaluation" (St. Clare's

Mercy Hospital School of Nursing, 1983, p. 1). It states

the belief that education provides the student with

guidance and direction and that in order for learning

to take place, the environment must be conducive to

learning, there must be worthwhile objectives with both long term and short term goals, and the curriculum must be structured from the simple to the complex. Beliefs are also stated about man, society, and health. The philosophy of the School of Nursing is consistent with that of the sponsoring agent, St. Clare's Mercy Hospital.

## Objectives of the Program

The faculty of the School of Nursing believes that a sound education is needed to prepare nurses to meet the physical, psychological, and social needs of patients. The programme objectives reflect an examination of health care services including types of services/institutions, available health programs, community resources/support, and type of nursing demanded by identified health situations. The objectives specify behavior to be demonstrated by each graduate and are consistent with those of the sponsoring agent (St. Clare's Mercy Hospital School of Nursing, 1983). The objectives outlined for specific courses taught during the first two years of training reflect an examination of the community in which the program is located in regard to population, age distribution, socioeconomic factors, and lifestyle, as well as an examination of morbidity and mortality profiles. This

is consistent with the guidelines set down by the ARNN
(1984).

## Curriculum

The curriculum consists of the learning activities
that are designed to achieve the educational objectives
of the nursing education program. The faculty of St. Clare's
Mercy Hospital School of Nursing believes that a conceptual
framework provides a sound theoretical base for the
nursing curriculum as:

> The conceptual approach unifies, modifies,
> and utilizes many theories or ideas from various
> disciplines combining them into new forms—
> holistic and dynamic in its approach. The
> use of concepts provides readily available
> vehicles with which to transmit new knowledge
> in a holistic and more comprehensive way.
> (St. Clare's Mercy Hospital School of Nursing,
> 1981, p. 5)

In the "Rationale for Program Design" of St. Clare's
School of Nursing the faculty indicates that in the
late 1970's, with the aid of a curriculum consultant,
they became involved in curriculum revision:

> The Canadian Nurses Association Blueprint
> was studied prior to identifying the major
> concepts and sub-concepts or integrative curriculum
> threads that would pervade in the learning
> program. These concepts and sub-concepts
> were analyzed and elaborated into more extensive
> statements that addressed how the individual
> concepts would interact in a dynamic manner

to render a holistic approach to curriculum
planning and teaching and learning strategies.
    The curriculum is structured to proceed
from the simple to the complex, both in didactic
content and clinical experience. Course content
is arranged so that students can master basic
knowledge and skills during the first year
of the program and also gain a conceptual
introduction to medical-surgical nursing.
Second year courses are designed to build
upon the basic knowledge acquired during the
first year and to introduce the student to
the specialty nursing courses--Obstetrical
Nursing (Maternal Nursing), Psychiatric Nursing
(Mental Health and Illness), and Medical-Surgical
and Pediatric Nursing (Care of the Adult and
Child). The third or final year is viewed
as a transition year with emphasis on client-
care, management, advanced clinical competencies,
and professional nursing. In each year of
the program, clinical experiences are selected
to enhance the theoretical component of the
curriculum. (St. Clare's Mercy Hospital School
of Nursing, 1984, unpaged)

The conceptual framework provides direction for
all courses at the school. The instructors have developed
a format for lecture presentation, nursing care plans,
medication study guides, and clinical evaluation based
on this framework.

Curriculum organization is depicted in Tables 1,
2, and 3. Detailed course outlines including behavioral
objectives for specific content areas are provided for
the students by the teachers of the respective courses.

Table 1
Year One: Hours Planned for Theory and Practice

| Curriculum content | Number of hours Theory | Practice |
|---|---|---|
| Anatomy & Physiology | 118 | |
| Communications | 20 | |
| Dosage & Solutions | 13 | |
| Fundamentals of Nursing | 175 | 72 |
| Growth & Development | 36 | |
| Microbiology | 48 | |
| Psychology (University Credit Course) | 30 | |
| Religious Studies (Caring & Compassion) | 20 | |
| Basic Science | 65 | |
| Conceptual Introduction to Medical/Surgical Nursing | 165 | 250 |
| Nutrition & Diet Therapy | 50 | |
| Sociology | 25 | |
| Summer Practicum | | 105 |
| **Total** | **765** | **427** |

Table 2
Year Two: Hours Planned for Theory and Practice

| Curriculum content | Number of hours Theory | Practice |
|---|---|---|
| Nursing 200A (Maternal Nursing) | 115 | 210 |
| Nursing 200B (Mental Health & Illness) | 115 | 160 |
| Nursing 200C (Care of the Adult & Child) | 215 | 320 |
| Professional Nursing (History, Research, Ethics, Perspectives) | 15 | |
| Medical Ethics | 25 | |
| Seminars (Family Living, Legal Aspects of Nursing, Death & Dying, Gerontology) | 25 | |
| Summer Practicum | | 105 |
| **Total** | **510** | **795** |

Table 3
Year Three: Hours Planned for Theory and Practice

| Curriculum content | Number of hours Theory | Practice |
|---|---|---|
| Professional Nursing Level III | | |
| Nursing 300A (Nursing Leadership) | 20 | |
| Medical Legal Ethics Seminar | 10 | |
| Social Ethics Seminar | 8 | |
| Labour Relations | 4 | |
| Employment Ethics | 2 | |
| A.R.N.N. | 2 | |
| Specialty Areas of Nursing | | |
| Nursing 300B (Community Nursing) | 16 | |
| Nursing 300C (Critical Care Nursing) | 20 | |
| Emergency Nursing Seminar | 6 | |
| Advanced Clinical Procedures | 8 | |
| Nursing 300D (Comprehensive Nursing) | 38 | |
| Practicum | | |
| Orientation | | 192 |
| Regular Rotations | | 1088 |
| Summer Rotation | | 416 |
| Total | 134 | 1696 |

Faculty

The faculty of St. Clare's Mercy Hospital School of Nursing consists of the Director of the School of Nursing, one Assistant Director, three Nursing Education Coordinators, eleven full-time instructors, six part-time instructors, and one Educational Materials Specialist Librarian.

The Director of Nursing Education of St. Clare's Mercy Hospital School of Nursing, responsible to the

Executive Director of St. Clare's Mercy Hospital, oversees the formulation of the philosophy and objectives of the educational programme, the establishment of committees to meet the needs of students, instructors and the educational program, and the selection of instructors.

The Assistant Director is directly responsible to the Director of Nursing Education and assists the Director in the organization and administration of the School of Nursing.

The coordinators of first year, second year, and nurse interne programs are responsible for the overall planning, continuity, and evaluation of the curricula for their respective programs. Their administrative roles consist of the supervision and evaluation of those nurse instructors assigned within their program, coordination of schedules and communications with clincial facility agencies, arrangement for learning activities in clinical facility agencies, and assignment of topics to instructors according to their expertise.

The instructors of the School of Nursing are responsible to the program coordinators. Their specific responsibilities include the development, planning, implementation, evaluation and revision of the curriculum; instruction, supervision and evaluation of students; communication with clinical facility agency staff regarding student learning activities;

and participation in school and hospital committees. They must develop the objectives for the courses they teach in accordance with the philosophy of the school, assist with the selection of texts, effectively integrate audiovisual materials into the program, and prepare and grade examinations.

The Educational Materials Specialist Librarian is responsible for the acquisition and distribution of all print and non-print media and for the production of graphic and photographic materials. She is responsible for selection of media to achieve the desired educational goals within the available budget.

Information relating to the academic qualifications of instructors is included in the data reported in the next section, "Data Collection and Analysis".

Guest Lecturers

In addition to the instructors of St. Clare's Mercy Hospital School of Nursing several guest lecturers instruct the students in their respective areas of specialty. Table 4 contains information regarding topics of instruction and number of hours scheduled to be taught by guest lecturers during the 1984-85 school year.

Table 4
Topics Covered by Guest Lecturers
During the 1984-85 School Year

| Topic | Hours |
| --- | --- |
| Pharmacology | 55-60 |
| Sociology | 25 |
| Chemistry | 30 |
| Physics | 13 |
| Caring & Compassion | 20 |
| Medical Ethics | 25 |
| Community Nursing | 17 |
| Labor Relations | 4 |

Note: All guest lecturers scheduled to teach have at least one academic degree.

Students

The generally accepted purpose of the curriculum is to facilitate the growth of students. This refers not only to academic and professional growth but also to personal and social development. Those responsible for the development of curriculum and instruction must know what the student is like before effective plans can be developed. Periodic assessment of the characteristics of students accepted for nursing education can assist instructors in making curriculum decisions.

Although the professional commitment of nursing students to helping others underlies the choice of career for many, the characteristics of the nursing education student are changing. An admission profile of students

entering the nursing program at St. Clare's School of
Nursing in the years 1982-84 indicates that the high
school average of these students has declined from 73.5%
in 1982 to 68.4% in 1984, and the class mean on the
pre-entrance psychological examination dropped from
56.9% in 1982 to 41.4% in 1984. In 1984 almost 30%
of the students entering were over 20 years of age.
There were four male students and seven married students
in the group admitted in that year, and several had
other diplomas (secretarial, laboratory technology,
occupational therapy, etc.) and/or university credits
(St. Clare's Mercy Hospital School of Nursing, 1984).

<u>Summary</u>

Through its two plus one year diploma program,
initiated in 1963, the School of Nursing offers students
an integrated, conceptual approach to nursing education.
The program, designed to meet the needs of students
and the community, is based on a philosophy and objectives
which are consistent with those of St. Clare's Mercy
Hospital, the sponsoring agent. The curriculum, which
proceeds from the simple to more complex content, is
structured to allow students to master basic knowledge
and skills during the first year, to build upon this
knowledge during the second year when specialty courses

are introduced, and to gain clinical expertise during
the third or transition year.

In this section the responsibilities of instructors
have been outlined and learner characteristics discussed.
The information provided is intended to set the background
for the evaluation of instructional procedures.

## Data Collection and Analysis

### Instructors

According to the position description for Instructor
II, nursing instructors at the School of Nursing are
expected to be capable of carrying out a number of respon-
sibilities. These responsibilities include curriculum
development, planning, implementation, evaluation and
revision; development of course objectives; selection
of course content and associated learning experiences;
operation of audiovisual equipment; selection of texts;
and preparation and grading of examinations and other
written assignments (St. Clare's Mercy Hospital School
of Nursing, 1984).

These are complex tasks requiring specialized training.
Although preference is given to individuals with previous
satisfactory teaching experience, the qualifications
stipulated by the School of Nursing for the instructor

do not require pedagogical training or training in curriculum development and implementation.

Table 5 contains data relating to the academic qualifications of faculty members at the time of this study.

Table 5
Academic Preparation of Faculty According to
Highest Qualification Attained

| Position | Graduate Degree | Undergraduate Degree | R.N. |
|----------|--------|--------|------|
| Director School of Nursing | 1 | | |
| Assistant Director School of Nursing | 1 | | |
| Nursing Education Coordinators | | 3 | |
| Full-time Instructors | | 11 | |
| Part-time Instructors | | 4 | 2 |
| Educational Materials Specialist Librarian | 1 | | |
| Total | 3 | 18 | 2 |

Note: Four full-time faculty members have degrees in Education.

The only full-time faculty members in possession of pedagogical training are the Director, Assistant Director, Nursing Education Coordinators, and the Educational Materials Specialist Librarian. No faculty members at the level of Instructor II currently have educational training.

Professional development consists mainly of an orientation program for new instructors and inservice training designed to meet the specific identified needs of faculty members" (St. Clare's Mercy Hospital School of Nursing, 1984, unpaged).

The orientation program, designed to enhance job satisfaction and performance, is of a general nature and includes orientation to the Hospital as well as to the School of Nursing. The "Orientation Program Guidelines" (St. Clare's Mercy Hospital School of Nursing, 1984) indicate that topics covered include the philosophy and objectives of the Hospital and the School of Nursing; the structure, organization, administration, and policies of the School of Nursing; and a tour of the facilities. The location, method of booking, and demonstration of audiovisual equipment and typing and photocopying services are explained. Procedures, as taught in the School, are outlined as well as the content, organization, and method of presentation of the program. Library facilities, policies, and holdings are detailed and School reference manuals are distributed. The coordinator of each program is responsible for the orientation to that program and for detailing individual responsibilities.

## Instructional Setting

The educational facilities of the School of Nursing are located in Our Lady of Lourdes Hall, a building adjacent to St. Clare's Mercy Hospital. The building, officially opened in 1958, is a four-storey concrete block structure. (See Appendix B for detailed floor plans of the educational facilities).

First Year Classroom. The first year classroom is a long, narrow room with seating possible for approximately 90 students. During observation sessions, desks were arranged in five rows of fourteen desks. Instructors have, at times, experimented with other seating arrangements, as they have not found this arrangement to be entirely satisfactory.

The room is equipped with bookcases, a lectern, chalkboards, a bulletin board, black out drapes, two viewing screens, an overhead projector, a slide/filmstrip projector, a 16mm motion picture projector, a 1/2 inch videotape player and monitor, and a speaker system. Chalkboards were not observed in use nor was the bulletin board used for displays. Although a microphone was provided for and generally used by instructors, the researcher had difficulty hearing one of the instructors observed.

Teachers were unable to maintain eye contact with students at the back of the room and these students frequently asked to have material repeated, as they had difficulty hearing some of the instructors and/or viewing material presented on overhead transparencies.

The first year classroom has several features which appear to seriously limit the instructional techniques employed by teachers. The number and arrangement of desks and the physical design of the room both contribute to the use of the lecture as the primary method of instruction. The arrangement of desks leads to the vehicle for teaching being the total group, with the teacher the strategic figure in the group. There is a lack of space planned to facilitate procedures such as group discussion. There was a noticeable lack of posters or displays which might be motivating and informational for students, as well as a possible source of discussion topics.

Second Year Classroom. This is a wide, rectangular room with seating for approximately 70 students. The room is equipped with a lectern, two chalkboards, two projection screens, a bulletin board, an overhead projector, a slide/filmstrip projector, a 16mm motion picture projector, and a 3/4 inch videotape player and monitor.

Teachers using this room do not require the use of a speaker system to be heard by students. The design of the room permits teachers to maintain eye contact with students and allows students to hear the teachers and view transparencies presented by means of the overhead projector.

Lecture Room. This large room, with a seating capacity of approximately 100, is located in the basement of the centre block of the hospital complex, adjacent to the School of Nursing, and is available to the school.

The room is equipped with projection screens, video monitors, a portable chalkboard, a lectern and black out drapes. Audiovisual equipment from the Resource Centre is available for use for presentations in the Lecture Room. The room was observed in use by the School of Nursing for a seminar presented to second year students. The room was large enough to permit all students to be seated without crowding, view of screens was unobstructed, and the acoustics were sufficiently good that students were able to hear the speakers without the use of a speaker system.

Library/Resource Centre. The Library/Resource Centre consists of one room containing the stacks for print media, display space for periodicals, seating for approximately 35 persons, and an audiovisual workroom

which contains the non-print collection and audiovisual equipment and supplies.

Although the collection held by the School of Nursing is limited, students have access to the Health Sciences Library which houses over 200,000 volumes and subscribes to 1400 periodicals, abstracts, and indexes. In addition, the librarian acquires, where possible through interlibrary loan, materials requested that are not in the Resource Centre collection.

The Resource Centre workroom contains two carrels, equipped with headphones, for use by students and instructors when previewing filmstrips and slide tape productions. However, the workroom also serves as the librarian's office and graphics production area. In addition to the main library and the workroom, the School has a newly-equipped darkroom used for photographic production.

The results of a pre-graduation questionnaire completed by the Class of 1984 indicated that 21% of those students felt that the library resources were good, and 37% felt they were adequate to meet study needs. Thirty-four percent of the students said that they utilized the Health Sciences Library. Some students interviewed by the researcher expressed the opinion that they generally found it inconvenient to use the Health Sciences Library. Teachers also agreed that this could be a problem for

students and some said that as a result students were
not required to do extensive independent research.

Laboratories. There are two nursing skills laboratories
located in the School of Nursing. During most of the
school year these rooms contain hospital beds and bedside
units with appropriate support equipment. There are
room dividers to separate practice units. Other equipment
such as diagnostic sets and wheelchairs are available
when required for demonstration and practice. In addition
to laboratory sessions, these rooms are occasionally
available for demonstrations, role playing, and small
group discussions. During the observation period one
of the rooms was used by a summer research student and
for the designing, development and production of a filmstrip
and booklet. The rooms were not in use for practice/
demonstration sessions during that period.

## Instructional Techniques

Although teachers have autonomy in areas related
to their teaching and therefore in the selection of
learning experiences and instructional techniques, there
was little variety observed in the techniques employed
in the classroom situation. Nursing skills laboratory
demonstrations for first year students were introduced

on a pilot basis in 1984, and seminars are presented
on selected topics for second year students.

Lecture Method.  The lecture was the most frequent
teaching activity observed.  Teachers were found to
be well prepared, with equipment and materials well
organized and content presented in logical sequence.

Examination of the course outlines prepared for
first and second year courses revealed that the material
was organized according to a conceptual model and that
behavioral objectives were clearly stated.  It is the
presentation of this material to students which seemed
ineffective.

The researcher noted little interaction between
teachers and students.  Teachers were observed either
dictating notes to students or, at times, reading material
that was also presented on overhead transparencies.
Only infrequently were explanations, anecdotes, or examples
used to add interest, or for relief.  When teachers did
relate real life experiences students were encouraged
to relate their experiences.

The main purpose of the lectures appeared to be
the presentation of facts and the majority of the teachers
observed appeared to be rushing to "cover" the material.
Few questions were asked and these were low level questions.

such as "Where are the kidneys is located" (#8-0-1)? or "What substance is totally reabsorbed" (#8-0-1)? Teachers did not ask thought-provoking questions. Little attempt was made to initiate any discussion.

Student activity consisted mainly of listening and note-taking. Teachers seldom appeared to be sensitive to the fact that students tired from writing constantly. One notable exception was a teacher who periodically gave students a rest saying, "Now you won't have to take notes for a while as I illustrate this" (#3-0-2). This teacher also emphasized important points for students to note in an effort to assist them with note-taking.

Some teachers were noted to have distinctive verbal mannerisms which were found to be distracting. Poor eye contact was noted due in part to the fact that many teachers read from their notes and in part to the fact that the design of the first year classroom is not conducive to maintaining eye contact.

It was evident that the total group was the vehicle for most teaching and that the teacher was the focal point of the group. There was little provision made

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[1] The information following each excerpt from the interviews/observations includes the number assigned to the session, a letter to indicate whether it was an interview (I) or an observation (O) session, and a second number to indicate the year of instruction.

for questioning or discussion, or for independent study.
There also appeared to be little provision made for
changes of pace during instructional periods. An examination
of timetables indicated that a teacher frequently instructed
the same group of students on a single topic for three
consecutive hours.

One coordinator expressed the opinion that the
coordinators generally hope to get away from so much
lecturing, especially in those courses which the students
find most difficult. Teachers generally seemed interested
in finding new ways of presenting material more effectively.

Discussion. The researcher noted, from classroom
observations, that teachers generally provided little
opportunity for any class discussion. They did not
encourage students' questions but seemed intent on "covering"
the course material. One instructor said, "Students
don't actively participate as much as instructors would
like but then the instructors have so much content to
cover" (#2-I-1).

Students in the Nurse Interne year are divided
into small groups during the Leadership Course to solve
hypothetical problems. These problems are then discussed
in the large group. The third year coordinator noted
that students like this format. Classroom observations

were not conducted at this level as classroom instruction
was not being carried out during the observation period.

Although the researcher did not observe significant
attempts to encourage discussion, one teacher, new to
the faculty, expressed the desire and intention to incor-
porate small group discussion into her teaching, as
she was familiar with the technique.

Laboratory Demonstrations. The researcher observed
only one first year nursing skills laboratory demonstration.
It was preceded by a conference in which one teacher
demonstrated to others, who would be conducting demon-
strations, the procedure to be followed. Steps in the
presentation were listed on a handout provided for the
teachers and the necessary equipment was on hand for
the demonstration.

During the actual demonstration to students, there
were 16 students in a small room with one instructor.
Although there was insufficient seating for the students,
they were attentive and asked questions throughout the
demonstration. They had previously been given notes
on the topic. The instructor explained where the equipment
is kept and what is included in the package, displayed
the equipment and labelling of parts to students, and
explained the setup of the equipment and problems to
avoid. Students interviewed expressed the opinion that

they found the laboratory demonstrations beneficial and enjoyed being in small groups where they could ask questions.

The Director of the School said that the pilot use of these demonstrations has been a positive move toward more effective instruction. One coordinator interviewed agreed, stating that she felt the learning laboratories could be used more extensively for instruction in place of lectures as they allow students to get feedback on things they are unsure of before they arrive in the clinical area and need to have procedures explained there.

Seminars. Seminars are provided for second year students on selected topics. One seminar was conducted during the period in which the researcher carried out observations of instructional techniques. The seminar was held in a large lecture room which is not used for regular classroom instruction.

Experts on the topic were invited to the School to present the seminar. Techniques used included effective use of slides and overhead transparencies to highlight important points. Anecdotes and examples from real life were used effectively to illustrate points made. Although notes were not dictated, students were able to take notes if they wished. At one point, slides

were shown side-by-side with the overhead transparencies. It was noted that equipment was not set up in advance of the arrival of the guests and this occupied time at the beginning of the presentations.

Students interviewed found the seminar both interesting and informative and expressed the opinion that they enjoyed the change of pace. They found the morning session, which provided more factual information, to be the more beneficial session. Although students do not have an examination following seminars, they are accountable for the information on comprehensive examinations.

Instructional Media. The School of Nursing has, as one faculty member, an Instructional Materials Specialist Librarian, who is trained in the production and use of instructional materials and is available to assist teachers who are unfamiliar with audiovisual media. She is also available to assist with the production of materials such as overhead transparencies and photographic slides. Despite the availability of this expertise, nursing instructors generally made inadequate use of visual materials in instruction. Much of this failure is presumed to be due to lack of knowledge of the production and use of materials and to the failure of teachers to make adequate use of the services available to them.

The instructional equipment most frequently observed in use was the overhead projector. Teachers appeared to make a genuine effort to assist students with note-taking through the use of overhead transparencies. It was noted that teachers made use of a variety of colours on overhead transparencies. Although these were generally used effectively on diagrams to highlight specific areas, red and orange were noted as being more difficult to read than black, blue, or green. Most transparencies viewed were neatly printed with lettering large enough to be easily read from the back of the classroom. However, some teachers produced transparencies from typewritten and/or photocopied material. Many students found these transparencies difficult to see. Diagrams and illustrations produced in this manner were particularly difficult to discern. Overhead transparencies generally contained far too much information to be effective. By far the majority of teachers observed used the overhead projector to present the content of lectures rather than to present headings or brief outlines. Students were thus occupied copying material from the projection screen.

The School of Nursing has a collection of filmstrips with accompanying audiotapes on many topics covered in the curriculum. Teachers reported that they frequently

incorporate selected filmstrips into their class presentations or occasionally cover the material in class and request that students view the appropriate filmstrips on their own. In either case, filmstrips are available for students for viewing in the Resource Centre which has an autovance filmstrip projector and carrels for student or teacher use.

Filmstrips viewed by the researcher during classroom observations were noted to contain a great deal of factual material and to consist of in excess of 100 frames. They were too lengthy to maintain student interest. After noting teacher comments that students did not like the commercially produced filmstrips, the researcher viewed a random sampling of 10 filmstrips from the collection. She found that generally many facts were presented in each filmstrip with only one of those viewed presenting concepts rather than facts. The filmstrips viewed contained as many as 120 frames and were up to 28 minutes in length.

Four slide tape presentations have been produced by the School of Nursing since 1982. These have been well received by students and instructors as they have been designed to comply with the needs of the students and the curriculum.

No slide tape productions or 16mm motion pictures

were observed in use during the classroom observation sessions.

## Summary

Information gathered through classroom observations, structured and unstructured interviews, analysis of documents and records, and preview of media provided insight in regard to instruction at St. Clare's Mercy Hospital School of Nursing. It indicated that the instructional setting limited the number and type of instructional techniques employed by teachers, and contributed to the use of the lecture as the primary method of instruction; that although instructors and coordinators have put a great deal of effort into the development of instructional objectives for the curriculum, and teachers have lecture content well prepared, inappropriate use has been made of the lecture method of instruction with little opportunity provided for discussion; that students have found the nursing skills laboratory demonstrations a worthwhile learning experience and seminars a welcome change of pace; that frequent, though ineffective use has been made of the overhead projector; and that students have not found the majority of commercially produced filmstrips effective for the purpose for which they have been used.

This information suggested to the researcher that a review of the literature on large-group instruction, on the use of instructional resources, and on other methods of instruction which might suggest possibilities for nursing education should be conducted.

## CHAPTER IV

### INSTRUCTIONAL STRATEGIES AND TACTICS

#### Introduction

This chapter focuses on research into various instructional strategies and tactics which may prove appropriate for nursing education. The literature relating to the use of such strategies as the lecture, discussion, lecture-discussion, and demonstration is reviewed. The implications for applications of computers in education are investigated, and the literature pertaining to effective tactics to be employed in conjunction with the foregoing strategies is reviewed.

As an aid to teachers in planning instructional strategies and techniques, the author has prepared charts summarizing points to be considered when selecting and planning instructional strategies. The charts are based on a technique developed by Horn (1972) called "Information Mapping". With this technique each page is a separate, complete unit. The technique has also been used extensively by Romiszowski (1981; 1984).

"Overall instructional strategies are the translation of a philosophical or theoretical position regarding

instruction into a statement of the way in which instruction should be carried out in specific circumstances" (Romiszowski, 1984, p. 56). The two main theoretical viewpoints related to learning and instruction, according to Romiszowski, are reception learning, supported by the behaviorists (Skinner, 1969; Ausubel, 1968) and discovery learning promoted by Bruner (1966) and Piaget (1964).

Reception learning leads to expositive strategies and tactics in which information is presented through explanation or demonstration while discovery learning leads to experiential strategies and tactics in which opportunities are provided for students to act and observe the consequences of their actions (Romiszowski, 1984)).

De Tornyay (1971) provides an explanation of expository teaching:

> The underlying educational philosophy of expository teaching views the teacher as the expert with the major purpose of subject matter transmission. Expository teaching is utilized as a teaching strategy when the teacher wishes to convey material to a class in an organized way so that all students receive the same information. (de Tornyay, 1971, p. 64)

Expositive strategies and tactics include the traditional lecture, seminars, most programmed instruction, demonstrations, most media presentations, drill and practice, use of textbooks, reading assignments, and modelling.

De Tornyay explains discovery or experiential learning by observing that "discovery learning...pertains to the cognitive aspects of learning. It is concerned with the development and organization of concepts, ideas and insights; the use of inference and other logical processes" (p. 77). Discovery strategies and tactics include group discussions, case studies, adaptive media such as interactive video, clinics, projects, workshops, simulations, role-playing and laboratory methods.

Romiszowski notes that "it is possible to construct a continuum of discovery/expositive strategies, ranging from totally free discovery to totally controlled expositive rote learning" (1984, p. 56) and that this continuum "is perhaps the most important group of strategies concerned with the actual process of instruction" (1984, p. 57).

While many teachers in nursing education favor expository teaching because it requires less time, allows the teacher to control the learning process, and aids in giving students an organized view of nursing, students frequently are not given the opportunity to manipulate the facts and generalizations acquired, an ability they need when they are required to solve problems (de Tornyay, 1971).

There are many methods of teaching, each suited to a particular situation, but no one best way to teach

(Goode, 1974). Classes differ in size, in student char-
acteristics, in setting, and in goals, and these differences
should be utilized rather than ignored. Powell (1964)
notes that "the prime consideration, when deciding which
teaching procedure to use, must always be the extent
to which it will succeed in attaining our educational
objectives" (p. 180).

Knopke and Diekelmann (1978), observe that the
traditional environmental constraints of timetabling,
classroom space and allocation, and large classes, coupled
with an emphasis on efficient training of nurses, have
led to predictable approaches to teaching in the health
sciences. This is compounded by the fact that "most
health science teachers are thrust into teaching situations
with little or no preparation or formal educational
experience" (p. 196).

The classroom is an important area of teacher-student
interaction, thus what goes on in the classroom has
an effect on the learning experiences of students, whether
they be college or university students or students in
schools of nursing. The teacher and the methods she
employs are perceived by students as important elements
in the learning process.

The researcher has focused on classroom methods
employed in postsecondary education with particular

emphasis on the traditional lecture and discussion methods
of large-group instruction, lecture-discussion, demon-
stration, and the use of computer-assisted instruction.
The researcher recognizes that no one teaching method
is an end in itself but that each method is related
to others and should complement others.

## The Lecture Method: Expository Teaching

### Introduction

The Hale Committee Report defines the lecture as
"a teaching period occupied wholly or mainly with continuous
exposition by a lecturer [italics in original]. Students
attending it may be given some opportunity for questions
or a little discussion, but in the main they have nothing
to do, except listen and take notes" (University Grants
Committee, 1964, p. 170).

Knopke and Deikelmann (1978), in defending the
use of the lecture, note:

By lecturing [italics in original], the teacher
assumes a directive role to convey a structured
body of knowledge to a group of students.
The teacher transmits to students knowledge
they do not have or would have difficulty
as novices obtaining on their own. The lecture
draws together diverse subject-content elements
in order to assist students in developing
understandings, insights, or relationships
needed to achieve the learning objectives
of a course. (p. 20)

During a lecture the teacher has five major concerns according to Broadwell (1980). "to be heard, to be understood, to allow for students to see visuals, to be able to see the students, and to cover a prespecified amount of material in the time allotted" (p. 12).

## Rationale for the Use of the Lecture

Although the lecture is frequently criticized as a teaching method, it continues to be widely used. It became popular during the fifteenth century in the medieval university, before the invention of moveable type. At that time lecturers possessed the only books available, so they read to the students. Lecturing later came to be synonomous with teaching (Hoover, 1980). In spite of advances in technology and the availability of books, teachers have continued to lecture and to base their lectures on text materials.

Eble (1976) states that "teachers need to recognize the basic attractiveness of the lecture before they attempt to attack or defend it" (p. 43), and Knopke and Diekelmann (1978), point out that it can be used for more than to transmit knowledge:

> It can be the means for bringing together ideas, concepts, and principles from diverse sources; for presenting both general and specific approaches to problem-solving; and for encouraging students to apply previously acquired knowledge

to new situations, to synthesize information
based on research and opinions from diverse
sources, and to develop the ability to question
and evaluate". (p. 107)

They state that the lecture is over-worked in that it
bears the burden of transmitting information while there
are other strategies and resources that are more effective
for transmitting knowledge. Students should be able
to obtain more factual information in the same amount
of time by reading than by attending a lecture, programmed
instructional materials can be used, and a variety of
audiovisual materials can be effective for conveying
information.

Bowman (1979) notes, "the lecture is the least
compelling in the purpose for which it is most often
used--conveying information. It is most effective in
the purpose for which it is least often used--conceptual
organization, inspiration, clarification, and motivation"
(p. 25). He states that the lecture should be used
to provide a framework for study or an overview of the
subject matter.

Bligh (1972) concluded that lectures can be used
to present information, including the framework of a
subject, but are unsuitable to stimulate thought or
to change attitudes. This is confirmed by McKeachie
(1978) who, following a review of research on the lecture

versus discussion concluded that the lecture is sometimes
an effective way of communicating information but other
methods may be more effective in achieving some of the
higher level cognitive and attitudinal objectives.
However, the lecture should not be used when the same
material is readily available in printed form.

Aschner (1963) in a study analyzing verbal interaction
in the classroom reasoned that many teachers use the
lecture method not because they feel it is the most
suitable method but because they know of no other way
of teaching. They lack the skills and training necessary
to enable them to stimulate thought-provoking discussion.
She advocates, "let teachers lecture out of preference,
when lecturing is the sound strategy of the moment,
and not because they do not know what else to do" (p. 55).

## Effective Lecture Tactics

The lecture is the most widely used teaching strategy.
It is also a frequently abused instructional technique.
Teachers and students can both become frustrated and
experience difficulty with the lecture if it is used
solely to transmit information. Those intending to
use the lecture as a primary teaching method should
give consideration to its quality. Teachers should
become adept at lecture preparation and delivery in

order to gain maximum benefit from this method of teaching. If lectures are unsuccessful, perhaps it is not the technique which is at fault but the purpose for which it is employed and the ability of the teacher to employ it well. Brown (1978) explains that:

> Lectures are for the benefit of students. They are predominantly oral methods of giving information, generating understanding and creating interest. Without interest, attention is lost and so there can be little understanding. Without information there is nothing to be understood. The task of lecturing is therefore threefold; it is rather more than the delivery of slabs of facts or loose clippings of ideas. (p. 41)

A review of the literature pertaining to the effective use of the lecture as a method of large-group instruction has yielded practical suggestions to be considered by teachers when preparing and presenting lectures.

Preparation. Preparing for a lecture is the first important step to be taken. Eble (1976) suggests that the best time to prepare for a lecture is often immediately after a class when the teacher realizes "what worked, what didn't, what one wanted to do, what one will do next time" (p. 45). He notes that this is also a good reason for a teacher not to have two classes in a row.

The teacher should keep the objectives of the course in mind while preparing the objectives of the lecture.

She should think through the substance of the subject, identify the points she wants to make, the order in which she wants to make them, and the amount of time and emphasis she wishes to devote to each (Heidgerken, 1965; Hayter, 1979).

The teacher should have a thorough knowledge of the subject matter to be taught. Research should be conducted on the topic and advances in the field noted. However, there is disagreement as to whether teachers should rehearse a lecture or not. Campsey (1984) suggests that, although the teacher should not attempt to memorize the content of the lecture, she should rehearse by practicing speaking into a tape recorder or discussing the material with colleagues. Watson, Pardo, and Tomovic (1978) observe that practicing a presentation provides an opportunity to learn the material, to discover any potential problems, and clarifies the presentation. Hayter (1979) objects saying that a lecture should not be rehearsed as it will tend to lose its spontaneity.

Outline. The outline contains the overall view of the material the teacher plans to cover and the order of presentation of topics. It is generally noted that the teacher will find it easier to achieve spontaneity if the text of the lecture is outlined than if the script is written out. Notes may be made in the margins to

indicate roughly the amount of time to be allocated to each topic. As Hayter (1979) points out, "if the teacher has a script in front of her, it increases the likelihood that reading will occur" (p. 277). Campsey (1984) notes further than "while notes or an outline will provide some sense of security and keep [the teacher] from digressing, dependency on all those words will discourage eye contact, limit freedom of movement before the group, and foster a monotone" (p. 68). Broadwell (1980) suggests that if teachers use a card system for outlining, they can use a different colour card on which to write a test item(s) for each objective. The time when the teacher is preparing the outline is an ideal time to make up a question on that information. The teacher can then pull these cards when preparing tests to ensure that testing is based on course objectives and content covered.

Teachers should not hesitate to "give students a detailed outline of the content of a lecture; this will enable them to listen more actively since they will need to take fewer notes (Campsey, 1984).

Content. Hayter (1979) points out that the amount of content or number of points presented in a lecture should be limited. This is confirmed by Eble (1976) who states:

> The teacher's efforts are weakened by the
> assumptions made about the topics that must
> be covered and by the expedients adopted to
> get them all in. The preparation of an individual
> lecture, like the harder task of preparing
> a class through a term, demands an intelligent,
> imaginative, and ruthless power of selection.
> No good teacher ever included everything that
> should have gone in the course; wisdom is
> in part learning what to leave out. (p. 46,
> 47)

Eble notes that teachers almost always include too much

in a lecture when preparing it and are then forced to

discard material, crowd it in and lose emphasis, or,

hold it over until the next class, and so get farther

behind in the course.

Hayter (1979) points out that rushing to cover

material usually results in the teacher's presenting

large amounts of factual information at the expense

of the students' conceptualizing, generalizing, and

assimilating" (p. 277). If course outlines and reference

lists are provided for students, they can be referred

to them for additional relevant information.

Teachers should avoid covering the content of the

textbook or assigned readings in lectures, but should

use lecture time to clarify and reinforce the topic

being studied and to provide information the students

may find difficult to obtain. However, the content

of the lecture should be closely related to the students' readings (Heidgerken, 1965).

Set Induction. It is important for the teacher to pay special attention to the beginning and ending of the lecture. Set induction, or the introduction, consists of those events at the beginning of the lecture which are designed to gain the attention of the audience, to state the objectives of the lesson, and to establish links with past lectures. "Set induction provides a motivational aspect to learning as well as helping students toward a cognitive bridge from what preceded to what will follow in the instructional sequence" (de Tornyay, 1971, p. 41). De Tornyay makes several suggestions as to how set can be effectively created including the posing of an intriguing problem, participation in a role-playing situation, use of analogy or anecdote, presentation of a film or videotape, or provision of a situation with specific alternative solutions.

Development of the lecture. Bligh (1972) notes that common forms of lecture organization are the classi-fication hierarchy, in which points of information are grouped together under appropriate headings; the problem-centered lecture, in which the teacher presents a problem followed by information and possible solutions; and chaining, which consists of a sequence of events or

stages. He points out that it is important that the lecture organization and connection with the overall view of the topic be made clear. This may be done at the outset of the lecture by explaining how the objectives are to be achieved.

During the development or main body of the lecture data are presented and then explained. Teachers should try not to stray from the topic. Broadwell (1980) suggests that if there are many facts to cover, it may be advantageous to give students a handout containing these facts and additional references. "A clearly written and carefully prepared set of handouts...will save us a lot of time and keep us from boring the students by giving the material in the lecture" (p..57). He cautions, however, that if students are to be expected to use handouts after class, they need to use them first in class to solve problems and so see the advantage of having and using the material. Students should be provided with examples and applications of this material after the facts and backup data have been presented, whether they have been presented in oral or written form. Teachers should try to provide concrete examples from the "real world" (Broadwell, 1980).

Closure. Closure, or consolidation, consists of events at the end of the lecture. This is the time

when the lecturer consolidates what has been presented
and students are assisted in applying what they have
learned to new situations. "Closure is complementary
to set induction. It links the new knowledge to past
knowledge and acts as a cognitive link to future learnings"
(de Tornyay, 1971, p. 48). Ways in which the teacher
can assist students toward closure are through review
and summary, application of what has been learned to
new examples, and extending what has been learned to
new situations (de Tornyay, 1971). The subject of the
next lecture may be given at this point to enable students
to do preparatory reading.

Bligh (1972) notes that it is worthwhile to summarize
the lecture at both the beginning of the lecture and
at the end, as this repetition aids students in remembering
the content of the lecture. Campsey (1984) points out
that summarizing also helps students to "organize their
notes and thoughts for more effective study" (p. 70).

Stimulus Variation. During the development of
the lecture the teacher should provide for stimulus
variation. Eble (1976) suggests that:

> The body of the lecture be broken into distinctive
> parts. For example, ten minutes of precisely
> defining, exemplifying, and relating a basic
> concept might be followed by ten minutes of
> questions and answers about the concept followed

by ten minutes of applications involving both teacher and students. (p. 48)

He suggests further that the teacher should "provide the audience with frequent breathing spaces and opportunities for questions" (p. 53). Gesture, provided it is meaningful, can be used effectively to hold attention or to reinforce a point (Laing, 1968). A change of pace can also be provided by a well-placed pause, use of anecdotes, use of suitable illustrations or by seeking comments from the audience (Cooper, 1982).

Eye contact. It is important for the lecturer to maintain eye contact with the audience. The advice Watson, Pardo, and Tomovic (1978) give in reference to seminars is also applicable to the lecture. They note that the speaker should look directly at those in the group, forcing them to interact with him/her. "Once you look at someone and catch his eye, you force him to respond to or interact with you" (p. 95). They give the additional advice that:

In your notes you should have specific points you wish to bring to the attention of specific people in your audience. While you are addressing these people, look directly at them....Shift your eyes around the room slowly but regularly so that you are forcing each person in the group to interact with you. (p. 95)

Instructional media. "Teaching large groups of
students almost always requires the use of instructional
media. Such basic considerations as voice amplification...
and visual projection...are minimal requirements" (Gerlach
& Ely, 1980, p. 228). Instructional media can be useful
in encouraging students to participate intellectually
as well as minimizing fatigue and boredom. Whereas
the formal lecture presentation stimulates only the
auditory sense, the lecture that is accompanied by media
stimulates several senses (Roberts & Thurston, 1984).

The three broad categories of large-group instructional
media are non-projected visuals, such as chalkboards,
flipcharts, handouts, and models; projected visuals
and audiovisuals, such as filmstrips, slides, transparencies,
films, videocassettes, and videodiscs; and audio materials,
such as tapes and records.

The selection of medium should be determined first
by its appropriateness in meeting the objectives of
the lesson. The level of sophistication, cost, availability,
and technical quality of materials are additional criteria
to be considered (Gerlach & Ely, 1980). Chalmers (1976)
suggests that the teacher must know not only what is
available, but also what medium is best suited to the
instructional purpose; that she must be familiar with
the methodology involved in using media and with equipment

operation; and that she should be able to produce basic instructional materials.

Although there is a wide range of media that can be effectively integrated into instruction, Gerlach and Ely (1980) warn teachers that the availability of materials should never be the sole cause for their use.

Enthusiasm. The teacher frequently has little choice as to the subject or topic of lectures. However, it is important to display interest in the topic so as to promote enthusiasm for the subject in students. Brown (1978) observes that:

> The face, the voice, the hands, movement and
> stillness, and silence, these are what we
> use to convey interest and enthusiasm. It
> follows from this that the face must be seen,
> the voice must be heard, the hands must be
> used, and stillness and silence observed.
> (p. 23)

Hayter (1979) advises the teacher to "show honest enthusiasm" (p. 277). She points out that "a crucial aspect of the teacher's effectiveness is her ability to inspire students, arouse their curiosity and interest in the subject, and help them experience the joy of learning" (p. 277).

Voice. Students frequently comment on the inaudibility and monotony of the voices of many teachers (Laing, 1968). Heidgerken (1965) notes that "the teacher should

speak to her students, not at them, nor above or below them. Clear tone, distinct enunciation, good diction help all students to hear and understand" (p. 424). She points out that it is not the rate of speech that is critical but the rate of ideas.

Eble (1976) makes a valid point when saying:

> Speech is a basic tool, the chief means by which teachers attempt to reach students, and command of voice is as serviceable a part of professional competence as command of subject matter....Teachers should obviously have voice qualities and diction that are reasonably effective--even pleasing--to others. Persons proposing to earn a living by using their voices have obligations to develop force and control and to overcome stridencies, nasalities, and the like. (p. 44)

Non-verbal communication. Hayter (1979) notes that teachers should be conscious of non-verbal behavior. They should "become aware of and eliminate mannerisms, gestures, or peculiarities of speech which are distracting to students" (p. 276). Behaviors such as pacing the floor, twisting the chalk, or removing glasses can destroy a teacher's effectiveness. Hayter suggests videotaping a class and watching it later in order to become aware of distracting behaviors. However, teachers should not eliminate all unique behaviors as they may "interfere with spontaneity, individuality, and sincerity which

are so essential for effective interpersonal relationships"
(p. 276).

Note-taking. The findings in regard to the effects
of note-taking are not consistent. Some investigators
have found that it is beneficial for students to take
notes during a lecture (DiVesta & Gray, 1972; Davies,
1981) while others advocate the use of handouts containing
either partial or full notes (Bligh, 1972; Collingwood
& Hughes, 1978). Carter and Von Matre, (1975) carried
out a study aimed at clarifying the theory relating
to the effects of note-taking and review. They concluded
that it is not note-taking but note-having and reviewing
which is beneficial, and note-taking alone is of questionable
value.

Hartley and Marshall (1974), found that not only
are notes useful for the purpose of review, but also
that good notes are more beneficial than poor notes.
They therefore suggest that students entering higher
education be given guidance in note-taking, that lecturing
be improved so as to make the task of note-taking easier,
and that the importance of handouts should be stressed
to provide students with such things as new terminology,
references, and lecture outlines with spaces left for
students to add notes.

Davies (1981) found that taking notes aids learning but that such note-taking should be controlled. "Instead of taking notes continuously throughout the lesson, it is better if there are breaks for note-taking" (p. 215). He is in agreement with the points made by Hartley and Marshall (1974) regarding the use of notes and guidance to be given in note-taking. Davies provides guidelines for both the instructor and students to follow while note-taking and using notes. He suggests that notes should be in note form rather than in sentences, that space should be allowed for additional notes, that underlining or highlighting is helpful, and that notes should be kept in a notebook or binder.

Mills (1977) states that "uncontrolled note-taking is a laborious, time-consuming activity and that it is frequently a waste of time. He suggests that teachers give students guidelines in the form of main heading and sub-headings as the lecture progresses and that "notes should be dictated verbatim only [italics in original] to confirm important features such as summaries or definitions" (p. 212).

The teacher should be considerate of students who take notes during the lecture. She should present points or concepts at a slow enough pace to allow them to take notes and should outline headings and sub-headings on

the chalkboard, on transparencies used with the overhead
projector, or in handouts, and allow students a reasonable
amount of time to write down pertinent points.

Pre-reading. Although lectures are not usually
effective in promoting thinking, Bligh (1972) suggests
that in order to promote student thought in large classes
it may be valuable to assign reading on a topic in advance
of the lecture. However, the readings assigned must
be easily comprehended by students, they must not require
an introductory lecture, they should be short enough
so the students will read them, and the references must
be readily available to students. He suggests summarizing
the reading at the beginning of the lecture without
indicating that the summary is complete. Class time
can then be effectively used to develop the lecture
topic.

Updating lectures. Lectures should be updated
regularly in order that new research can be included,
obsolete material eliminated, and so that material that
appears in print can be dropped. "The lecture is the
newspaper or journal of teaching; it, more than any
other/teaching, must be up-to-date" (McKeachie, 1978,
p. 32).

## Summary

A review of the literature has shown that the bulk of lectures appear to be designed with the purpose of communicating knowledge. Although they are economical of staff time, information can frequently be transmitted more effectively through other strategies with the lecture used to introduce a topic, to motivate, to provide a framework for study, or to summarize information. In order to deliver effective lectures, teachers must become adept at lecture preparation and delivery. Students should be aided in taking good notes through the provision of headings and sub-headings.

## Lecture Chart

Figure 2 contains a chart summarizing uses of the lecture as an instructional strategy and the steps in the procedure.

## Lecture Guidelines

The following points, which represent a summary of views expressed in the review of the literature on effective lecture tactics should provide some practical suggestions to be considered when nursing instructors are preparing and presenting lectures.
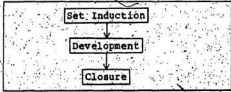
| Introduction | The lecture can be effective for large group instruction. It is an expositive strategy with responsibility for imparting information resting with the teacher. There is no effective feedback from the students to the teacher. | |
|---|---|---|
| Use | Recommended | Not recommended |
| | When information is not available in another form; to introduce a topic or concept; to summarize learning; to explain a process; when one-way communication is indicated; to provide a conceptual framework for new ideas. | When material is complex or abstract; learning involves attitudes; integration with previous learning required; when two-way communication is indicated. |
| Steps |  | |
| Set Induction | This is the introduction to the lecture. Its purposes are to: (a) focus student attention and interest on the lesson; (b) clarify the goals of instruction; (c) create a framework for organizing information; (d) help students form a cognitive bridge between one topic and another. | |
| Development | Data is presented and explained. Handouts should be used if there are many facts. Provide students with examples and applications of material presented. | |
| Closure | This refers to actions/statements designed to bring a lecture to an appropriate conclusion and to help organize student learning. Activities include: (a) summary/review of information presented; (b) probing questions to aid transfer of learning; (c) extending what has been learned to new situations; (d) applying what has been learned to similar examples. | |

Figure 2. The lecture: Purpose and procedure

1. Preparation:

   a. Keep the course objectives in mind when planning lesson objectives.

   b. Have a thorough knowledge of the subject matter.

   c. It is frequently helpful to prepare for a lecture immediately after a class.

   d. It may be helpful to discuss material with colleagues.

2. Outline:

   a. Prepare an outline of the lecture; do not write out the text.

   b. Notes or an outline tend to keep the lecturer from digressing.

   c. Indicate the approximate amount of time to be spent on each section of the lecture.

   d. Provide students with an outline of the lecture.

3. Content:

   a. Limit the amount of content covered in a lecture.

   b. Refer students to references for additional information.

   c. Avoid covering the content of the textbook.

   d. Use lecture time to clarify and reinforce the

topic under study and to provide information
the students may have difficulty obtaining.

4. Set induction:

a. The lecture should have an effective introduction.

b. The purposes of set induction are to attract
   the attention of the audience, to state the
   objectives of the lesson, to establish links
   with past lectures, and to give an overview
   of the lecture.

c. Set induction can be created by posing a problem,
   through role-playing, use of analogy or anecdotes,
   or presentation of a film or videotape.

d. Make the organization of the lecture clear
   at this time.

5. Development of the lecture:

a. Present data.

b. Provide students with handouts if there are
   many facts to be given.

c. Provide students with examples and applications
   of data presented.

6. Closure:

a. Review and summarize content presented in the
   body of the lesson.

    b. Apply learning to new examples but do not introduce new information.

    c. Extend learning to new situations.

    d. The topic of the next lecture may be given to allow students to do preparatory reading.

7. **Stimulus variation:**

    a. Divide the lecture into sections.

    b. Provide for stimulus variation through pausing, providing the opportunity for students to ask questions, use of gesture, and use of visual media.

8. **Eye contact:**

    a. Maintain eye contact with the students in order to force them to interact and so maintain their attention.

9. **Instructional media.**

    a. The use of media stimulates several senses.

    b. Consider the most appropriate medium to use.

    c. Be familiar with equipment operation and production of basic instructional materials.

    d. In large-group instruction voice amplification and visual projection are frequently necessary.

10. <u>Enthusiasm</u>:

    a. Display an interest in the topic so as to motivate students.

    b. Show enthusiasm through facial expression, voice tone and pitch, and gestures.

11. <u>Voice</u>:

    a. Check the acoustics in the classroom.

    b. Enunciate clearly.

    c. Avoid speaking in a monotone; vary voice tone and pitch.

12. <u>Non-verbal communication</u>:

    a. Be conscious of non-verbal behaviour.

    b. Eliminate distracting mannerisms and peculiarities of speech.

13. <u>Note-taking</u>:

    a. Aid students in obtaining good notes for review.

    b. Provide handouts with new terminology and references.

    c. Outline headings and sub-headings on the chalkboard, on overhead transparencies, or in handouts.

    d. Pace lecture delivery to allow for note-taking. It is the rate of ideas that is important.

14. Pre-reading:

    a. Assign reading on a topic in advance of class
       to promote thinking during the lecture and
       to allow the teacher to develop the topic in
       class.

    b. Reading assignments should be easily comprehended
       by students and not require an introductory
       lecture.

    c. References must be readily available.

    d. Avoid lengthy reading assignments that students
       will fail to complete.

    e. Summarize the reading at the beginning of class.

15. Updating lectures:

    a. Update lectures regularly to include new research
       and eliminate obsolete material.

    b. Eliminate material that has become available
       in print.

The Discussion: Experiential Teaching

Introduction

The Hale Committee Report notes that:

In a lecture the student spends the period,
apart from any time allowed for questions,
in listening to, and taking notes of, a continuous
exposition. There may be a few questions,

but there is no discussion. It is of the essence of a discussion period that the student is expected to participate in discussion, and there is this justification for treating the discussion period as a single category. (University Grants Committee, 1964, p. 60)

"Class discussion is designed to develop group agreement through talk and reflective thinking [italics in original]. Its purposes are to stimulate analysis, encourage interpretations, and develop or change attitudes" (Hoover, 1980, p. 121). Hoover stated further that, although it is a poor means of disseminating information, discussion is effective when there is controversy, when facts need to be sorted and sifted or problems resolved, or for achieving higher cognitive and affective objectives.

Group discussion provides an opportunity for students to practice application and critical thinking and for them to receive feedback on the results. "A group discussion permits presentation of a variety of problems and enables a number of people to gain experience in integrating facts, formulating hypotheses, amassing relevant evidence, and evaluating conclusions" (McKeachie, 1978, p. 50).

The discussion method is a student-oriented, participative method which is especially suitable for explaining issues and making decisions (Davies, 1981). It is, however, not well-suited to large-group instruction as groups should normally range from the optimum size

of five to seven to a maximum of twenty individuals
(Hoover, 1982). Discussion also requires a face-to-
face seating arrangement to be effective. Classroom
size and configuration can thus be a serious limiting
factor. Large lecture classes should be divided into
smaller discussion groups for effective interaction
(Hoover, 1980).

### Rationale for the Use of Discussion

> Only if one holds to the extreme view that
> the teacher's role is one of unquestionable
> authority and expertise can one rule out discus-
> sion. But even then, the need to clarify
> concepts with the students and to ascertain
> whether signals sent are in fact being received
> moves one away from being strictly a transmitter
> of information. (Eble, 1976, p. 56).

Sorcinelli and Logothetics (1982) note three situations
when discussion is a particularly appropriate strategy:
when the teacher wants to use the resources of the group;
in order to motivate students for future learning; and
to teach students how to integrate and apply knowledge
for problem-solving.

Following a review of studies of methods designed
to compare the effectiveness of various teaching strategies
in promoting thinking, Bligh (1972) concluded that he
had "not found a single study to suggest that lectures
stimulate thought better than discussion methods" (p. 32).

Conversely, the studies suggested that "during discussion students are more attentive, active and thoughtful than during lectures" (p. 33). Bligh noted that in order to learn to think students must be placed in situations where they have to think and in order to solve problems they have to be faced with problem-solving situations.

In summarizing the results of studies comparing lecture and discussion, McKeachie (1978), points out that the discussion method appears to be superior to the lecture for the attainment of higher level cognitive objectives, for attitude change, and for motivation of students. In regard to the use of discussion to provide feedback to students, McKeachie notes that group discussion provides an opportunity for students to practice applying what they have learned, to practice critical thinking, and to receive feedback on the results.

There can be diversity in the size of discussion groups, in the purpose of the discussion, and in the frequency of their use. Three different formats for small-group discussion which may effectively be used in nursing instruction are the case study, brainstorming, and buzz groups.

Case study. "In the case study...the material is posed in the form of a real or simulated problem (Davies, 1981, p. 44). This problem may be in written

form, or it may be presented on videotape or film.
Case studies are usually used to aid students in identifying
underlying principles or in solving problems when there
is more than one right answer (Davies, 1981). It is
thought to be a valuable form of discussion for nursing
students as it gives them practice in the type of decision-
making they will have to do as nurses. The case study
is "intended to develop student ability to solve problems
using knowledge, concepts, and skills that may have
been learned in previous courses, or which the students
are expected to be motivated the by case to learn from
readings, lectures, or other resources" (McKeachie,
1978, p. 149).

Brainstorming. "Brainstorming is an especially
valuable technique for generating ideas on a specific
problem. Indeed the term literally means 'storming
the brain for ideas'. The technique is most effective
in groups of twelve people" (Hoover, 1980, p. 89).
There must be a large enough number to generate ideas
but the number must be small enough to allow all to
participate.

Romiszowski (1981), notes that the technique was
developed to promote creative problem-solving. Brainstorming
permits uninhibited participation of all group members,
since there is no immediate evaluation or criticism

of ideas presented. The technique is especially useful
in the sections of the nursing education program dealing
with human relations problems.

Buzz groups. These are short-lived groups, lasting
only a few minutes, that usually focus on one aspect
of a problem. "Their most important function is to
provide expanded opportunities for participation in
problem-solving discussions" (Hoover, 1980, p. 72).
The Philips 6-6 technique (Romiszowski, 1984, p. 160)
is an example of this technique in which "a group of
six people discuss a given topic for six minutes" (p. 160).
The topic and rules of discussion must be clearly defined
and groups should be provided with a discussion guide.
New points raised by each group are reported to the
large group by the group spokesperson. The technique
is valuable for nursing education, since it involves
all students in problem-solving and is easily carried
out in the regular classroom setting with students merely
turning in their seats to meet with those seated behind
and adjacent to them.

Effective Discussion Tactics

Class discussion is designed "to stimulate analysis,
encourage interpretations, and develop or change attitudes"
(Hoover, 1980, p. 121). It involves exploring issues

and analyzing and evaluating evidence so that generalizations can be made.

A review of the literature pertaining to effective tactics to be used during discussion periods has yielded suggestions which may be worthwhile for teachers of nursing to consider when planning instruction to incorporate the use of discussion.

Atmosphere. Hoover (1980), notes that the teacher or discussion leader should aim to create an atmosphere that is relaxed yet planned and organized. She should encourage open reflection and discussion by avoiding offering her personal points of view, which may be biased.

Seating. The seating arrangement can play an important part in a discussion period as it affects the communication patterns of the group. "When the teacher faces all participants...a centralized communication pattern in which the teacher dominates the flow of the discussion is likely to occur" (Knopke & Diekelmann, 1978, p. 112). Group members should be able to see and hear each other easily, chairs should be arranged in a circle or horseshoe, if possible, and if students are seated around a table, a round table is preferable to a rectangular one (Davies, 1981; Renner, 1983). Buzz groups, which do not require the rearrangement of desks, can be used effectively within the lecture setting.

Planning. It is important for the teacher to plan time for discussion so that it will not get under way just as the class ends. She should prepare an outline in advance of the discussion to contain questions dealing with the basic issues (Hoover, 1980). Knopke and Deikelmann (1978), note that "the discussion frequently suffers from teacher misuse, primarily inadequate teacher preparation" (p. 20). This includes informing students in advance of a discussion of the issues to be considered as well as resources they will be expected to use. Discussion is a time-consuming process and Davies (1981) notes that the purpose of the discussion must be clear as well as worthy of the time and effort that will be expended. It is important that in the process of planning for discussion, arrangements for the discussion, including identification of group members, selection of topic, organization of seating, and setting of a time limit, should be made in advance (Davies, 1981).

Preparation. All participants have the responsibility of being well informed in order to be able to make a worthwhile contribution and to avoid breakdown in the discussion due to misinformation or lack of information. Prejudice and ignorance detract from discussions (Davies, 1981). Eble (1976) confirms this, observing, that "students resent discussions that are really lectures, but they

also resent discussion classes in which they are expected
to profit solely from the half-baked ideas of other
students, with no correctives from facts, experiences,
and hard exacting thought" (p. 61).

The Hale Committee Report on undergraduate teaching
methods in Great Britain suggests that:

> The introduction of more teaching by discussion
> is beneficial only when it can be matched
> by a corresponding increase in the amount
> of private study done by the student, so that
> he comes to the meeting after having done
> some work for it. (University Grants Committee,
> 1964, p. 76)

Prior knowledge may be obtained through library research,
from information provided in textbooks, through observation,
or through personal experience (Boover, 1980).

Beginning the discussion. Just as with a lecture,
there should be a definite beginning, middle, and end
to a discussion period. McKeachie suggests that effective
discussions may be started by providing an experience
through a lecture, film demonstration, videotape, or
role-playing; with a meaningful question designed to
stimulate application or analysis of facts; or through
the introduction of controversy. Discussion leaders
require skill in initiating and developing discussion,
appraising progress, and encouraging participation
(McKeachie, 1978), and students require guidance in

the formulation of appropriate problems for discussion.
Prior to the actual discussion the teacher should clarify
the kind of discussion to be carried out and its objectives
(Eble, 1976).

Developing discussion. Once the discussion has
been initiated, the teacher or group leader must provide
guidance but she should not provide answers or solutions
to problems (Hoover, 1980). McKeachie (1978) notes:

> Probably one of the most common barriers to
> good discussion is the instructor's tendency
> to tell the students the answer or to put
> the solution in abstract or general terms
> before the students have developed an answer
> or meaning for themselves. Of course, teachers
> can sometimes save time by tying things together
> or stating a generalization that is emerging.
> But all too often they do this before the
> class is ready for it. (p. 45)

Questions. Questions used by both the discussion
leader and participants must be clearly and impartially
stated (Hoover, 1980). They should be real questions,
questions of interest to students, and not "canned questions"
such as those found in teacher's manuals:

> Real questions, however trivial, have the
> effect of grounding the dialogue or discussion
> in a reality that will gain attention and
> interest, even respect. From there, one has
> a chance to move on to big questions and perhaps
> make big questions seem real. (Eble, 1976,
> p. 68)

Of the three types of questions that characterize discussions, Davies (1981) states that evaluative questions (involving an opinion), and interpretive questions (involving an explanation) will stimulate discussion to a greater extent than factual questions. The latter may be used to begin a discussion, followed by interpretive questions, and evaluative questions. The use of open-ended interpretive or evaluative questions requires a higher level of thinking than the use of closed, factual questions.

Encourage participation. Renner (1983) advises teachers to observe the group process—who speaks to whom, the types of behaviour that occur, dominant participants—so as to assist the group in improving its discussion skills. Discussion implies the participation of group members and all members should be encouraged to participate. However, individual contributions should be brief due to the limited time allowed for most discussions (Hoover, 1980). McKeachie (1978) suggests that the teacher can encourage participation by creating the expectation that students are to participate in discussions, by explaining the value of discussions, by arranging seating in a circle if possible, by calling students by name, by capitalizing on students' interests and areas of knowledge, by acknowledging participation, and by asking general questions that have no wrong answers.

_Dealing with conflict._ When conflicts arise, as frequently happens during discussion periods, McKeachie (1978) suggests that the teacher should use the conflict so that it may contribute to learning through reference to the text or another authority as a resource, or asking those with conflicting points of view to change sides and present arguments for the opposing point of view, "Such a technique seems to be effective in developing awareness of the strengths of other positions" (p. 41).

In dealing with controversial issues, the teacher should adopt a neutral position and let the group deal with the issue, with the teacher acting as a chairperson only (Davies, 1981).

_Ending the discussion._ Once relevant data have been gathered and the possible solutions to a problem have been discussed, criteria should be established as to an acceptable solution, and the alternatives should be evaluated (McKeachie, 1978). If discussion is conducted in a small-group format, it will be necessary for a spokesperson for each group to report briefly on the points raised by that group so that the large group can derive generalizations as a result of the discussion, and summarize and analyse the conclusions reached.

## Summary

A review of the literature has shown that the discussion
is useful to stimulate thinking, to give students practice
in applying knowledge to problem-solving, to motivate
students for further study or to do research, and to
promote attitude change. Thus the objectives of instruction
must be the starting point for determining the instructional
strategy. Seating arrangements and optimum group size
make the use of small-group discussion difficult within
the usual setting in nursing education with the exception
of buzz groups. These can be effectively used.

## Discussion Chart

Figure 3 contains information pertaining to the
selection of discussion as an instructional strategy
as well as the steps to be followed in carrying out
discussions.

## Discussion Guidelines

1. Atmosphere:

   a. Create a relaxed but organized atmosphere to
      encourage discussion.

   b. Avoid offering a personal point of view which
      may be biased.

| Introduction | The discussion is an effective strategy to use when controversy exists, when problems need to be resolved, and when high level cognitive and/or affective objectives are to be achieved. It is an experiential method which provides feedback. Three formats for small-group discussion are case study, brainstorming, and buzz groups. | |
|---|---|---|
| Use | **Recommended** | **Not recommended** |
| | To bring about changes in attitudes; for problem-solving; to explore issues and make decisions; when communal effort is likely to be more productive than individual efforts. | When time is at a premium as it is a time-consuming process; when the objective is the imparting of factual knowledge. |

| Steps | |
|---|---|
| | Define problem |
| | ↓ |
| | Explain Purpose and Rules |
| | ↓ |
| | Discussion |
| | ↓ |
| | Derive Generalizations |

| Define Problem | What is the problem or objective of the discussion? |
|---|---|
| Explain Purpose and Rules | What are the rules of the specific group format? Tasks, goals and assignments of members must be clearly defined; set a realistic time schedule. |
| Discussion | Get relevant data; establish criteria for an acceptable solution; examine possible solutions. |
| Derive Generalizations | Feedback to the large group if necessary; evaluate alternative solutions; restate major ideas or concepts produced as a result of the discussion. |

**Figure 3.** The discussion: Purpose and procedure.

2. Seating:

   a. Arrange seating so that group members can see and hear each other.

   b. Seating arranged in a circle or horseshoe promotes student-student discussion.

   c. With the regular classroom seating arrangement the teacher tends to dominate the discussion.

3. Planning:

   a. Plan adequate time for discussion.

   b. Prepare an outline containing suggested questions to stimulate discussion.

   c. Inform students of discussion topics in advance so they may come prepared.

   d. Plan organization of seating and identify group members.

   e. Discussion is a time-consuming activity. Be sure the topic is worthy of the time and effort.

4. Preparation:

   a. Students must be prepared for discussions in order for them to be worthwhile.

   b. Students can obtain the necessary background information through pre-reading, observation, or personal experience.

5. Beginning the discussion:

   a. Teachers can stimulate discussion with an intro-
      ductory lecture, film, videotape, demonstration
      or role-playing, by introducing controversy
      or through appropriate questions.

   b. The type of discussion and objectives of the
      discussion must be clarified.

6. Developing discussion:

   a. Provide guidance and focus but not solutions
      to problems or answers to questions.

   b. Appraise progress and encourage participation.

7. Questions:

   a. State questions clearly and impartially.

   b. Use questions of interest to students.

   c. Factual questions may be used to begin a discussion.

   d. Interpretative and evaluative questions are
      better to stimulate discussion.

   e. Open-ended questions require a higher level
      of thinking than closed, factual questions.

8. Encourage participation:

   a. Observe the group process and organize groups
      so as to encourage all to participate.

   b. Limit the length of individual contributions.

    c. Inform students of the value of discussions and that they are expected to participate.

    d. Arrange seating so that students can see and hear each other.

    e. Learn and use students' names.

    f. Capitalize on student's interests and areas of knowledge.

    g. Ask questions that have no wrong answer.

9. **Dealing with conflict:**

    a. Adopt a neutral position.

    b. Use conflict to advantage.

    c. Refer students to resources for clarification of facts.

    d. Ask students to change sides and argue for and become aware of the strength of the opposing point of view.

10. **Ending the discussion:**

    a. The spokesperson for each small group should report briefly on new points raised by the group.

    b. Evaluate alternative solutions presented according to criteria established.

    c. Summarize and analyze conclusions reached.

    d. Derive generalizations.

## Lecture-Discussion: An Effective Combination

### Introduction

The first section of this chapter presented an analysis of the use of the lecture and effective lecture tactics. The second section investigated discussion as an instructional strategy. The review of the literature has indicated that both methods are valuable; used together they can make a significant difference:

> In a course in which the instructors wish not only to give information but also to develop concepts, the use of both lectures and discussions would thus seem to be a logical and popular choice. The lecture can effectively present new research findings; the discussion can give students opportunities to analyze the studies, find relationships, and develop generalizations. (McKeachie, 1963, p. 1127)

During the lecture-discussion the instructor presents new material in lecture form and then encourages discussion about the material. Broadwell (1980) observes that it is usually an effective strategy because it involves students in thinking and responding, provides feedback to the instructor on student thinking, and provides feedback to the students to enable them to evaluate their learning.

Gerlach and Ely (1980) refer to the lecture-discussion strategy as "directed discussion" when they note:

> Exposition and inquiry are very seldom used
> exclusively by any teacher....There are points
> between exposition and inquiry which will
> probably be the locus of most teacher and
> student activity. The _directed discussion_
> [italics in original] is not just a compromise,
> but a valid device for alternating methods
> during formal classes or during an entire
> unit of study. (p. 186)

## Rationale for the Use of Lecture-Discussion

Costin (1972), after conducting an extensive review

of research concerning lecture versus discussion methods,

supported the practice of including both lecture and

discussion methods in teaching a course. The balance

might be determined by the relative emphasis placed

by the course objectives on acquiring knowledge as compared

with acquiring cognitive skills, students' opinions

regarding both methods, the skills of the instructor,

and the economics of the situation.

Costin notes that "the evidence is scanty and con-

flicting as to whether or not lectures supplemented

with separate small discussion classes are any more

productive for teaching facts and principles than is

a combination of lecturing and discussion during the

same class section" (p. 12) but that "given the choice

between lectures with small discussion sections, and

larger lecture classes with some opportunity for discussion

during the session, there is a slight tendency for students to prefer the latter arrangement" (p. 12).

The lecture-discussion is perhaps the most common instructional strategy used in classroom teaching at the postsecondary level (de Tornyay, 1971). "Here the presentation is supplemented by audiovisual aids and students are encouraged to interrupt for questions, comments, and clarification" (p. 66, 67). The lecture-discussion combination is beneficial as the lecture can be used to present material not readily available, clarify and emphasize points, present first-hand experiences of the lecturer, and present an overview of a topic while the discussion can provide students with the opportunity to analyze studies, find relationships, and develop generalizations.

Although it is generally difficult to generate discussion with very large groups, there are specific group structures which provide opportunities for two-way as well as one-way communication. Examples of large-group instructional situations which involve a combination of lecture and discussion or expository and experiential strategies and which might be practical for nursing education are the postlecture forum, the panel forum, and the symposium (Romiszowski, 1981).

Postlecture forum. The postlecture forum is an open discussion designed to help students clarify key concepts presented during a lecture, derive implications, and make connections and associations. Limited group interaction takes place, with exchanges being between the lecturer and the students (Hoover, 1980; Romiszowski, 1981).

Panel forum. The panel forum follows a discussion by a panel of speakers in front of a large group. The forum itself involves audience participation through comments or questions. This forum thus involves participation of the audience with several panel members. Questions and answers are brief (Hoover, 1980; Romiszowski, 1981). The panel can be made up of guests or of students who have been assigned a topic to research. Statements involving facts and opinions are presented to the class. Panel members then interact with each other before other class members ask questions or add comments.

Symposium. The symposium is a modified lecture. It consists of a series of presentations in which speakers address the group in a predetermined order. There is no interaction between speakers and the group. The symposium is followed by a forum in which the speakers participate in an open discussion. Total group interaction

is encouraged at this time with the aim of integrating
the various points of view expressed (Romiszowski, 1981).

## Effective Lecture-Discussion Tactics

In noting that lecturing is likely to continue
in postsecondary education, Eble (1976) says that "for-
tunately, lecturing does shift to many forms of interacting
discourse" (p. 42) in which the lecture is only one
part of the teaching technique in combination with demon-
strations, discussion, and problem-solving. Hayter
(1979) and Campsey (1984) both emphasize that students
should be actively involved in their own learning and
their participation can be encouraged through the use
of questioning to encourage discussion. Questions can
be posed by either the teacher or students.

Knopke and Diekelmann (1978) suggest using discussions
with students, question-and-answer sessions, or a problem-
solving exercise to provide a break between lecture
sections and allow students to participate in the lecture.
They suggest a procedure which may be followed to effectively
integrate lecture and discussion strategies and so involve
students:

> This participation can be encouraged by dis-
> tributing an outline of the lecture at the
> beginning; opening the lecture with a statement
> of its key points; including opportunities
> for clarification at designated intervals;

presenting problems that require independent,
postlecture effort for solution; asking test-
type questions periodically to reinforce material
and stimulate discussion; and relating theory
to practical applications where appropriate.
(p. 189)

Broadwell (1980) reminds the teacher to allot time
for student participation in discussion when preparing
the outline for a presentation. He also notes that
"effective teachers often anticipate the classes' questions
or comments ahead of time, and prepare for them with
back-up data or references" (p. 19). When discussion
questions are prepared in advance of the lecture the
teacher is able to control the discussion.

Summary

A review of the literature has shown that lectures
are more effective if used in conjunction with class
discussion rather than on their own. Through an introductory
lecture information can be presented and points clarified,
with discussion used to provide feedback and aid in
formulating generalizations. A combination of the tactics
suggested for lectures and discussions can be effectively
employed in the lecture discussion.

Lecture-Discussion Chart

Figure 4 presents a summary of information pertaining
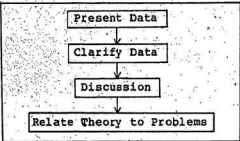to the lecture-discussion as an instructional strategy.

| Introduction | Lecture and discussion used together provide an effective instructional strategy. The postlecture forum, panel forum, and symposium are three large-group instructional situations which combine the two strategies. |
|---|---|
| Use | The lecture can be used to present material, to emphasize and clarify points, to present experiences of the instructor, and to give an overview of the topic. Discussion provides an opportunity for analysis of studies and development of generalizations. |
| Steps | |

Present Data
↓
Clarify Data
↓
Discussion
↓
Relate Theory to Problems

| Present Data | Present new material in lecture form |
|---|---|
| Clarify Data | Emphasize important points; provide examples and explanations; |
| Discussion | Discuss questions and problems raised by teacher and/or students |
| Relate Theory to Problems | Integrate points of view expressed; analyze and summarize solutions; form generalizations |

Figure 4. The lecture-discussion: Purpose and procedure.

The Demonstration: Expository and Experiential Teaching

## Introduction

According to Mills (1977) demonstration "is the link between explanation and practice, and makes use of man's natural inclination to imitate. The interest of even large classes can be roused and held by a good demonstration" (p. 171). The demonstration emphasizes explaining and showing. It is used to show how something works or how a procedure is carried out.

## Rationale for the Use of Demonstrations

Gerlach and Ely (1980) note that "demonstrations are useful because they provide concrete referents for objects or events. Students relate terms and concepts to those events which they have observed" (p. 192). Hoover (1980) adds that "demonstrations are usually most appropriate when independent dimensions and spatial relationships are involved" (p. 185) as viewing and possibly handling the real object is superior to a description of the object. Demonstrations can also enable the teacher to perform, within the classroom setting, activities that might be difficult, dangerous, or costly for students to perform.

The most common way of presenting information about a piece of equipment, of presenting an experiment, or

of showing a procedure is to bring the equipment or experiment to the classroom and to give a demonstration. Providing the students are able to see the demonstration well enough this is more effective than a series of visuals or a film. If the real object is large, a model can often be brought to class for the demonstration.

Broadwell (1980) lists several advantages of the demonstration as an instructional strategy:

> It represents a change of pace and almost always increases student interest. The actual equipment is better than any description of it and usually better than pictures of it. It helps 'program' the instructor's lecture, too, making it easy for the words and description to flow, since the equipment usually needs to operate in a sequence of some kind. The words have much more meaning, being reinforced with an actual happening or action by the equipment. (p. 18)

Where the lecture primarily involves listening, the demonstration combines both listening and seeing, and it is generally agreed that more learning takes place by seeing than by hearing alone (Guinee, 1978). The demonstration allows the student to speculate on what will happen, how it will happen, and why it will happen (Guinee, 1978). Its major purpose is to show how something may be done by applying principles or rules to the operation; it relates principles to real world situations.

Romiszowski (1981) notes that "the power of example
is often underrated in education and training. Teachers
spend too much time 'telling' and not enough time 'showing'"
(p. 316). He also points out that "many simple psychomotor
skills can be effectively learned simply by observation
of a demonstration by a master performer, with little
or no need for explanations" (p. 316).

## Effective Demonstration Tactics

Davies (1981) explains that the instructor has
to impart both knowledge and skill during a demonstration.
Since it is primarily an expository technique, the tactics
suggested for lectures are also applicable for demon-
strations. There are, however, additional factors to
be considered if demonstrations are to be effective.

Preparation. Mills (1977) emphasizes that a good
demonstration requires time and trouble for adequate
preparation. Davies (1981) is in agreement noting that
"the demonstration method demands very careful preparation
and organization. If things go wrong the effect is
lost" (p. 41). Poor planning and lack of preparation
can result in having faulty equipment or inadequate
safety precautions, performing a procedure with steps
in the wrong sequence, or failure to allow sufficient

time for the demonstration and for students to practice
a procedure, if necessary.

Visibility. Care should be taken to ensure that
all students are able to see and hear what the instructor
is doing and saying. Davies (1981) notes that this
may necessitate using small groups of students for demon-
strations unless closed circuit television is available.
For demonstrations teachers should select objects that
are large enough to be easily seen or use an opaque
projector or an overhead projector to make small objects
visible.

Safety. Guinee (1978) reminds the teacher to plan
safety precautions. In nursing education it is important
to think of the safety of the patient. For this reason
models and simulations are frequently used. Films can
also be used effectively to demonstrate a process without
endangering patients. After reviewing film research
Heidgerken (1965) reported that students find films
beneficial for demonstrating motor skills. Time can
be controlled and objects can be enlarged or reduced.
Films are especially useful when demonstrating a skill
or procedure to a large group as all can see the process.

Procedure. In demonstrating a piece of equipment
the instructor usually begins by explaining the purpose
of the equipment and what students should look for,

and then demonstrates the procedure (Davies, 1981).
The sequence of steps in the procedure should be emphasized
during the demonstration and their connection with each
other pointed out. Davies (1981) notes that some instructors
demonstrate a skill or procedure slowly first, then
at normal speed, and then go over the steps verbally.
Others demonstrate a skill first at normal speed, and
then slowly, emphasizing each step. This may be followed
by a third demonstration at normal speed. Mills (1977)
notes that there is a danger of going too fast and also
of continuing with the demonstration for too long.
He points out that a skill should be demonstrated slowly
and in easily assimilated steps. Students should be
given an opportunity to practice a skill and to receive
feedback on their performance.

Role-playing. In nursing education, the majority
of demonstrations are given to show equipment or procedures.
They can also be used to demonstrate human relations.
Role-playing is such a form of demonstration. Students
act out roles they will take in nursing to develop inter-
active skills and to learn how patients may react in
specific situations.

Experiential tactics. Although demonstrations
usually tend to be expository since, like the lecture,
they are dominated by the instructor, inquiry can be

built into a demonstration by having students choose among alternative steps to follow:
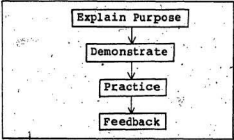
> The teacher permits a student to make a decision and to act upon that decision. If the action is correct, the demonstration is completed. If not, the resultant action is analyzed and reasons for lack of success are elicited from the class. (Gerlach and Ely, 1980, p. 192)

## Summary

Demonstration is an effective instructional strategy involving both visual and auditory senses. Providing a change of pace, demonstrations promote student interest. The use of concrete objects helps students relate concepts and theory to the procedures observed. Students participate more actively in their learning during a demonstration than during a lecture as they speculate on events to take place and the reasons for them. Teachers must prepare adequately for demonstrations and follow procedures carefully. Student practice following a demonstration is beneficial.

## Demonstration Chart

Figure 5 contains a chart summarizing the uses of and steps involved in carrying out a demonstration.

| Introduction | The demonstration is primarily an expository strategy involving the visual and auditory senses. |
|---|---|
| Use | The demonstration is used to show how equipment works or how a skill or procedure is carried out. It may also be used to demonstrate human relations situations (role-playing). |
| Steps |  |
| Explain Purpose | What is the purpose of the equipment or procedure? |
| Demonstrate | Demonstrate the equipment, skill, or procedure. Emphasize the sequence of steps and their connection with each other. Be sure all students can see and hear the demonstration. |
| Practice | Provide students with an opportunity to practice a skill or procedure. |
| Feedback | Evaluate student performance and provide feedback to students. |

**Figure 5.** The demonstration: Purpose and procedure.

Demonstration Guidelines

1. **Preparation:**

   a. Check equipment needed for the demonstration.

   b. Plan adequate safety precautions.

   c. Outline procedure with steps in sequence.

   d. Plan for sufficient time for the demonstration
   and for student practice if a skill or procedure
   is involved.

2. **Visibility:**

   a. Be sure all students can see the instructor.

   b. Small groups may have to be used for the demon-
   stration unless closed circuit television is
   available.

   c. Select objects that are large enough to be
   seen when demonstrating to a large group or
   use an opaque or overhead projector to make
   small objects visible.

3. **Safety:**

   a. Plan safety precautions.

   b. Consider the safety of the patient.

   c. Use models and simulations for demonstrations
   whenever possible.

   d.  Demonstrations can be effectively and safely
       displayed through the medium of film.

4.  Procedure:

   a.  Explain the purpose of the equipment.

   b.  Tell students what they are to look for.

   c.  Emphasize the sequence of steps in a procedure.

   d.  Demonstrate a skill or procedure slowly and
       in easily assimilated steps.

   e.  Provide students with an opportunity for practice.

   f.  Give students feedback on their performance.

5.  Experiential tactics:

   a.  Permit students to make decisions during a
       procedure and to act upon them.

   b.  Selection of the correct steps will result
       in the demonstration being completed.

   c.  Elicit and analyze reasons for lack of success.

   d.  Repeat procedure until students know the correct
       procedure.


Computer-Assisted Instruction:  The Possibilities

## Introduction

     Advances in technology are forcing nursing educators
to look at education and to find those methods of instruction

that will most efficiently and effectively provide professional nurses with the knowledge base and experience they require. This section examines the eduational applications of the computer for schools of nursing. It considers the case for computer-assisted instruction (CAI) and the problems related to the development of high quality instructional materials for nursing education.

## Rationale for the Use of Computer-Assisted Instruction

It is expected that soon all hospitals will have centralized, computer-based information systems and all nurses will be expected to use a computer (Mikan, 1984; McAlister & Covvey, 1983). Hassett (1984) states that nursing educators must lead the way in familiarizing the profession with computer applications. She reports on several computer-based education strategies such as matching students with clinical settings, simulations, computer-assisted education, drug dosage programs, computerized objective test blanks and evaluation of clinical learning.

McAlister and Covvey (1983) note that nurses are starting to take action to ensure that they will understand the role of computers in health care and educators are investigating ways to incorporate basic computer literacy into nursing education. Levine and Weiner (1975) observe

that "nursing students must, early in their training, master voluminous factual material. It is just this kind of material that can be shifted to the student's initiative and the machine's capability" (p. 1300).

Two studies of nursing education in the United States showed that although students using CAI did not learn more than those taught by traditional methods, they took less time to learn the same material and were better able to transfer their knowledge to clinical practice (Bitzer & Boudreaux, 1969; Huckabay, Anderson, Holm, & Lee, 1979).

Norman (1982) suggests four advantages of CAI: (a) immediate feedback; (b) interactive learning, through responding actively to questions in written, graphic or animated form; (c) individualized instruction with the student able to repeat part or all of the program; and (d) availability, as CAI is preserved and can be updated to reflect new knowledge. Huckabay, Anderson, Holm, and Lee (1979) state that CAI has the additional advantages of reducing the risk involved to the patient and of lowering the student-teacher ratio, as one group of students can use the computer while a second group discusses content or issues with the instructor.

The laser-read videodisc is an audiovisual format with random access capability. The material on a videodisc

can be viewed as motion or a single frame at a time.
Access to the disc is controlled by a computer. The
ability to combine the video output of the microcomputer
with the videodisc signal to provide textual and graphic
overlays is an exciting development. Gaponoff, McArthur,
Bolles, Draye, Jorgensen, Konikow, & Pliske (1981) report
that the University of Washington Health Sciences Learning
Resources Center has developed several programs that
are combinations of tutorials and patient simulations
in specific medical or nursing subjects.

The strength of videodisc lies in three areas,
according to Walker (1979-80): (a) its flexibility
in manner of presentation (motion or still frame); (b)
its information storage capacity; and (c) its rapid
access to any point. When combined with the computer,
the videodisc provides resources for blending still
and motion pictures, sound, text, graphics, and colour
for instruction. The pacing, amount of interaction
and lesson control permitted the student are controlled
by the program author.

La Gow (1979-80) states that the most advantageous
feature of the videodisc is its capacity for a variety
of instructional techniques. It is one medium that
can store and present lessons in a large group, a small
group, or for independent study.

Pleasance, Townsend, and Norman (1983) report that schools of nursing in the United Kingdom are investigating the applications of the computer. They speculate that with the advent of low-cost microcomputers many nursing schools will explore this area.

## Effective Computer-Assisted Instruction Tactics

Drill and practice. Forman (1983) notes that the predominant use of CAI is still drill and practice. "Drill-and-practice programs take advantage of the computer's tireless patience and ability to provide immediate feedback and reinforcement to prescribe, provide and monitor potentially very complex drill-and-practice activities" (p. 134). These activities can also be designed to meet a student's individual needs.

Bork and Franklin (1983) observe that while there is disagreement on the importance of practice in learning, most educational procedures depend on it to some extent. They note that it is important for students to receive feedback on answers to problems, and that "a student's tolerance...for routine, repetitious practice may exceed an instructor's...available time or patience" (p. 39).

In nursing education there are many areas of the training which could benefit from the use of computers. Students have vast amounts of terminology to learn,

drugs to become familiar with, and symptoms to recognize.
This learning can certainly benefit from drill and practice
using computers until students master the material.
The computer can vary the way in which problems are
presented, omitting information or presenting conflicting,
or redundant information. Programs can be adapted to
provide students with additional information if desired.
Multiple choice tests are used in nursing education.
These are ideally suited to use with the computer, thus
students can be provided with practice in the type of
questions they will receive on examinations.

Tutorial. Tutorial programs are used to teach
the student as a teacher would in a one-on-one situation.
"The best type of tutorial...leads the active learner
through a series of carefully planned questions to some
new understanding or knowledge of the topic at hand"
(Forman, 1983, p. 134). The computer presents information
in paragraph form, asks questions about this information,
and provides additional information based on the student's
response to questions (Coburn et al, 1982). Tutorials
are especially effective in introducing or reviewing
a topic or teaching a concept. Bork and Franklin (1983)
note that the computer generated tutorial is a valuable
instructional tactic as "information, techniques, and
attitudes are developed within an environment in which

the learner is invited and encouraged to play an active role" (p. 39).

Simulation. Simulations in the form of interaction with computerized systems models are commonly used instructional methods of simulating real-world phenomena:

> Simulations, or controllable worlds are programs in which the computer can be used to simulate or generate environments for the learner so that he can change variables and explore situations in a manner that might have been too expensive, too restricted by time limitations, too dangerous or too impossible to allow the student to explore in the real world. (Forman, 1983, p. 134)

Jacknow (1979-80) states that simulation offers the student the advantage of engaging in a practice situation which may be recreated until the student reaches a satisfactory level of performance. Simulations can provide a way of maximizing the student's exposure to a variety of patient encounters. This is accomplished without risk to the simulated patient, while ensuring consistency of student experience (Schleutermann, Holzemer, & Farrand, 1983).

Realistic interactive mannikin simulators have been programmed to exhibit physiological signs in response to student-applied treatments. They have provided effective teaching aids on which to acquire skills prior to working with patients (Clark & Manning, 1981-82). Skills in

medical problem solving, including diagnosis and therapy, can be provided by simulated patient encounters through standard computer terminals. Such simulations provide safe opportunities for students to be exposed to clinical simulations.

Gaponoff et al (1981) list the following three advantages of patient simulations for medical educators: (a) they provide a standard set of patients/problems; (b) they ensure that the student has at least had some hands-on experience; and (c) they can be run whenever a computer is available. However, they note that the use of computer simulations in medical and nursing applications is not widespread due to the difficult and time-consuming process required to create effective simulations. Hardware costs have also limited the use of simulations in the past. The growth of the use of microcomputers should have a positive effect on the development of computer simulations.

A comprehensive model, 'HUMAN', has been adapted for use on the Apple II microcomputer. As described by Randall and Coleman (1981), it involves the relationships between over 200 physiological variables. There are over 600 parameters which can be individually set to simulate pathology, environmental conditions, or therapeutic interventions. The developers state that the dynamic

nature of this and similar simulations is superior to
drill and practice CAI. Perhaps there is room for both
in nursing instruction.

Taylor (1980) writes that "computer simulation
seems to provide the 'ultimate' alternative in instructional
methodologies since it most closely approaches the clinical
experience and yet provides the learner with a controlled
environment for learning" (p. 1217). She describes
a project carried out through Quebec's Ministry of Education
"to develop computer simulation units for use by nursing
students to improve the efficiency and accuracy of their
decision-making skills" (p. 1218). Through this approach
to learning students would be assisted to incorporate
skills learned early in nursing courses and combine
them with concepts acquired throughout the program as
well as recall of principles prerequisite to nursing
in the sciences and mathematics.

Through the use of simulations in nursing education
it is expected that students will become better prepared
to make decisions during their nursing programs as well
as when they assume their role as nurses.

The possibilities for the application of interactive
videodisc to nursing education are exciting. It would
be especially valuable in clinical simulations of patients
as interactive video systems are more flexible in terms

of visual imagery than most computer-assisted instructional systems. While regular computer graphics can be time consuming to develop, visuals for interactive videodiscs can be developed rapidly with cameras (Howe, 1983).

## Courseware Availability

Although there have been attempts made in recent years to integrate the use of the computer into nursing education, particularly through the use of simulation, integrated videodisc, database searching, and computerized testing, they have been carried out on a very small scale. Many schools of nursing have not begun to incorporate the use of computers into their instruction. Many of the programs which are in use are adaptations of ones produced for education in general. There is a lack of quality courseware developed specifically for nursing education.

Hawkridge (1983) gives several reasons why the quality of courseware is inadequate. Many writers of computer courseware are without training in education so they devise materials that are ineffective for teaching. The sequence of the content is frequently unrelated to what is taught and the content is often quickly outdated, (this is especially true of courseware in the health sciences), yet to update every five years or so is expen-

sive. Frequently, Hawkridge states, the content and presentation do not take sufficient advantage of the medium so teachers feel they could have used less costly means to achieve the same results. The quantity as well as the quality of courseware is inadequate.

Norman and Townsend (1983) report that nurses' experiences in the production of CAI materials in the United States have shown that to produce effective software one needs the expertise of an instructional development team. Since this makes the production of software costly, subjects chosen should have wide-ranging curricular application, should not need to be updated frequently, and should be ones that will be attractive to other nursing schools.

Over ten years ago Bancroft and Collins (1974) stated that to develop high quality instructional materials for nursing education, it is helpful to have skill in teaching, expertise in the content area, nursing practice skills, knowledge of technology related to production, and experience in curriculum and instructional design. As this combination of talents is rarely found in one individual, nursing design teams are a suggested alternative. One such team consisting of nursing faculty, instructional developers, and computer programmers was developed at the Wisconsin School of Nursing. It was

found to be an effective way to develop quality computer-assisted instruction programs.

Because there is a shortage of quality computer programs in nursing, administrators of schools of nursing must realize that the microcomputers they purchase for instructional purposes may be installed for some time before they are used effectively within the educational process (Mikan, 1984). However, unless administrators are willing to begin to explore the potential of computers to assist in the training of nurses, there will not be a demand for good courseware and thus little will be produced.

It is the responsibility of nurse educators to become computer literate and of administrators of schools of nursing to explore the potential of computers to assist in the training of nurses. "Computer technology is here to stay and nursing educators must lead the way in familiarizing the profession with its applications" (Hassett, 1984, p. 34).

Computer-assisted instruction has implications for nursing education. It provides immediate feedback to students and teachers; it provides for interactive learning (most effectively through the use of the videodisc); it provides individualized instruction, allowing the student to repeat a program; and it allows programs

to be updated to include new research and knowledge.
Computer simulations provide students' with exposure
to a variety of nursing situations without risk to patients.
The introduction of the videodisc provides for rapid
access to a large amount of information as well as flexible
pacing and presentation techniques. The quantity and
quality of software for nursing education is limited.
However, production will be encouraged only if there
is a demand. Nursing educators must explore the potential
for computers to assist in the improvement of nursing
education.

Computer-Assisted Instruction Chart

Figure 6 contains a chart summarizing the advantages
and uses of CAI, specific tactics, and information pertaining
to courseware availability.

Summary

This chapter has focused on a review of the literature
related to strategies and tactics relevant to nursing
education. It has provided charts including information
pertaining to the purpose of each strategy and procedures
to be followed in carrying out the various strategies.
Specific guidelines for tactics to be employed in conjunction
with these strategies have been provided.

| Introduction | CAI refers to the presentation of material and questions on that material through a computer. The student responds to the computer as questions are presented. |
|---|---|
| Advantages | Four advantages of CAI over traditional methods are:<br>(a) immediate feedback;<br>(b) interactive learning;<br>(c) individualized instruction;<br>(d) information can be stored and updated. |
| Uses | Uses to which CAI can be put in nursing education are:<br>(a) drill and practice;<br>(b) tutorials; and<br>(c) simulation |
| Drill and Practice | This has been the main use of CAI; beneficial in nursing education when learning terminology, and factual material. |
| Tutorial | Material is presented then student is tested on that material; the next material to be presented is selected on the basis of student's response. |
| Simulation | Representation of a given process or situation; student can change variables and explore situations; interactive videodisc is especially useful for simulations. |
| Courseware Availability | Courseware is limited in quality and quantity; it is suggested that teams be formed to develop courseware for nursing education to include nursing faculty, instructional developers, and computer programmers. |

Figure 6. Computer-assisted instruction (CAI): Purpose, tactics, and courseware availability.

In the first section the literature pertaining to the rationale behind the use of the lecture and the literature related to effective tactics for lecture preparation and delivery have been reviewed.

The second section has dealt with the discussion as an instructional strategy. Constraints of class size and setting make it difficult to conduct small-group discussions, other than buzz groups, in nursing education.

The third section has described the lecture-discussion which provides for discussion within the lecture format. It has been shown to be an effective large-group strategy which allows the teacher to present material, clarify points, give examples, and provide an opportunity for students to analyze studies and develop generalizations.

The demonstration has been discussed in the fourth section. It is effective when presenting information about equipment or to demonstrate a skill or procedure. Human relations can be investigated through "role-playing", a form of demonstration.

The final section has presented the rationale behind the use of computer-assisted instruction in nursing education with emphasis on computer simulations which are especially effective for presenting demonstrations in the health sciences. Since there is difficulty obtaining

suitable courseware, it has been suggested that teams
be set up to develop appropriate software.

If nursing instruction is to improve, the suggested
strategies and tactics need to be considered. Lectures
should be supplemented by strategies that require students
to become involved in the learning process and that
provide immediate assessment of their efforts. Used
correctly, these strategies are a way of making nursing
students do for themselves what is too often done for
them. In order to carry out instruction effectively,
nursing educators must become familiar with a variety
of instructional strategies and must become adept at
lesson preparation and delivery.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary and Conclusions

The nursing profession has changed and continues to change to meet the demands of society. It is influenced by the economic, social, and political environments in which nurses function. As the nursing profession changes, there are new demands placed on schools of nursing to develop programs to train nurses who can respond to the service required by society.

Early schools of nursing provided an apprenticeship program with the service needs of the hospital being of primary importance. There was little provision made for academic training. With advances in medical knowledge, more emphasis was placed on classroom instruction. Gradually schools of nursing began to be located within universities. Present university baccalaureate programs are planned, taught and evaluated by university faculty. Graduates of both diploma and baccalaureate programs are required to write the same examinations for regis- tration. Registration of nurses is controlled by provincial nursing associations, with the exception of the province

of Ontario, where the College of Nurses is the registering body. The CNA has recommended to the provincial associations that the minimum requirement for entry to practice by the year 2000 be a baccalaureate degree.

The CNA has recommended implementation of an accreditation program by schools of nursing. However such a program has not been undertaken. The ARNN has begun to implement a mandatory program of approval for schools of nursing within its jurisdiction based on the Standards for Nursing Education in Canada (CNA, 1978).

Although basic diploma programs may provide adequate training for nurses, there is much that can be done to improve the quality of instruction provided. The instructors at St. Clare's Mercy Hospital School of Nursing have recognized a need to improve classroom instruction, and an evaluation of instructional practices has been conducted with a view to improving the strategies and tactics used.

Instructors of schools of nursing have traditionally been practicing nurses with emphasis placed on their clinical background rather than on their teaching ability. Analysis of records at the School of Nursing has yielded data that indicate that nursing instructors actually engaged in classroom instruction at the School of Nursing

lack formal training in instructional techniques. From classroom observations it was evident that the lecture is the main form of instruction and that it is used primarily to transmit information. The number and arrangement of desks, particularly in the first-year classroom, have led to the use of a strategy which involves the whole group with the teacher being the dominant figure. Both classrooms are adequately equipped for the use of projected media.

Although the content of lectures appeared to have been thoroughly researched and logically sequenced, notes were generally dictated to students and/or presented on overhead transparencies; little provision was made for questioning or discussion or for independent study. The lecture can be an effective strategy for large-group instruction; however it is not currently being used for the purposes for which it is most effective. There appears to be little provision for change of pace during instruction periods, indicating that teachers require guidelines for the presentation of effective lectures and suggestions for other effective strategies for large-group instruction. The nursing skills laboratory demonstrations, conducted on a trial basis during 1983-84, appear to have been well received by students, who liked the small-group setting for such demonstrations. These

demonstrations also provided a much needed change of pace.

Examination of timetables indicated that classes are frequently instructed by one teacher for two or three consecutive hours with little variety in strategy or tactics employed. It is difficult for an instructor to remain enthusiastic with the same group for this period of time or for students to be motivated.

Students were observed to be occupied throughout lectures in note-taking. In order to ensure that students had complete notes, notes were generally dictated to students and/or presented on overhead transparencies. Although teachers should ensure that students have good notes by providing headings and sub-headings, this may be done in the form of handouts, thus allowing students to spend more time listening rather than writing.

Filmstrips shown contained a great deal of factual material, causing students to attempt to take notes while viewing. Filmstrips and slide tape presentations have recently been produced locally under the guidance of the Instructional Materials Specialist Librarian and with the advice of content experts from the School of Nursing. From interviews with students and instructors the researcher has determined that students and instructors generally find these productions to be more effective

than commercial productions. The latter were found to contain too many facts and in many cases are too lengthy to maintain attention.

Although there is an inservice education committee at the School of Nursing which is charged with the responsibility of providing inservice in areas of identified need, programs offered during the 1983-84 academic year were not related to improvement of classroom instruction. Since instructors at the School of Nursing are generally not trained in educational techniques before commencing instruction, they require inservice training or enrolment in appropriate courses at an institution such as Memorial University Faculty of Education. The Library/Resource Centre has few texts designed to assist teachers in planning effective educational strategies and tactics. Many excellent resources exist, particularly on the use and production of instructional media.

The review of the literature on instructional methods appropriate for nursing education has indicated that the lecture can be an effective strategy if employed for the purposes which it best serves, so it should not be abandoned. Other strategies such as discussion, either alone or in combination with lectures, demonstration, and computer-assisted instruction can also be effective and should be used when appropriate and if practical.

The strategy used should be determined by the objectives of the lesson, the needs of the students, the personal preference and abilities of the instructor, and considering the physical constraints of the instructional setting.

Guidelines suggested for specific instructional strategies and tactics were meant to add to the instructor's teaching style rather than to change it. It is hoped that suggestions provided will be incorporated into each instructor's methods of teaching. It is expected that instructors will continue to lecture but that they will also use other strategies. Through the use of tactics suggested their lectures will improve.

The researcher has noted that coordinators and instructors have made every effort to implement suggestions made during the study. The seating arrangement in the first year classroom has been changed with the room being divided into two smaller classrooms through the use of the room divider. Teachers were provided with lecture guidelines for implementation in the fall of 1984. A booklet containing charts and guidelines will be provided for use at the School of Nursing in the fall of 1985 along with specific suggestions for their implementation.

The Director of the School of Nursing has displayed a deep concern and interest in the improvement of

instruction. It is important that she show the staff that change is needed, and convey the importance of improving instruction to individual teachers. In order to do this she must be willing to provide the necessary training, facilities, and release time to make it evident that she supports the change.

The ARNN program for approval of schools of nursing in Newfoundland has caused the Director to examine instruction at the School of Nursing, and many individual teachers seem genuinely interested in improving their techniques. It is hoped that the increased interest and success of those instructors who do attempt to incorporate new tactics into the planning and delivery of instruction will carry over to any who may be reluctant to change their methods due to the time and effort required.

### Recommendations

As a result of the findings of this study the following recommendations are made:

1. There should be immediate implementation of the guidelines suggested for specific instructional strategies and tactics.

2. Inservice training specifically directed at improving classroom instruction should be undertaken. This

inservice training should be on-going to provide
new skills when the need is perceived. In-depth
treatment of one concept should be completed in
one session rather than a generalized treatment
attempting to solve all problems in one session.
Where possible, inservice training should be conducted
at the School of Nursing to encourage greater numbers
to attend.

3. As schools of nursing do not usually have the resources
to undertake staff training of this type, it is
recommended that the School of Nursing maintain
ties with the Faculty of Education at Memorial
University which, in cooperation with the Instructional
Materials Specialist Librarian, may be able to
assist with inservice education. Instructors should
be encouraged to enrol in courses in the Faculty
of Education that are designed to provide teachers
with theoretical and practical applications of
instructional procedures.

4. It is recommended that the timetable be arranged
so that an instructor does not present instruction
to one group of students in one area of content
for more than one hour at a time. If it is found
that the timetable must be set up as it is then
it is recommended that there be more variety in

the activities (e.g., a 50 minute lecture followed
by group review, discussion or questions, followed
by a film).

5. Regular staff meetings should be held to solve
   instructional problems and to provide an opportunity
   for instructors to share ideas about educational
   innovations. Meetings might also be held with
   other nursing instructors in the province to share
   ideas and provide mutual support.

6. Continuation of the nursing skills laboratory
   demonstrations is recommended as an effective technique
   for small-group instruction.

7. Continued local production of resource materials
   such as filmstrips, slide tape productions, and
   booklets is recommended. These contribute to a
   sense of local ownership and pride.

8. The Library/Resource Centre at the School of Nursing
   serves primarily as a production and service unit.
   It is recommended that the expertise of the
   Instructional Materials Specialist Librarian be
   used in dealing with basic teaching problems and
   effective media utilization techniques.

9. The Library/Resource Centre should obtain a selection
   of texts dealing with instructional procedures
   and instructional media. It is recommended that

a bibliography of resource materials which are
available at the Queen Elizabeth II Library and
the Health Sciences Library should be compiled
to assist teachers in obtaining suitable references.

10. The physical setting should be examined and adjusted
as much as possible, given the existing building,
to allow for more small-group instruction and discussion
and to provide a more adequate classroom for large-group
instruction involving the first-year students.

11. A committee should be established to investigate
the application of computers to nursing education
and the feasibility of purchasing microcomputers
for use in the School of Nursing.

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APPENDIX A

Interview Guides

INTERVIEW GUIDE #1

Director, School of Nursing

1. Where can information be obtained regarding the
   historical development of the School?

2. When was the statement of philosophy formulated?
   When was it revised?

3. When was the statement of objectives formulated?
   When was it revised?

4. Who is responsible for developing and implementing
   educational policy?

5. What academic qualifications must faculty members
   have?

6. How are members of the instructional staff selected?

7. What is the policy regarding the ratio of students
   to instructors in the classroom setting?

8. Is there a program for the development of instructional
   personnel?
   If so, who coordinates the program?

9. By what means are students recruited? (Visitations
   to schools, open house, advertisements, word of
   mouth, other)

10. What is the optimum number of students admitted
    annually?

11. How is the optimum number determined?

12. Who processes the applications?

13. By whom is the final selection made? (Committee, Director of the School of Nursing, other)

14. Has a program of accreditation/approval been initiated? If so, is this a national or provincial program?

15. Do you have a list of the criteria to be met for accreditation/approval?

16. In the Annual Report of the School of Nursing for the academic year 1981-82 it was stated that it was planned to include five university courses by January 1984. Has this been accomplished?

17. What courses, if any, have been included?

18. In the same report it was stated that faculty evaluation policies and procedures had been developed to be implemented in the 1981-82 academic year. Has this been implemented?
    With what results?

19. In the January 1983 Minutes of the Faculty Committee Meeting a request was made that students be given some standard for writing papers. The Librarian stated that she would assess what resources were available in the school library. What has transpired?

20. Are you concerned about the number of withdrawals especially during the first year?

21. Are you concerned about the school standing on the Canadian Nursing Association Testing Service examinations in relation to the standing of other schools in Newfoundland?

22. It was noted in the first year committee Report to the Faculty Executive in July 1983 that it was planned to hold a session on study skills in 1983-84. Has this been implemented?

23. Have the tutorial sessions in basic mathematics suggested in the above report been instituted? If so, with what results?

24. How effective have the "learning labs" been?

25. Was the inservice program "Effective Teaching in Large Groups" held?

26. What topics have been covered in inservice training in the past year?

27. Mention was made in the minutes of the Faculty Committee Meeting of January 23, 1984 of a conceptual model of nursing education being developed. To what does this refer?

28. In the Annual Report of April 1983 mention was made of a "Master Plan for Systematic Program Evaluation" that has been developed for the School of Nursing. To what does this refer?

29. What indication have you had that present teaching methods may not be effective?

INTERVIEW GUIDE #2

First Year Coordinator

1. How many first year instructors are there?

   Full time _____    Part time _____

2. What qualifications must these instructors have?

3. What is the normal teaching load?

4. Is time allotted for the preparation of lessons?

5. How many weeks are planned for the first year program?

6. Where does the responsibility lie for planning the content and time allotment for formal instruction?

7. Is clinical instruction included in the first year curriculum?

8. Is clinical experience provided during the first year?

9. Are there outlines on file for all courses taught?

10. How are the students evaluated?

11. How often is the program evaluated?

12. How is the teaching effectiveness of the instructional personnel evaluated?

13. Do the students participate in the evaluation of their own progress?

14. Are the students given an opportunity to critique courses?

15. Are you satisfied with the quality of classroom instruction?

16. How do you feel instruction might be improved?

17. Do you discuss methods used to prepare for and deliver classroom presentations with the first year instructors?

18. Do you review the instructors' plans/notes prior to presentation?

19. Are instructors given suggestions for preparing for large-group instruction?

20. Are instructors given suggestions for encouraging student participation in their own learning?

21. Do you feel that inservice training in instructional techniques would be valuable?

22. In your opinion, should instructors be provided with release time to attend inservice sessions?

## INTERVIEW GUIDE #3

### Second Year Coordinator

1. How many second year instructors are there?

2. What qualifications must they have?

3. What is the usual teaching load?

4. How many weeks are planned for the second year program?

5. Where does the responsibility lie for planning the content and time allotment for formal instruction?

6. Is clinical instruction included in the second year curriculum?

7. Is clinical experience provided during the second year?

8. Are evening and/or night experiences included?

9. Are there outlines on file for all courses taught?

10. How often is the program evaluated?

11. How is the teaching effectiveness of the instructional personnel evaluated?

12. By whom are they evaluated?

13. What methods are used to evaluate student progress?

14. Do the students participate in the evaluation of their progress?

15. Do second year students receive clinical experience in other hospitals?

    If so, which hospitals?

16. Are you satisfied with the quality of classroom instruction provided by second year instructors?

17. In what ways do you feel instruction might be improved?

18. Is much use made of instructional media?

19. Do you discuss methods of lesson preparation and presentation with the second year instructors?

20. Do you review instructors' plans/notes prior to presentation?

21. In your opinion, would inservice training in instructional strategies and tactics be worthwhile?

INTERVIEW GUIDE #4

## Third Year Coordinator

1. How many third year instructors are there?

   Full time _____          Part time _____

2. Are the qualifications that they must possess the
   same as those for first and second year instructors?
   What additional qualifications should they have,
   if any?

3. Do any of the third year instructors have training
   in instructional methods?

4. What is the normal teaching load?

5. How much time is allotted for the third year program?

6. How is this time allocated?

   Classroom _____          Clinical _____

7. Where does the responsibility lie for planning
   the content and time allotment?

8. Are there outlines on file for classroom instruction?

9. How often is the program evaluated?

10. What methods are used to evaluate student progress?

11. Do third year students participate in the evaluation
    of their progress?

12. Do they have input into program evaluation?

13. In what hospitals and affiliated agencies do the
    students receive clinical experience?

INTERVIEW GUIDE #5

Classroom Instructors

1. How long have you been instructing at the School of Nursing?

2. Did you have any previous instructional experience?

3. Do you have any formal training in instructional techniques?

4. What is your normal teaching load?

5. In your opinion, is sufficient time allotted for lesson preparation?

6. What methods do you use for instruction?

7. Are you satisfied with the quality of your classroom instruction?

8. What do you perceive to be your teaching strengths?

9. What do you perceive to be your weaknesses?

10. Do you feel that inservice training in instructional methods would be worthwhile?

11. Are you provided with guidance in the preparation and delivery of lessons?

12. Do you know how to operate the audiovisual equipment which is available?

13. Do you make frequent use of instructional media?

14. Do you make frequent use of the overhead projector?

15. Have you been provided with guidelines for the effective use of the overhead projector?

16. Is the school atmosphere such that teachers feel free to explore and utilize different methods and materials for presenting subject content?

## INTERVIEW GUIDE #6

### Inservice Education Committee Chairperson

1. What type of orientation is planned for incoming instructors?

2. Does anyone discuss preparation of classroom presentations with new instructors?

3. Is there a probationary period for new instructors in which their teaching effectiveness is monitored?

4. How frequently are inservice sessions held?

5. Is attendance optional or mandatory?

6. What topics have been covered in inservice sessions held during the last three years?

7. How beneficial are these sessions in your opinion?

8. Do you plan to hold the proposed inservice session on effective teaching techniques for large groups in the near future?

9. What other programs for staff development exist?

10. Are instructors given suggestions for preparation for large and/or small group presentations?

11. Are instructors provided with training in the use of audiovisual equipment?

12. Are instructors given any guidance in the selection and use of media?

13. In your opinion, in what areas is inservice training needed?

INTERVIEW GUIDE #7

Instructional Materials Specialist Librarian

1. Do you consider the holdings of the library to
   be adequate to serve the needs of students?

2. Is there adequate provision in the annual budget
   for library needs?

3. During what hours is the library available to students?

4. What other libraries are available to students
   and faculty?

5. What is the loan period for books?

6. Is there a reserved book section?
   -if so, What is the loan period for reserve books?

7. How are new accessions publicized?

8. Are outdated materials discarded?

9. Is there provision made for inter-library loans?

10. Are faculty members trained in audiovisual equipment
    operation?

11. Are faculty members instructed in effective use
    of media?

12. Are teachers given instruction in the production
    of basic visual materials?

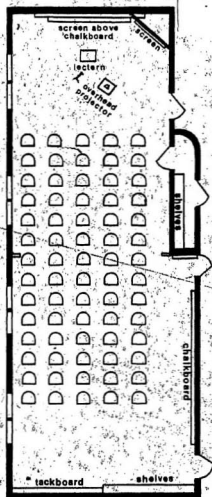13. Do instructors seek advice on the production of

instructional materials, particularly overhead transparencies?

14. Do you have sufficient time available to assist teachers with the production of materials?

15. How extensive is the audiovisual collection?

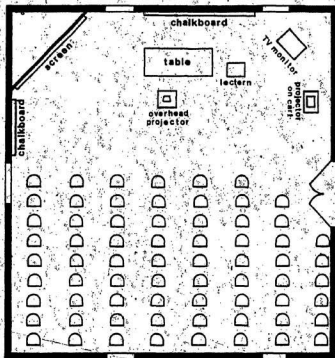16. In your opinion, would inservice sessions on instructional techniques be beneficial to instructors?
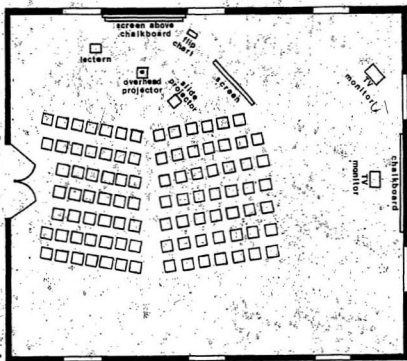
# APPENDIX B

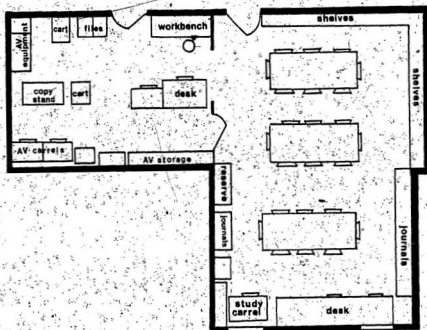## Floor Plans: Educational Facilities

screen above
chalkboard

screen

lectern

overhead
projector

shelves

chalkboard

tackboard    shelves

First Year Classroom

chalkboard

screen

chalkboard

table

lectern

TV monitor

portable computer on cart

overhead projector

Second Year Classroom

Lecture Room

Library/Resource Centre