TECHNIQUES FOR TEACHING NURSING
RESEARCH IN AMERICA

Assistant Director Nursing Research Education and Qualith Assurance.
Elizabeth A. Mottet, R. N., M. S.
Univ of California, Medical Center, San Diego.

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Good Afternoon. I am honored to be here today to talk to the Japanese Society of Nursing Research. I am especially happy to return to Japan after being away for 25 years. I lived here as a child from 1950 - 1953 and from 19 57 - 1961. I have many fond memories of the time I spent growing up in Japan. My husband and I want to thank you or your warm hospitality. Dr. Fukushima, please accept my gratitude for the fine arrangements you have made for our stay here.

I am speaking today on " Techniques for Teaching Nursing Research in America."I will first speak on teaching nursing research in schools of nursing or the academic setting. I will discuss some of the controversies that exist and elaborate on methods used in some schools of nursing.

Secondarily I will describe how nursing research is taught and supported in the clinical setting. It will also be helpful for you to hear some information about "patient rights" in the United States and the affect on research projects.

In the past, research has been introduced at the master of science level and emphasized at the doctoral level. Nurses who graduated from a baccalaureate of science program received very little information on research. This has changed dramatically over the last several years. Hesook kim reports in the Journal of Continuing Education that the last decade with its advancing technology and expansion of knowledge is marked by the incorporation of a scientist role into the view of the nurse and therefore the required preparation of the nurse for that role. The National League for Nursing advanced the idea in 1972 and reaffirmed it in 1977 that all types of nursing programs should provide opportunities for students to learn to interpret research, understand its methods and significance, assess its findings, and adopt those research findings which have value. In 1979, a statement tescribing the characteristics of baccalaureate nursing education was adopted. The statement supported requiring educational programs to provide opportunities for students to acquire ability to evaluate current nursing practice and to try new approaches. It also stated that students should have an understanding of research process and its contribution to nursing practice. The impetus for change is significantly enhanced when the standard setting organization for academic nursing makes clear its position that the research process and its contribution to nursing should be an integral part of the curriculum at the baccalaureate level of nursing education.

Now that the expectation of including research is clear, how have nursing schools responded to the task of incorporating research

into the curriculum? Carnegie summarized in her editorial in Nursing Research 1978 that the diversity represented in formal courses at the baccalaureate level ranged from the basics of nursing research to the provision of opportunities for students to participate in various stages of the research process. Faculty may set up classes that provide the knowledge and skills to conduct certain types of research or may provide classes that focus only on the development of problem-solving skills and competency in reading research reports. Interpretation of how and what to teach nurses at the baccalaurate level is varied.

Oldfield and Duffy in the Journal of Advanced Nursing 1984 describes three major ways that baccalaureate nursing students learn research. Nurses can "learn by doing" by having students do an actual research study. Nurses can "learn by proposing to do" by having students write a research proposal but not be required to collect, analyze or report the findings. Nurses may "learn by critiquing" by having students read critically several research articles and as a final assignment produce a scientific literature review on a topic of their choice.

Teaching techniques for "learning by doing" include lectures, textbooks, and assignments directed toward teaching a student how to do a research study.

表 1, 2
　LEARN　BY　DOING
ο　PROBLEM　STATEMENT
ο　LITERATURE　REVIEW
ο　WRITTEN　PROPOSAL
ο　DATA　COLLECTION
ο　DATA　ANALYSIS
ο　FINAL　REPORT

STUDENT　OUTCOMES

ENTHUSIASM
INCREASE　CONFIDENCE
APPRECIATES　COMPLEXITY
INCREASED　INTEREST

The student must develop a problem statement, review the pertinent literature in the selected area, write a research proposal for faculty approval, collect data, analyze it, and write a final report of the findings. Oldfield and Duffey noted in a survey of the literature in 1984 that 7 of 11 programs discussed in the survey used this approach solely or in combination with other methods. In the authors opinions students learn a limited amount about research. The studies often suffer by being trivial, poorly designed and poorly executed.

Human subject review committees or instituional review boards play an important part in research in theUnited States.

表 3
HUMAN　SUBJECTS　REVIEW
ο　PROTECT
ο　REVIEW
ο　EDUCATE
ο　APPROVE

These committees are designed to protect patients and employees. The main functions of the review board are to review proposals, educate investigators, and identify potential problems in human subjects research. Concerns such as invasion of privacy, potential risks versus potential benefits, the cost to the patient or institution are subjects discussed by the committee. The student must obtain approval through these committees and agencies. Some review boards are more rigorous than others. The approval process can take several months in some cases. For undergraduates this may

prohibit beginning data collection till after the research course is completed. The time constraints and workload can dampen the students interest in research. However, for those highly interested in research or a particular area of study this method of learning can be very rewarding.

"Learning byproposing to do" is usually taught using lectures, textbooks and assignments directed toward teaching the student how to do research, however the student only reaches the proposal stage.

表4,5

LEARNING BY PROPOSING TO DO
      ◦ PROBLEM STATEMENT
      ◦ LITERATURE REVIEW
      ◦ WRITTEN PROPOSAL

STUDENT OUTCOMES
IMPROVED ATTITUDE TOWARD
RESEARCH
INCREASED COMFORT WITH RESEARCH
TERMINOLOGY
VOLUNTARY IMPLEMENTATION OF
RESEARCH
VOLUNTARY READING OF ·
RESEARCH

In Oldfield's study 5 of 11 programs used this approach alone or in combination with another method. This method usually requires less student time, allowing more time for other teaching and learning activities. Research topics may be better conceived since they need not be carried out.The student, however, may never see an end result or validation of the work they have done because they may never do the research.

Those who teach research with the "learning by critiquing" method direct the lectures, readings and assignments toward teaching a student how to read and critique research articles.

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LEARN BY CRITIQUING
  ◦ READ ARTICLES
  ◦ ANALYZE
  ◦ WRITE SCIENTIFIC REVIEW

STUDENT OUTCOMES
DECREASED ANXIETY ABOUT
RESEARCH
INCREASED INTEREST IN
RESEARCH

The final assignment may be the production of a scientific review in a area of the student's choosing. Six of the 11 programs from Oldfield's review used this approach, however only one used it alone.

Spector and Bleeks in 1980 described their technique for teaching research in Nursing Outlook. As teachers of medical-surgical nursing, they were dismayed by the bad attitude their senior level students had concerning research. They initiated a program for integrating research into their medical-surgical course. Using research articles for each segment of the course and identifying appropriate research questions at every opportunity, these faculty served as role models and questioned current nursing practices from a research point of view.

Attitudes about research receive significant attention at American universities. Many nurses perceive research as tedious and not relevant to practice. Faculty at schools of nursing often focus on creating a positive environment for research and give that objective a high priority in writing objectives for the courses.

Dr. Hesook Suzie Kim, Professor of Nursing, University of Rhode Island, describes another perspective on organizing knowledge, skills, and attiudes in the development of scientists. She developed a typology or organizing

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PERSPECTIVES	BEHAVIORAL OUTCOMES
GENERAL PERSPECTIVE	1. DEMONSTRATE INTELLECTUAL CURIOSITY. 2. DIFFERENTIATE TYPES OF KNOWLEDGE. 3. DIFFERENTIATE METHODOLOGIES OF KNOWLEDGE GENERATION. 4. USE INDUCTIVE AND DEDUCTIVE APPROACHES FOR PROBLEM SOLVING AND ANALYSIS OF IDEAS.

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FORMAL PERSPECTIVE	BEHAVIORAL OBJECTIVES
FORMAL PERSPECTIVE	1. IDENTIFY THE MAJOR ELEMENTS OF RESEARCH PROCESS AND INTERRELATIONSHIPS AMONG THE ELEMENTS. 2. DEFINE AND USE BASIS TERMINOLOGY IN RESEARCH. 3. IDENTIFY SIMPLE PROBLEMS FOR RESEARCH. 4. SELECT AND CRITICALLY REVIEW LITERATURE. 5. IDENTIFY BASIC QUALITATIVE QUANTITATIVE APPROACHES TO DATA ANALYSIS. 6. IDENTIFY IMPLICATIONS OF NURSING PRACTICE FOR NURSING RESEARCH. 7. USE NURSING PRACTICE AS A MEANS OF DATA GATHERING FOR REFINING AND EXTENDING NURSING PRACTICE.

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PERSPECTIVE	BEHAVIORAL OBJECTIVES
UTILITARIAN PERSPECTIVE	1. READ RESEARCH REPORTS AND UNDERSTAND OVERALL MEANINGS OF REPORTS. 2. CRITICIZE RESEARCH FINDINGS WITH RESPECT TO THE MAJOR ELEMENTS OF RESEARCH PROCESS, MEANING, APPROPRIATENESS, AND VALUE. 3. IDENTIFY POTENTIAL APPLICATIONS OF RESEARCH FINDINGS IN NURSING PRACTICE.

framework to examine research related know-ledge. The components of the body of knowle-dge are codified into 3 perspectives 1) the ge-neral perspective 2) the formal perspective and 3) the utilitarian perspective.

The general perspective encompasses the knowledge, skills and attitudes for developing the underlying qualities essential for using sc-ientific approaches to problem solving. It in-cludes logic that is involved in developing op-erations for solving problems, understanding of the ways knowledge is generated, and syst-ems of thoughts and ideas.

The formal perspective refers to the kno-wledge, skills and attitudes related to the res-earch process and research methods that are essential for conducting research.
It includes the content that deal with methods of scientific inquiry aimed at validations of theoretical conjectures and generalizations of the empirical world. Scientific methods in this perspective include procedures in description, explanation, validation and justification of knowledge.

The utilitarian perspective refers to the knowledge, skills and attitudes for effective utilization of research findings and for devel-oping a competent consumer of research. It also provides the practitioner with information on how to communicate effectively in the area of research.

This typology allows the faculty to consi-der which emphasis and level of research tra-ining is appropriate. Behavioral outcomes can be developed using the framework. For exam-ple, the general perspective objectives could include: develop intellectual curiosity and diff-erentiate methodologies of knowledge generat-ion. For the formal perspective objectives could include:define and use basic terminology in research; identify basic qualitative and quan-titative approaches to data analysis. For the

utilitarian perspective the objectives could inc-lude: read researdh reports and discuss mean-ing of reports.

This typology can also be used to differe-ntiate what should be required of the nurse who goes on for graduate education at the master's degree level. There is general agree-ment that the study of research is essential at this level but again it can take many forms.

Dr. Mary Quayhagen, faculty advisor for nursing research at the University of San Die-go states, "There is a trend away from expe-cting the master's student to complete a thesis as a requirement for graduation." There is increased focus on developing and completing a research project that can be published upon completion.

Scientific inquiry and full development of a chosen topic inlcuding a written master's thesis remains a popular requirement of mas-ter's level programs. In 1980, Donna Brogan, Associate Professor, Statistics and Biometry at Emory University described in The Ameri-can Statistician a program of teaching and consultation in research methods and statisti-cs for students in the master's of nursing pr-ogram.The master's program at this school consisted of 4 quarters (approximately 1 year) of academic coursework, clinical practicums and research.

As a requirement of the degree, each stu-dent conducts a nursing research project and writes a master's thesis. The student attends courses on research and statistics and prepares to begin an independent research study of their choice in consultation with a faculty member. The major objectives of the 2-quarter sequence in research methods and statistics are 1) to enable each student to read and critique the nursing literature and 2) to enable each student to carry out his or her own research project.

Many nursing programs at the graduate

level require a statistics course prior to entry into graduata school, however, in this case the statistics course follows the research-methods course. This approach is intended to make the statistics more relevant for the student.

The two-quarter sequence is based on the conceptual framework for teaching which emphasizes that statistics and research are reasoning processes applied to some problem. The major topics in the research-methods course are:

- ° Definition of nursing research
- ° The research process and scientific method
- ° Selecting and stating a research problem
  - variables and hypotheses
- ° Use of statistical tests of significance
- ° Historical research
- ° Designs for descriptive research
- ° Designs for true experimental and quasi-experiment research-internal and external validity
- ° Questionnaire design and interviewing techniques
- ° Sampling methods
- ° Ethics of doing research
- ° Writing a research proposal
- ° Communicating research results
- ° Critiquing a research report

A favorite book for use in graduate level research courses is polit & Hungler's Nursing Research: Principles and Methods, J. B. Lippincott Company.

The table of contents shown on the slide gives you an idea of the content students are receiving from the text. Coursework and reading is complimented by support from the faculty member during the consultation phase as the

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CONTENTS

PART I. THE SCIENTIFIC RESEARCH
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2. THE SCIENTIFIC APPROACH

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RESEARCH PROCESS
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student proceeds with the research and the completion of the thesis.

Other techniques can be used to educate nurses in research at the master's level. One that particularly appealed to me was described by Selby in the Journal of Nursing Education. This program is called the guided design method. It is based on the theory that students learn more effectively by working through a series of well-designed problems that are relevant to real-life situations rather than by passively acquiring knowledge.

Learning occurs on three levels.

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3 LEVELS OF LEARNING

LEVEL	CONTENT
1	FUNDAMENTAL CONCEPTS PRINCIPLES SKILLS
2	CLOSED PROBLEM－SOLVING METHODOLOGY
3	OPEN PROBLEM－SOLVING METHODOLOGY

In the Ist level, the knowledge base is developed by learning fundamental concepts, principles and skills.An instructor-prepared study guide with exercises is supplemented with assigned reading.

In the 2nd level learning occurs on closed problems. Class discussion in conjunction with study guide exercises leads the student through problem solving methodology and opens their minds to other points of view.

At the top level, learning occurs on open-ended problems. It is guided by printed instruction-feedback material which models the step-by-step problemsolving process followed by professionals. Small group activity is used at this top level of learning. Students are guided step by step to 1) identify a researchablep roblem and 2) develop a research proposal

to address the identified problem in a hypothetical but reality-based clinical situation.

Learning goes from a low level to a high level.Transfer of learning occurs from the lower to higher levels as activities reinforce and clarefy concepts introduced earlier. Selby measured the changes that occurred during a pilot study of this model. The study showed significant positive changes in students attitudes and knowledge at $p < .0001$. The scores were doubled between the pre and post tests. Student with previous knowledge scored better on the pre-test, however, there was no significant difference between the 2 groups of students on the post-test.

Doctoral programs in Nursing Science and nurses who have obtained Doctors of Philosphy or Doctors of Education have increased significantly in very recent times. The emphasis on research and the value of using research in clinical practice have supported opportunities for nurses with doctoral preparation. Dissertations developed from extensive (2-3 years) research are the expected outcome for these individuals.

Participation in research at the student level when one's motivation is guided by desires to complete requirements for coursework is one thing. Participation for more altruistic reasons is another. Let us turn our discussion toward the problem of supporting scientific inquiry by nurses who are busy caring for patients. Fostering research in the clinical setting is essential it the nursing profession is to fulfill its promise as a contributor to improvement of patient care.

Time, money and lack of knowledge and support from administration are barriers to performing research in the clinical setting. On the other hand, the environment provides a laboratory of incredible diversity and research pursued in this setting has immediate validity

for clinical practice. Creating an environment that reduces the impact of the barriers and takes advantage of the positive elements should be the goal of each nursing executive.

A program of great success was initiated at University of Arizona, University Hospital. It was described by Helen Chanca, the director of nursing at University of Arizona Hospital and by Ada Sue Hinshaw, Director of Research at the Collecge of Nursing, University of Arizona in the Journal of Nursing Administration, 1980.

Chance and Hinshaw state, " Three critical factors facilitated the initiation of the research program: the reseach-oriented attitude of the nursing administrator the existence of a research environment in the nursing department, and the values and flexibility of both the hospital and the nursing department organizational structure. "

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FACTORS AFFECTING RESEARCH
PROGRAM

ATTITUDE OF NURSING ADMINISTRATOR
EXISTENCE OF RESEARCH ENVIRONMENT
FLEXIBILITY OF ORGANIZATIONAL STRUCTURE

Chance believes that accurate data is needed for decision making. The best way to provide such data is through research. The director layed the groundwork for bringing a research emphasis to the University Hospital by hiring temporary research consultants to work on specific projects. The nursing staff were involved in these projects in a variety of ways and became familiar with how research protocols were established. The experience with consultants reinforced the director's belief that research was necessary to the department.

Decentralization and redistribution of nursing management opened some positions and funds to support creation of a research

section. It addition the school of nursing agreed to fund a part-time position as a compliment to the research position at the hospital. This merging of practice and education was very positive for the success of the program.

Establishment of the research section involved 3 important elements: 1) identifying aims and objectives, 2) defining the types of research programs to be conducted, 3) selecting initial research studies whose results would legitimate its existance.

To ensure its implementation and support its maintenance, the aims and objectives of the research section were taken from the broader philosophy and overall goals of the hospital. Therefore, the aims included:

1 . Generation of knowledge to guide practice

2 . Collaboration with clinical and administrative nursing staff in conducting research

The objectives were organized to reflect the problems and concerns of the practice setting that require systematically obtained data from objective sources. The objectives were:

1 . Provide data for administrative decisions by investigating administrative factors basic to the delivery of quality nursing care.

2 . Investigate clinical questions and problems confronting patients and nursing staff to provide data for clinical care decisions.

3 . Initiate and foster staff involvement in the investigation of various clinical problems.

4 . Evaluate the effectiveness of clinical management and staff education programs.

5 . Promote application of research results to common clinical and administrative problems.

In order to legitimate the research section, the early studies were planned so that results would have implications for nursing adminis-

tration, clinical staff and hospital administration. For example. administrative decisions about continuing an all- RN staffing pattern were based on data from a study organized by the research section. Answering the questions of the involved groups and redefining what research could and could not do took many hours of discussion during the early state of implementation.

Placement of the research director in the organization heirarchy indicates its recognition and legitimation by the nursing director. It also clearly identifies the communication lines and the lines of accoutability. The University Hospital model placed the associate director of research at a level equal to the heads of the staff development and the clinical nursing sections. The associate directors report directly to the nursing director.

Feedback channels both up and down the heirarchy are important for continued support of research. Chance and Hinshaw state, "The productivity of the section is judged in terms of ability to facilitata the major goal of the department, the continual improvement in the delivery of patient care." The contributions of a research section should be made explicit in all communication.

How to provide money for the research section was an important decision. Because the section was viewed as a long-term investment, it was to be maintained as a part of the organization as opposed to relying on transient grant monies. Though establishing its own budget would have been another method of legitimizing the section, it was decided that including it in the nursing department's general fund would allow more flexibility. The staff development fund was also used to supply resources to the research section.

Not all clinical settings have the structure or organization to support a research section.

There are other ways to foster research in a clinical setting.

Holly Skodol Wilson describes such a program in The Journal of Nursing Administration, June 1985. She writes, " Creativity, the process from which new and unique ideas emerge, is essential to worthwhile nursing research. "Because of the demands of managing the nursing division of a hospital, nursing executives can be in the position of inhibiting creativity and innovation. Wilson Suggests several techniques for supporting research.

1. Develop several long term research goals such as:
   o Increase resources available for research support, e.g. seed money, computer hardware, software, statistical consultation budget,etc.
   o Recruit new staff members who possess background in research
   o Negotiate for a seat on the Human Subjects Committee
   o Sponsor a research awards dinner
2. Establish mechanisms for communicating research-related information. For example:
   o Establish a centralized research bulletin board
   o Designate a library shelf for research journals and reference books
   o Develop a file containing application packets for grants
   o Meet over lunch with presentations on instrument development or other topics
   o Publish a column in the hospital newsletter on nursing research.
   o Organize a nursing research journal club
3. Specify research priorities in view of institutional mission, staff interest and likelihood for funding. Foster collaborative research.
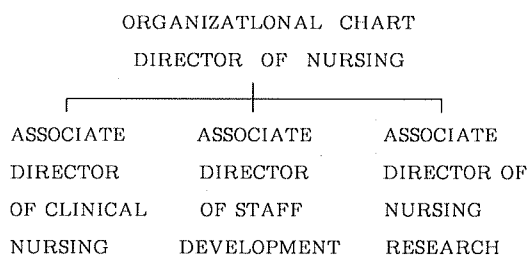
4. Participate in initiating research among nursing executives.

Another method for supporting research is described by Woldrum in the Journal of Continuing Education. New England Medical Center organized a research conference that brought together 3 hospitals to discuss ideas, share information and educate the conference attendees on research. Some of the presentations were reports on actual research and other presentations described were concepts and techniques for research. They found this provided the staff with increased impetus to participate in research at a variety of levels.

Marchette in the Journal of Nursing Administration March 1985, discusses the position of research in the hospital heirarchy. She agrees with Chance and Hinshaw that the person designated as responsible for developing and implementing a research program should report to the Director of Nursing so that the lines of communication and the lines of influence are direct.

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ORGANIZATLONAL CHART

DIRECTOR OF NURSING

ASSOCIATE	ASSOCIATE	ASSOCIATE
DIRECTOR	DIRECTOR	DIRECTOR OF
OF CLINICAL	OF STAFF	NURSING
NURSING	DEVELOPMENT	RESEARCH

Marchette also formulates some questions to ask when research is suggested by clinical practitioners. The questions relate to the feasibility and productivity of the proposed research:

Can it be completed?

Can it be funded?

Is there administrative support?

Can variables be controlled?

Are the skills and commitment there to perform the research?

Can approval be obtained?

These questions are not intended to create barriers for the new researcher but are intended to enhance the success of the project. It is helpful to have some relatively positive experiences as individuals become participants in research. Also the nurse scientist must answer these questions as part of acquiring the discipline to become a good researcher.

Finally let me describe the program for supporting research at UCSD Medical Center. The position of director of research has been combined with the director of education and quality assurance. The director carries the title of Assistant Director of Patient Care Services, Director of Nursing Research, Education and Quality Assurance. She reports directly to the Director of Patient Care Services who is also the Director of Nursing.

Originally, the research director functioned independently, however, economics and budget constraints caused the combining of three departments under one administrative leader. This necessitates some reduction in the emphasis on nursing research, but allows an excellent collaboration between those involved in education and those involved in quality assurance. Evaluation studies in quality assurance have generated research projects. The results of these projects increases knowledge of how to improve the quality of care. The results have also been helpful in identifying areas needing inservice and continuing education.

Coordinated nursing research efforts began with the objectives of increasing the knowledge of basic research principles and providing a supportive environment for learning research by doing it. A research committee was initiated. Membership was open to all clinical and administrative nurses. The chair of the

committee was the director of nursing research who also solicited the involvement of nurses who were prepared at the master's level and were employed in clinical nurse specialists roles. Participating in nursing research was an expectation of their positions at the medical center.

Initially the committee selected a research project on which to work together various aspects of the project such as literature review, funding, data processsong support, definition of terms, questionnaire development were divided up amongst the group. The committee met monthly and as necessary to complete the research. The director of research provided guidance throughout the process.

In addition to the research committee, a formal class in research was presented, again open to all nurses at themedical center. The course was a 2 hour class meeting once a week for 12 weeks. The objectives involved learning how to define a research project and to select appropriate methods for carrying it to completion.

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INTRODUCTION TO NURSING RESEARCH
COURSE OBJECTIVES :

1. REVIEW THE BASIC STEPS IN THE RESEARCH PROCESS,
2. STATE A RESEARCH PROBLEM AND LIST ONE QUESTION TO BE ANSWERED BY THE RESEARCH,
3. EVALUATE PERTINENT LITERATURE FOR ITS RELEVANCE IN DEVELOPING A RESEARCH PROBLEM,
4. DISCUSS THE DIFFERENCES BETWEEN NOMINAL, ORDINAL, INTERVAL AND RATIO DATA,

INTRODUCTION TO NURSING RESEARCH
COURSE OBJECTIVES :
(CONTINUED)
5. DEFINE THE TERMS INDEPENDENT AND DEPENDENT VARIABLE,
6. OUTLINE A METHOD FOR STUDYING THE PROBLEM,
7. EVALUATE IN - PROGRESS AND COMPLETED STUDIES,
8. IDENTIFY THE ETHICAL ISSUES INVOLVED IN THE CONDUCT OF RESEARCH.

The participants were required to write a critical analysis of a research article and to write a research proposal.

As the nursing staff interested in research have become more knowledgeable through course-work on research and the work of the research committee, interest in individual research has grown. The committee has completed its project and the members feelbetter prepared for beginning their own research. The committee purpose has shifted from group project to educational and individual support.

The committee now meets once a mouth for educational and consultative purposes. That is, information on a research topic is presented or the group consults with one another on their own research projects. For example, the members might be interested in having their peers review a research questionnaire which they have devised or ask if anyone is aware of additional literature resources.

To add to the purpose and direction of group. Two local research seminars have been targeted as excellent opportunities for presenting beginning research. One seminar occurs in October of each year and is held in the Los Angeles area about 120 miles north of San Diego. The other seminar is the UCSD Research Symposium established November of 1982

and held annually since then. Researchers can present at both of these conferences. Again, the research director is available for guidance with each person's project.

We have found this system very helpful in supporting research in the clinical setting. Key elements include the support of the director of nursing and a person knowledgeable in research methodology. That person must also be able to share that knowledge and be available to provide support to others.

This is an exciting time for nursing. Many challenges exist. Nurses must find a way to incorporate research into their daily thought patterns. Clinical and academic settings have the responsibility of providing the support, environment and preparation to meet the challenges. Additional support systems are increasing every year. Mosby company has created computer software that teaches basic nursing research concepts and methodology. Nursing organizations such as Sigma Theta Tau and the American Nursing Diagnosis Association are actively supporting nursing research.

There are many paths to take and the journey is never complete. A telling quotation from a writer in the last century stated, "In research the horizon recedes as we advance, and is no nearer at sixty than it was at twenty. As the power of endurance weakens with age, the urgency of the pursuit grows more intense. And research is always incomplete." I hope that the techniques for teaching I have described will assist you in coutinuing the journey of advancing nursing research in your lovely land.

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